KOMET GROUP



# KomPass – Bore Machining

TOOLS + IDEAS®

# KomPass Bore machining – BENEFITS for you:



## KOMET GROUP – The specialists in bore machining

Innovative tool concepts and holistic solutions for the bore machining industry distinguish the KOMET GROUP as a worldwide leader in machining technology.

We are known by our customers as a manufacturer of premium quality tools. They recognise the ideas behind our solutions. We have set ourselves the goal of bringing out the added value that this has, to the benefit of our customers.

We call it TOOLS+IDEAS ® . It is a new and innovative way of providing our customers with permanent and sustained benefits by means of improved support and services.

# Index


**Solid Drilling**
KUB® Drillmax · KUB K2® · KUB Quatron®
KUB Pentron® · KUB Trigon® · KUB Duon®
KUB Centron® · KUB® V464
4 – 161

**Roughing**
TwinKom® G01
162 – 203

**Fine Boring**
MicroKom® *hi.flex* · MicroKom® *BluFlex™* · UniTurn®
204 – 299

**Easy Special™**
Solid Drilling · Roughing · Fine Boring
300 – 391

**Adaptors**
Taper Shanks · HSK · ABS® · PSC
392 – 505

**Kometric®**
Insert Seatings
506 – 603

**Inserts**
604 – 725

**Informations**
Accessories · Assembly Parts
ABS® · HSK · KomLoc® Clamping System
726 – 767

**Numerical Index**
Order formulae
768 – 786

# KOMET® – Solid Drilling






**The KOMET GROUP is one of the world's leading providers of high-precision KOMET® drilling and reaming tools for efficient bore machining. Our potential for providing innovative solutions, a comprehensive performance spectrum and personal commitment form the basis for successful partnerships with our customers.**

With the development of solid drill bits, KOMET® entered completely new territory in the Seventies.

The KUB® solid drill bit range has now become a leading concept in tool design.

Through the use of high-performance carbides and the latest generation of coatings, the cutting edges are always ideally matched with the solid bit drilling process.

The KOMET GROUP also provides its service and after-sales spectrum internationally. You will find us in any location where you manufacture products which demand a high level of quality.



# Index

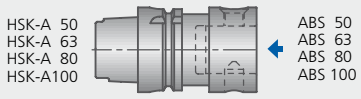

| | Page |
|---|---|
| Programme summary | 6 – 7 |
| Tool selection | 8 – 9 |
| **Solid drilling tools** | |
| KUB® Drillmax / KUB® Drillmax XL | 10 – 21 |
| JEL® Drillcut 24 | 22 – 24 |
| JEL® Drillmax 22 | 25 |
| JEL® Dreammax | 26 – 27 |
| KUB K2® | 28 – 37 |
| KUB Quatron® | 38 – 53 |
| KUB Pentron® | 54 – 73 |
| KUB Trigon® | 74 – 103 |
| KUB® drill | 104 – 115 |
| KUB Duon® | 116 – 137 |
| KUB Centron® | 138 – 151 |
| KUB® V464 | 152 – 155 |
| KUB® drill head | 156 – 157 |
| Flat-bottoming tool | 158 – 159 |
| Trepannning tool | 160 |
| Packet drill | 161 |
| Easy Special™ | Chapter 4 |

# Programme Summary – Solid Drilling

## 5 Adaptors

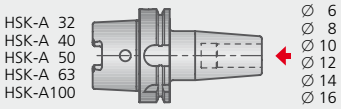
### HSK-A Adaptors
with ABS® connection

▸ 400



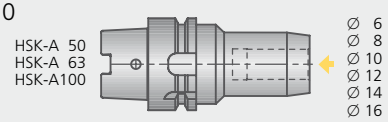

Thermal expansion chuck

▸ 490



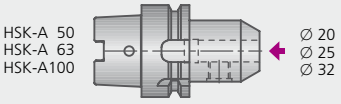

Expanding chuck

▸ 410



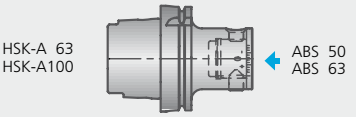

Adaptor sleeve Weldon

▸ 406



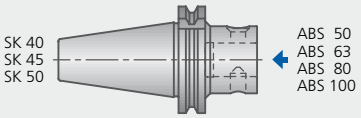

Eccentric adjusting device with ABS® connection

▸ 402



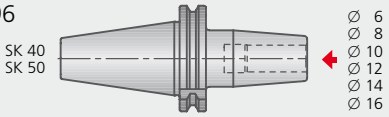

### Taper shanks DIN 69871
with ABS® connection

▸ 430



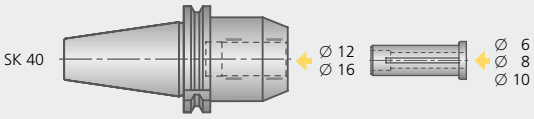

Thermal expansion chuck

▸ 496



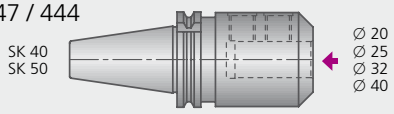

Expanding chuck

▸ 448



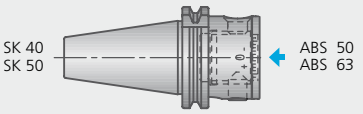

Adaptor sleeve Weldon / cylindrical shank (combination shank)

▸ 447 / 444



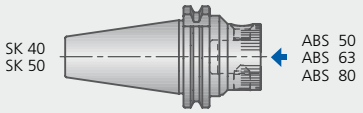

Eccentric adjusting device with ABS® connection

▸ 434



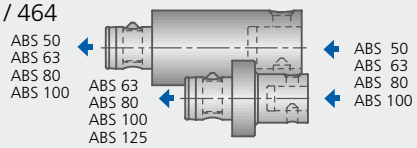

Torsional dampener with ABS® connection

▸ 435



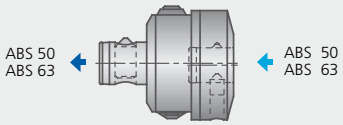

### ABS® Adaptors
Extension / Reducer

▸ 466 / 464



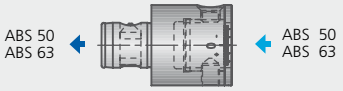

Adjustment device

▸ 461



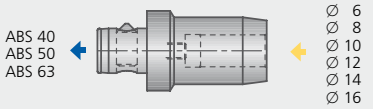

Eccentric adjusting device

▸ 462



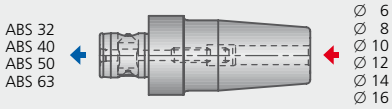

Expanding chuck

▸ 482



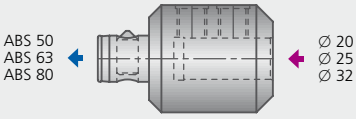

Thermal expansion chuck

▸ 502



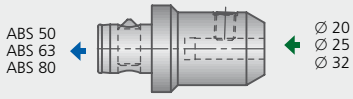

Adaptor sleeve Weldon

▸ 474



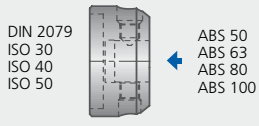

Adaptor sleeve Whistle Notch

▸ 472



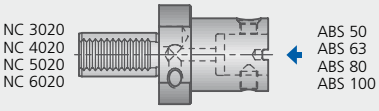

### Spindle adaptor flange
with ABS® connection

▸ 458



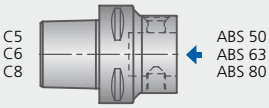

### VDI Adaptor
with ABS® connection

▸ 456




### PSC Adaptors ISO 26623
PSC interface with ABS® connection

▸ 460



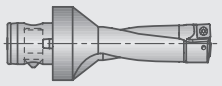



Further adaptors see chapter 5.

## 1 Tools for Solid Drilling, Trepanning and Flat Bottoming

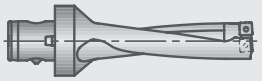
### with ABS® connection

ABS 50 ABS 63 ABS 80



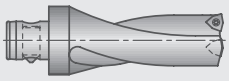
**KUB Quatron®**
∅ 14 – 65 mm
▸ 40 – 43

ABS 50 ABS 63



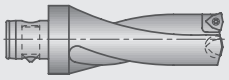
**KUB Pentron®**
∅ 14 – 46 mm
▸ 56 – 61

ABS 50



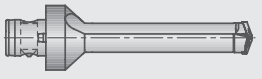
**KUB Trigon®**
∅ 14 – 44 mm
▸ 76 – 77

ABS 50 ABS 63 ABS 80



**KUB® drill**
∅ 38,5 – 82 mm
▸ 104 – 105

ABS 50 ABS 63



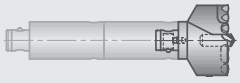
**KUB Duon®**
∅ 17,3 – 44,2 mm
▸ 118 – 133

ABS 50 ABS 63 ABS 80 ABS 100



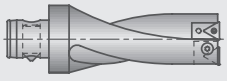
**KUB Centron®**
∅ 20 – 81 mm
▸ 140 – 143

ABS 50 ABS 63 ABS 80



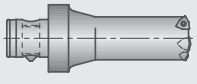
**KUB® V464**
∅ 80 – 155 mm
▸ 152

ABS 50 ABS 63 ABS 80



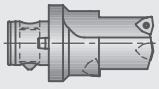
**Flat-bottoming tool**
∅ 37 – 64 mm
▸ 158

ABS 50 ABS 63 ABS 80

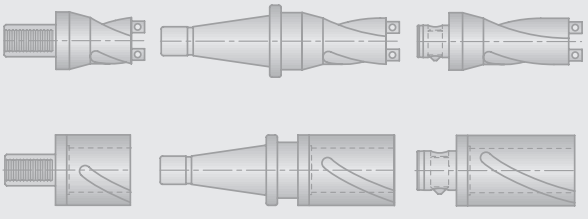


**Packet drill**
∅ 14 – 82 mm
▸ 161

ABS 50

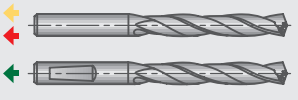


**Easy Special™**
∅ 14 – 44 mm
▸ Chapter 4



### with cylindrical shank

∅ 6 ∅ 8 ∅ 10 ∅ 12 ∅ 14 ∅ 16



**KUB® Drillmax**
∅ 3 – 16 mm
▸ 12 – 17

∅ 6 ∅ 8 ∅ 10 ∅ 12



**JEL® Drillcut 24**
∅ 5 – 12 mm
▸ 24

∅ 6 ∅ 8 ∅ 10



**JEL® Drillmax 22**
∅ 6 – 10 mm
▸ 25

∅ 6 ∅ 8 ∅ 10 ∅ 12



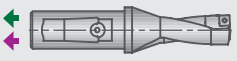
**JEL® Dreammax**
∅ 6 – 12 mm
▸ 26

∅ 16



**KUB K2®**
∅ 10 – 20,5 mm
▸ 30 – 35

∅ 20 ∅ 25 ∅ 32 ∅ 40



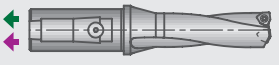
**KUB Quatron®**
∅ 14 – 44 mm
▸ 44 – 47

∅ 20 ∅ 25 ∅ 32 ∅ 40



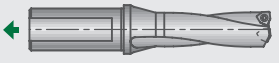
**KUB Pentron®**
∅ 14 – 46 mm
▸ 62 – 67

∅ 20 ∅ 25 ∅ 32



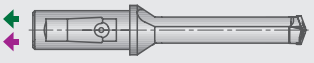
**KUB Trigon®**
∅ 12 – 44 mm
▸ 80 – 85

∅ 20 ∅ 25 ∅ 32 ∅ 40



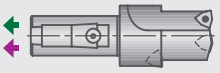
**KUB Trigon®**
∅ 14 – 54 mm
▸ 88 – 93

∅ 25 ∅ 32 ∅ 40



**KUB Duon®**
∅ 17,3 – 44,2 mm
▸ 118 – 129

∅ 20 ∅ 25 ∅ 32 ∅ 40



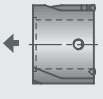
**Easy Special™**
∅ 14 – 44 mm
▸ Chapter 4

**Key**

- ABS® connection
- ABS® connection
- Cylindrical connection
- Whistle Notch connection
- Weldon connection
- Shrink connection



**KUB® drill head**
larger sizes on request
∅ 83 – 128 mm
▸ 156



**Trepannning tool**
on request
∅ 83 – 198 mm
▸ 160

# KOMET® Tool Selection

## Help Table for Solid Drilling

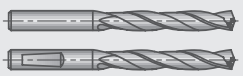
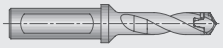
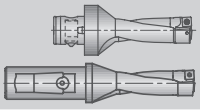
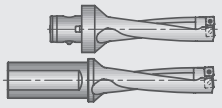
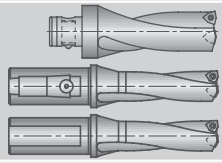
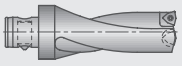
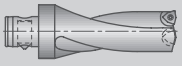
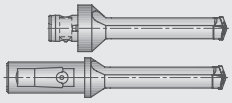
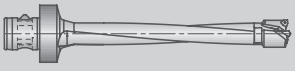
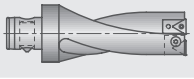
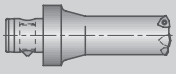
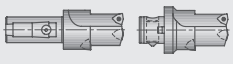


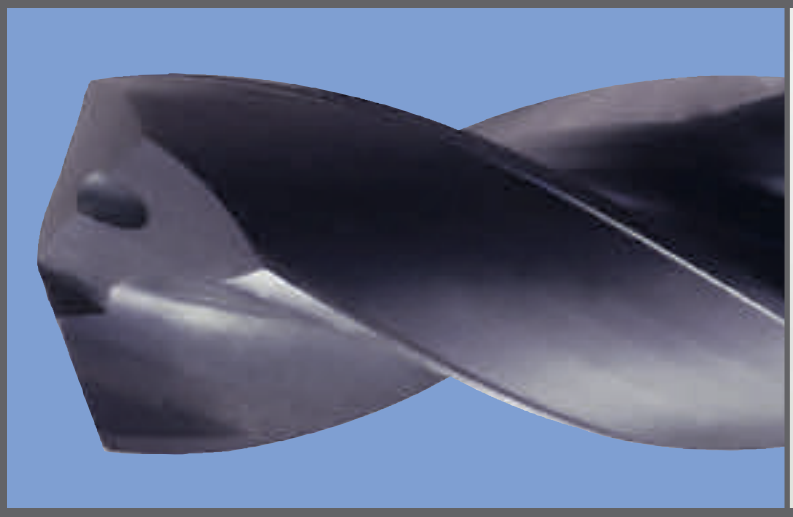


| Ø (mm) | L / D | Machining | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Length/ diameter ratio | solid drilling | blind hole | forge/ casting skin, interface | angled start and drilling out, inter-rupted cut | convex | cross bore | centering bore, seam | chamber | stack plate drilling | rough boring | adjustable |
| 3,0 – 16,0 | 5×D 7-8×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | | ◐ | ○ | |
| 3,0 – 10,0 | 20×D 30×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | | ○ | | |
| 5,0 – 12,0 | 5×D | ● | ● | ○ | ○ | ○ | ○ | ○ | | ○ | | |
| 6,0 – 10,0 | 5×D | ● | ● | ○ | ○ | ○ | ○ | ○ | | ○ | | |
| 6,0 – 12,0 | 4×D | ● | ● | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | |
| 10,0 – 20,5 +0,05 | 3 – 7×D | ● | ● | ○ | ○ | | | ● | | ● | | |
| 14,0 – 65,0 ±0,2 | 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |
| | 3×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |
| 14,0 – 46,0 $^{+0,3}_{-0,1}$ | 4×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ○ | ◐ | | ◐ |
| 14,0 – 46,0 $^{+0,35}_{-0,1}$ | 5×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | | ◐ | | ◐ |
| 12,0 – 44,0 ±0,1 | 2×D | ● | ● | ● | ● | ● | ● | ◐ | ● | | ◐ | ● |
| 12,0 – 54,0 ±0,1 | 3×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | | ○ | ● |
| 14,0 – 44,0 ±0,1 | 4×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | | | ◐ |
| 38,5 – 82,0 $^{+1,0}_{-0,5}$ | 3×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ◐ |
| 45,0 – 82,0 ±0,2 | 2×D | ● | ● | ● | ● | ● | ◐ | ◐ | ● | | ◐ | ◐ |
| | 3×D | ● | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | | | ◐ |
| 17,3 – 44,2 ±0,1 | 5×D | ● | ● | ◐ | ○ | ◐ | ◐ | ○ | ◐ | ● | ○ | |
| 20,0 – 81,0 ±0,1 | 9×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | | | |
| 80,0 – 155,0 | 6×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | | | ● |
| 83,0 – 128,0 ±0,4 | 4×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | | | |
| 83,0 – 198,0 ±0,5 | 3×D | ● | | ◐ | ◐ | ◐ | ◐ | ● | ● | | | |
| 37,0 – 64,0 ±0,5 | 3×D | | ◐ | | | | | | | | ● | ● |
| 14,0 – 82,0 | 2×D | ◐ | ◐ | ◐ | ○ | ◐ | ◐ | ◐ | ◐ | ● | ○ | ○ |
| | 3×D | ◐ | ◐ | ◐ | ○ | ◐ | ◐ | ◐ | ◐ | ● | ○ | ○ |
| 14,0 – 44,0 | 1,5 - 4×D | ● | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | | | ● |



● very good ◐ good ○ possible: see technical notes

| Coolant | | | | Material | | | | | | Tool | Page |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Emulsion | | MQL | | Mild steel/ tool steel | Stainless and acid-resistant steel | Grey cast iron, spheroidal cast iron | Non-ferrous metals | Heat-resistant steels | Hardened tool steel | | |
| internal | external | internal | external | P | M | K | N | S | H | | |
| ● | | ◐ | | ● | ◑ | ◑ | | | |  KUB® Drillmax<br>cylindrical shank DIN 6535 HA<br>cylindrical shank DIN 6535 HE | ▸ 12 – 17 |
| ● | | ◐ | | ● | ◑ | ◑ | | | | | |
| | | | | | | | ● | | |  JEL® Drillcut 24 PCD<br>cylindrical shank DIN 6535 HA | ▸ 24 |
| | | | | | | | ● | | |  JEL® Drillmax 22 PCD<br>cylindrical shank DIN 6535 HA | ▸ 25 |
| | | | | | | | ● | ● | |  JEL® Dreammax<br>cylindrical shank DIN 6535 HA | ▸ 26 |
| ● | | ◐ | | ● | ◑ | ● | | | |  KUB K2®<br>cylindrical shank ISO 9766 | ▸ 30 – 35 |
| ● | ◐ | ● | ◐ | ● | ○ | ● | ● | ● | ○ |  KUB Quatron®<br>ABS® connection<br>cylindrical shank (combination shank) | ▸ 40 – 47 |
| ● | ◐ | ● | ◐ | ● | ○ | ● | ● | ● | ○ | | |
| ● | ◐ | ◐ | MQL only with cylindrical shank | ● | ○ | ● | ● | ◑ | |  KUB Pentron®<br>ABS® Verbindung<br>cylindrical shank ISO 9766 | ▸ 56 – 67 |
| ● | ◐ | ◐ | | ● | ○ | ● | ● | ◑ | | | |
| ● | ◐ | ● | ◐ | ● | ○ | ● | ● | ● | ○ |  KUB Trigon®<br>ABS® connection<br>cylindrical shank (combination shank)<br>VDI kompatibel | ▸ 76 – 93<br>▸ 96 – 101 |
| ● | ◐ | ● | ○ | ● | ○ | ● | ● | ● | | | |
| ● | ○ | ● | ○ | ● | ○ | ● | ● | | | | |
| ● | ○ | ◐ | ○ | ● | ○ | ● | ● | | |  KUB® drill adjustable<br>ABS® connection | ▸ 104 – 105 |
| ● | ◐ | ◐ | ◐ | ● | ○ | ● | ● | ● | ○ |  KUB® drill<br>ABS® connection | ▸ 108 – 109 |
| ● | ○ | ◐ | ○ | ● | ○ | ● | ● | ● | | | |
| ● | ○ | ● | ○ | ● | ○ | ● | ● | | |  KUB Duon®<br>ABS® connection<br>cylindrical shank (combination shank) | ▸ 118 – 133 |
| ● | | ○ | | ● | ○ | ● | ● | | |  KUB Centron®<br>ABS® connection | ▸ 140 – 143 |
| ● | | ○ | | ● | ○ | ● | ● | | |  KUB® V464 drill head<br>ABS® T connection | ▸ 152 |
| ● | ○ | ◐ | ○ | ● | ○ | ● | ● | | |  KUB® drill head | ▸ 156 |
| ● | ○ | ◐ | ○ | ● | ○ | ● | ● | | |  Trepannning tool | ▸ 160 |
| ● | ◐ | ◐ | ○ | ● | ○ | ● | ● | | |  Flat-bottoming tool<br>ABS® connection | ▸ 158 |
| ● | ◐ | ◐ | ○ | ● | ◑ | ● | ◐ | | |  Packet drill | ▸ 161 |
| ● | ○ | ◐ | ○ | ● | ◑ | ● | ◐ | | | | |
| ● | ◐ | ◐ | ○ | ● | ○ | ● | ● | ● | |  Easy Special™ | Chapter 4 |





KUB® Drillmax
High-performance drill for small diameters

The KUB® Drillmax high-performance solid carbide drills complete our range for drill diameters of 3 to 16 mm and length/diameter ratios of **5×D and 7-8×D**.
Optimised, special flutes are ideal for removing chips and for highly productive machining.

Variant:
- Drill diameter: 3.00 – 16.00 mm
- Hole tolerance: IT9 (achievable)
- Drilling depth: 5×D, 7-8×D
- Shank shape: HA and HE (DIN 6535)
- Coating: TiAlN
- Point angle: 140°
- Helix angle: 30°
- Internal coolant supply

BENEFITS for you:

- Excellent hole tolerances
- Optimum chip removal thanks to special flutes
- Optimum machining result thanks to good coordination of carbide and coating with drill geometry
- Long tool edge life thanks to effective coating

KUB® Drillmax XL
High-performance drill for deep holes

With the KOMET KUB® Drillmax XL, the expertise gained from developing many special solutions has been transferred to a standard tool range, which is available from stock for 20×D in diameters of 3.0 to 10.0 mm and for 30×D in diameters of 3.0 to 8.0 mm.
The spiral-fluted deep-hole drills have four guide chamfers, ensuring good guidance.

Variant:
- 4 x guide chamfers
- Drill diameter: for 20×D: 3.00 – 10.0 mm
  for 30×D: 3.00 – 8.00 mm
- Shank: DIN 6535 HA
- Coating: TiAlN
- Point angle: 140°
- Helix angle: 30°
- Internal coolant supply

BENEFITS for you:

- 4 x chamfers for high drilling and alignment precision
- Ideal chip removal thanks to optimised, special flutes
- Reliable drilling up to 30×D, with no pecking
- Significantly reduced production times due to extremely high feed rates and cutting speeds

Note:
Pilot hole required, depth: 2 – 3×D
KOMET KUB® Drillmax 5×D standard drills with the same diameter can be used.



## KOMET KUB® Drillmax


Page

**Cylindrical Shank DIN 6535 HA / HE**

∅ 3 – 16 mm, R.H. cutting
Drilling depth 5×D 12 – 13
Drilling depth 7-8×D 14 – 15

**Cylindrical Shank DIN 6535 HA**

∅ 3 – 10 mm, R.H. cutting 16
Drilling depth 20×D

∅ 3 – 8 mm, R.H. cutting 17
Drilling depth 30×D

**Technical Notes** 18 – 19

Guideline values for solid drilling

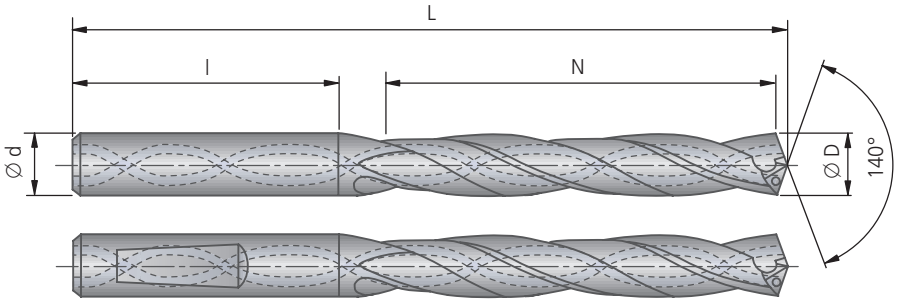
**Technical Informations** 21

# KOMET KUB® Drillmax — Ø 3,0 – 16,0 mm

## High-Performance Solid Carbide Drill with Cylindrical Shank DIN 6535 HA / HE, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ✕ | ◐ | ○ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 21 ✕ not possible




| 5 × D | | | | | | | for workpiece material |
|---|---|---|---|---|---|---|---|
| Ø D | Ø d × l | DIN 6535 HA Order No. | DIN 6535 HE Order No. | L | N | kg ~ | P M K N S H |
| 3,0 | 6 × 36 | V03 03000.112730 | V03 03000.212730 | 66 | 24 | 0,016 | |
| 3,1 | 6 × 36 | V03 03100.112730 | V03 03100.212730 | 66 | 24 | 0,016 | |
| 3,2 | 6 × 36 | V03 03200.112730 | V03 03200.212730 | 66 | 24 | 0,017 | |
| 3,3 | 6 × 36 | V03 03300.112730 | V03 03300.212730 | 66 | 24 | 0,017 | |
| 3,4 | 6 × 36 | V03 03400.112730 | V03 03400.212730 | 66 | 24 | 0,017 | ● ◐ ◐ |
| 3,5 | 6 × 36 | V03 03500.112730 | V03 03500.212730 | 66 | 24 | 0,018 | |
| 3,6 | 6 × 36 | V03 03600.112730 | V03 03600.212730 | 66 | 24 | 0,018 | |
| 3,7 | 6 × 36 | V03 03700.112730 | V03 03700.212730 | 66 | 24 | 0,018 | |
| 3,8 | 6 × 36 | V03 03800.112730 | V03 03800.212730 | 74 | 30 | 0,018 | |
| 3,9 | 6 × 36 | V03 03900.112730 | V03 03900.212730 | 74 | 30 | 0,018 | |
| 4,0 | 6 × 36 | V03 04000.112730 | V03 04000.212730 | 74 | 30 | 0,018 | |
| 4,1 | 6 × 36 | V03 04100.112730 | V03 04100.212730 | 74 | 30 | 0,019 | |
| 4,2 | 6 × 36 | V03 04200.112730 | V03 04200.212730 | 74 | 30 | 0,019 | |
| 4,3 | 6 × 36 | V03 04300.112730 | V03 04300.212730 | 74 | 30 | 0,019 | ● ◐ ◐ |
| 4,4 | 6 × 36 | V03 04400.112730 | V03 04400.212730 | 74 | 30 | 0,019 | |
| 4,5 | 6 × 36 | V03 04500.112730 | V03 04500.212730 | 74 | 30 | 0,019 | |
| 4,6 | 6 × 36 | V03 04600.112730 | V03 04600.212730 | 74 | 30 | 0,019 | |
| 4,7 | 6 × 36 | V03 04700.112730 | V03 04700.212730 | 74 | 30 | 0,019 | |
| 4,8 | 6 × 36 | V03 04800.112730 | V03 04800.212730 | 82 | 35 | 0,020 | |
| 4,9 | 6 × 36 | V03 04900.112730 | V03 04900.212730 | 82 | 35 | 0,020 | |
| 5,0 | 6 × 36 | V03 05000.112730 | V03 05000.212730 | 82 | 35 | 0,020 | |
| 5,1 | 6 × 36 | V03 05100.112730 | V03 05100.212730 | 82 | 35 | 0,021 | |
| 5,2 | 6 × 36 | V03 05200.112730 | V03 05200.212730 | 82 | 35 | 0,021 | |
| 5,3 | 6 × 36 | V03 05300.112730 | V03 05300.212730 | 82 | 35 | 0,022 | |
| 5,4 | 6 × 36 | V03 05400.112730 | V03 05400.212730 | 82 | 35 | 0,022 | |
| 5,5 | 6 × 36 | V03 05500.112730 | V03 05500.212730 | 82 | 35 | 0,023 | ● ◐ ◐ |
| 5,54 | 6 × 36 | V03 05540.112730 | V03 05540.212730 | 82 | 35 | 0,023 | |
| 5,6 | 6 × 36 | V03 05600.112730 | V03 05600.212730 | 82 | 35 | 0,023 | |
| 5,7 | 6 × 36 | V03 05700.112730 | V03 05700.212730 | 82 | 35 | 0,024 | |
| 5,8 | 6 × 36 | V03 05800.112730 | V03 05800.212730 | 82 | 35 | 0,024 | |
| 5,9 | 6 × 36 | V03 05900.112730 | V03 05900.212730 | 82 | 35 | 0,025 | |
| 6,0 | 6 × 36 | V03 06000.112730 | V03 06000.212730 | 82 | 35 | 0,025 | |
| 6,1 | 8 × 36 | V03 06100.112730 | V03 06100.212730 | 91 | 43 | 0,027 | |
| 6,2 | 8 × 36 | V03 06200.112730 | V03 06200.212730 | 91 | 43 | 0,027 | |
| 6,3 | 8 × 36 | V03 06300.112730 | V03 06300.212730 | 91 | 43 | 0,030 | |
| 6,4 | 8 × 36 | V03 06400.112730 | V03 06400.212730 | 91 | 43 | 0,030 | |
| 6,5 | 8 × 36 | V03 06500.112730 | V03 06500.212730 | 91 | 43 | 0,032 | ● ◐ ◐ |
| 6,6 | 8 × 36 | V03 06600.112730 | V03 06600.212730 | 91 | 43 | 0,032 | |
| 6,7 | 8 × 36 | V03 06700.112730 | V03 06700.212730 | 91 | 43 | 0,032 | |
| 6,8 | 8 × 36 | V03 06800.112730 | V03 06800.212730 | 91 | 43 | 0,035 | |
| 6,9 | 8 × 36 | V03 06900.112730 | V03 06900.212730 | 91 | 43 | 0,035 | |

Note: with whistle notch clamping surface conforming to DIN 6535 HE. Delivery time 1 week (minimum purchase: 3 pieces)

## High-Performance Solid Carbide Drill with Cylindrical Shank DIN 6535 HA / HE, R.H. cutting

| 5 × D | | | | | | | for workpiece material |
|---|---|---|---|---|---|---|---|
| Ø D | Ø d × l | DIN 6535 HA Order No. | DIN 6535 HE Order No. | L | N | kg ~ | P M K N S H |
| 7,0 | 8 × 36 | V03 07000.112730 | V03 07000.212730 | 91 | 43 | 0,037 | |
| 7,1 | 8 × 36 | V03 07100.112730 | V03 07100.212730 | 91 | 43 | 0,037 | |
| 7,2 | 8 × 36 | V03 07200.112730 | V03 07200.212730 | 91 | 43 | 0,039 | |
| 7,3 | 8 × 36 | V03 07300.112730 | V03 07300.212730 | 91 | 43 | 0,039 | |
| 7,4 | 8 × 36 | V03 07400.112730 | V03 07400.212730 | 91 | 43 | 0,040 | |
| 7,43 | 8 × 36 | V03 07430.112730 | V03 07430.212730 | 91 | 43 | 0,040 | |
| 7,5 | 8 × 36 | V03 07500.112730 | V03 07500.212730 | 91 | 43 | 0,040 | |
| 7,6 | 8 × 36 | V03 07600.112730 | V03 07600.212730 | 91 | 43 | 0,041 | |
| 7,7 | 8 × 36 | V03 07700.112730 | V03 07700.212730 | 91 | 43 | 0,041 | |
| 7,8 | 8 × 36 | V03 07800.112730 | V03 07800.212730 | 91 | 43 | 0,043 | |
| 7,9 | 8 × 36 | V03 07900.112730 | V03 07900.212730 | 91 | 43 | 0,043 | |
| 8,0 | 8 × 36 | V03 08000.112730 | V03 08000.212730 | 91 | 43 | 0,044 | |
| 8,1 | 10 × 40 | V03 08100.112730 | V03 08100.212730 | 103 | 49 | 0,045 | |
| 8,2 | 10 × 40 | V03 08200.112730 | V03 08200.212730 | 103 | 49 | 0,045 | |
| 8,3 | 10 × 40 | V03 08300.112730 | V03 08300.212730 | 103 | 49 | 0,047 | |
| 8,4 | 10 × 40 | V03 08400.112730 | V03 08400.212730 | 103 | 49 | 0,047 | |
| 8,5 | 10 × 40 | V03 08500.112730 | V03 08500.212730 | 103 | 49 | 0,050 | |
| 8,6 | 10 × 40 | V03 08600.112730 | V03 08600.212730 | 103 | 49 | 0,050 | |
| 8,7 | 10 × 40 | V03 08700.112730 | V03 08700.212730 | 103 | 49 | 0,052 | |
| 8,8 | 10 × 40 | V03 08800.112730 | V03 08800.212730 | 103 | 49 | 0,052 | |
| 8,9 | 10 × 40 | V03 08900.112730 | V03 08900.212730 | 103 | 49 | 0,055 | |
| 9,0 | 10 × 40 | V03 09000.112730 | V03 09000.212730 | 103 | 49 | 0,055 | |
| 9,1 | 10 × 40 | V03 09100.112730 | V03 09100.212730 | 103 | 49 | 0,057 | |
| 9,2 | 10 × 40 | V03 09200.112730 | V03 09200.212730 | 103 | 49 | 0,057 | |
| 9,3 | 10 × 40 | V03 09300.112730 | V03 09300.212730 | 103 | 49 | 0,062 | |
| 9,4 | 10 × 40 | V03 09400.112730 | V03 09400.212730 | 103 | 49 | 0,062 | |
| 9,5 | 10 × 40 | V03 09500.112730 | V03 09500.212730 | 103 | 49 | 0,067 | |
| 9,54 | 10 × 40 | V03 09540.112730 | V03 09540.212730 | 103 | 49 | 0,067 | |
| 9,6 | 10 × 40 | V03 09600.112730 | V03 09600.212730 | 103 | 49 | 0,067 | |
| 9,7 | 10 × 40 | V03 09700.112730 | V03 09700.212730 | 103 | 49 | 0,072 | |
| 9,8 | 10 × 40 | V03 09800.112730 | V03 09800.212730 | 103 | 49 | 0,072 | |
| 9,9 | 10 × 40 | V03 09900.112730 | V03 09900.212730 | 103 | 49 | 0,077 | |
| 10,0 | 10 × 40 | V03 10000.112730 | V03 10000.212730 | 103 | 49 | 0,077 | |
| 10,1 | 12 × 45 | V03 10100.112730 | V03 10100.212730 | 118 | 56 | 0,080 | |
| 10,2 | 12 × 45 | V03 10200.112730 | V03 10200.212730 | 118 | 56 | 0,085 | |
| 10,3 | 12 × 45 | V03 10300.112730 | V03 10300.212730 | 118 | 56 | 0,090 | |
| 10,4 | 12 × 45 | V03 10400.112730 | V03 10400.212730 | 118 | 56 | 0,094 | |
| 10,5 | 12 × 45 | V03 10500.112730 | V03 10500.212730 | 118 | 56 | 0,097 | |
| 10,6 | 12 × 45 | V03 10600.112730 | V03 10600.212730 | 118 | 56 | 0,100 | |
| 10,7 | 12 × 45 | V03 10700.112730 | V03 10700.212730 | 118 | 56 | 0,102 | |
| 10,8 | 12 × 45 | V03 10800.112730 | V03 10800.212730 | 118 | 56 | 0,105 | |
| 10,9 | 12 × 45 | V03 10900.112730 | V03 10900.212730 | 118 | 56 | 0,107 | |
| 11,0 | 12 × 45 | V03 11000.112730 | V03 11000.212730 | 118 | 56 | 0,110 | |
| 11,1 | 12 × 45 | V03 11100.112730 | V03 11100.212730 | 118 | 56 | 0,112 | |
| 11,2 | 12 × 45 | V03 11200.112730 | V03 11200.212730 | 118 | 56 | 0,115 | |
| 11,3 | 12 × 45 | V03 11300.112730 | V03 11300.212730 | 118 | 56 | 0,117 | |
| 11,4 | 12 × 45 | V03 11400.112730 | V03 11400.212730 | 118 | 56 | 0,120 | |
| 11,5 | 12 × 45 | V03 11500.112730 | V03 11500.212730 | 118 | 56 | 0,122 | |
| 11,54 | 12 × 45 | V03 11540.112730 | V03 11540.212730 | 118 | 56 | 0,122 | |
| 11,6 | 12 × 45 | V03 11600.112730 | V03 11600.212730 | 118 | 56 | 0,125 | |
| 11,7 | 12 × 45 | V03 11700.112730 | V03 11700.212730 | 118 | 56 | 0,127 | |
| 11,8 | 12 × 45 | V03 11800.112730 | V03 11800.212730 | 118 | 56 | 0,130 | |
| 11,9 | 12 × 45 | V03 11900.112730 | V03 11900.212730 | 118 | 56 | 0,132 | |
| 12,0 | 12 × 45 | V03 12000.112730 | V03 12000.212730 | 118 | 56 | 0,135 | |
| 12,5 | 14 × 45 | V03 12500.112730 | V03 12500.212730 | 124 | 60 | 0,180 | |
| 12,8 | 14 × 45 | V03 12800.112730 | V03 12800.212730 | 124 | 60 | 0,180 | |
| 13,0 | 14 × 45 | V03 13000.112730 | V03 13000.212730 | 124 | 60 | 0,182 | |
| 13,3 | 14 × 45 | V03 13300.112730 | V03 13300.212730 | 124 | 60 | 0,182 | |
| 13,5 | 14 × 45 | V03 13500.112730 | V03 13500.212730 | 124 | 60 | 0,185 | |
| 13,8 | 14 × 45 | V03 13800.112730 | V03 13800.212730 | 124 | 60 | 0,185 | |
| 14,0 | 14 × 45 | V03 14000.112730 | V03 14000.212730 | 124 | 60 | 0,188 | |
| 14,5 | 16 × 48 | V03 14500.112730 | V03 14500.212730 | 133 | 63 | 0,240 | |
| 14,8 | 16 × 48 | V03 14800.112730 | V03 14800.212730 | 133 | 63 | 0,240 | |
| 15,0 | 16 × 48 | V03 15000.112730 | V03 15000.212730 | 133 | 63 | 0,250 | |
| 15,5 | 16 × 48 | V03 15500.112730 | V03 15500.212730 | 133 | 63 | 0,270 | |
| 15,8 | 16 × 48 | V03 15800.112730 | V03 15800.212730 | 133 | 63 | 0,270 | |
| 16,0 | 16 × 48 | V03 16000.112730 | V03 16000.212730 | 133 | 63 | 0,282 | |

Other diameters on request.

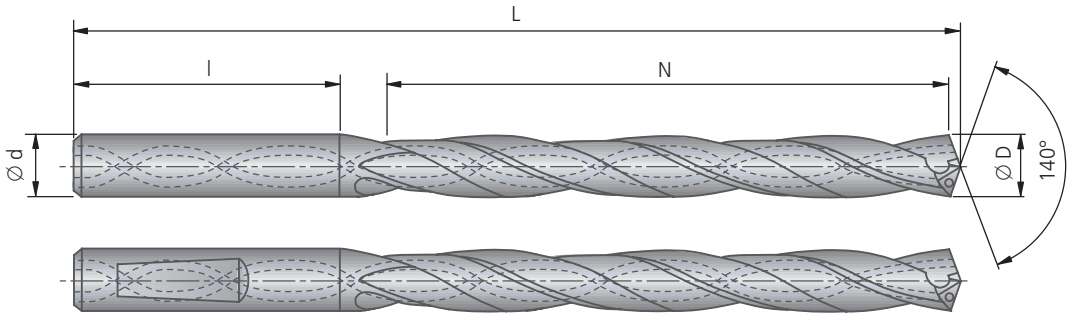
Guideline values for solid drilling: page 18 – 19.

# KOMET KUB® Drillmax — Ø 3,0 – 16,0 mm

## High-Performance Solid Carbide Drill with Cylindrical Shank DIN 6535 HA / HE, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7-8×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ✕ | ◐ | ○ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 21 ✕ not possible




| 7 – 8 × D | | | | | | | for workpiece material |
|---|---|---|---|---|---|---|---|
| Ø D | Ø d × l | DIN 6535 HA Order No. | DIN 6535 HE Order No. | L | N | kg ~ | P M K N S H |
| 3,0 | 6 × 36 | V04 03000.112730 | V04 03000.212730 | 70 | 28 | 0,017 | |
| 3,1 | 6 × 36 | V04 03100.112730 | V04 03100.212730 | 70 | 28 | 0,017 | |
| 3,2 | 6 × 36 | V04 03200.112730 | V04 03200.212730 | 70 | 28 | 0,017 | |
| 3,3 | 6 × 36 | V04 03300.112730 | V04 03300.212730 | 70 | 28 | 0,017 | ● ◐ ◐ |
| 3,4 | 6 × 36 | V04 03400.112730 | V04 03400.212730 | 70 | 28 | 0,018 | |
| 3,5 | 6 × 36 | V04 03500.112730 | V04 03500.212730 | 70 | 28 | 0,018 | |
| 3,6 | 6 × 36 | V04 03600.112730 | V04 03600.212730 | 70 | 28 | 0,018 | |
| 3,7 | 6 × 36 | V04 03700.112730 | V04 03700.212730 | 70 | 28 | 0,018 | |
| 3,8 | 6 × 36 | V04 03800.112730 | V04 03800.212730 | 80 | 36 | 0,019 | |
| 3,9 | 6 × 36 | V04 03900.112730 | V04 03900.212730 | 80 | 36 | 0,019 | |
| 4,0 | 6 × 36 | V04 04000.112730 | V04 04000.212730 | 80 | 36 | 0,019 | |
| 4,1 | 6 × 36 | V04 04100.112730 | V04 04100.212730 | 80 | 36 | 0,020 | |
| 4,2 | 6 × 36 | V04 04200.112730 | V04 04200.212730 | 80 | 36 | 0,020 | ● ◐ ◐ |
| 4,3 | 6 × 36 | V04 04300.112730 | V04 04300.212730 | 80 | 36 | 0,020 | |
| 4,4 | 6 × 36 | V04 04400.112730 | V04 04400.212730 | 80 | 36 | 0,021 | |
| 4,5 | 6 × 36 | V04 04500.112730 | V04 04500.212730 | 80 | 36 | 0,021 | |
| 4,6 | 6 × 36 | V04 04600.112730 | V04 04600.212730 | 80 | 36 | 0,021 | |
| 4,7 | 6 × 36 | V04 04700.112730 | V04 04700.212730 | 80 | 36 | 0,021 | |
| 4,8 | 6 × 36 | V04 04800.112730 | V04 04800.212730 | 92 | 45 | 0,023 | |
| 4,9 | 6 × 36 | V04 04900.112730 | V04 04900.212730 | 92 | 45 | 0,023 | |
| 5,0 | 6 × 36 | V04 05000.112730 | V04 05000.212730 | 92 | 45 | 0,024 | |
| 5,1 | 6 × 36 | V04 05100.112730 | V04 05100.212730 | 92 | 45 | 0,025 | |
| 5,2 | 6 × 36 | V04 05200.112730 | V04 05200.212730 | 92 | 45 | 0,025 | |
| 5,3 | 6 × 36 | V04 05300.112730 | V04 05300.212730 | 92 | 45 | 0,026 | |
| 5,4 | 6 × 36 | V04 05400.112730 | V04 05400.212730 | 92 | 45 | 0,027 | ● ◐ ◐ |
| 5,5 | 6 × 36 | V04 05500.112730 | V04 05500.212730 | 92 | 45 | 0,027 | |
| 5,54 | 6 × 36 | V04 05540.112730 | V04 05540.212730 | 92 | 45 | 0,027 | |
| 5,6 | 6 × 36 | V04 05600.112730 | V04 05600.212730 | 92 | 45 | 0,028 | |
| 5,7 | 6 × 36 | V04 05700.112730 | V04 05700.212730 | 92 | 45 | 0,029 | |
| 5,8 | 6 × 36 | V04 05800.112730 | V04 05800.212730 | 92 | 45 | 0,030 | |
| 5,9 | 6 × 36 | V04 05900.112730 | V04 05900.212730 | 92 | 45 | 0,030 | |
| 6,0 | 6 × 36 | V04 06000.112730 | V04 06000.212730 | 92 | 45 | 0,031 | |
| 6,1 | 8 × 36 | V04 06100.112730 | V04 06100.212730 | 100 | 52 | 0,032 | |
| 6,2 | 8 × 36 | V04 06200.112730 | V04 06200.212730 | 100 | 52 | 0,034 | |
| 6,3 | 8 × 36 | V04 06300.112730 | V04 06300.212730 | 100 | 52 | 0,036 | |
| 6,4 | 8 × 36 | V04 06400.112730 | V04 06400.212730 | 100 | 52 | 0,038 | |
| 6,5 | 8 × 36 | V04 06500.112730 | V04 06500.212730 | 100 | 52 | 0,039 | ● ◐ ◐ |
| 6,6 | 8 × 36 | V04 06600.112730 | V04 06600.212730 | 100 | 52 | 0,040 | |
| 6,7 | 8 × 36 | V04 06700.112730 | V04 06700.212730 | 100 | 52 | 0,041 | |
| 6,8 | 8 × 36 | V04 06800.112730 | V04 06800.212730 | 100 | 52 | 0,043 | |

Note: with whistle notch clamping surface conforming to DIN 6535 HE. Delivery time 1 week (minimum purchase: 3 pieces)

## High-Performance Solid Carbide Drill with Cylindrical Shank DIN 6535 HA / HE, R.H. cutting



| 7 – 8 × D | | | | | | | for workpiece material |
|---|---|---|---|---|---|---|---|
| Ø D | Ø d × l | DIN 6535 HA Order No. | DIN 6535 HE Order No. | L | N | kg ~ | P M K N S H |
| 6,9 | 8 × 36 | V04 06900.112730 | V04 06900.212730 | 108 | 60 | 0,045 | |
| 7,0 | 8 × 36 | V04 07000.112730 | V04 07000.212730 | 108 | 60 | 0,045 | |
| 7,1 | 8 × 36 | V04 07100.112730 | V04 07100.212730 | 108 | 60 | 0,046 | |
| 7,2 | 8 × 36 | V04 07200.112730 | V04 07200.212730 | 108 | 60 | 0,047 | |
| 7,3 | 8 × 36 | V04 07300.112730 | V04 07300.212730 | 108 | 60 | 0,047 | |
| 7,4 | 8 × 36 | V04 07400.112730 | V04 07400.212730 | 108 | 60 | 0,048 | |
| 7,43 | 8 × 36 | V04 07430.112730 | V04 07430.212730 | 108 | 60 | 0,048 | ● ◐ ◐ |
| 7,5 | 8 × 36 | V04 07500.112730 | V04 07500.212730 | 108 | 60 | 0,049 | |
| 7,6 | 8 × 36 | V04 07600.112730 | V04 07600.212730 | 108 | 60 | 0,050 | |
| 7,7 | 8 × 36 | V04 07700.112730 | V04 07700.212730 | 108 | 60 | 0,050 | |
| 7,8 | 8 × 36 | V04 07800.112730 | V04 07800.212730 | 108 | 60 | 0,051 | |
| 7,9 | 8 × 36 | V04 07900.112730 | V04 07900.212730 | 108 | 60 | 0,052 | |
| 8,0 | 8 × 36 | V04 08000.112730 | V04 08000.212730 | 108 | 60 | 0,053 | |
| 8,1 | 10 × 40 | V04 08100.112730 | V04 08100.212730 | 122 | 68 | 0,055 | |
| 8,2 | 10 × 40 | V04 08200.112730 | V04 08200.212730 | 122 | 68 | 0,057 | |
| 8,3 | 10 × 40 | V04 08300.112730 | V04 08300.212730 | 122 | 68 | 0,060 | |
| 8,4 | 10 × 40 | V04 08400.112730 | V04 08400.212730 | 122 | 68 | 0,062 | |
| 8,5 | 10 × 40 | V04 08500.112730 | V04 08500.212730 | 122 | 68 | 0,065 | |
| 8,6 | 10 × 40 | V04 08600.112730 | V04 08600.212730 | 122 | 68 | 0,067 | |
| 8,7 | 10 × 40 | V04 08700.112730 | V04 08700.212730 | 122 | 68 | 0,070 | |
| 8,8 | 10 × 40 | V04 08800.112730 | V04 08800.212730 | 122 | 68 | 0,072 | |
| 8,9 | 10 × 40 | V04 08900.112730 | V04 08900.212730 | 122 | 68 | 0,075 | |
| 9,0 | 10 × 40 | V04 09000.112730 | V04 09000.212730 | 122 | 68 | 0,077 | |
| 9,1 | 10 × 40 | V04 09100.112730 | V04 09100.212730 | 130 | 76 | 0,080 | ● ◐ ◐ |
| 9,2 | 10 × 40 | V04 09200.112730 | V04 09200.212730 | 130 | 76 | 0,082 | |
| 9,3 | 10 × 40 | V04 09300.112730 | V04 09300.212730 | 130 | 76 | 0,085 | |
| 9,4 | 10 × 40 | V04 09400.112730 | V04 09400.212730 | 130 | 76 | 0,087 | |
| 9,5 | 10 × 40 | V04 09500.112730 | V04 09500.212730 | 130 | 76 | 0,090 | |
| 9,54 | 10 × 40 | V04 09540.112730 | V04 09540.212730 | 130 | 76 | 0,090 | |
| 9,6 | 10 × 40 | V04 09600.112730 | V04 09600.212730 | 130 | 76 | 0,090 | |
| 9,7 | 10 × 40 | V04 09700.112730 | V04 09700.212730 | 130 | 76 | 0,092 | |
| 9,8 | 10 × 40 | V04 09800.112730 | V04 09800.212730 | 130 | 76 | 0,095 | |
| 9,9 | 10 × 40 | V04 09900.112730 | V04 09900.212730 | 130 | 76 | 0,097 | |
| 10,0 | 10 × 40 | V04 10000.112730 | V04 10000.212730 | 130 | 76 | 0,099 | |
| 10,1 | 12 × 45 | V04 10100.112730 | V04 10100.212730 | 152 | 90 | 0,102 | |
| 10,2 | 12 × 45 | V04 10200.112730 | V04 10200.212730 | 152 | 90 | 0,105 | |
| 10,3 | 12 × 45 | V04 10300.112730 | V04 10300.212730 | 152 | 90 | 0,110 | |
| 10,4 | 12 × 45 | V04 10400.112730 | V04 10400.212730 | 152 | 90 | 0,112 | |
| 10,5 | 12 × 45 | V04 10500.112730 | V04 10500.212730 | 152 | 90 | 0,115 | |
| 10,6 | 12 × 45 | V04 10600.112730 | V04 10600.212730 | 152 | 90 | 0,117 | |
| 10,7 | 12 × 45 | V04 10700.112730 | V04 10700.212730 | 152 | 90 | 0,120 | |
| 10,8 | 12 × 45 | V04 10800.112730 | V04 10800.212730 | 152 | 90 | 0,122 | |
| 10,9 | 12 × 45 | V04 10900.112730 | V04 10900.212730 | 152 | 90 | 0,125 | |
| 11,0 | 12 × 45 | V04 11000.112730 | V04 11000.212730 | 152 | 90 | 0,127 | |
| 11,1 | 12 × 45 | V04 11100.112730 | V04 11100.212730 | 152 | 90 | 0,130 | ● ◐ ◐ |
| 11,2 | 12 × 45 | V04 11200.112730 | V04 11200.212730 | 152 | 90 | 0,132 | |
| 11,3 | 12 × 45 | V04 11300.112730 | V04 11300.212730 | 152 | 90 | 0,135 | |
| 11,4 | 12 × 45 | V04 11400.112730 | V04 11400.212730 | 152 | 90 | 0,137 | |
| 11,5 | 12 × 45 | V04 11500.112730 | V04 11500.212730 | 152 | 90 | 0,140 | |
| 11,54 | 12 × 45 | V04 11540.112730 | V04 11540.212730 | 152 | 90 | 0,140 | |
| 11,6 | 12 × 45 | V04 11600.112730 | V04 11600.212730 | 152 | 90 | 0,145 | |
| 11,7 | 12 × 45 | V04 11700.112730 | V04 11700.212730 | 152 | 90 | 0,150 | |
| 11,8 | 12 × 45 | V04 11800.112730 | V04 11800.212730 | 152 | 90 | 0,155 | |
| 11,9 | 12 × 45 | V04 11900.112730 | V04 11900.212730 | 152 | 90 | 0,160 | |
| 12,0 | 12 × 45 | V04 12000.112730 | V04 12000.212730 | 152 | 90 | 0,168 | |
| 12,5 | 14 × 45 | V04 12500.112730 | V04 12500.212730 | 170 | 106 | 0,198 | |
| 12,8 | 14 × 45 | V04 12800.112730 | V04 12800.212730 | 170 | 106 | 0,200 | |
| 13,0 | 14 × 45 | V04 13000.112730 | V04 13000.212730 | 170 | 106 | 0,210 | |
| 13,3 | 14 × 45 | V04 13300.112730 | V04 13300.212730 | 170 | 106 | 0,220 | ● ◐ ◐ |
| 13,5 | 14 × 45 | V04 13500.112730 | V04 13500.212730 | 170 | 106 | 0,230 | |
| 13,8 | 14 × 45 | V04 13800.112730 | V04 13800.212730 | 170 | 106 | 0,240 | |
| 14,0 | 14 × 45 | V04 14000.112730 | V04 14000.212730 | 170 | 106 | 0,246 | |
| 14,5 | 16 × 48 | V04 14500.112730 | V04 14500.212730 | 192 | 122 | 0,315 | |
| 14,8 | 16 × 48 | V04 14800.112730 | V04 14800.212730 | 192 | 122 | 0,317 | |
| 15,0 | 16 × 48 | V04 15000.112730 | V04 15000.212730 | 192 | 122 | 0,320 | |
| 15,5 | 16 × 48 | V04 15500.112730 | V04 15500.212730 | 192 | 122 | 0,340 | ● ◐ ◐ |
| 15,8 | 16 × 48 | V04 15800.112730 | V04 15800.212730 | 192 | 122 | 0,350 | |
| 16,0 | 16 × 48 | V04 16000.112730 | V04 16000.212730 | 192 | 122 | 0,360 | |

Other diameters on request.

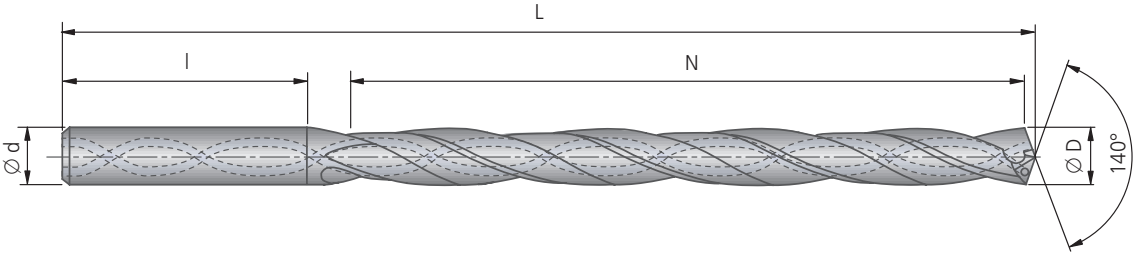
Guideline values for solid drilling: page 18 – 19.

# KOMET KUB® Drillmax XL — Ø 3,0 – 10,0 mm · 20×D

## High-Performance Solid Carbide Drill with Cylindrical Shank DIN 6535 HA, R.H. cutting

**Warning!** A pilot hole must always be drilled. Direct spot drilling is not possible, even on a machined spot-drill surface. Angled surfaces or unmachined spot-drill surfaces must also be faced or spot faced for the pilot drilling tool (page 20).

- 4 x guide chamfers
- coating: TiAlN
- with coolant channels



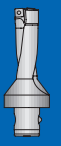

| 20 × D | | | | | | for workpiece material |
|---|---|---|---|---|---|---|
| Ø D | Ø d × l | DIN 6535 HA Order No. | L | N | kg ~ | P M K N S H |
| 3,0 | 6 × 36 | V05 03000.117830 | 108 | 62 | | |
| 4,0 | 6 × 36 | V05 04000.117830 | 132 | 82 | | |
| 4,5 | 6 × 36 | V05 04500.117830 | 144 | 95 | | ● ● |
| 5,0 | 6 × 36 | V05 05000.117830 | 156 | 103 | | |
| 5,5 | 6 × 36 | V05 05500.117830 | 168 | 113 | | |
| 6,0 | 6 × 36 | V05 06000.117830 | 178 | 123 | | |
| 6,5 | 8 × 36 | V05 06500.117830 | 192 | 133 | | ● ● |
| 8,0 | 8 × 36 | V05 08000.117830 | 222 | 164 | | |
| 8,5 | 10 × 40 | V05 08500.117830 | 244 | 174 | | |
| 9,0 | 10 × 40 | V05 09000.117830 | 256 | 184 | | ● ● |
| 10,0 | 10 × 40 | V05 10000.117830 | 270 | 205 | | |

Other diameters on request.

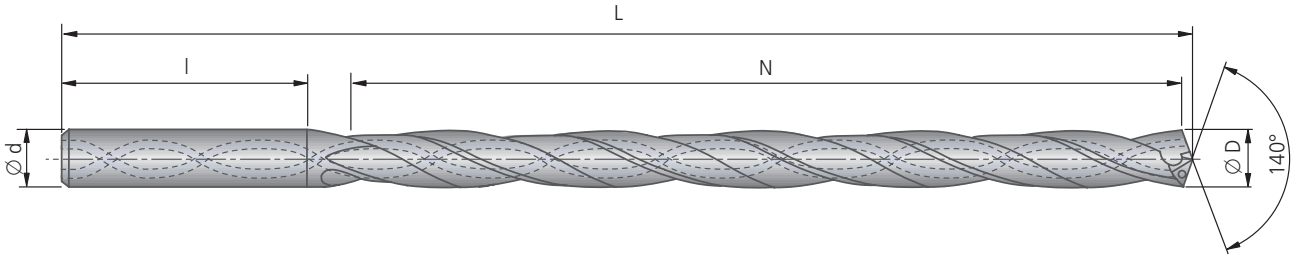
## High-Performance Solid Carbide Drill with Cylindrical Shank DIN 6535 HA, R.H. cutting

**Warning!** A pilot hole must always be drilled. Direct spot drilling is not possible, even on a machined spot-drill surface. Angled surfaces or unmachined spot-drill surfaces must also be faced or spot faced for the pilot drilling tool (page 20).





4 x guide chamfers ■
coating: TiAlN ■
with coolant channels ■




| 30 × D | | | | | | for workpiece material |
|---|---|---|---|---|---|---|
| Ø D | Ø d × l | DIN 6535 HA Order No. | L | N | kg ~ | P M K N S H |
| 3,0 | 6 × 36 | V06 03000.117830 | 138 | 92 | | |
| 4,0 | 6 × 36 | V06 04000.117830 | 172 | 122 | | |
| 4,5 | 6 × 36 | V06 04500.117830 | 189 | 137 | | ● ● |
| 5,0 | 6 × 36 | V06 05000.117830 | 206 | 153 | | |
| 5,5 | 6 × 36 | V06 05500.117830 | 223 | 168 | | |
| 6,0 | 6 × 36 | V06 06000.117830 | 238 | 183 | | |
| 6,5 | 8 × 36 | V06 06500.117830 | 257 | 198 | | ● ● |
| 8,0 | 8 × 36 | V06 08000.117830 | 302 | 244 | | |

Other diameters on request.

Guideline values for solid drilling: page 19.

# KOMET KUB® Drillmax, KOMET KUB® Drillmax XL

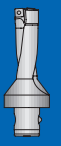
## Technical Notes





| Guideline values for solid drilling | | | | | | 5×D / 7-8×D | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Feed f (mm/rev) | | | | | |
| | | | | | | | | | Ø 3,0-5,0 | | | Ø 5,1-8,0 | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | | | | | | | | |
| | | | | | | min | opt. | max | min | opt. | max | min | opt. | max |
| P | 1.0 | ≤ 500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 95 | 115 | 135 | 0,08 | 0,14 | 0,20 | 0,15 | 0,20 | 0,25 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 70 | 85 | 100 | 0,06 | 0,12 | 0,18 | 0,12 | 0,17 | 0,22 |
| P | 2.1 | < 500 | | lead alloys | 9SMnPb28 / 1.0718 | 70 | 85 | 100 | 0,06 | 0,12 | 0,18 | 0,10 | 0,18 | 0,25 |
| P | 3.0 | > 900 - 1200 | | low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 70 | 75 | 80 | 0,05 | 0,10 | 0,15 | 0,10 | 0,15 | 0,20 |
| P | 4.0 | > 1200 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 45 | 60 | 75 | 0,05 | 0,09 | 0,13 | 0,10 | 0,14 | 0,18 |
| P | 4.1 | | | HSS | | | | | | | | | | |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | | | | | | | | | |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | | | | | | | | | |
| M | 6.0 | ≤ 600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 40 | 55 | 70 | 0,06 | 0,12 | 0,18 | 0,12 | 0,17 | 0,22 |
| M | 6.1 | < 900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 25 | 45 | 65 | 0,05 | 0,08 | 0,10 | 0,09 | 0,15 | 0,20 |
| M | 7.0 | > 900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 15 | 30 | 40 | 0,05 | 0,08 | 0,10 | 0,06 | 0,10 | 0,14 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 90 | 115 | 140 | 0,10 | 0,18 | 0,25 | 0,15 | 0,23 | 0,30 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 70 | 95 | 120 | 0,10 | 0,18 | 0,25 | 0,15 | 0,23 | 0,30 |
| K | 9.0 | ≤ 600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 100 | 120 | 140 | 0,08 | 0,14 | 0,20 | 0,15 | 0,20 | 0,25 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic/perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 80 | 100 | 120 | 0,06 | 0,12 | 0,18 | 0,10 | 0,15 | 0,20 |
| K | 10.0 | > 600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 70 | 90 | 110 | 0,06 | 0,12 | 0,18 | 0,10 | 0,15 | 0,20 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 60 | 70 | 80 | 0,06 | 0,12 | 0,18 | 0,10 | 0,15 | 0,20 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 60 | 70 | 80 | 0,06 | 0,12 | 0,18 | 0,10 | 0,15 | 0,20 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | | | | | | | | | |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | | | | | | | | | |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | | | | | | | | | |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | | | | | | | | | |
| N | 14.0 | | 100 | cast alum.alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | | | | | | | | | |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | | | | | | | | | |
| H | 16,0 | 1800 | | hardened steels > 45 HRC | | | | | | | | | | |

Cutting values shown are relating to the basic recommendations for cutting materials given.

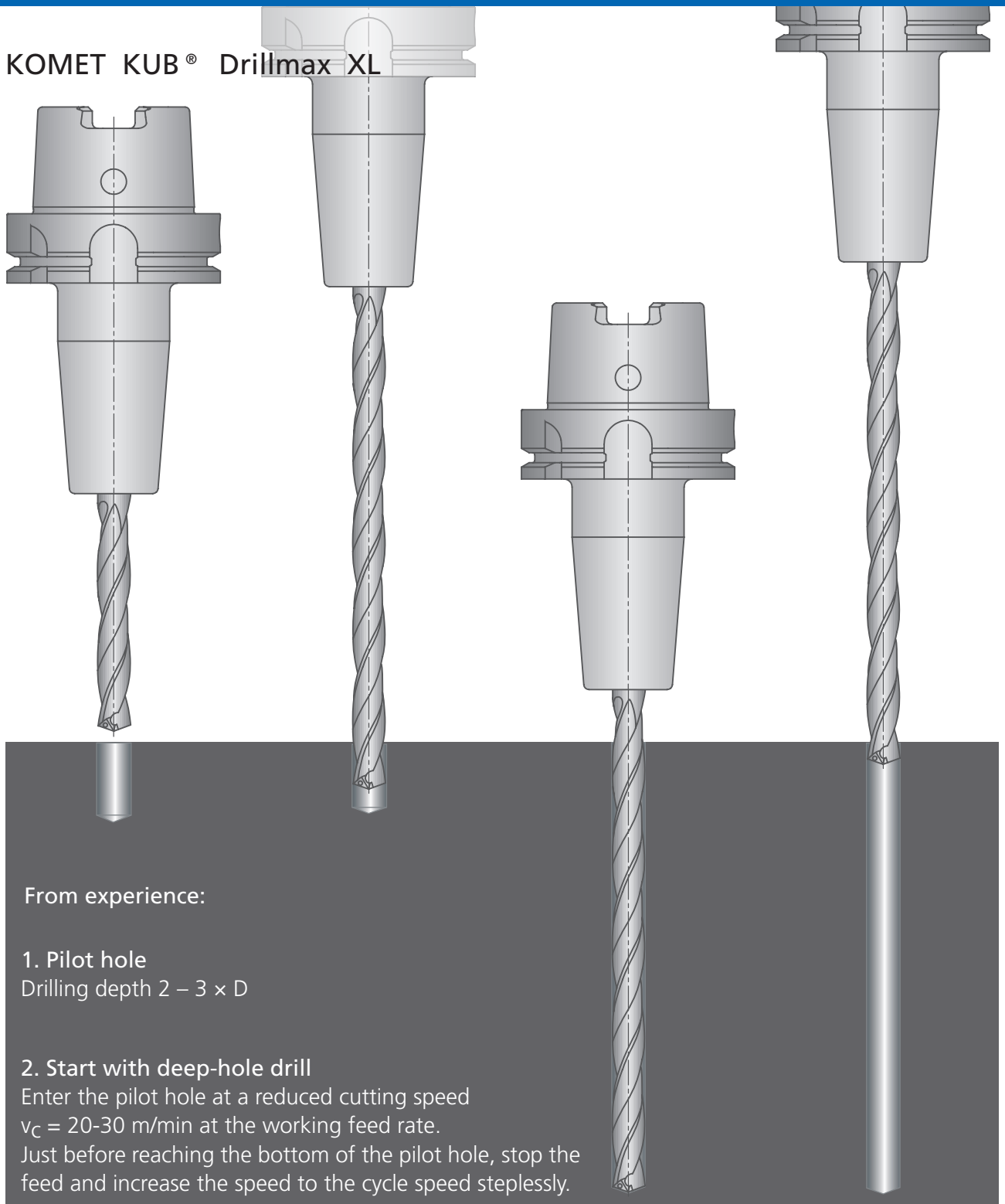


| | 5×D / 7-8×D | | | | | | | | | | | | 20×D / 30×D | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Feed f (mm/rev) | | | | | | | | | | | | Cutting speed $v_C$ (m/min) | Feed f (mm/rev) | | | | | | | |
| | ∅ 8,1-10,0 | | | ∅ 10,1-12,0 | | | ∅ 12,1-14,0 | | | ∅ 14,1-16,0 | | | | ∅ 3,0-4,0 | | | ∅ 4,1-6,0 | | | ∅ 6,1-10,0 | | |
| | min | opt. | max | min | opt. | max | min | opt. | max | min | opt. | max | | min | opt. | max | min | opt. | max | min | opt. | max |
| | 0,15 | **0,23** | 0,30 | 0,20 | **0,28** | 0,35 | 0,25 | **0,33** | 0,40 | 0,30 | **0,38** | 0,45 | 40 | **85** | 100 | 0,06 | **0,10** | 0,15 | 0,10 | **0,20** | 0,30 | 0,15 | **0,25** | 0,35 |
| | 0,15 | **0,20** | 0,25 | 0,18 | **0,24** | 0,30 | 0,20 | **0,28** | 0,35 | 0,30 | **0,44** | 0,48 | 40 | **75** | 100 | 0,06 | **0,09** | 0,12 | 0,10 | **0,17** | 0,25 | 0,15 | **0,20** | 0,25 |
| | 0,20 | **0,28** | 0,35 | 0,25 | **0,33** | 0,40 | 0,30 | **0,38** | 0,45 | 0,35 | **0,44** | 0,52 | 40 | **85** | 100 | 0,06 | **0,10** | 0,15 | 0,15 | **0,25** | 0,30 | 0,15 | **0,25** | 0,35 |
| | 0,12 | **0,19** | 0,25 | 0,15 | **0,23** | 0,30 | 0,20 | **0,28** | 0,35 | 0,25 | **0,33** | 0,40 | 35 | **60** | 80 | 0,06 | **0,09** | 0,12 | 0,10 | **0,15** | 0,20 | 0,15 | **0,20** | 0,25 |
| | 0,12 | **0,18** | 0,23 | 0,15 | **0,22** | 0,28 | 0,18 | **0,25** | 0,32 | 0,20 | **0,28** | 0,35 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0,15 | **0,20** | 0,25 | 0,18 | **0,24** | 0,30 | 0,20 | **0,28** | 0,35 | 0,22 | **0,31** | 0,40 | | | | | | | | | | | | |
| | 0,11 | **0,17** | 0,22 | 0,14 | **0,20** | 0,25 | 0,16 | **0,23** | 0,30 | 0,20 | **0,28** | 0,35 | | | | | | | | | | | | |
| | 0,08 | **0,13** | 0,18 | 0,12 | **0,17** | 0,22 | 0,14 | **0,20** | 0,26 | 0,16 | **0,23** | 0,30 | | | | | | | | | | | | |
| | 0,20 | **0,30** | 0,40 | 0,25 | **0,33** | 0,40 | 0,25 | **0,35** | 0,45 | 0,30 | **0,40** | 0,50 | 40 | **70** | 85 | 0,07 | **0,11** | 0,15 | 0,18 | **0,24** | 0,30 | 0,20 | **0,25** | 0,35 |
| | 0,20 | **0,30** | 0,40 | 0,25 | **0,33** | 0,40 | 0,25 | **0,35** | 0,45 | 0,30 | **0,40** | 0,50 | 40 | **70** | 85 | 0,07 | **0,11** | 0,15 | 0,18 | **0,24** | 0,30 | 0,20 | **0,25** | 0,35 |
| | 0,15 | **0,23** | 0,30 | 0,20 | **0,28** | 0,35 | 0,25 | **0,33** | 0,40 | 0,30 | **0,38** | 0,45 | 35 | **65** | 80 | 0,06 | **0,10** | 0,15 | 0,15 | **0,20** | 0,25 | 0,15 | **0,25** | 0,30 |
| | 0,14 | **0,20** | 0,25 | 0,18 | **0,24** | 0,30 | 0,20 | **0,28** | 0,35 | 0,25 | **0,33** | 0,40 | 35 | **65** | 80 | 0,06 | **0,10** | 0,15 | 0,15 | **0,20** | 0,25 | 0,15 | **0,25** | 0,30 |
| | 0,14 | **0,20** | 0,25 | 0,18 | **0,24** | 0,30 | 0,20 | **0,28** | 0,35 | 0,25 | **0,33** | 0,40 | 35 | **65** | 80 | 0,06 | **0,10** | 0,15 | 0,15 | **0,20** | 0,25 | 0,15 | **0,25** | 0,30 |
| | 0,14 | **0,20** | 0,25 | 0,18 | **0,24** | 0,30 | 0,20 | **0,28** | 0,35 | 0,25 | **0,33** | 0,40 | | | | | | | | | | | | |
| | 0,14 | **0,20** | 0,25 | 0,18 | **0,24** | 0,30 | 0,20 | **0,28** | 0,35 | 0,25 | **0,33** | 0,40 | 35 | **65** | 80 | 0,06 | **0,09** | 0,12 | 0,15 | **0,20** | 0,25 | 0,15 | **0,25** | 0,30 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | |

Cutting values shown are relating to the basic recommendations for cutting materials given.

**Important: See chapter 8 for more application details and safety notes!**

# KOMET KUB® Drillmax XL



From experience:

**1. Pilot hole**
Drilling depth 2 – 3 × D

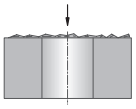
**2. Start with deep-hole drill**
Enter the pilot hole at a reduced cutting speed
$v_C$ = 20-30 m/min at the working feed rate.
Just before reaching the bottom of the pilot hole, stop the feed and increase the speed to the cycle speed steplessly.

**3. Increase the deep-hole drilling**
Feed rate to the cycle speed. Drill to the required hole depth without pecking. When drilling a through hole, reduce the feed rate by 50 % when the drill tip exits at through holes – risk of chipping.

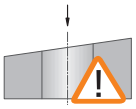
**4. Back out of the hole**
Once the final drilling depth is reached, withdraw the tool 2-3 mm, then reduce the cutting speed to $v_C$ = 20-30 m/min and withdraw at $v_f$ = 3000 mm/min until the pilot hole depth. Then back out from the hole at n = 300 rpm $v_f$ = 3000 mm/min.



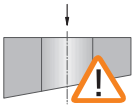
Important: See chapter 8 for more application details and safety notes!

1. 

**Starting on uneven surfaces (cast surfaces)**
- depending on the quality of the surface or when spot drilling, reduce the feed

2. 

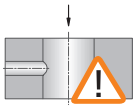
**Starting on angled surfaces**
- spot face surface before starting bore

3. 

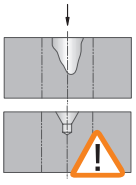
**Angled bore exit**
- reduce feed by 50 % in the exit area

4. 

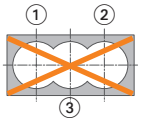
**Starting on cambered surfaces**
- drilling on centre with reduced feed is possible
- spot facing is required if the bore start point is outside the radius centre

5. 

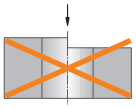
**Drilling through a cross bore**
- half feed rate at interruption

6. 

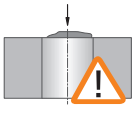
**Starting on a groove or large centering bore**
- end-face the seam or centre beforehand where applicable (diameter min. 0.1 mm greater than drill diameter)
- possible under certain conditions. Reduce feed where necessary

7. 

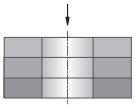

**Drilling a chamfer**
- not possible

8. 

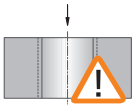
**Starting on an edge**
- not possible (start point must be flat)

9. 

**Starting on a welded seam**
- spot face surface before starting bore

10. 

**Drilling through stacked plates**
- possible in principle
- good workpiece clamping required
- avoid large spaces between elements

11. 

**Roughing**
- 5×D and 7-8×D possible
- 20×D and 30×D not possible

**Warning!** A pilot hole must always be drilled. Direct spot drilling is not possible, even on a machined spot-drill surface. Angled surfaces or unmachined spot-drill surfaces must also be faced or spot faced for the pilot drilling tool.

# JEL® PCD High-performance Drill







**Modern PCD cutting material**

Due to high hardness and resistance to abrasion, polycrystalline diamond (PCD) cutting materials have achieved significant importance in machining aluminium alloys.

With our PCD tipped cutting tools we will take your machine to its full potential at maximum productivity. Depending on the application there is almost unlimited cutting speed possible. It is no longer the tool which determines the cutting data but the efficiency of your machine.

# JEL® Drill Reamer




Drilling to precise tolerances in one operation, thereby reducing the tools required and saving costs

Hole tolerance IT 7 achievable

Main application area:
Grey cast iron
Spheroidal graphite cast iron
Aluminium



**BENEFITS for you:**

- For maximum cutting speeds and tool life
- For cutting lightweight structural materials such as aluminium, magnesium and fibre-reinforced plastics

## Drillcut · Drillmax · Dreammax


Page

**PCD High-performance Drill Drillcut 24** 24

∅ 5 – 12 mm, R.H. cutting
Drilling depth 5×D

**PCD High-performance Drill Drillmax 22** 25

∅ 6 – 10 mm, R.H. cutting
Drilling depth 5×D

**Drill Reamer Dreammax** 26

∅ 6 – 12 mm, R.H. cutting
Drilling depth 4×D

**Technical Notes** 27

Guidelines

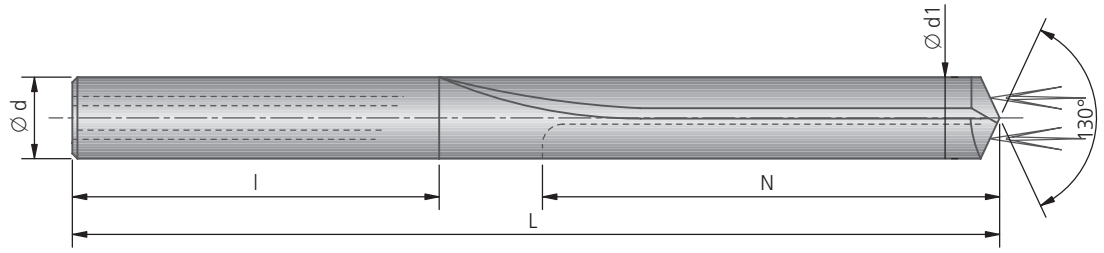
# JEL® Drillcut 24 — Ø 5,0 – 12,0 mm · 5×D

## PCD High-Performance Drill with Cylindrical Shank DIN 6535 HA, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ✕ | ○ | ✕ | ✕ |

● very good ◐ good ○ possible ✕ not possible

- with solid carbide shank
- 2 cutting edges and 4 guides
- straight fluted
- with coolant channels
- cutting material: PCD sandwich




| 5 × D | | | | | | | for workpiece material |
|---|---|---|---|---|---|---|---|
| Ø d1 | for thread | Ø d × l | DIN 6535 HA Order No. | L | N | kg ~ | P M K N S H |
| 5,00 | M6 | 6 × 36 | 38588082000500 | 82 | 35 | 0,023 | |
| 5,50 | M6 roll formed + M6×0,5 | 6 × 36 | 38588082000550 | 82 | 35 | 0,025 | ● |
| 6,00 | | 6 × 36 | 38588082000600 | 82 | 35 | 0,027 | |
| 6,80 | M8 | 8 × 36 | 38588091000680 | 91 | 43 | 0,045 | |
| 7,40 | M8 roll formed | 8 × 36 | 38588091000740 | 91 | 43 | 0,047 | ● |
| 8,00 | | 8 × 36 | 38588091000800 | 91 | 43 | 0,050 | |
| 8,50 | M10 | 10 × 40 | 38588003000850 | 103 | 49 | 0,060 | |
| 9,30 | M10×1,25 roll formed | 10 × 40 | 38588003000930 | 103 | 49 | 0,075 | ● |
| 10,00 | | 10 × 40 | 38588003001000 | 103 | 49 | 0,090 | |
| 10,20 | M12 | 12 × 45 | 38588018001020 | 118 | 56 | 0,116 | |
| 11,20 | M12×1,5 roll formed | 12 × 45 | 38588018001120 | 118 | 56 | 0,122 | ● |
| 12,00 | M14 | 12 × 45 | 38588018001200 | 118 | 56 | 0,142 | |

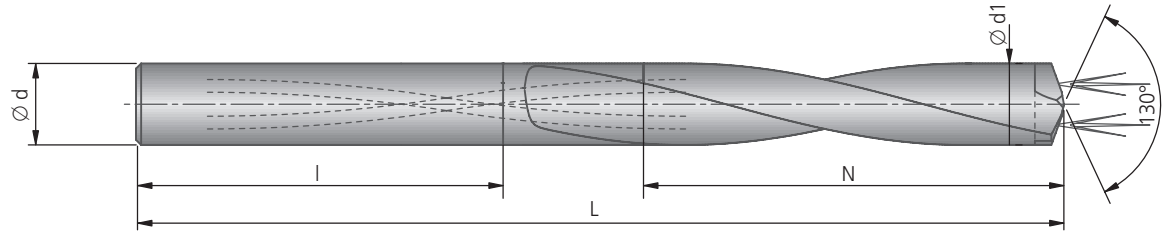
## PCD High-Performance Drill with Cylindrical Shank DIN 6535 HA, R.H. cutting



| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ✕ | ○ | ✕ | ✕ |

● very good ◐ good ○ possible ✕ not possible

- with solid carbide shank
- 2 cutting edges and 4 guides
- spiral fluted
- with coolant channels
- cutting material: PCD sandwich




| 5 × D | | | | | | for workpiece material |
|---|---|---|---|---|---|---|
| Ø d1 | Ø d × l | DIN 6535 HA Order No. | L | N | kg ~ | P M K N S H |
| 6,00 | 6 × 36 | 38405002000600 | 82 | 30 | 0,038 | ● |
| 8,00 | 8 × 36 | 38405002000800 | 91 | 42 | 0,047 | ● |
| 10,00 | 10 × 40 | 38405002001000 | 103 | 50 | 0,083 | ● |

Guideline values: page 27.

# JEL® Dreammax

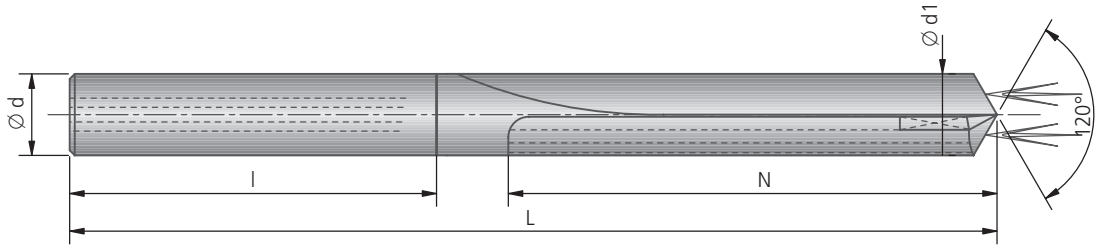
## Ø 6,0 – 12,0 mm · 4×D

## Drill Reamer with Cylindrical Shank DIN 6535 HA, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ✕ | ○ | ○ | ✕ |

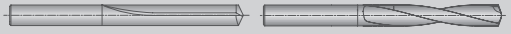
● very good ◐ good ○ possible ✕ not possible

- for bore tolerance H7
- 2 cutting edges
- straight fluted
- with coolant channels
- cutting material: solid carbide




| 4 × D | | | | | | for workpiece material |
|---|---|---|---|---|---|---|
| Ø d1 | Ø d × l | DIN 6535 HA Order No. | L | N | kg ~ | P M K N S H |
| 6,00 | 6 × 36 | 78451082000600 | 82 | 24 | | ● ● |
| 8,00 | 8 × 36 | 78451091000800 | 91 | 32 | | ● ● |
| 10,00 | 10 × 40 | 78451003001000 | 103 | 40 | | ● ● |
| 12,00 | 12 × 45 | 78451018001200 | 118 | 48 | | ● ● |

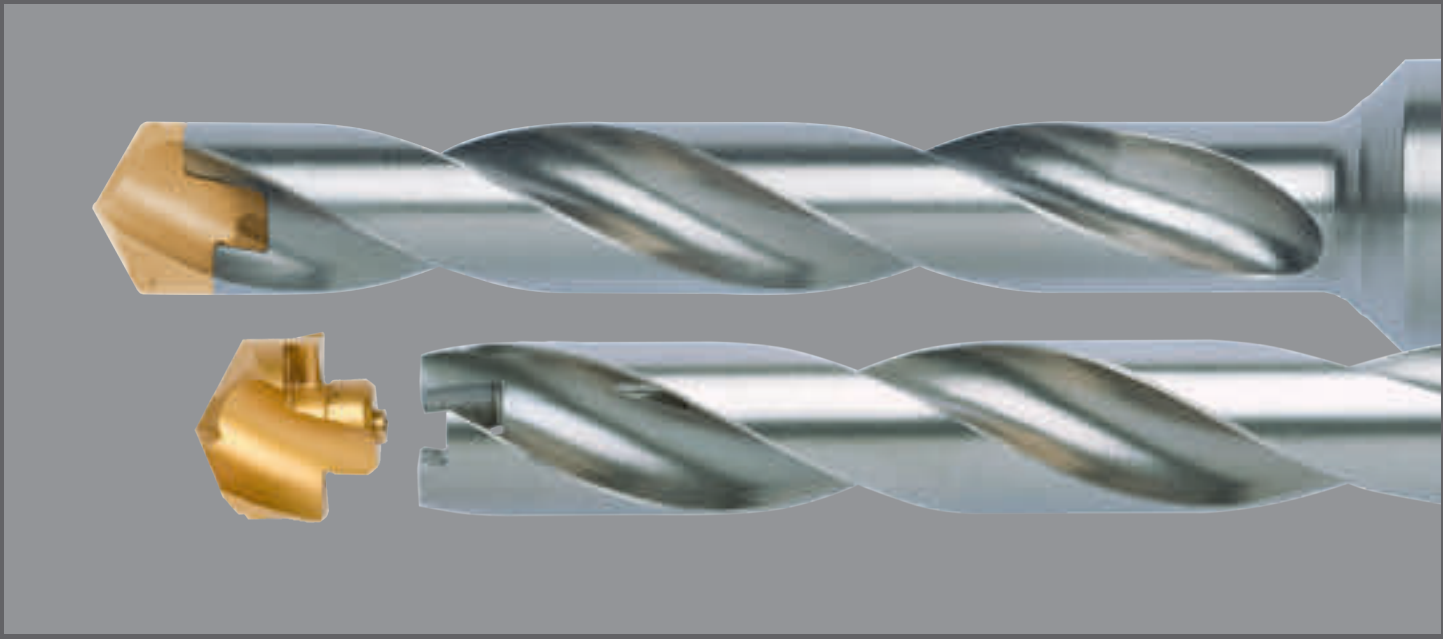


| Material Group | | Strength Rm (N/mm²) | Hardness HB | Tool | Drillcut 24 · Drillmax 22 | | | | | | | | Dreammax | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Cutting material | PCD | | | | | | | | Solid carbide | | | |
| | | | | Surface | uncoated | | | | | | | | TiN | | | |
| | | | | |  | | | | | | | |  | | | |
| | | | | Diameter | Ø 5 - 6 | | Ø 6 - 8 | | Ø 8 - 10 | | Ø 10 - 12 | | | Ø 6-8 | Ø 8-10 | Ø10-12 |
| | | | | Material | $v_c$ (m/min) | $f_b$ (mm/rev) | $v_c$ (m/min) | $f_b$ (mm/rev) | $v_c$ (m/min) | $f_b$ (mm/rev) | $v_c$ (m/min) | $f_b$ (mU) | $v_c$ (m/min) | $f_z$ (mm/tooth) | $f_z$ (mm/tooth) | $f_z$ (mm/tooth) |
| P | 1.1 | ≤400 | ≤120 | Magnetic soft iron | | | | | | | | | | | | |
| P | 1.2 | ≤700 | ≤200 | Structural, case hardened steel | | | | | | | | | | | | |
| P | 1.3 | ≤850 | ≤250 | Carbon steel | | | | | | | | | | | | |
| P | 1.4 | ≤850 | ≤250 | Alloy steel | | | | | | | | | | | | |
| P | 1.5 | >850 ≤1200 | >250 ≤350 | Alloy/heat treated steel | | | | | | | | | | | | |
| P | 1.6 | >1200 | >350 | Alloy/heat treated steel | | | | | | | | | | | | |
| H | 1.7 | ≤1400 | ≤400 | Hardened steel to 45 HRC | | | | | | | | | | | | |
| H | 1.8 | ≤2200 | ≤600 | Hardened steel to 58 HRC | | | | | | | | | | | | |
| M | 2.1 | ≤850 | ≤250 | Stainless steel, sulphuretted | | | | | | | | | | | | |
| M | 2.2 | ≤850 | ≤250 | Austentic | | | | | | | | | | | | |
| M | 2.3 | ≤1000 | ≤300 | Ferritic, ferritic & austentic, martensitic | | | | | | | | | | | | |
| K | 3.1 | ≤500 | ≤150 | Grey cast iron | | | | | | | | | 30-60 | 0,03-0,10 | 0,04-0,10 | 0,07-0,10 |
| K | 3.2 | >500 ≤1000 | >150 ≤300 | Grey cast iron, heat treated | | | | | | | | | 30-60 | 0,03-0,10 | 0,04-0,10 | 0,07-0,10 |
| K | 3.3 | 400-500 | 200-250 | Vermicular cast iron | | | | | | | | | | | | |
| K | 3.4 | ≤700 | ≤200 | Spher. graph. cast iron | | | | | | | | | 30-60 | 0,03-0,10 | 0,04-0,10 | 0,07-0,10 |
| K | 3.5 | >700 ≤1000 | >200 ≤300 | Spher. graph. cast iron, heat treated | | | | | | | | | | | | |
| K | 3.6 | ≤700 | ≤200 | Malleable iron | | | | | | | | | | | | |
| K | 3.7 | >700 <1000 | >200 ≤300 | Malleable iron, heat treated | | | | | | | | | | | | |
| S | 4.1 | ≤700 | ≤200 | Pure titanium | | | | | | | | | | | | |
| S | 4.2 | ≤900 | ≤270 | Titanium alloys | | | | | | | | | | | | |
| S | 4.3 | >900 ≤1250 | >270 ≤300 | Titanium alloys | | | | | | | | | | | | |
| S | 5.1 | ≤500 | ≤150 | Pure nickel | | | | | | | | | | | | |
| S | 5.2 | ≤900 | <270 | Nickel alloys, heat resistant | | | | | | | | | | | | |
| S | 5.3 | >900 ≤1200 | >270 ≤350 | Nickel alloys, high heat resistant | | | | | | | | | | | | |
| N | 6.1 | ≤350 | ≤100 | Non-alloy copper | | | | | | | | | | | | |
| N | 6.2 | ≤700 | ≤200 | short chip, brass, bronze, red brass | 100-400 | 0,10-0,12 | 100-400 | 0,10-0,20 | 100-600 | 0,15-0,25 | 100-800 | 0,20-0,30 | | | | |
| N | 6.3 | ≤700 | ≤200 | long chip brass | | | | | | | | | | | | |
| N | 6.4 | ≤500 | ≤470 | Cu-Al-Fe alloy (Ampco) | | | | | | | | | | | | |
| N | 7.1 | ≤350 | ≤100 | Alu, Mg non-alloy | 100-600 | 0,10-0,15 | 100-800 | 0,15-0,25 | 150-1000 | 0,20-0,30 | 150-1200 | 0,25-0,35 | | | | |
| N | 7.2 | ≤600 | ≤180 | Alu wrought all., break. strain (A 5) <14 % | 100-600 | 0,10-0,15 | 100-800 | 0,15-0,25 | 150-1000 | 0,20-0,30 | 150-1200 | 0,25-0,35 | 50-100 | 0,05-0,12 | 0,06-0,15 | 0,07-0,15 |
| N | 7.3 | ≤600 | ≤180 | Alu wrought all., break. strain (A 5) ≥14 % | 100-600 | 0,10-0,15 | 100-800 | 0,15-0,25 | 150-1000 | 0,20-0,30 | 150-1200 | 0,25-0,35 | 50-100 | 0,05-0,12 | 0,06-0,15 | 0,07-0,15 |
| N | 7.4 | ≤600 | ≤180 | Alu cast alloy, Si <10 % | 100-600 | 0,10-0,15 | 100-800 | 0,15-0,25 | 150-1000 | 0,20-0,30 | 150-1200 | 0,25-0,35 | | | | |
| N | 7.5 | ≤600 | ≤180 | Alu cast alloy, Si ≥10 % | 100-600 | 0,10-0,15 | 100-800 | 0,15-0,25 | 150-1000 | 0,20-0,30 | 150-1200 | 0,25-0,35 | | | | |
| N | 8.1 | | | Thermoplastics | | | | | | | | | | | | |
| N | 8.2 | | | Thermosetting plastics | | | | | | | | | | | | |
| N | 8.3 | | | Fibre reinforced plastics | 150-400 | 0,10-0,20 | 150-600 | 0,15-0,30 | 250-800 | 0,20-0,40 | 250-1000 | 0,25-0,50 | | | | |

$v_c$ = Cutting speed · $f_b$ = Drilling feed · $f_z$ = Milling feed

**Important: See chapter 8 for more application details and safety notes!**

# KOMET KUB K2 ® Replaceable Head Drill for Tiny Diameters



## KOMET KUB K2 ® replaceable head drill

With this replaceable head system for the double-cutting KUB K2 ®, KOMET ® has introduced an ingenious system of replaceable drill heads.

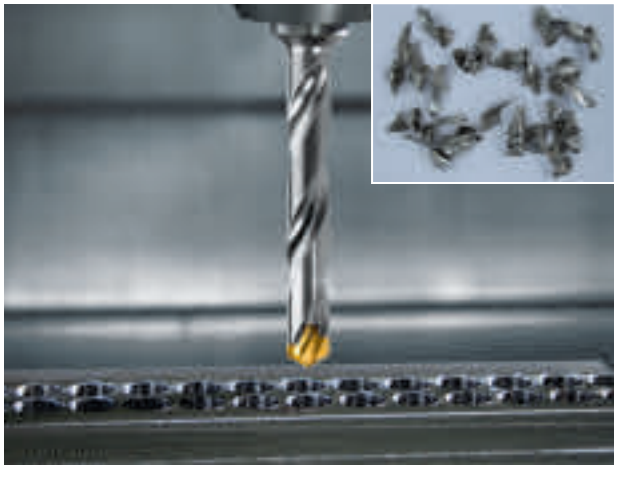
These now also make the most of the economic and flexibility advantages of replaceable cutting heads with small drilling diameters up to 10 mm.

The double-cutting carbide drill heads cannot be reground. A patented attachment point makes them self-clamping, self-centring and easy to change.

BENEFITS for you:

- Easy replacement of the KUB K2 ® replaceable heads even in the machine, with secure, user-friendly quick-change connector
- Maximum performance and best possible feed with the latest coatings and high-end polished sections
- Outstanding tension release properties for many materials, due to optimum surface quality of the cutting channels
- Impressive performance and life of the main drill body due to a special surface treatment

**Rotating application**
in a machining centre
Material: 1.4301, V2A
$v_C$ = 70 m/min · f = 0.2 mm/rev



**Stationary application**
in a cyclically-controlled lathe
Material: 42CrMo4
$v_C$ = 90 m/min · f = 0.22 mm/rev





## KOMET KUB K2 ®

Page

Cylindrical Shank ISO 9766 30 – 35

∅ 10 – 20.5 mm, R.H. cutting
Drilling depth 3×D, 5×D, 7×D

Technical Notes 36

Guideline values for solid drilling

Technical Informations 37

Applications:

- For diameter range 10 to 20.5 mm
- Internal coolant supply
- Suitable for use with steel, cast metal and stainless materials
- Replaceable head system enables use with a wide variety of sections and coatings.

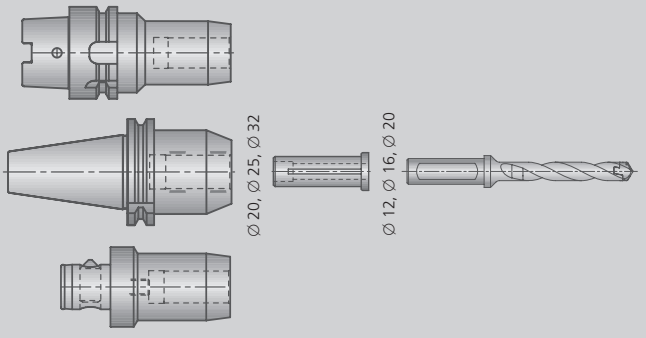
**Rotating application**
in a machining centre

Material: 1.6758 (23MnNiMoCr5-4)
$v_C$ = 46 m/min · f = 0.1 mm/rev



Reduced cutting speed due to very low coolant pressure.

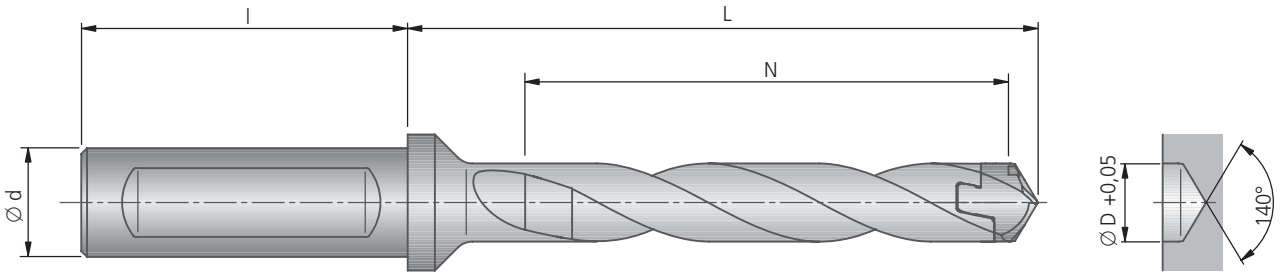
**Please note:** When using the KUB K2 ® in a hydraulic expansion chuck, use a reducing sleeve.



# KOMET KUB K2®

## Ø 10,0 – 12,9 mm

### Replaceable Head Drill with Cylindrical Shank ISO 9766, R.H. cutting




| Replaceable head | | | | | | |
|---|---|---|---|---|---|---|
| Ø D | BK8425 Order No. | BK2725 Order No. | kg | Coating | for workpiece material P M K N S H | |
| 10,0 | H70 10000.018425 | H70 10000.012725 | 0,004 | BK8425 BK2725 | | |
| 10,1 | H70 10100.018425 | H70 10100.012725 | | | | |
| 10,2 | H70 10200.018425 | H70 10200.012725 | | | | |
| 10,3 | H70 10300.018425 | H70 10300.012725 | | | | |
| 10,4 | H70 10400.018425 | H70 10400.012725 | | | | |
| 10,5 | H70 10500.018425 | H70 10500.012725 | 0,004 | BK8425 BK2725 | | |
| 10,6 | H70 10600.018425 | H70 10600.012725 | | | | |
| 10,7 | H70 10700.018425 | H70 10700.012725 | | | | |
| 10,8 | H70 10800.018425 | H70 10800.012725 | | | | |
| 10,9 | H70 10900.018425 | H70 10900.012725 | | | | |
| 11,0 | H70 11000.018425 | H70 11000.012725 | 0,005 | BK8425 BK2725 | | |
| 11,1 | H70 11100.018425 | H70 11100.012725 | | | | |
| 11,2 | H70 11200.018425 | H70 11200.012725 | | | | |
| 11,3 | H70 11300.018425 | H70 11300.012725 | | | | |
| 11,4 | H70 11400.018425 | H70 11400.012725 | | | | |
| 11,5 | H70 11500.018425 | H70 11500.012725 | 0,005 | BK8425 BK2725 | | |
| 11,6 | H70 11600.018425 | H70 11600.012725 | | | | |
| 11,7 | H70 11700.018425 | H70 11700.012725 | | | | |
| 11,8 | H70 11800.018425 | H70 11800.012725 | | | | |
| 11,9 | H70 11900.018425 | H70 11900.012725 | | | | |
| 12,0 | H70 12000.018425 | H70 12000.012725 | 0,006 | BK8425 BK2725 | | |
| 12,1 | H70 12100.018425 | H70 12100.012725 | | | | |
| 12,2 | H70 12200.018425 | H70 12200.012725 | | | | |
| 12,3 | H70 12300.018425 | H70 12300.012725 | | | | |
| 12,4 | H70 12400.018425 | H70 12400.012725 | | | | |
| 12,5 | H70 12500.018425 | H70 12500.012725 | 0,007 | BK8425 BK2725 | | |
| 12,6 | H70 12600.018425 | H70 12600.012725 | | | | |
| 12,7 | H70 12700.018425 | H70 12700.012725 | | | | |
| 12,8 | H70 12800.018425 | H70 12800.012725 | | | | |
| 12,9 | H70 12900.018425 | H70 12900.012725 | | | | |

For other diameters see following page.

**Supply includes:**
Replaceable head with mounting key. Please order basic body and accessories separately..

## Replaceable Head Drill with Cylindrical Shank ISO 9766, R.H. cutting

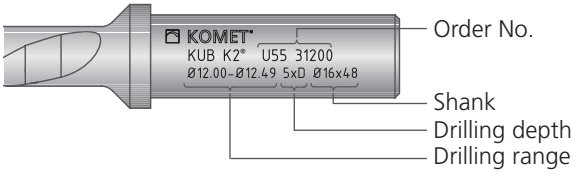


| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3×D | ● | ● | ○ | ○ | ✕ | ✕ | ● | ✕ | ● | ✕ | ✕ |
| 5×D | ● | ● | ○ | ○ | ✕ | ✕ | ● | ✕ | ● | ✕ | ✕ |
| 7×D* | ● | ● | ○ | ○ | ✕ | ✕ | ● | ✕ | ● | ✕ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 37 ✕ not possible

* **Please note:** Technical notes page 37, position 15.

| | Basic body | | | | | | | | | | | | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3×D | | | | 5×D | | | | 7×D | | | | Multi-key |
| | Cylindrical shank Ø d × l | Order No. | L | N | kg | Order No. | L | N | kg | Order No. | L | N | kg | Order No. Article |
| | 12 × 45 | **U53 21000** | 56,6 | 33 | 0,05 | **U55 21000** | 78,6 | 55 | 0,055 | **U57 21000** | 100,6 | 77 | 0,06 | |
| | 12 × 45 | **U53 21050** | 56,6 | 33 | 0,05 | **U55 21050** | 78,6 | 55 | 0,057 | **U57 21050** | 100,6 | 77 | 0,065 | |
| | 12 × 45 | **U53 21100** | 60,7 | 36 | 0,054 | **U55 21100** | 84,7 | 60 | 0,062 | **U57 21100** | 108,7 | 84 | 0,07 | **L05 10010** Size 1 |
| | 12 × 45 | **U53 21150** | 60,7 | 36 | 0,055 | **U55 21150** | 84,7 | 60 | 0,064 | **U57 21150** | 108,7 | 84 | 0,075 | |
| | 16 × 48 | **U53 31200** | 66,7 | 39 | 0,09 | **U55 31200** | 92,7 | 65 | 0,10 | **U57 31200** | 118,7 | 91 | 0,111 | |
| | 16 × 48 | **U53 31250** | 66,7 | 39 | 0,09 | **U55 31250** | 92,7 | 65 | 0,10 | **U57 31250** | 118,7 | 91 | 0,115 | **L05 10020** Size 2 |

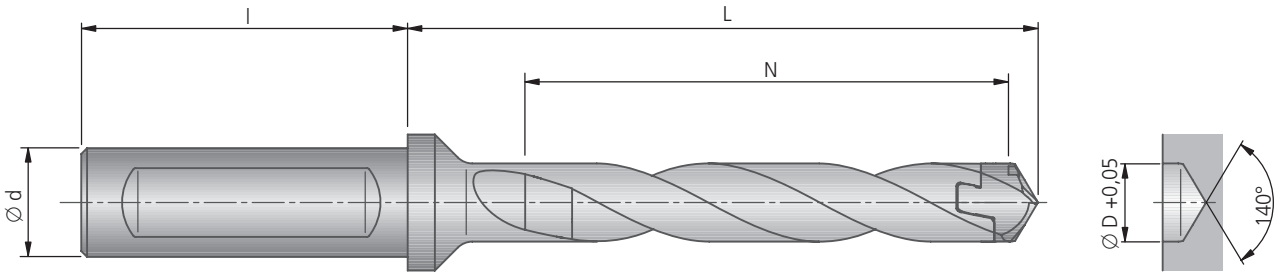



Guideline values for solid drilling: page 36.

# KOMET KUB K2®

## Ø 13,0 – 16,9 mm

Replaceable Head Drill with Cylindrical Shank ISO 9766, R.H. cutting

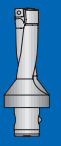



| Replaceable head | | | | | | |
|---|---|---|---|---|---|---|
| Ø D | BK8425 Order No. | BK2725 Order No. | kg | Coating | for workpiece material P M K N S H | |
| 13,0 | H70 13000.018425 | H70 13000.012725 | 0,008 | BK8425 BK2725 | | |
| 13,1 | H70 13100.018425 | H70 13100.012725 | | | | |
| 13,2 | H70 13200.018425 | H70 13200.012725 | | | | |
| 13,3 | H70 13300.018425 | H70 13300.012725 | | | | |
| 13,4 | H70 13400.018425 | H70 13400.012725 | | | | |
| 13,5 | H70 13500.018425 | H70 13500.012725 | | | | |
| 13,6 | H70 13600.018425 | H70 13600.012725 | | | | |
| 13,7 | H70 13700.018425 | H70 13700.012725 | | | | |
| 13,8 | H70 13800.018425 | H70 13800.012725 | | | | |
| 13,9 | H70 13900.018425 | H70 13900.012725 | | | | |
| 14,0 | H70 14000.018425 | H70 14000.012725 | 0,010 | BK8425 BK2725 | | |
| 14,1 | H70 14100.018425 | H70 14100.012725 | | | | |
| 14,2 | H70 14200.018425 | H70 14200.012725 | | | | |
| 14,3 | H70 14300.018425 | H70 14300.012725 | | | | |
| 14,4 | H70 14400.018425 | H70 14400.012725 | | | | |
| 14,5 | H70 14500.018425 | H70 14500.012725 | | | | |
| 14,6 | H70 14600.018425 | H70 14600.012725 | | | | |
| 14,7 | H70 14700.018425 | H70 14700.012725 | | | | |
| 14,8 | H70 14800.018425 | H70 14800.012725 | | | | |
| 14,9 | H70 14900.018425 | H70 14900.012725 | | | | |
| 15,0 | H70 15000.018425 | H70 15000.012725 | 0,012 | BK8425 BK2725 | | |
| 15,1 | H70 15100.018425 | H70 15100.012725 | | | | |
| 15,2 | H70 15200.018425 | H70 15200.012725 | | | | |
| 15,3 | H70 15300.018425 | H70 15300.012725 | | | | |
| 15,4 | H70 15400.018425 | H70 15400.012725 | | | | |
| 15,5 | H70 15500.018425 | H70 15500.012725 | | | | |
| 15,6 | H70 15600.018425 | H70 15600.012725 | | | | |
| 15,7 | H70 15700.018425 | H70 15700.012725 | | | | |
| 15,8 | H70 15800.018425 | H70 15800.012725 | | | | |
| 15,9 | H70 15900.018425 | H70 15900.012725 | | | | |
| 16,0 | H70 16000.018425 | H70 16000.012725 | 0,014 | BK8425 BK2725 | | |
| 16,1 | H70 16100.018425 | H70 16100.012725 | | | | |
| 16,2 | H70 16200.018425 | H70 16200.012725 | | | | |
| 16,3 | H70 16300.018425 | H70 16300.012725 | | | | |
| 16,4 | H70 16400.018425 | H70 16400.012725 | | | | |
| 16,5 | H70 16500.018425 | H70 16500.012725 | | | | |
| 16,6 | H70 16600.018425 | H70 16600.012725 | | | | |
| 16,7 | H70 16700.018425 | H70 16700.012725 | | | | |
| 16,8 | H70 16800.018425 | H70 16800.012725 | | | | |
| 16,9 | H70 16900.018425 | H70 16900.012725 | | | | |


For other diameters see following page.
Patented design (KUB K2)

## Replaceable Head Drill with Cylindrical Shank ISO 9766, R.H. cutting





| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3×D | ● | ● | ○ | ○ | ✕ | ✕ | ● | ✕ | ● | ✕ | ✕ |
| 5×D | ● | ● | ○ | ○ | ✕ | ✕ | ● | ✕ | ● | ✕ | ✕ |
| 7×D* | ● | ● | ○ | ○ | ✕ | ✕ | ● | ✕ | ● | ✕ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 37 ✕ not possible

* **Please note:** Technical notes page 37, position 15.

**Supply includes:**
Replaceable head with mounting key. Please order basic body and accessories separately..

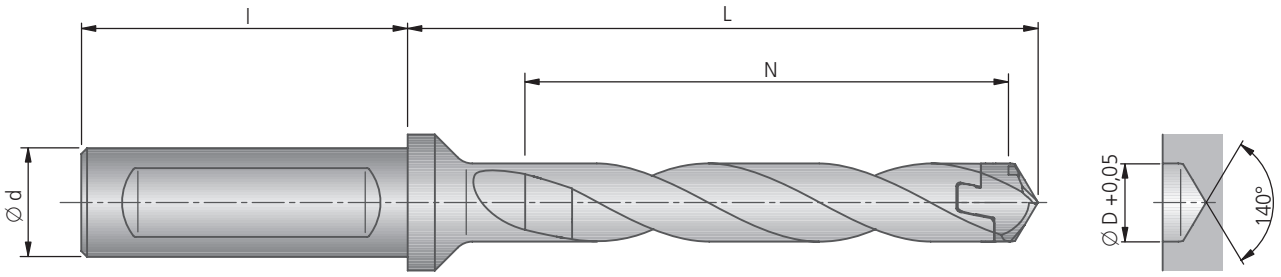
| | Basic body | | | | | | | | | | | | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3×D | | | | 5×D | | | | 7×D | | | | Multi-key |
| | Cylindrical shank Ø d × l | Order No. | L | N | kg | Order No. | L | N | kg | Order No. | L | N | kg | Order No. Article |
| | 16 × 48 | **U53 31300** | 70,8 | 42 | 0,10 | **U55 31300** | 98,8 | 70 | 0,11 | **U57 31300** | 126,8 | 98 | 0,123 | **L05 10020** Size 2 |
| | 16 × 48 | **U53 31400** | 74,9 | 45 | 0,10 | **U55 31400** | 104,9 | 75 | 0,12 | **U57 31400** | 134,8 | 105 | 0,137 | |
| | 16 × 48 | **U53 31500** | 78,9 | 48 | 0,11 | **U55 31500** | 110,9 | 80 | 0,13 | **U57 31500** | 142,9 | 112 | 0,154 | |
| | 20 × 50 | **U53 41600** | 85,5 | 51 | 0,17 | **U55 41600** | 119,5 | 85 | 0,19 | – | | | | |

Guideline values for solid drilling: page 36.

# KOMET KUB K2®

## Ø 17,0 – 20,5 mm

### Replaceable Head Drill with Cylindrical Shank ISO 9766, R.H. cutting

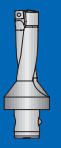



| Replaceable head | | | | | | |
|---|---|---|---|---|---|---|
| Ø D | BK8425 Order No. | BK2725 Order No. | kg | Coating | for workpiece material P M K N S H | |
| 17,0 | H70 17000.018425 | H70 17000.012725 | 0,017 | BK8425 BK2725 | | |
| 17,1 | H70 17100.018425 | H70 17100.012725 | | | | |
| 17,2 | H70 17200.018425 | H70 17200.012725 | | | | |
| 17,3 | H70 17300.018425 | H70 17300.012725 | | | | |
| 17,4 | H70 17400.018425 | H70 17400.012725 | | | | |
| 17,5 | H70 17500.018425 | H70 17500.012725 | | | | |
| 17,6 | H70 17600.018425 | H70 17600.012725 | | | | |
| 17,7 | H70 17700.018425 | H70 17700.012725 | | | | |
| 17,8 | H70 17800.018425 | H70 17800.012725 | | | | |
| 17,9 | H70 17900.018425 | H70 17900.012725 | | | | |
| 18,0 | H70 18000.018425 | H70 18000.012725 | 0,020 | BK8425 BK2725 | | |
| 18,1 | H70 18100.018425 | H70 18100.012725 | | | | |
| 18,2 | H70 18200.018425 | H70 18200.012725 | | | | |
| 18,3 | H70 18300.018425 | H70 18300.012725 | | | | |
| 18,4 | H70 18400.018425 | H70 18400.012725 | | | | |
| 18,5 | H70 18500.018425 | H70 18500.012725 | | | | |
| 18,6 | H70 18600.018425 | H70 18600.012725 | | | | |
| 18,7 | H70 18700.018425 | H70 18700.012725 | | | | |
| 18,8 | H70 18800.018425 | H70 18800.012725 | | | | |
| 18,9 | H70 18900.018425 | H70 18900.012725 | | | | |
| 19,0 | H70 19000.018425 | H70 19000.012725 | 0,023 | BK8425 BK2725 | | |
| 19,1 | H70 19100.018425 | H70 19100.012725 | | | | |
| 19,2 | H70 19200.018425 | H70 19200.012725 | | | | |
| 19,3 | H70 19300.018425 | H70 19300.012725 | | | | |
| 19,4 | H70 19400.018425 | H70 19400.012725 | | | | |
| 19,5 | H70 19500.018425 | H70 19500.012725 | | | | |
| 19,6 | H70 19600.018425 | H70 19600.012725 | | | | |
| 19,7 | H70 19700.018425 | H70 19700.012725 | | | | |
| 19,8 | H70 19800.018425 | H70 19800.012725 | | | | |
| 19,9 | H70 19900.018425 | H70 19900.012725 | | | | |
| 20,0 | H70 20000.018425 | H70 20000.012725 | | | | |
| 20,1 | H70 20100.018425 | H70 20100.012725 | | | | |
| 20,2 | H70 20200.018425 | H70 20200.012725 | | | | |
| 20,3 | H70 20300.018425 | H70 20300.012725 | | | | |
| 20,4 | H70 20400.018425 | H70 20400.012725 | | | | |
| 20,5 | H70 20500.018425 | H70 20500.012725 | | | | |

**Supply includes:**
Replaceable head with mounting key. Please order basic body and accessories separately.

## Replaceable Head Drill with Cylindrical Shank ISO 9766, R.H. cutting





| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3×D | ● | ● | ○ | ○ | ✕ | ✕ | ● | ✕ | ● | ✕ | ✕ |
| 5×D | ● | ● | ○ | ○ | ✕ | ✕ | ● | ✕ | ● | ✕ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 37 ✕ not possible

| | Basic body | | | | | | | | | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 3×D | | | | 5×D | | | | Multi-key |
| | Cylindrical shank Ø d × l | Order No. | L | N | kg | Order No. | L | N | kg | Order No. Article |
| | 20 × 50 | U53 41700 | 89,5 | 54 | 0,18 | U55 41700 | 125,5 | 90 | 0,21 | L05 10020 Size 2 |
| | 20 × 50 | U53 41800 | 93,7 | 57 | 0,19 | U55 41800 | 131,7 | 95 | 0,23 | |
| | 20 × 50 | U53 41900 | 97,7 | 61,5 | 0,21 | U55 41900 | 137,7 | 102,5 | 0,25 | |

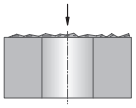
Guideline values for solid drilling: page 36.

## Technical Notes



| Guideline values for solid drilling | | | | | | $v_c$ (m/min) | | | | | | f (mm/rev) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Cutting speed | | | | | | Feed | | | | | |
| | | | | | | BK8425 | | | BK2725 | | | 3×D / 5×D Ø10–20,5 | | | 7×D Ø10–15,9 | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | min | opt. | max | min | opt. | max | min | opt. | max | min | opt. | max |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 100 | **120** | 140 | | | | 0,15 | **0,18** | 0,22 | 0,16 | **0,18** | 0,20 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 100 | **120** | 140 | 100 | **120** | 140 | 0,15 | **0,20** | 0,25 | 0,15 | **0,18** | 0,22 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 80 | **100** | 120 | 80 | **100** | 120 | 0,20 | **0,25** | 0,30 | 0,18 | **0,22** | 0,28 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 70 | **90** | 110 | 70 | **90** | 110 | 0,20 | **0,25** | 0,30 | 0,18 | **0,22** | 0,28 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 50 | **70** | 90 | 50 | **70** | 90 | 0,15 | **0,20** | 0,25 | 0,14 | **0,18** | 0,22 |
| P | 4.1 | | | HSS | | | | | | | | | | | | | |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | | | | | | | | | | | | | |
| S | 5.1 | 400 | | titanium, titanium alloys | | | | | | | | | | | | | |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | | | | 40 | **60** | 80 | 0,15 | **0,20** | 0,25 | 0,12 | **0,15** | 0,18 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | | | | | | | | | | | | |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | | | | | | | | | | | | |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 70 | **90** | 110 | | | | 0,20 | **0,30** | 0,40 | 0,20 | **0,28** | 0,38 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 60 | **80** | 100 | | | | 0,20 | **0,30** | 0,40 | 0,20 | **0,28** | 0,38 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 60 | **80** | 100 | | | | 0,25 | **0,35** | 0,45 | 0,20 | **0,30** | 0,40 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 50 | **70** | 90 | | | | 0,25 | **0,35** | 0,45 | 0,20 | **0,30** | 0,40 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 50 | **70** | 90 | | | | 0,25 | **0,35** | 0,45 | 0,20 | **0,30** | 0,40 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 30 | **50** | 70 | | | | 0,20 | **0,25** | 0,35 | 0,18 | **0,22** | 0,30 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 40 | **60** | 80 | | | | 0,25 | **0,35** | 0,45 | 0,20 | **0,30** | 0,40 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | | | | | | | | | | | | |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | | | | | | | | | | | | |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | | | | | | | | | | | | |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | | | | | | | | | | | | |
| N | 14.0 | | 100 | cast alum.alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | | | | | | | | | | | | |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | | | | | | | | | | | | |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | | | | | | | | | | | | |

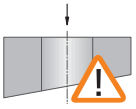
Cutting values shown are relating to the basic recommendations for cutting materials given.

1. 

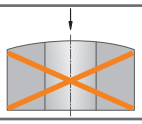
**Starting on uneven surfaces (cast surfaces)**
- depending on the quality of the surface or when spot drilling, reduce the feed

2. 

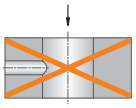
**Starting on angled surfaces**
- spot face surface before starting bore

3. 

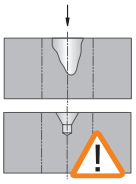
**Angled bore exit**
- reduce feed by 50 % in the exit area

4. 

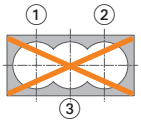
**Starting on cambered surfaces**
- not possible

5. 

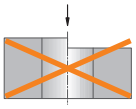
Drilling through a cross bore
- not possible

6. 

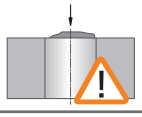
**Starting on a groove or large centering bore**
- end-face the seam or centre beforehand where applicable (diameter min. 0.1 mm greater than drill diameter)
- possible under certain conditions. Reduce feed where necessary

7. 

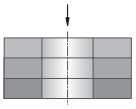

**Drilling a chamfer**
- not possible

8. 

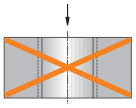
**Starting on an edge**
- not possible (start point must be flat)

9. 

**Starting on a welded seam**
- spot face surface before starting bore

10. 

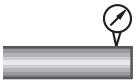
**Drilling through stacked plates**
- possible in principle
- good workpiece clamping required
- avoid large spaces between elements

11. 

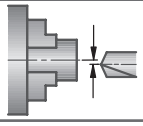
**Roughing**
- not possible

12. 

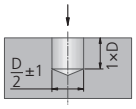
**Coolant**
- internal coolant supply min. 5 bar

13. 

**Rotating application**
- max. concentricity in rotating application 0,05 mm

14. 

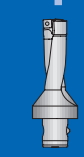
**Stationary application**
- max. offset in stationary application 0,025 mm

15. 


For basic bodies > 5×D, a pilot hole with a depth of approx. 1×D is recommended

# KOMET KUB Quatron®

## Continuous Drilling to 3×D

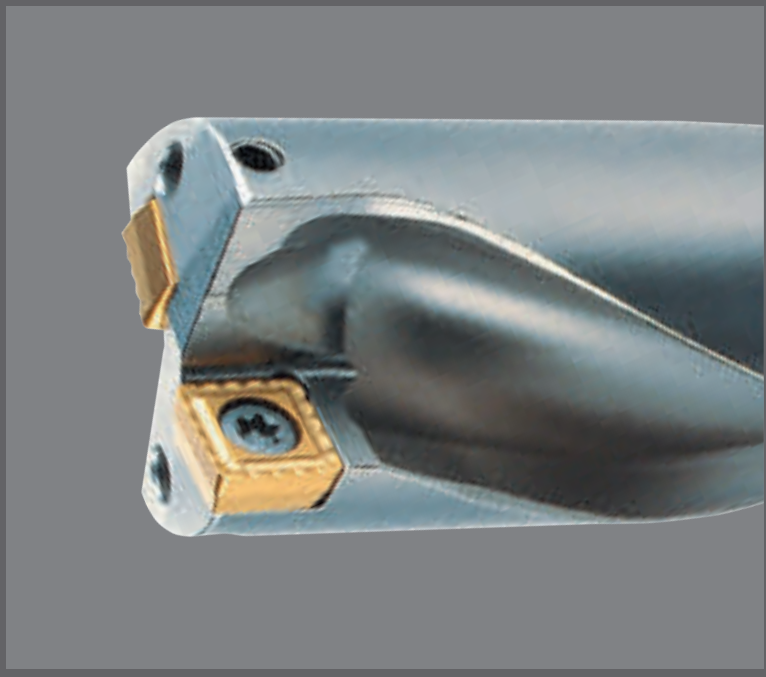


The KOMET KUB Quatron® is supplied as standard in drilling depths up to 3×D with combination shank DIN 6536 HE and DIN 6595 and also with ABS 50 connection.

A high overall rigidity with square inserts guarantee dimensional stability and accurate drilling with the KOMET KUB Quatron® at high feed speeds.

The four cutting edges on each insert make the KOMET KUB Quatron® totally economic. The latest coatings combined with tough, strong substrates reduce friction and also ensure maximum tool life.

The KUB Quatron® from KOMET®, which has already been successfully established in extreme technical situations such as for interrupted cuts, angled castings and rolling skins, is now available with the new insert technology -21 and -03 system.



BENEFITS for you:

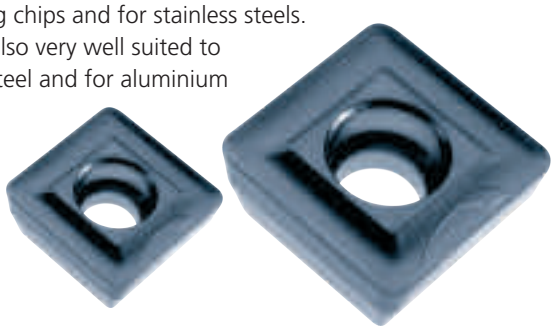
- High stability and economy by using square inserts
- Free flow of chips and no wear on the tool body because of the special surface treatment
- Can be used for difficult drilling conditions such as cast angles, rolling skin or interrupted cut
- Excellent bore quality with no withdrawal grooves
- Maximum tool life with four cutting edges made up of specific substrates and coatings
- Same insert internally and externally same coating, same locking screw
- Intermediate sizes can be supplied within 4 weeks e.g. U10 71940 (Ø 19,4 mm 2×D)

Insert geometry 21:

Consisting of ultra fine grain carbide with highly positive top rake, clearly reduced cutting edge rounding and a new type of coating, it has been possible to halve cutting forces compared to previous versions.

This reduces the stress on machine and on workpiece, which allows significantly higher cutting parameters and, as a result, increases in productivity.

Geometry 21 was developed specifically for materials that produce long chips and for stainless steels. However, this is also very well suited to universal use in steel and for aluminium alloys.






| KOMET KUB Quatron® | Page |
|---|---|
| ABS® Connection | 40 – 43 |
| R.H. cutting<br>Drilling depth 2×D, 3×D – ∅ 14 - 65 mm | |
| Cylindrical Shank (combination shank) | 44 – 47 |
| R.H. cutting<br>Drilling depth 2×D, 3×D – ∅ 14 - 44 mm | |
| Technical Notes | 48 – 49 |
| Guideline values for solid drilling | |
| Technical Informations | 50 – 51 |
| Alternative Inserts | 52 |
| Problems → Causes → Solutions | 53 |
| Milling Cartridge | Chapter 6 |


Insert geometry 03:

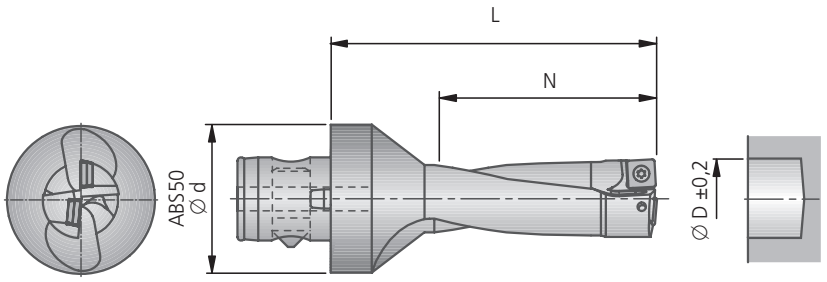
Generally suitable for all steels, in particular for long-chipping steel materials and stainless steels. The SOEX indexable insert topography is predestined for use in long-chipping materials, and, thanks to its optimum chip formation, ensures reliable removal of chips, even with high L/D ratios.



# KOMET KUB Quatron®

# Ø 14 – 33 mm

## Insert Drill with ABS® Connection, R.H. cutting




| Ø D | *max. diameter with offset | ABS Ø d | 2×D Order No. | 2×D N | 2×D L | 2×D kg | 3×D Order No. | 3×D N | 3×D L | 3×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 14,0 | 14,5 | 50 | U10 71402 | 28 | 63 | 0,45 | U11 51402 | 42 | 77 | 0,47 |
| 15,0 | 15,5 | 50 | U10 71502 | 30 | 65 | 0,46 | U11 51502 | 45 | 80 | 0,47 |
| 15,5 | 16,0 | 50 | U10 71550 | 32 | 67 | 0,46 | U11 51550 | 48 | 83 | 0,47 |
| 16,0 | 16,5 | 50 | U10 71600 | 32 | 67 | 0,46 | U11 51600 | 48 | 83 | 0,48 |
| 16,5 | 17,0 | 50 | – | | | | U11 51650 | 51 | 86 | 0,48 |
| 17,0 | 17,5 | 50 | U10 71700 | 34 | 69 | 0,47 | U11 51700 | 51 | 86 | 0,48 |
| 17,5 | 18,0 | 50 | U10 71750 | 36 | 71 | 0,47 | U11 51750 | 54 | 89 | 0,49 |
| 18,0 | 18,5 | 50 | U10 71800 | 36 | 71 | 0,47 | U11 51800 | 54 | 89 | 0,49 |
| 18,5 | 19,0 | 50 | U10 71850 | 38 | 73 | 0,48 | U11 51850 | 57 | 92 | 0,50 |
| 19,0 | 19,5 | 50 | U10 71900 | 38 | 73 | 0,48 | U11 51900 | 57 | 92 | 0,48 |
| 19,5 | 20,0 | 50 | U10 71950 | 40 | 75 | 0,49 | U11 51950 | 60 | 95 | 0,51 |
| 20,0 | 20,5 | 50 | U10 72000 | 40 | 75 | 0,49 | U11 52000 | 60 | 95 | 0,52 |
| 20,5 | 21,0 | 50 | U10 72050 | 42 | 77 | 0,5 | U11 52050 | 63 | 98 | 0,52 |
| 21,0 | 21,5 | 50 | U10 72100 | 42 | 77 | 0,5 | U11 52100 | 63 | 98 | 0,53 |
| 22,0 | 22,5 | 50 | U10 72200 | 44 | 79 | 0,51 | U11 52200 | 66 | 101 | 0,52 |
| 22,5 | 23,0 | 50 | U10 72250 | 46 | 81 | 0,52 | U11 52250 | 69 | 104 | 0,56 |
| 23,0 | 23,5 | 50 | U10 72300 | 46 | 81 | 0,52 | U11 52300 | 69 | 104 | 0,59 |
| 24,0 | 24,5 | 50 | U10 72400 | 48 | 83 | 0,54 | U11 52400 | 72 | 107 | 0,60 |
| 24,5 | 25,0 | 50 | U10 72450 | 50 | 85 | 0,54 | U11 52450 | 75 | 110 | 0,60 |
| 25,0 | 25,5 | 50 | U10 72500 | 50 | 85 | 0,55 | U11 52500 | 75 | 110 | 0,60 |
| 26,0 | 26,5 | 50 | U10 72600 | 52 | 87 | 0,56 | U11 52600 | 78 | 113 | 0,61 |
| 26,5 | 27,0 | 50 | U10 72650 | 54 | 89 | 0,58 | U11 52650 | 81 | 116 | 0,63 |
| 27,0 | 27,5 | 50 | U10 72700 | 54 | 89 | 0,58 | U11 52700 | 81 | 116 | 0,63 |
| 28,0 | 28,5 | 50 | U10 72800 | 56 | 91 | 0,60 | U11 52800 | 84 | 119 | 0,65 |
| 28,5 | 29,0 | 50 | U10 72850 | 58 | 93 | 0,61 | U11 52850 | 87 | 122 | 0,67 |
| 29,0 | 29,5 | 50 | U10 72900 | 58 | 93 | 0,61 | U11 52900 | 87 | 122 | 0,67 |
| 29,5 | 30,0 | 50 | U10 72950 | 59 | 95 | 0,63 | U11 52950 | 88,5 | 125 | 0,69 |
| 30,0 | 30,5 | 50 | U10 73000 | 60 | 100 | 0,66 | U11 53000 | 90 | 130 | 0,79 |
| 31,0 | 31,5 | 50 | U10 73100 | 62 | 102 | 0,68 | U11 53100 | 93 | 133 | 0,79 |
| 31,5 | 32,0 | 50 | U10 73150 | 64 | 104 | 0,70 | U11 53150 | 96 | 136 | 0,78 |
| 32,0 | 32,5 | 50 | U10 73200 | 64 | 104 | 0,70 | U11 53200 | 96 | 136 | 0,80 |
| 33,0 | 33,5 | 50 | U10 73300 | 66 | 106 | 0,73 | U11 53300 | 99 | 139 | 0,84 |

For other diameters see following page.

Any **intermediate dimensions** from Ø 14 – 33 mm and **inch dimensions** are available on request.

**Supply includes:** KUB Quatron® drill with assembly parts. Please order insert and accessories separately.

* Adjustment device see "KomPass Bore machining – chapter 5"



Patent applied for inside and outside Germany (ABS) and patent applications (KUB Quatron)

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |
| 3×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 50-51 >< not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert -01 -21 | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| W83 13010.048425<br>W83 13210.042730<br>W83 13000.0161<br>W83 13210.047710<br>W83 13000.0179 | SOEX 050204-01 BK8425<br>SOEX 050204-21 BK2730 ⚠<br>SOEX 050204-01 BK61<br>SOEX 050204-21 BK7710<br>SOEX 050204-01 BK79 | 2 | ● ◐ ● ● ● ○ | N00 56041<br>S/M2×4,3-6IP | 0,62 Nm | L05 00810<br>6IP |
| W83 18010.068425<br>W83 18210.062730<br>W83 18000.0961<br>W83 18210.067710<br>W83 18000.0979 | SOEX 060306-01 BK8425<br>SOEX 060306-21 BK2730 ⚠<br>SOEX 060306-01 BK61<br>SOEX 060306-21 BK7710<br>SOEX 060306-01 BK79 | 2 | ● ◐ ● ● ● ○ | N00 57553<br>S/M2,2×5,5-6IP | 1,01 Nm | L05 00810<br>6IP |
| W83 23010.088425<br>W83 23210.082730<br>W83 23000.0161<br>W83 23210.087710<br>W83 23000.0179 | SOEX 07T308-01 BK8425<br>SOEX 07T308-21 BK2730 ⚠<br>SOEX 07T308-01 BK61<br>SOEX 07T308-21 BK7710<br>SOEX 07T308-01 BK79 | 2 | ● ◐ ● ● ● ○ | N00 57571<br>S/M2,5×6,3-8IP | 1,28 Nm | L05 00830<br>8IP |
| W83 32010.088425<br>W83 32210.082730<br>W83 32000.1561<br>W83 32210.087710<br>W83 32000.1579 | SOEX 090408-01 BK8425<br>SOEX 090408-21 BK2730 ⚠<br>SOEX 090408-01 BK61<br>SOEX 090408-21 BK7710<br>SOEX 090408-01 BK79 | 2 | ● ◐ ● ● ● ○ | N00 57261<br>S3575-15IP | 2,8 Nm | L05 00860<br>15IP |

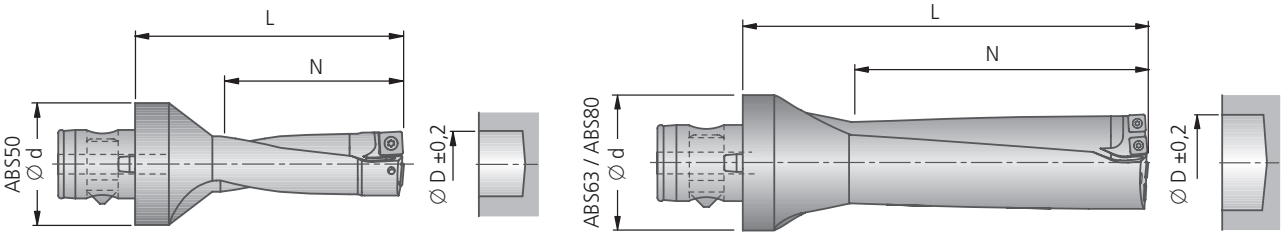
⚠ Note: Only use this insert with KUB Quatron® as an external cutting edge:
SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminium).

Guideline values for solid drilling: pages 48-49 / alternative inserts: page 52.

# KOMET KUB Quatron®

## Ø 34 – 65 mm

### Insert Drill with ABS® Connection, R.H. cutting




| Ø D | *max. diameter with offset | ABS Ø d | 2×D Order No. | 2×D N | 2×D L | 2×D kg | 3×D Order No. | 3×D N | 3×D L | 3×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 34,0 | 34,5 | 50 | U10 73400 | 68 | 108 | 0,75 | U11 53400 | 102 | 142 | 0,85 |
| 35,0 | 35,5 | 50 | U10 73500 | 70 | 110 | 0,77 | U11 53500 | 105 | 145 | 0,89 |
| 36,0 | 36,5 | 50 | U10 73600 | 72 | 112 | 0,8 | U11 53600 | 108 | 148 | 0,93 |
| 37,0 | 37,5 | 50 | U10 73700 | 74 | 124 | 0,88 | U11 53700 | 111 | 161 | 1,04 |
| 37,5 | 38,0 | 50 | U10 73750 | 76 | 126 | 0,9 | U11 53750 | 114 | 164 | 1,02 |
| 38,0 | 38,5 | 50 | U10 73800 | 76 | 126 | 0,92 | U11 53800 | 114 | 164 | 1,08 |
| 39,0 | 39,5 | 50 | U10 73900 | 78 | 128 | 0,95 | U11 53900 | 117 | 167 | 1,13 |
| 39,5 | 40,0 | 50 | U10 73950 | 80 | 130 | 0,97 | U11 53950 | 120 | 170 | 1,14 |
| 40,0 | 40,5 | 50 | U10 74000 | 80 | 130 | 0,98 | U11 54000 | 120 | 170 | 1,17 |
| 41,0 | 41,5 | 50 | U10 74100 | 82 | 132 | 1,02 | U11 54100 | 123 | 173 | 1,22 |
| 42,0 | 42,5 | 50 | U10 74200 | 84 | 134 | 1,06 | U11 54200 | 126 | 176 | 1,27 |
| 43,0 | 43,5 | 50 | U10 74300 | 86 | 136 | 1,1 | U11 54300 | 129 | 179 | 1,33 |
| 44,0 | 44,5 | 50 | U10 74400 | 88 | 138 | 1,14 | U11 54400 | 132 | 182 | 1,41 |
| 45,0 | 45,5 | 63 | U10 84500 | 90 | 145 | 1,47 | U12 34500 | 135 | 190 | 1,73 |
| 46,0 | 46,5 | 63 | U10 84600 | 92 | 147 | 1,51 | U12 34600 | 138 | 193 | 1,8 |
| 47,0 | 47,5 | 63 | U10 84700 | 94 | 149 | 1,55 | U12 34700 | 141 | 196 | 1,86 |
| 48,0 | 48,5 | 63 | U10 84800 | 96 | 151 | 1,6 | U12 34800 | 144 | 199 | 1,93 |
| 49,0 | 49,5 | 63 | U10 84900 | 98 | 153 | 1,65 | U12 34900 | 147 | 202 | 2,0 |
| 50,0 | 50,5 | 63 | U10 85000 | 100 | 155 | 1,7 | U12 35000 | 150 | 205 | 2,08 |
| 51,0 | 51,5 | 63 | U10 85100 | 102 | 157 | 1,75 | U12 35100 | 153 | 208 | 2,15 |
| 52,0 | 52,5 | 63 | U10 85200 | 104 | 159 | 1,81 | U12 35200 | 156 | 211 | 2,24 |
| 53,0 | 53,5 | 63 | U10 85300 | 106 | 161 | 1,82 | U12 35300 | 159 | 214 | 2,27 |
| 54,0 | 54,5 | 63 | U10 85400 | 108 | 163 | 1,88 | U12 35400 | 162 | 217 | 2,35 |
| 55,0 | 55,5 | 80 | U10 95500 | 110 | 165 | 2,57 | U12 45500 | 165 | 220 | 3,07 |
| 56,0 | 56,5 | 80 | U10 95600 | 112 | 167 | 2,64 | U12 45600 | 168 | 223 | 3,16 |
| 57,0 | 57,5 | 80 | U10 95700 | 114 | 169 | 2,7 | U12 45700 | 171 | 226 | 3,26 |
| 58,0 | 58,5 | 80 | U10 95800 | 116 | 171 | 2,76 | U12 45800 | 174 | 229 | 3,35 |
| 59,0 | 59,5 | 80 | U10 95900 | 118 | 173 | 2,83 | U12 45900 | 177 | 232 | 3,45 |
| 60,0 | 60,5 | 80 | U10 96000 | 120 | 175 | 2,93 | U12 46000 | 180 | 235 | 3,59 |
| 61,0 | 61,5 | 80 | U10 96100 | 122 | 177 | 3,01 | U12 46100 | 183 | 238 | 3,6 |
| 62,0 | 62,5 | 80 | U10 96200 | 124 | 179 | 3,08 | U12 46200 | 186 | 241 | 3,81 |
| 63,0 | 63,5 | 80 | U10 96300 | 126 | 181 | 3,18 | U12 46300 | 189 | 244 | 3,95 |
| 64,0 | 64,5 | 80 | U10 96400 | 128 | 183 | 3,26 | U12 46400 | 192 | 247 | 4,07 |
| 65,0 | 65,5 | 80 | U10 96500 | 130 | 185 | 3,35 | U12 46500 | 195 | 250 | 4,2 |

Any **intermediate dimensions** from ∅ 34 – 65 mm and **inch dimensions** are available on request.

**Supply includes:** KUB Quatron® drill with assembly parts. Please order insert and accessories separately.

* Adjustment device see "KomPass Bore machining – chapter 5"



Patent applied for inside and outside Germany (ABS) and patent applications (KUB Quatron)

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |
| 3×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 50-51 >< not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert -01 -21 | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| W83 44010.088425<br>W83 44210.082730<br>W83 44000.1861<br>W83 44210.087710<br>W83 44000.1879 | SOEX 120508-01 BK8425<br>SOEX 120508-21 BK2730 ⚠<br>SOEX 120508-01 BK61<br>SOEX 120508-21 BK7710<br>SOEX 120508-01 BK79 | 2 | | N00 57301<br>S45100-20IP | 6,25 Nm | L05 00870<br>20IP |
| W83 23010.088425<br>W83 23210.082730<br>W83 23000.0161<br>W83 23210.087710<br>W83 23000.0179 | SOEX 07T308-01 BK8425<br>SOEX 07T308-21 BK2730 ⚠<br>SOEX 07T308-01 BK61<br>SOEX 07T308-21 BK7710<br>SOEX 07T308-01 BK79 | 4 | | N00 57571<br>S/M2,5×6,3-8IP | 1,28 Nm | L05 00830<br>8IP |
| W83 32010.088425<br>W83 32210.082730<br>W83 32000.1561<br>W83 32210.087710<br>W83 32000.1579 | SOEX 090408-01 BK8425<br>SOEX 090408-21 BK2730 ⚠<br>SOEX 090408-01 BK61<br>SOEX 090408-21 BK7710<br>SOEX 090408-01 BK79 | 4 | | N00 57261<br>S3575-15IP | 2,8 Nm | L05 00860<br>15IP |

⚠ Note: Only use this insert with KUB Quatron® as an external cutting edge:
SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminium).

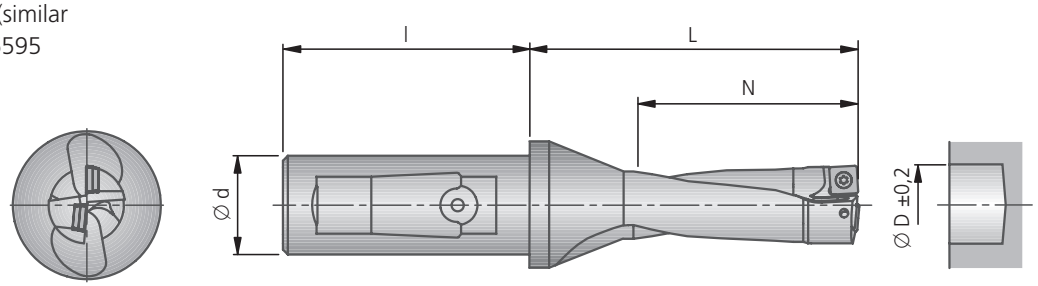
Guideline values for solid drilling: pages 48-49 / alternative inserts: page 52.

# KOMET KUB Quatron®

# Ø 14 – 33 mm

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

■ cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595




| Ø D | max. diameter with offset | Cylindrical shank Ø d × l | 2×D Order No. | 2×D N | 2×D L | 2×D kg | 3×D Order No. | 3×D N | 3×D L | 3×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 14,0 | 14,5 | 20 × 50 | U10 01402 | 28 | 52 | 0,17 | U11 61402 | 42 | 66 | 0,18 |
| 15,0 | 15,5 | 20 × 50 | U10 01502 | 30 | 54 | 0,18 | U11 61502 | 45 | 69 | 0,19 |
| 15,5 | 16,0 | 20 × 50 | U10 01550 | 32 | 56 | 0,18 | U11 61550 | 48 | 72 | 0,19 |
| 16,0 | 16,5 | 20 × 50 | U10 01600 | 32 | 56 | 0,19 | U11 61600 | 48 | 72 | 0,20 |
| 16,5 | 17,0 | 20 × 50 | – | | | | U11 61650 | 51 | 75 | 0,20 |
| 17,0 | 17,5 | 20 × 50 | U10 01700 | 34 | 58 | 0,19 | U11 61700 | 51 | 75 | 0,20 |
| 17,5 | 18,0 | 25 × 56 | U10 11750 | 36 | 60 | 0,27 | U11 71750 | 54 | 78 | 0,28 |
| 18,0 | 18,5 | 25 × 56 | U10 11800 | 36 | 60 | 0,27 | U11 71800 | 54 | 78 | 0,28 |
| 18,5 | 19,0 | 25 × 56 | U10 11850 | 38 | 62 | 0,27 | U11 71850 | 57 | 81 | 0,29 |
| 19,0 | 19,5 | 25 × 56 | U10 11900 | 38 | 62 | 0,28 | U11 71900 | 57 | 81 | 0,29 |
| 19,5 | 20,0 | 25 × 56 | U10 11950 | 40 | 64 | 0,29 | U11 71950 | 60 | 84 | 0,30 |
| 20,0 | 20,5 | 25 × 56 | U10 12000 | 40 | 64 | 0,29 | U11 72000 | 60 | 84 | 0,31 |
| 20,5 | 21,0 | 25 × 56 | U10 12050 | 42 | 66 | 0,30 | U11 72050 | 63 | 87 | 0,31 |
| 21,0 | 21,5 | 25 × 56 | U10 12100 | 42 | 66 | 0,30 | U11 72100 | 63 | 87 | 0,32 |
| 22,0 | 22,5 | 25 × 56 | U10 12200 | 44 | 68 | 0,31 | U11 72200 | 66 | 90 | 0,33 |
| 22,5 | 23,0 | 25 × 56 | U10 12250 | 46 | 70 | 0,31 | U11 72250 | 69 | 93 | 0,34 |
| 23,0 | 23,5 | 25 × 56 | U10 12300 | 46 | 70 | 0,32 | U11 72300 | 69 | 93 | 0,35 |
| 24,0 | 24,5 | 32 × 60 | U10 22400 | 48 | 72 | 0,51 | U11 82400 | 72 | 96 | 0,55 |
| 24,5 | 25,0 | 32 × 60 | U10 22450 | 50 | 74 | 0,52 | U11 82450 | 75 | 99 | 0,56 |
| 25,0 | 25,5 | 32 × 60 | U10 22500 | 50 | 74 | 0,52 | U11 82500 | 75 | 99 | 0,56 |
| 26,0 | 26,5 | 32 × 60 | U10 22600 | 52 | 76 | 0,54 | U11 82600 | 78 | 102 | 0,58 |
| 26,5 | 27,0 | 32 × 60 | U10 22650 | 54 | 78 | 0,55 | U11 82650 | 81 | 105 | 0,60 |
| 27,0 | 27,5 | 32 × 60 | U10 22700 | 54 | 78 | 0,56 | U11 82700 | 81 | 105 | 0,61 |
| 28,0 | 28,5 | 32 × 60 | U10 22800 | 56 | 80 | 0,57 | U11 82800 | 84 | 108 | 0,63 |
| 28,5 | 29,0 | 32 × 60 | U10 22850 | 58 | 82 | 0,58 | U11 82850 | 87 | 111 | 0,65 |
| 29,0 | 29,5 | 32 × 60 | U10 22900 | 58 | 82 | 0,59 | U11 82900 | 87 | 111 | 0,66 |
| 29,5 | 30,0 | 32 × 60 | U10 22950 | 59 | 84 | 0,60 | U11 82950 | 88,5 | 114 | 0,67 |
| 30,0 | 30,5 | 32 × 60 | U10 23000 | 60 | 89 | 0,63 | U11 83000 | 90 | 119 | 0,70 |
| 31,0 | 31,5 | 32 × 60 | U10 23100 | 62 | 91 | 0,65 | U11 83100 | 93 | 122 | 0,73 |
| 31,5 | 32,0 | 32 × 60 | U10 23150 | 64 | 93 | 0,66 | U11 83150 | 96 | 125 | 0,75 |
| 32,0 | 32,5 | 32 × 60 | U10 23200 | 64 | 93 | 0,67 | U11 83200 | 96 | 125 | 0,76 |
| 33,0 | 33,5 | 32 × 60 | U10 23300 | 66 | 95 | 0,73 | U11 83300 | 99 | 128 | 0,83 |
| | | 40 × 68 | U10 33300 | 66 | 95 | 1,02 | U11 93300 | 99 | 128 | 1,12 |

For other diameters see following page.

Any **intermediate dimensions** from Ø 14 – 33 mm and **inch dimensions** are available on request.

**Supply includes:** KUB Quatron® drill with assembly parts. Please order insert and accessories separately.

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |
| 3×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 50-51 ✕ not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert -01 -21 | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| W83 13010.048425<br>W83 13210.042730<br>W83 13000.0161<br>W83 13210.047710<br>W83 13000.0179 | SOEX 050204-01 BK8425<br>SOEX 050204-21 BK2730 ⚠<br>SOEX 050204-01 BK61<br>SOEX 050204-21 BK7710<br>SOEX 050204-01 BK79 | 2 | ● ● ● ● ○ | N00 56041<br>S/M2×4,3-6IP | 0,62 Nm | L05 00810<br>6IP |
| W83 18010.068425<br>W83 18210.062730<br>W83 18000.0961<br>W83 18210.067710<br>W83 18000.0979 | SOEX 060306-01 BK8425<br>SOEX 060306-21 BK2730 ⚠<br>SOEX 060306-01 BK61<br>SOEX 060306-21 BK7710<br>SOEX 060306-01 BK79 | 2 | ● ● ● ● ○ | N00 57553<br>S/M2,2×5,5-6IP | 1,01 Nm | L05 00810<br>6IP |
| W83 23010.088425<br>W83 23210.082730<br>W83 23000.0161<br>W83 23210.087710<br>W83 23000.0179 | SOEX 07T308-01 BK8425<br>SOEX 07T308-21 BK2730 ⚠<br>SOEX 07T308-01 BK61<br>SOEX 07T308-21 BK7710<br>SOEX 07T308-01 BK79 | 2 | ● ● ● ● ○ | N00 57571<br>S/M2,5×6,3-8IP | 1,28 Nm | L05 00830<br>8IP |
| W83 32010.088425<br>W83 32210.082730<br>W83 32000.1561<br>W83 32210.087710<br>W83 32000.1579 | SOEX 090408-01 BK8425<br>SOEX 090408-21 BK2730 ⚠<br>SOEX 090408-01 BK61<br>SOEX 090408-21 BK7710<br>SOEX 090408-01 BK79 | 2 | ● ● ● ● ○ | N00 57261<br>S3575-15IP | 2,8 Nm | L05 00860<br>15IP |

⚠ Note: Only use this insert with KUB Quatron® as an external cutting edge:
SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminium).

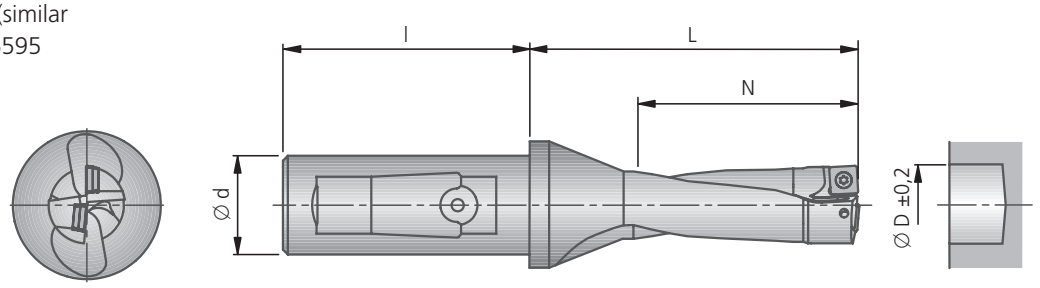
Guideline values for solid drilling: pages 48-49 / alternative inserts: page 52.

# KOMET KUB Quatron®

## Ø 34 – 44 mm

### Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

■ cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595



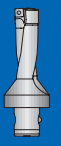

| Ø D | max. diameter with offset | Cylindrical shank Ø d × l | 2×D Order No. | 2×D N | 2×D L | 2×D kg | 3×D Order No. | 3×D N | 3×D L | 3×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 34,0 | 34,5 | 32 × 60 | U10 23400 | 68 | 97 | 0,75 | U11 83400 | 102 | 131 | 0,86 |
| | | 40 × 68 | U10 33400 | 68 | 97 | 1,04 | U11 93400 | 102 | 131 | 1,15 |
| 35,0 | 35,5 | 32 × 60 | U10 23500 | 70 | 99 | 0,78 | U11 83500 | 105 | 134 | 0,89 |
| | | 40 × 68 | U10 33500 | 70 | 99 | 1,07 | U11 93500 | 105 | 134 | 1,18 |
| 36,0 | 36,5 | 32 × 60 | U10 23600 | 72 | 101 | 0,8 | U11 83600 | 108 | 137 | 0,93 |
| | | 40 × 68 | U10 33600 | 72 | 101 | 1,09 | U11 93600 | 108 | 137 | 1,22 |
| 37,0 | 37,5 | 32 × 60 | U10 23700 | 74 | 113 | 0,89 | U11 83700 | 111 | 150 | 1,03 |
| | | 40 × 68 | U10 33700 | 74 | 113 | 1,18 | U11 93700 | 111 | 150 | 1,32 |
| 37,5 | 38,0 | 32 × 60 | U10 23750 | 76 | 115 | 0,91 | U11 83750 | 114 | 153 | 1,06 |
| | | 40 × 68 | U10 33750 | 76 | 115 | 1,2 | U11 93750 | 114 | 153 | 1,35 |
| 38,0 | 38,5 | 32 × 60 | U10 23800 | 76 | 115 | 0,92 | U11 83800 | 114 | 153 | 1,07 |
| | | 40 × 68 | U10 33800 | 76 | 115 | 1,21 | U11 93800 | 114 | 153 | 1,36 |
| 39,0 | 39,5 | 32 × 60 | U10 23900 | 78 | 117 | 0,95 | U11 83900 | 117 | 156 | 1,12 |
| | | 40 × 68 | U10 33900 | 78 | 117 | 1,24 | U11 93900 | 117 | 156 | 1,41 |
| 39,5 | 40,0 | 32 × 60 | U10 23950 | 80 | 119 | 0,97 | U11 83950 | 120 | 159 | 1,15 |
| | | 40 × 68 | U10 33950 | 80 | 119 | 1,26 | U11 93950 | 120 | 159 | 1,44 |
| 40,0 | 40,5 | 32 × 60 | U10 24000 | 80 | 119 | 0,99 | U11 84000 | 120 | 159 | 1,17 |
| | | 40 × 68 | U10 34000 | 80 | 119 | 1,28 | U11 94000 | 120 | 159 | 1,46 |
| 41,0 | 41,5 | 32 × 60 | U10 24100 | 82 | 121 | 1,02 | U11 84100 | 123 | 162 | 1,22 |
| | | 40 × 68 | U10 34100 | 82 | 121 | 1,31 | U11 94100 | 123 | 162 | 1,51 |
| 42,0 | 42,5 | 32 × 60 | U10 24200 | 84 | 123 | 1,06 | U11 84200 | 126 | 165 | 1,27 |
| | | 40 × 68 | U10 34200 | 84 | 123 | 1,35 | U11 94200 | 126 | 165 | 1,56 |
| 43,0 | 43,5 | 32 × 60 | U10 24300 | 86 | 125 | 1,1 | U11 84300 | 129 | 168 | 1,33 |
| | | 40 × 68 | U10 34300 | 86 | 125 | 1,39 | U11 94300 | 129 | 168 | 1,62 |
| 44,0 | 44,5 | 32 × 60 | U10 24400 | 88 | 127 | 1,14 | U11 84400 | 132 | 171 | 1,34 |
| | | 40 × 68 | U10 34400 | 88 | 127 | 1,43 | U11 94400 | 132 | 171 | 1,63 |

Any **intermediate dimensions** from ∅ 34 – 44 mm and **inch dimensions** are available on request.

**Supply includes:**
KUB Quatron® drill with assembly parts. Please order insert and accessories separately.

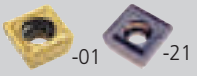
## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting





| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |
| 3×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 50-51 >< not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert  -01 -21 | | | for workpiece material | Clamping screw  | Starting torque | Screwdriver  |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| **W83 44010.088425**<br>**W83 44210.082730**<br>**W83 44000.1861**<br>**W83 44210.087710**<br>**W83 44000.1879** | SOEX 120508-01 BK8425<br>SOEX 120508-21 BK2730 ⚠<br>SOEX 120508-01 BK61<br>SOEX 120508-21 BK7710<br>SOEX 120508-01 BK79 | 2 |  | **N00 57301**<br>S45100-20IP | 6,25 Nm | **L05 00870**<br>20IP |

⚠ Note: Only use this insert with KUB Quatron® as an external cutting edge:
SOEX ... -21 (Geometry 21) in BK2730 and BK7710 (suitable as internal cutting edge for machining BK7710 aluminium).

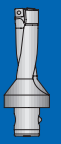
Guideline values for solid drilling: pages 48-49 / alternative inserts: page 52.

## Technical Notes



| Guideline values for solid drilling | | | | | | $v_c$ | Max. feed f (mm/rev) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2×D | | | | | | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 14 – 15,9 | Ø 16 – 17,5 | Ø 17,6 – 21,5 | Ø 21,6 – 27 | Ø 28 – 33 | Ø 34 – 44 | Ø 45 – 52 | Ø 53 – 65 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,10 | 0,12 | 0,12 | 0,14 | 0,14 | 0,14 | 0,14 | 0,14 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,12 | 0,14 | 0,16 | 0,20 | 0,20 | 0,25 | 0,20 | 0,20 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,14 | 0,16 | 0,18 | 0,25 | 0,25 | 0,30 | 0,25 | 0,25 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 200 | 0,14 | 0,16 | 0,18 | 0,20 | 0,20 | 0,25 | 0,20 | 0,20 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 180 | 0,10 | 0,12 | 0,12 | 0,18 | 0,18 | 0,20 | 0,18 | 0,18 |
| P | 4.1 | | | HSS | | 80 | 0,08 | 0,10 | 0,12 | 0,14 | 0,16 | 0,18 | 0,14 | 0,16 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 60 | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 | 0,12 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 80 | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 | 0,12 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 180 | 0,08 | 0,10 | 0,12 | 0,14 | 0,14 | 0,16 | 0,14 | 0,14 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 160 | 0,08 | 0,08 | 0,12 | 0,16 | 0,16 | 0,20 | 0,16 | 0,16 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 160 | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 | 0,14 | 0,12 | 0,12 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 200 | 0,16 | 0,16 | 0,25 | 0,30 | 0,30 | 0,30 | 0,30 | 0,30 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 160 | 0,14 | 0,16 | 0,18 | 0,20 | 0,20 | 0,25 | 0,20 | 0,20 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,14 | 0,16 | 0,18 | 0,20 | 0,20 | 0,25 | 0,20 | 0,20 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 160 | 0,14 | 0,16 | 0,18 | 0,22 | 0,22 | 0,25 | 0,22 | 0,22 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 140 | 0,14 | 0,16 | 0,18 | 0,22 | 0,22 | 0,25 | 0,22 | 0,22 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,14 | 0,16 | 0,18 | 0,22 | 0,25 | 0,25 | 0,22 | 0,25 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,10 | 0,12 | 0,16 | 0,20 | 0,20 | 0,25 | 0,20 | 0,20 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,12 | 0,14 | 0,16 | 0,25 | 0,20 | 0,25 | 0,25 | 0,20 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 400 | 0,08 | 0,08 | 0,10 | 0,12 | 0,12 | 0,15 | 0,12 | 0,12 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 600 | 0,08 | 0,08 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 | 0,12 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,10 | 0,12 | 0,14 | 0,16 | 0,16 | 0,20 | 0,16 | 0,16 |
| N | 14.0 | | 100 | cast alum.alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,30 | 0,20 | 0,20 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | 0,05 | 0,05 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 40 | 0,05 | 0,05 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 |

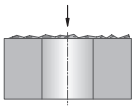
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



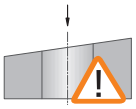
| Max. feed f (mm/rev) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 3×D | | | | | | | |
| | Ø 14 – 15,9 | Ø 16 – 17,5 | Ø 17,6 – 21,5 | Ø 21,6 – 27 | Ø 28– 33 | Ø 34 – 44 | Ø 45 – 52 | Ø 53 – 65 |
| | 0,10 | 0,12 | 0,12 | 0,14 | 0,14 | 0,14 | 0,14 | 0,14 |
| | 0,12 | 0,14 | 0,16 | 0,20 | 0,20 | 0,25 | 0,20 | 0,20 |
| | 0,14 | 0,16 | 0,18 | 0,25 | 0,25 | 0,30 | 0,25 | 0,25 |
| | 0,14 | 0,16 | 0,18 | 0,20 | 0,20 | 0,25 | 0,20 | 0,20 |
| | 0,10 | 0,12 | 0,12 | 0,18 | 0,18 | 0,20 | 0,18 | 0,18 |
| | 0,08 | 0,10 | 0,12 | 0,14 | – | – | 0,14 | – |
| | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 | 0,12 |
| | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 | 0,12 |
| | 0,08 | 0,10 | 0,12 | 0,14 | 0,14 | 0,16 | 0,14 | 0,14 |
| | 0,08 | 0,08 | 0,12 | 0,16 | 0,16 | 0,20 | 0,16 | 0,16 |
| | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 | 0,14 | 0,12 | 0,12 |
| | 0,16 | 0,16 | 0,25 | 0,30 | 0,30 | 0,30 | 0,30 | 0,30 |
| | 0,14 | 0,16 | 0,18 | 0,20 | 0,20 | 0,25 | 0,20 | 0,20 |
| | 0,14 | 0,16 | 0,18 | 0,20 | 0,20 | 0,25 | 0,20 | 0,20 |
| | 0,14 | 0,16 | 0,18 | 0,22 | 0,22 | 0,25 | 0,22 | 0,22 |
| | 0,14 | 0,16 | 0,18 | 0,22 | 0,22 | 0,25 | 0,22 | 0,22 |
| | 0,14 | 0,16 | 0,18 | 0,22 | 0,25 | 0,25 | 0,22 | 0,25 |
| | 0,10 | 0,12 | 0,16 | 0,20 | 0,20 | 0,25 | 0,20 | 0,20 |
| | 0,12 | 0,14 | 0,16 | 0,25 | 0,20 | 0,25 | 0,25 | 0,20 |
| | 0,08 | 0,08 | 0,10 | 0,12 | 0,12 | 0,15 | 0,12 | 0,12 |
| | 0,08 | 0,08 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 | 0,12 |
| | 0,10 | 0,12 | 0,14 | 0,16 | 0,16 | 0,20 | 0,16 | 0,16 |
| | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,30 | 0,20 | 0,20 |
| | 0,05 | 0,05 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 |
| | 0,05 | 0,05 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 |

## Technical Informations

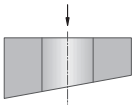


1. 

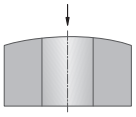
**Starting on uneven surfaces (cast surfaces)**
- subject to the surface, reduce feed as required when starting the bore

2. 

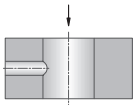
**Starting on angled surfaces**
- subject to the starting angle, the feed must be reduced when starting the bore.
  Rule of thumb: 3° ≙ 30%; 10° ≙ 40%; 25° ≙ 60% use tools max. 2×D
- use tough insert and stable corner radius

3. 

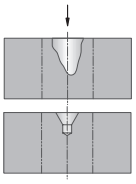
**Angled bore exit**
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insertand stable corner radius

4. 

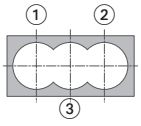
**Starting on cambered surfaces**
- no problems
- reduce feed rate if necessary

5. 

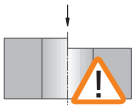
**Drilling through a cross bore**
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insert and stable corner radius

6. 

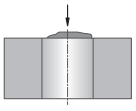
**Starting on a groove or large centering bore**
- use short tools, max. 3×D
- spot face if required
- reduce feed
- use tough insert for internal cutting edge

7. 

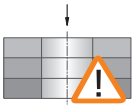

**Drilling a chamber**
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- if necessary reduce to approx. 1-1.5 mm in the ∅ on circumference
- reduce feed rate 50% for interrupted cut
- use tough insert and stable corner radius

8. 

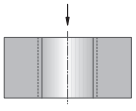
**Starting on an edge**
- reduce feed rate by 50%
- use tough insert and stable corner radius

9. 

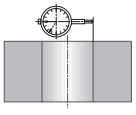
**Starting on a welded seam**
- reduce feed rate
- use max. 3×D tools

10. 

**Drilling through stacked plates**
- good workpiece clamping required
- max. gap = 1 mm

11. 

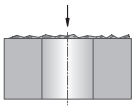
**Roughing**
- possible

12. 

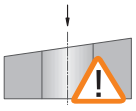
**Adjustable**
- using adjusting device (ABS-MV) and eccentric adjusting device
- for turning machines over axis

Note: please note max. offset ∅ in tables

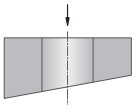


1. 

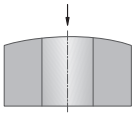
**Starting on uneven surfaces (cast surfaces)**
- subject to the surface, reduce feed as required when starting the bore

2. 

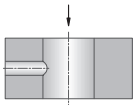
**Starting on angled surfaces**
- max. 3° angled position possible (cast angles)
- reduce feed rate when starting bore
- use stable corner radius

3. 

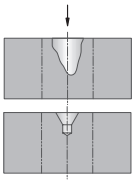
**Angled bore exit**
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insertand stable corner radius

4. 

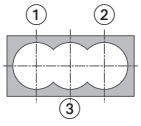
**Starting on cambered surfaces**
- no problems
- reduce feed rate if necessary

5. 

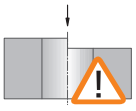
**Drilling through a cross bore**
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insertand stable corner radius

6. 

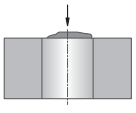
**Starting on a groove or large centering bore**
- use short tools, max. 3×D
- spot face if required
- reduce feed
- use tough insert for internal cutting edge

7. 

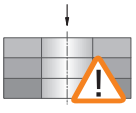

**Drilling a chamber**
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- if necessary reduce to approx. 1-1.5 mm in the ∅ on circumference
- reduce feed rate 50% for interrupted cut
- use tough insertand stable corner radius

8. 

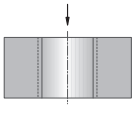
**Starting on an edge**
- not possible for 3×D tools
- because of the undefined surface for starting the bore, pre-machining is required (spot facing, face milling)
- then continue as described under Point 1

9. 

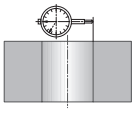
**Starting on a welded seam**
- reduce feed rate
- use max. 3×D tools

10. 

**Drilling through stacked plates**
- good workpiece clamping required

11. 

**Roughing**
- possible

12. 

**Adjustable**
- using adjusting device (ABS-MV) and eccentric adjusting device
- for turning machines over axis

Note: please note max. offset ∅ in tables

## Alternative Inserts



### Alternative Inserts 2×D / 3×D

| | ØD | Order No. ▽▽ Size | ISO-Code | Insert -03 -13 -21 | for workpiece material P M K N S H |
|---|---|---|---|---|---|
| for better chip control | 14-17,5 | W83 13130.048425 | SOEX 050204-13 BK8425 | | |
| | | W83 13210.042730 | SOEX 050204-21 BK2730 ⚠ | | |
| | | W83 13030.048430 | SOEX 050204-03 BK8430 | | |
| | | W83 13000.0279 | SOEX 050204-13 BK79 | | |
| | | W83 13210.047710 | SOEX 050204-21 BK7710 ⚠ | | |
| | 18-21,5 | W83 18130.068425 | SOEX 060306-13 BK8425 | | |
| | | W83 18210.062730 | SOEX 060306-21 BK2730 ⚠ | | |
| | | W83 18030.068430 | SOEX 060306-03 BK8430 | | |
| | | W83 18000.1079 | SOEX 060306-13 BK79 | | |
| | | W83 18210.067710 | SOEX 060306-21 BK7710 ⚠ | | |
| | 22-27 | W83 23130.088425 | SOEX 07T308-13 BK8425 | | |
| | | W83 23210.082730 | SOEX 07T308-21 BK2730 ⚠ | | |
| | | W83 23030.088430 | SOEX 07T308-03 BK8430 | | |
| | | W83 23000.0279 | SOEX 07T308-13 BK79 | | |
| | | W83 23210.087710 | SOEX 07T308-21 BK7710 ⚠ | | |
| | 28-33 | W83 32130.088425 | SOEX 090408-13 BK8425 | | |
| | | W83 32210.082730 | SOEX 090408-21 BK2730 ⚠ | | |
| | | W83 32030.088430 | SOEX 090408-03 BK8430 | | |
| | | W83 32000.1779 | SOEX 090408-13 BK79 | | |
| | | W83 32210.087710 | SOEX 090408-21 BK7710 ⚠ | | |
| | 34-44 | W83 44130.088425 | SOEX 120508-13 BK8425 | | |
| | | W83 44210.082730 | SOEX 120508-21 BK2730 ⚠ | | |
| | | W83 44030.088430 | SOEX 120508-03 BK8430 | | |
| | | W83 44000.1979 | SOEX 120508-13 BK79 | | |
| | | W83 44210.087710 | SOEX 120508-21 BK7710 ⚠ | | |
| | 45-52 | W83 23130.088425 | SOEX 07T308-13 BK8425 | | |
| | | W83 23210.082730 | SOEX 07T308-21 BK2730 ⚠ | | |
| | | W83 23030.088430 | SOEX 07T308-03 BK8430 | | |
| | | W83 23000.0279 | SOEX 07T308-13 BK79 | | |
| | | W83 23210.087710 | SOEX 07T308-21 BK7710 ⚠ | | |
| | 53-65 | W83 32130.088425 | SOEX 090408-13 BK8425 | | |
| | | W83 32210.082730 | SOEX 090408-21 BK2730 ⚠ | | |
| | | W83 32030.088430 | SOEX 090408-03 BK8430 | | |
| | | W83 32000.1779 | SOEX 090408-13 BK79 | | |
| | | W83 32210.087710 | SOEX 090408-21 BK7710 ⚠ | | |

⚠
Only use this insert with KUB Quatron® as an external cutting edge:
SOEX ... -01 (Geometry 01) in BK6115,
SOEX ... -21 (Geometry 21) in BK2730 and BK7710
(suitable as internal cutting edge for machining BK7710 aluminium).

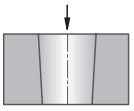
### Alternative Inserts 2×D / 3×D

| | ØD | Order No. ▽▽ Size | ISO-Code | Insert -01 -21 | for workpiece material P M K N S H |
|---|---|---|---|---|---|
| for higher cutting speed | 14-17,5 | W83 13010.046420 | SOEX 050204-01 BK6420 | | |
| | | W83 13210.046130 | SOEX 050204-21 BK6130 | | |
| | | W83 13000.0174 | SOEX 050204-01 BK74 | | |
| | | W83 13000.016115 | SOEX 050204-01 BK6115 ⚠ | | |
| | 18-21,5 | W83 18010.066420 | SOEX 060306-01 BK6420 | | |
| | | W83 18210.066130 | SOEX 060306-21 BK6130 | | |
| | | W83 18000.0974 | SOEX 060306-01 BK74 | | |
| | | W83 18000.096115 | SOEX 060306-01 BK6115 ⚠ | | |
| | 22-27 | W83 23010.086420 | SOEX 07T308-01 BK6420 | | |
| | | W83 23210.086130 | SOEX 07T308-21 BK6130 | | |
| | | W83 23000.0174 | SOEX 07T308-01 BK74 | | |
| | | W83 23000.016115 | SOEX 07T308-01 BK6115 ⚠ | | |
| | 28-33 | W83 32010.086420 | SOEX 090408-01 BK6420 | | |
| | | W83 32210.086130 | SOEX 090408-21 BK6130 | | |
| | | W83 32000.1574 | SOEX 090408-01 BK74 | | |
| | | W83 32000.156115 | SOEX 090408-01 BK6115 ⚠ | | |
| | 34-44 | W83 44010.086420 | SOEX 120508-01 BK6420 | | |
| | | W83 44210.086130 | SOEX 120508-21 BK6130 | | |
| | | W83 44000.1874 | SOEX 120508-01 BK74 | | |
| | | W83 44000.186115 | SOEX 120508-01 BK6115 ⚠ | | |
| | 45-52 | W83 23010.086420 | SOEX 07T308-01 BK6420 | | |
| | | W83 23210.086130 | SOEX 07T308-21 BK6130 | | |
| | | W83 23000.0174 | SOEX 07T308-01 BK74 | | |
| | | W83 23000.016115 | SOEX 07T308-01 BK6115 ⚠ | | |
| | 53-65 | W83 32010.086420 | SOEX 090408-01 BK6420 | | |
| | | W83 32210.086130 | SOEX 090408-21 BK6130 | | |
| | | W83 32000.1574 | SOEX 090408-01 BK74 | | |
| | | W83 32000.156115 | SOEX 090408-01 BK6115 ⚠ | | |
| for greater strength | 14-17,5 | **W83 13000.0179** | SOEX 050204-01 BK79 | | |
| | | **W83 13010.046420** | SOEX 050204-01 BK6420 | | |
| | 18-21,5 | **W83 18000.0979** | SOEX 060306-01 BK79 | | |
| | | **W83 18010.066420** | SOEX 060306-01 BK6420 | | |
| | 22-27 | **W83 23000.0179** | SOEX 07T308-01 BK79 | | |
| | | **W83 23010.086420** | SOEX 07T308-01 BK6420 | | |
| | 28-33 | **W83 32000.1579** | SOEX 090408-01 BK79 | | |
| | | **W83 32010.086420** | SOEX 090408-01 BK6420 | | |
| | 34-44 | **W83 44000.1879** | SOEX 120508-01 BK79 | | |
| | | **W83 44010.086420** | SOEX 120508-01 BK6420 | | |
| | 45-52 | **W83 23000.0179** | SOEX 07T308-01 BK79 | | |
| | | **W83 23010.086420** | SOEX 07T308-01 BK6420 | | |
| | 53-65 | **W83 32000.1579** | SOEX 090408-01 BK79 | | |
| | | **W83 32010.086420** | SOEX 090408-01 BK6420 | | |

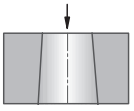
## rotating and stationary use



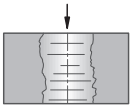
**Short tool life** types of wear on inserts
- cutting speed to high → select correct cutting speed
- cutting material with too little wear resistance → select grade with higher wear resistance
- tool overhang too great → if possible use shorter tool
- damaged insert seating → check tool, change if necessary
- clamping device not stable enough → improve stability



**Bore narrows at bottom**
- chip jam on external cutting edge → use different chip fracture geometry, increase feed if necessary
- material very soft → increase cutting speed, reduce feed. Use positive chip geometry



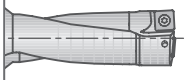
**Bore widens at bottom**
- chip jam on internal cutting edge → use different chip fracture geometry, increase feed if necessary



**Bad surface finish**
- bad chip removal → improve cutting parameters: increase cutting speed reduce feed

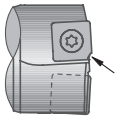


**Bild up on cutting edge**
- cutting speed too low → increase cutting speed
- insert too negative → use positive geometry
- coating not suitable → select correct coating

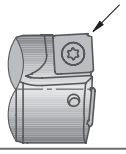


**Friction marks on tool shank**
- bore diameter too small → check setting
- chip removal problems → improve cutting parameters, check geometry of inserts
- cutting edge corner radius too large → use correct cutting edge radius

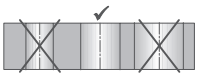
## stationary use



**Fracture on internal cutting edge**
- drill bit height of tool too high/too low → tool turret/holder may have shifted. Readjust machine
- feed rate too high → reduce feed rate
- insert grade too brittle → use tougher insert grade
- wrong insert geometry → use geometry with chamfered cutting edge

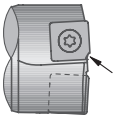


**Fracture on external cutting edge**
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius

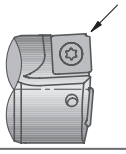


**Bore too small/ too large**
- machine not at X-0 position → move axis to correct position
- machine axis shifted → readjust machine

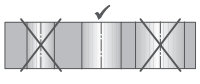
## rotating use



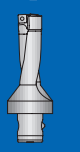
**Fracture on internal cutting edge**
- feed rate too high → reduce feed rate
- insert grade too brittle → use tougher insert grade
- wrong insert geometry → use geometry with chamfered cutting edge

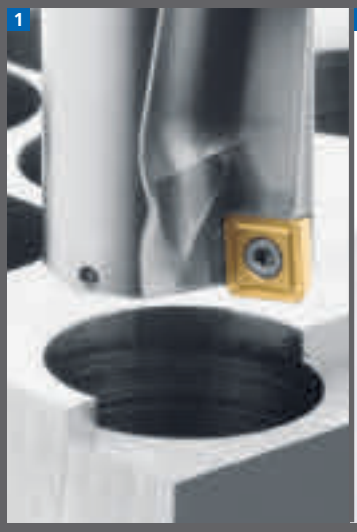


**Fracture on external cutting edge**
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius



**Bore too small/ too large** with adjustable tool
- wrong cutting edge radius used → use correct cutting edge radius
- setting wrong → correct setting















KOMET KUB Pentron® continuous drill

In developing the KUB Pentron®, KOMET® has blazed a completely new trail.

It has combined key features such as real accuracy, top performance parameters and deep drilling depths in a single tool.

In comparison with the usual indexable insert drills available until now on the market, the KOMET KUB Pentron® gives up to 20% higher cut and feed values, right through to a 5×D length/ diameter ratio.

It can handle extreme working conditions that were previously only feasible with 3×D.

BENEFITS for you:

- Maximum performance and life with excellent drilling performance due to optimum main body stability and a special surface treatment.
- Optimum dimensional accuracy in the most difficult drilling conditions to 5×D.
- Cost reductions in stocking and ease of handling due to identical internal and external indexable inserts.
- Maximum tool life due to four fully useable cutting edges of modern substrates with appropriate coatings.

Applications:

- Perfect for great drilling depths and high feed performance
- Ideal for extreme working situations
- Ideal for machining steel, cast metal, aluminium and stainless materials

Extreme applications in the 5×D region:

1 Drilling on an edge
2 Drilling in an acute corner
3 Multiple drilling
4 Drilling on a welded seam or undulating surfaces

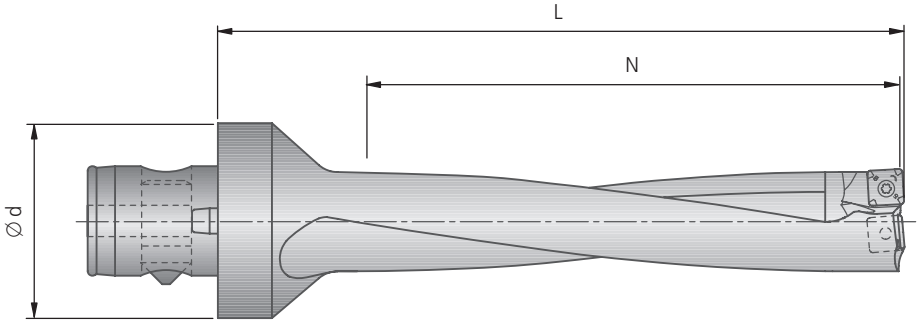


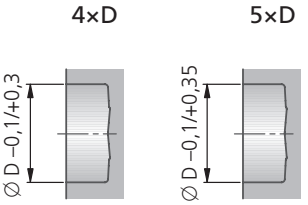

| KOMET KUB Pentron® | Page |
|---|---|
| **ABS® Connection** | 56 – 61 |
| R.H. cutting<br>Drilling depth 4×D, 5×D – ∅ 14 - 46 mm | |
| **Cylindrical Shank ISO 9766** | 62 – 67 |
| R.H. cutting<br>Drilling depth 4×D, 5×D – ∅ 14 - 46 mm | |
| **Technical Notes** | 68 – 71 |
| Guideline values for solid drilling | |
| **Technical Informations** | 72 |
| **Alternative Inserts** | 73 |
| **Milling cartridge** | Chapter 6 |

# KOMET KUB Pentron®

## Ø 14,0 – 26,0 mm

### Insert Drill with ABS® Connection, R.H. cutting



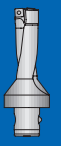

| Ø D mm (inch) | **max. diameter with offset mm | ABS Ø d | 4×D Order No. | 4×D N | 4×D L | 4×D kg | 5×D Order No. | 5×D N | 5×D L | 5×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 14,0 | 14,5 | 50 | U44 51400 | 56 | 83 | 0,39 | U45 51400 | 70 | 97 | 0,40 |
| 14,3 (0,562) | 14,8 | 50 | U44 51430 | 60 | 88 | 0,40 | U45 51430 | 75 | 103 | 0,41 |
| 14,5 | 15,0 | 50 | U44 51450 | 60 | 88 | 0,40 | U45 51450 | 75 | 103 | 0,41 |
| 15,0 | 15,5 | 50 | U44 51500 | 60 | 88 | 0,41 | U45 51500 | 75 | 103 | 0,41 |
| 15,1 (0,593) | 15,6 | 50 | U44 51510 | 64 | 94 | 0,41 | U45 51510 | 80 | 110 | 0,42 |
| 15,5 | 16,0 | 50 | U44 51550 | 64 | 94 | 0,41 | U45 51550 | 80 | 110 | 0,42 |
| 15,9 (0,625) | 16,4 | 50 | U44 51590 | 64 | 94 | 0,42 | U45 51590 | 80 | 110 | 0,43 |
| 16,0 | 16,5 | 50 | U44 51600 | 64 | 94 | 0,42 | U45 51600 | 80 | 110 | 0,43 |
| 16,5 | 17,0 | 50 | U44 51650 | 68 | 99 | 0,43 | U45 51650 | 85 | 116 | 0,44 |
| 16,7 (0.656)* | 17,2 | 50 | U44 51670 | 68 | 99 | 0,43 | U45 51670 | 85 | 116 | 0,44 |
| 17,0 | 17,5 | 50 | U44 51700 | 68 | 99 | 0,43 | U45 51700 | 85 | 116 | 0,44 |
| 17,5 (0.687) | 18,0 | 50 | U44 51750 | 72 | 103 | 0,44 | U45 51750 | 90 | 121 | 0,45 |
| 17,9 (0.703)* | 18,4 | 50 | U44 51790 | 72 | 103 | 0,44 | U45 51790 | 90 | 121 | 0,45 |
| 18,0 | 18,5 | 50 | U44 51800 | 72 | 103 | 0,44 | U45 51800 | 90 | 121 | 0,46 |
| 18,5 | 19,0 | 50 | U44 51850 | 76 | 108 | 0,47 | U45 51850 | 95 | 127 | 0,51 |
| 19,0 | 19,5 | 50 | U44 51900 | 76 | 108 | 0,49 | U45 51900 | 95 | 127 | 0,52 |
| 19,1 (0.750)* | 19,6 | 50 | U44 51910 | 80 | 112 | 0,49 | U45 51910 | 100 | 132 | 0,53 |
| 19,4 (0.765)* | 19,9 | 50 | U44 51940 | 80 | 112 | 0,50 | U45 51940 | 100 | 132 | 0,53 |
| 19,5 | 20,0 | 50 | U44 51950 | 80 | 112 | 0,50 | U45 51950 | 100 | 132 | 0,53 |
| 19,8 (0.781)* | 20,3 | 50 | U44 51980 | 80 | 112 | 0,51 | U45 51980 | 100 | 132 | 0,53 |
| 20,0 | 20,5 | 50 | U44 52000 | 80 | 112 | 0,51 | U45 52000 | 100 | 132 | 0,53 |
| 20,5 | 21,0 | 50 | U44 52050 | 84 | 116 | 0,51 | U45 52050 | 105 | 137 | 0,53 |
| 20,6 (0.812)* | 21,1 | 50 | U44 52060 | 84 | 116 | 0,51 | U45 52060 | 105 | 137 | 0,53 |
| 21,0 (0.828) | 21,5 | 50 | U44 52100 | 84 | 116 | 0,51 | U45 52100 | 105 | 137 | 0,54 |
| 21,5 | 22,0 | 50 | U44 52150 | 88 | 120 | 0,52 | U45 52150 | 110 | 142 | 0,55 |
| 22,0 | 22,5 | 50 | U44 52200 | 88 | 120 | 0,53 | U45 52200 | 110 | 142 | 0,56 |
| 22,2 (0.875)* | 22,7 | 50 | U44 52220 | 92 | 124 | 0,54 | U45 52220 | 115 | 147 | 0,58 |
| 22,5 | 23,0 | 50 | U44 52250 | 92 | 124 | 0,55 | U45 52250 | 115 | 147 | 0,59 |
| 23,0 (0.906) | 23,5 | 50 | U44 52300 | 92 | 124 | 0,56 | U45 52300 | 115 | 147 | 0,60 |
| 23,5 | 24,0 | 50 | U44 52350 | 96 | 128 | 0,56 | U45 52350 | 120 | 152 | 0,60 |
| 23,8 (0.937)* | 24,3 | 50 | U44 52380 | 96 | 128 | 0,57 | U45 52380 | 120 | 152 | 0,61 |
| 24,0 | 24,5 | 50 | U44 52400 | 96 | 128 | 0,57 | U45 52400 | 120 | 152 | 0,61 |
| 24,5 | 25,0 | 50 | U44 52450 | 100 | 133 | 0,59 | U45 52450 | 125 | 158 | 0,63 |
| 25,0 (0.985) | 25,5 | 50 | U44 52500 | 100 | 133 | 0,60 | U45 52500 | 125 | 158 | 0,64 |
| 25,4 (1.000)* | 25,9 | 50 | U44 52540 | 104 | 137 | 0,61 | U45 52540 | 130 | 163 | 0,66 |
| 25,5 | 26,0 | 50 | U44 52550 | 104 | 137 | 0,61 | U45 52550 | 130 | 163 | 0,66 |
| 26,0 | 26,5 | 50 | U44 52600 | 104 | 137 | 0,63 | U45 52600 | 130 | 163 | 0,68 |

All intermediate dimensions can be supplied quickly on request.
* Inch measurements marked with an asterisk (*) can be supplied quickly.
** Adjustment device see "KomPass Bore machining – chapter 5"


Patent applied for inside and outside Germany (ABS) and patent applications (KUB Pentron)

## Insert Drill with ABS® Connection, R.H. cutting





| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ○ | ◐ | ✕ | ◐ |
| 5×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ◐ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, page 72 ✕ not possible

**Supply includes:**
KUB Pentron® drill with assembly parts. Please order insert and accessories separately.

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| W80 10010.048425<br>W80 10010.042730<br>W80 10010.046115<br>W80 10010.047710 | SOGX 040204-01 BK8425<br>SOGX 040204-01 BK2730<br>SOGX 040204-01 BK6115 ⚠<br>SOGX 040204-01 BK7710 | 2 | ● ● ● ◐ ● ● | N00 56051<br>S/M1,8×3,85-5IP | 0,38 Nm | L05 00800<br>5IP |
| W80 12010.048425<br>W80 12010.042730<br>W80 12010.046115<br>W80 12010.047710 | SOGX 050204-01 BK8425<br>SOGX 050204-01 BK2730<br>SOGX 050204-01 BK6115 ⚠<br>SOGX 050204-01 BK7710 | 2 | ● ● ● ◐ ● ● | N00 56041<br>S/M2×4,3-6IP | 0,62 Nm | L05 00810<br>6IP |
| W80 18010.068425<br>W80 18010.062730<br>W80 18010.066115<br>W80 18010.067710 | SOGX 060206-01 BK8425<br>SOGX 060206-01 BK2730<br>SOGX 060206-01 BK6115 ⚠<br>SOGX 060206-01 BK7710 | 2 | ● ● ● ◐ ● ● | N00 57553<br>S/M2,2×5,5-6IP | 1,01 Nm | L05 00810<br>6IP |
| W80 20010.088425<br>W80 20010.082730<br>W80 20010.086115<br>W80 20010.087710 | SOGX 07T208-01 BK8425<br>SOGX 07T208-01 BK2730<br>SOGX 07T208-01 BK6115 ⚠<br>SOGX 07T208-01 BK7710 | 2 | ● ● ● ◐ ● ● | N00 57553<br>S/M2,2×5,5-6IP | 1,01 Nm | L05 00810<br>6IP |
| W80 24010.088425<br>W80 24010.082730<br>W80 24010.086115<br>W80 24010.087710 | SOGX 080308-01 BK8425<br>SOGX 080308-01 BK2730<br>SOGX 080308-01 BK6115 ⚠<br>SOGX 080308-01 BK7710 | 2 | ● ● ● ◐ ● ● | N00 57571<br>S/M2,5×6,3-8IP | 1,28 Nm | L05 00830<br>8IP |

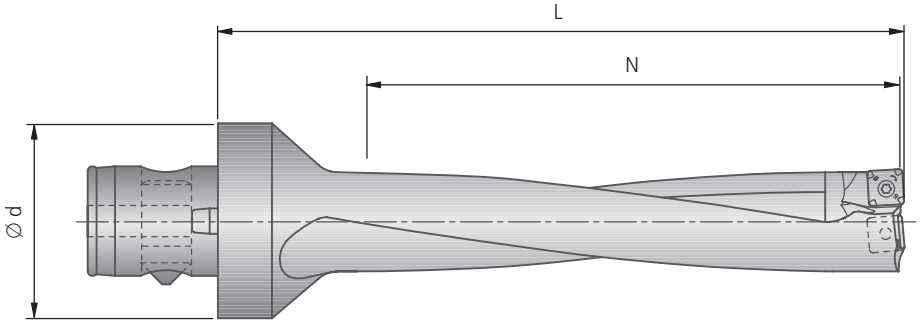
⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge:
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

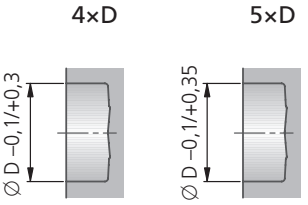
Guideline values for solid drilling: pages 68-71 / alternative inserts: page 73.

# KOMET KUB Pentron®

## Ø 26,2 – 37,0 mm

### Insert Drill with ABS® Connection, R.H. cutting




| Ø D mm (inch) | **max. diameter with offset mm | ABS Ø d | 4×D Order No. | 4×D N | 4×D L | 4×D kg | 5×D Order No. | 5×D N | 5×D L | 5×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 26,2 (1.031)* | 26,7 | 50 | U44 52620 | 108 | 142 | 0,61 | U45 52620 | 135 | 169 | 0,66 |
| 26,5 | 27,0 | 50 | U44 52650 | 108 | 142 | 0,61 | U45 52650 | 135 | 169 | 0,66 |
| 27,0 (1.062) | 27,5 | 50 | U44 52700 | 108 | 142 | 0,62 | U45 52700 | 135 | 169 | 0,67 |
| 27,5 | 28,0 | 50 | U44 52750 | 112 | 146 | 0,64 | U45 52750 | 140 | 174 | 0,70 |
| 28,0 | 28,5 | 50 | U44 52800 | 112 | 146 | 0,65 | U45 52800 | 140 | 174 | 0,71 |
| 28,2 (1.109)* | 28,7 | 50 | U44 52820 | 116 | 151 | 0,67 | U45 52820 | 145 | 180 | 0,73 |
| 28,5 | 29,0 | 50 | U44 52850 | 116 | 151 | 0,68 | U45 52850 | 145 | 180 | 0,74 |
| 28,6 (1.125)* | 29,1 | 50 | U44 52860 | 116 | 151 | 0,68 | U45 52860 | 145 | 180 | 0,75 |
| 29,0 | 29,5 | 50 | U44 52900 | 116 | 151 | 0,69 | U45 52900 | 145 | 180 | 0,76 |
| 29,4 (1.156)* | 29,9 | 50 | U44 52940 | 120 | 155 | 0,70 | U45 52940 | 150 | 185 | 0,77 |
| 29,5 | 30,0 | 50 | U44 52950 | 120 | 155 | 0,70 | U45 52950 | 150 | 185 | 0,77 |
| 30,0 | 30,5 | 50 | U44 53000 | 120 | 155 | 0,71 | U45 53000 | 150 | 185 | 0,79 |
| 30,2 (1.187)* | 30,7 | 63 | U44 63020 | 124 | 163 | 1,03 | U45 63020 | 155 | 194 | 1,12 |
| 30,5 | 31,0 | 63 | U44 63050 | 124 | 163 | 1,05 | U45 63050 | 155 | 194 | 1,13 |
| 30,9 (1.218)* | 31,4 | 63 | U44 63090 | 124 | 163 | 1,06 | U45 63090 | 155 | 194 | 1,15 |
| 31,0 | 31,5 | 63 | U44 63100 | 124 | 163 | 1,07 | U45 63100 | 155 | 194 | 1,15 |
| 31,5 | 32,0 | 63 | U44 63150 | 128 | 167 | 1,10 | U45 63150 | 160 | 199 | 1,18 |
| 31,8 (1.250)* | 32,3 | 63 | U44 63180 | 128 | 167 | 1,10 | U45 63180 | 160 | 199 | 1,19 |
| 32,0 | 32,5 | 63 | U44 63200 | 128 | 167 | 1,11 | U45 63200 | 160 | 199 | 1,20 |
| 32,5 (1.281) | 33,0 | 63 | U44 63250 | 132 | 172 | 1,15 | U45 63250 | 165 | 205 | 1,25 |
| 33,0 | 33,5 | 63 | U44 63300 | 132 | 172 | 1,17 | U45 63300 | 165 | 205 | 1,27 |
| 33,2 | 33,7 | 63 | U44 63320 | 136 | 176 | 1,18 | U45 63320 | 170 | 210 | 1,28 |
| 33,3 (1.312)* | 33,8 | 63 | U44 63330 | 136 | 176 | 1,18 | U45 63330 | 170 | 210 | 1,28 |
| 33,5 | 34,0 | 63 | U44 63350 | 136 | 176 | 1,18 | U45 63350 | 170 | 210 | 1,29 |
| 33,7 (1.328)* | 34,2 | 63 | U44 63370 | 136 | 176 | 1,19 | U45 63370 | 170 | 210 | 1,29 |
| 34,0 | 34,5 | 63 | U44 63400 | 136 | 176 | 1,19 | U45 63400 | 170 | 210 | 1,30 |
| 34,5 | 35,0 | 63 | U44 63450 | 140 | 181 | 1,23 | U45 63450 | 175 | 216 | 1,34 |
| 34,9 (1.375)* | 35,4 | 63 | U44 63490 | 140 | 181 | 1,24 | U45 63490 | 175 | 216 | 1,36 |
| 35,0 | 35,5 | 63 | U44 63500 | 140 | 181 | 1,24 | U45 63500 | 175 | 216 | 1,36 |
| 35,5 | 36,0 | 63 | U44 63550 | 144 | 185 | 1,27 | U45 63550 | 180 | 221 | 1,40 |
| 36,0 | 36,5 | 63 | U44 63600 | 144 | 185 | 1,29 | U45 63600 | 180 | 221 | 1,42 |
| 36,5 (1.437) | 37,0 | 63 | U44 63650 | 148 | 190 | 1,34 | U45 63650 | 185 | 227 | 1,48 |
| 37,0 | 37,5 | 63 | U44 63700 | 148 | 190 | 1,36 | U45 63700 | 185 | 227 | 1,50 |

All intermediate dimensions can be supplied quickly on request.

* Inch measurements marked with an asterisk (*) can be supplied quickly.

** Adjustment device see "KomPass Bore machining – chapter 5"

**Supply includes:** KUB Pentron® drill with assembly parts. Please order insert and accessories separately.



Patent applied for inside and outside Germany (ABS) and patent applications (KUB Pentron)



| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ○ | ◐ | ✕ | ◐ |
| 5×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ◐ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, page 72 ✕ not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| W80 28010.088425<br>W80 28010.082730<br>W80 28010.086115<br>W80 28010.087710 | SOGX 09T308-01 BK8425<br>SOGX 09T308-01 BK2730<br>SOGX 09T308-01 BK6115 ⚠<br>SOGX 09T308-01 BK7710 | 2 | | N00 57251<br>S3076-8IP | 2,25 Nm | L05 00830<br>8IP |
| W80 32010.088425<br>W80 32010.082730<br>W80 32010.086115<br>W80 32010.087710 | SOGX 100408-01 BK8425<br>SOGX 100408-01 BK2730<br>SOGX 100408-01 BK6115 ⚠<br>SOGX 100408-01 BK7710 | 2 | | N00 57261<br>S3575-15IP | 2,8 Nm | L05 00860<br>15IP |
| W80 38010.088425<br>W80 38010.082730<br>W80 38010.086115<br>W80 38010.087710 | SOGX 110408-01 BK8425<br>SOGX 110408-01 BK2730<br>SOGX 110408-01 BK6115 ⚠<br>SOGX 110408-01 BK7710 | 2 | | N00 57261<br>S3575-15IP | 2,8 Nm | L05 00860<br>15IP |

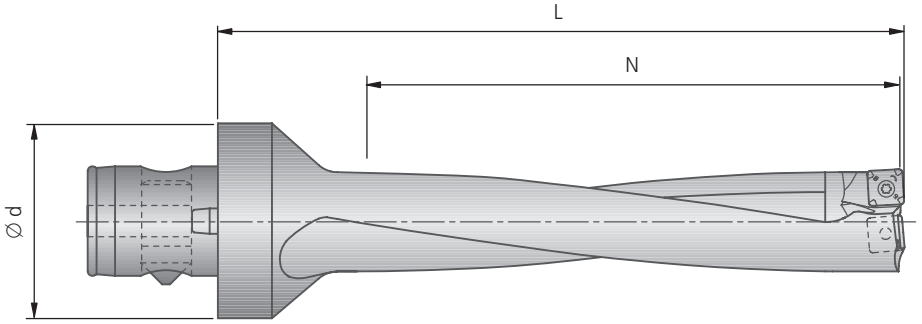
⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge:
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

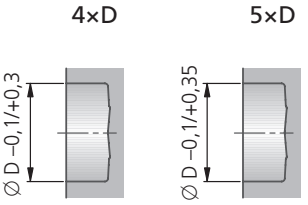
Guideline values for solid drilling: pages 68-71 / alternative inserts: page 73.

# KOMET KUB Pentron®

## Ø 37,3 – 46,0 mm

### Insert Drill with ABS® Connection, R.H. cutting




| Ø D mm (inch) | **max. diameter with offset mm | ABS Ø d | 4×D Order No. | 4×D N | 4×D L | 4×D kg | 5×D Order No. | 5×D N | 5×D L | 5×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 37,3 (1.469)* | 37,8 | 63 | U44 63730 | 152 | 194 | 1,38 | U45 63730 | 190 | 232 | 1,52 |
| 37,5 | 38,0 | 63 | U44 63750 | 152 | 194 | 1,39 | U45 63750 | 190 | 232 | 1,53 |
| 38,0 | 38,5 | 63 | U44 63800 | 152 | 194 | 1,40 | U45 63800 | 190 | 232 | 1,55 |
| 38,1 (1.500)* | 38,6 | 63 | U44 63810 | 156 | 199 | 1,42 | U45 63810 | 195 | 238 | 1,57 |
| 38,5 | 39,0 | 63 | U44 63850 | 156 | 199 | 1,43 | U45 63850 | 195 | 238 | 1,58 |
| 39,0 | 39,5 | 63 | U44 63900 | 156 | 199 | 1,44 | U45 63900 | 195 | 238 | 1,60 |
| 39,2 | 39,7 | 63 | U44 63920 | 160 | 203 | 1,48 | U45 63920 | 200 | 243 | 1,64 |
| 39,5 | 40,0 | 63 | U44 63950 | 160 | 203 | 1,49 | U45 63950 | 200 | 243 | 1,65 |
| 39,7 (1.562)* | 40,2 | 63 | U44 63970 | 160 | 203 | 1,50 | U45 63970 | 200 | 243 | 1,66 |
| 40,0 | 40,5 | 63 | U44 64000 | 160 | 203 | 1,51 | U45 64000 | 200 | 243 | 1,68 |
| 40,5 | 41,0 | 63 | U44 64050 | 164 | 208 | 1,56 | U45 64050 | 205 | 249 | 1,74 |
| 41,0 | 41,5 | 63 | U44 64100 | 164 | 208 | 1,58 | U45 64100 | 205 | 249 | 1,77 |
| 41,3 (1.625)* | 41,8 | 63 | U44 64130 | 168 | 212 | 1,62 | U45 64130 | 210 | 254 | 1,82 |
| 41,5 | 42,0 | 63 | U44 64150 | 168 | 212 | 1,63 | U45 64150 | 210 | 254 | 1,83 |
| 42,0 | 42,5 | 63 | U44 64200 | 168 | 212 | 1,65 | U45 64200 | 210 | 254 | 1,86 |
| 42,1 (1.656)* | 42,6 | 63 | U44 64210 | 172 | 217 | 1,66 | U45 64210 | 215 | 260 | 1,89 |
| 42,5 | 43,0 | 63 | U44 64250 | 172 | 217 | 1,68 | U45 64250 | 215 | 260 | 1,90 |
| 42,9 (1.687)* | 43,4 | 63 | U44 64290 | 172 | 217 | 1,70 | U45 64290 | 215 | 260 | 1,92 |
| 43,0 | 43,5 | 63 | U44 64300 | 172 | 217 | 1,70 | U45 64300 | 215 | 260 | 1,92 |
| 43,5 | 44,0 | 63 | U44 64350 | 176 | 221 | 1,75 | U45 64350 | 220 | 265 | 1,99 |
| 44,0 | 44,5 | 63 | U44 64400 | 176 | 221 | 1,78 | U45 64400 | 220 | 265 | 2,02 |
| 44,5 (1.750) | 45,0 | 63 | U44 64450 | 180 | 226 | 1,84 | U45 64450 | 225 | 271 | 2,09 |
| 45,0 | 45,5 | 63 | U44 64500 | 180 | 226 | 1,87 | U45 64500 | 225 | 271 | 2,13 |
| 45,5 | 46,0 | 63 | U44 64550 | 184 | 230 | 1,93 | U45 64550 | 230 | 276 | 2,20 |
| 46,0 | 46,5 | 63 | U44 64600 | 184 | 230 | 1,96 | U45 64600 | 230 | 276 | 2,24 |

All intermediate dimensions can be supplied quickly on request.
* Inch measurements marked with an asterisk (*) can be supplied quickly.

** Adjustment device see "KomPass Bore machining – chapter 5"

**Supply includes:**
KUB Pentron® drill with assembly parts. Please order insert and accessories separately.



Patent applied for inside and outside Germany (ABS) and patent applications (KUB Pentron)

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ○ | ◐ | ✕ | ◐ |
| 5×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ◐ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, page 72 ✕ not possible

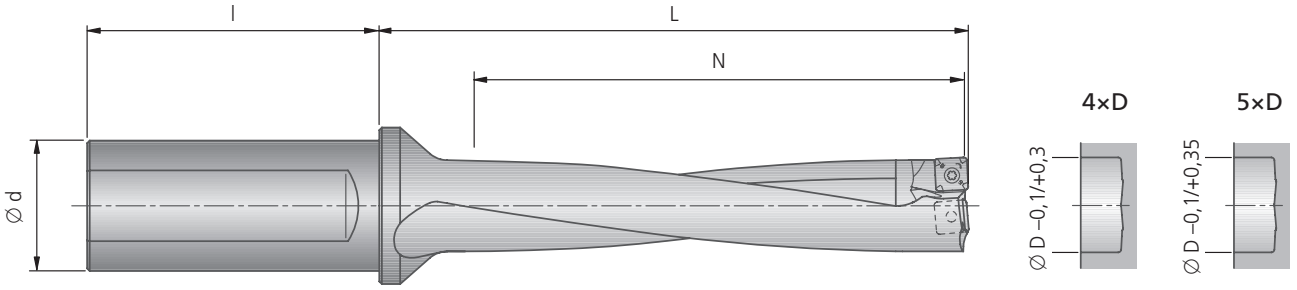
| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| **W80 42010.088425**<br>**W80 42010.082730**<br>**W80 42010.086115**<br>**W80 42010.087710** | SOGX 120408-01 BK8425<br>SOGX 120408-01 BK2730<br>SOGX 120408-01 BK6115 ⚠<br>SOGX 120408-01 BK7710 | 2 | | **N00 57301**<br>S45100-20IP | 6,25 Nm | **L05 00870**<br>20IP |
| **W80 46010.088425**<br>**W80 46010.082730**<br>**W80 46010.086115**<br>**W80 46010.087710** | SOGX 130508-01 BK8425<br>SOGX 130508-01 BK2730<br>SOGX 130508-01 BK6115 ⚠<br>SOGX 130508-01 BK7710 | 2 | | **N00 57301**<br>S45100-20IP | 6,25 Nm | **L05 00870**<br>20IP |

⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge:
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

# KOMET KUB Pentron®

## Ø 14,0 – 26,0 mm

### Insert Drill with Cylindrical Shank ISO 9766, R.H. cutting




| Ø D mm (inch) | max. diameter with offset mm | Cylindrical shank Ø d × l | 4×D Order No. | 4×D N | 4×D L | 4×D kg | 5×D Order No. | 5×D N | 5×D L | 5×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 14,0 | 14,5 | 20×50 | **U44 01400** | 56 | 69 | 0,14 | **U45 01400** | 70 | 83 | 0,15 |
| 14,3 (0,562) | 14,8 | 20×50 | **U44 01430** | 60 | 74 | 0,15 | **U45 01430** | 75 | 89 | 0,16 |
| 14,5 | 15,0 | 20×50 | **U44 01450** | 60 | 74 | 0,15 | **U45 01450** | 75 | 89 | 0,16 |
| 15,0 | 15,5 | 20×50 | **U44 01500** | 60 | 74 | 0,15 | **U45 01500** | 75 | 89 | 0,16 |
| 15,1 (0,593) | 15,6 | 20×50 | **U44 01510** | 64 | 80 | 0,16 | **U45 01510** | 80 | 96 | 0,17 |
| 15,5 | 16,0 | 20×50 | **U44 01550** | 64 | 80 | 0,16 | **U45 01550** | 80 | 96 | 0,17 |
| 15,9 (0,625) | 16,4 | 20×50 | **U44 01590** | 64 | 80 | 0,16 | **U45 01590** | 80 | 96 | 0,17 |
| 16,0 | 16,5 | 20×50 | **U44 01600** | 64 | 80 | 0,16 | **U45 01600** | 80 | 96 | 0,17 |
| 16,5 | 17,0 | 20×50 | **U44 01650** | 68 | 85 | 0,17 | **U45 01650** | 85 | 102 | 0,18 |
| 16,7 (0.656)* | 17,2 | 20x50 | **U44 01670** | 68 | 85 | 0,17 | **U45 01670** | 85 | 102 | 0,18 |
| 17,0 | 17,5 | 20×50 | **U44 01700** | 68 | 85 | 0,17 | **U45 01700** | 85 | 102 | 0,19 |
| 17,5 (0.687) | 18,0 | 25×56 | **U44 11750** | 72 | 89 | 0,25 | **U45 11750** | 90 | 107 | 0,27 |
| 17,9 (0.703)* | 18,4 | 25x56 | **U44 11790** | 72 | 89 | 0,26 | **U45 11790** | 90 | 107 | 0,28 |
| 18,0 | 18,5 | 25×56 | **U44 11800** | 72 | 89 | 0,26 | **U45 11800** | 90 | 107 | 0,28 |
| 18,5 | 19,0 | 25×56 | **U44 11850** | 76 | 94 | 0,26 | **U45 11850** | 95 | 113 | 0,28 |
| 19,0 | 19,5 | 25×56 | **U44 11900** | 76 | 94 | 0,27 | **U45 11900** | 95 | 113 | 0,29 |
| 19,1 (0.750)* | 19,6 | 25x56 | **U44 11910** | 80 | 98 | 0,28 | **U45 11910** | 100 | 118 | 0,30 |
| 19,4 (0.765)* | 19,9 | 25x56 | **U44 11940** | 80 | 98 | 0,28 | **U45 11940** | 100 | 118 | 0,30 |
| 19,5 | 20,0 | 25×56 | **U44 11950** | 80 | 98 | 0,28 | **U45 11950** | 100 | 118 | 0,30 |
| 19,8 (0.781)* | 20,3 | 25x56 | **U44 11980** | 80 | 98 | 0,29 | **U45 11980** | 100 | 118 | 0,31 |
| 20,0 | 20,5 | 25×56 | **U44 12000** | 80 | 98 | 0,29 | **U45 12000** | 100 | 118 | 0,31 |
| 20,5 | 21,0 | 25×56 | **U44 12050** | 84 | 103 | 0,31 | **U45 12050** | 105 | 124 | 0,33 |
| 20,6 (0.812)* | 21,1 | 25x56 | **U44 12060** | 84 | 103 | 0,31 | **U45 12060** | 105 | 124 | 0,33 |
| 21,0 (0.828) | 21,5 | 25×56 | **U44 12100** | 84 | 103 | 0,31 | **U45 12100** | 105 | 124 | 0,34 |
| 21,5 | 22,0 | 25×56 | **U44 12150** | 88 | 107 | 0,32 | **U45 12150** | 110 | 129 | 0,35 |
| 22,0 | 22,5 | 25×56 | **U44 12200** | 88 | 107 | 0,33 | **U45 12200** | 110 | 129 | 0,36 |
| 22,2 (0.875)* | 22,7 | 25x56 | **U44 12220** | 92 | 112 | 0,34 | **U45 12220** | 115 | 135 | 0,37 |
| 22,5 | 23,0 | 25×56 | **U44 12250** | 92 | 112 | 0,35 | **U45 12250** | 115 | 135 | 0,38 |
| 23,0 (0.906) | 23,5 | 25×56 | **U44 12300** | 92 | 112 | 0,36 | **U45 12300** | 115 | 135 | 0,39 |
| 23,5 | 24,0 | 32×60 | **U44 22350** | 96 | 116 | 0,51 | **U45 22350** | 120 | 140 | 0,54 |
| 23,8 (0.937)* | 24,3 | 32x60 | **U44 22380** | 96 | 116 | 0,51 | **U45 22380** | 120 | 140 | 0,55 |
| 24,0 | 24,5 | 32×60 | **U44 22400** | 96 | 116 | 0,51 | **U45 22400** | 120 | 140 | 0,55 |
| 24,5 | 25,0 | 32×60 | **U44 22450** | 100 | 121 | 0,54 | **U45 22450** | 125 | 146 | 0,59 |
| 25,0 (0.985) | 25,5 | 32×60 | **U44 22500** | 100 | 121 | 0,55 | **U45 22500** | 125 | 146 | 0,60 |
| 25,4 (1.000)* | 25,9 | 32x60 | **U44 22540** | 104 | 125 | 0,56 | **U45 22540** | 130 | 151 | 0,61 |
| 25,5 | 26,0 | 32×60 | **U44 22550** | 104 | 125 | 0,56 | **U45 22550** | 130 | 151 | 0,61 |
| 26,0 | 26,5 | 32×60 | **U44 22600** | 104 | 125 | 0,57 | **U45 22600** | 130 | 151 | 0,62 |

All intermediate dimensions can be supplied quickly on request.

* Inch measurements marked with an asterisk (*) can be supplied quickly.

## Insert Drill with Cylindrical Shank ISO 9766, R.H. cutting





| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ○ | ◐ | ✕ | ◐ |
| 5×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ◐ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, page 72 ✕ not possible

**Supply includes:**
KUB Pentron® drill with assembly parts. Please order insert and accessories separately.

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| W80 10010.048425<br>W80 10010.042730<br>W80 10010.046115<br>W80 10010.047710 | SOGX 040204-01 BK8425<br>SOGX 040204-01 BK2730<br>SOGX 040204-01 BK6115 ⚠<br>SOGX 040204-01 BK7710 | 2 | | N00 56051<br>S/M1,8×3,85-5IP | 0,38 Nm | L05 00800<br>5IP |
| W80 12010.048425<br>W80 12010.042730<br>W80 12010.046115<br>W80 12010.047710 | SOGX 050204-01 BK8425<br>SOGX 050204-01 BK2730<br>SOGX 050204-01 BK6115 ⚠<br>SOGX 050204-01 BK7710 | 2 | | N00 56041<br>S/M2×4,3-6IP | 0,62 Nm | L05 00810<br>6IP |
| W80 18010.068425<br>W80 18010.062730<br>W80 18010.066115<br>W80 18010.067710 | SOGX 060206-01 BK8425<br>SOGX 060206-01 BK2730<br>SOGX 060206-01 BK6115 ⚠<br>SOGX 060206-01 BK7710 | 2 | | N00 57553<br>S/M2,2×5,5-6IP | 1,01 Nm | L05 00810<br>6IP |
| W80 20010.088425<br>W80 20010.082730<br>W80 20010.086115<br>W80 20010.087710 | SOGX 07T208-01 BK8425<br>SOGX 07T208-01 BK2730<br>SOGX 07T208-01 BK6115 ⚠<br>SOGX 07T208-01 BK7710 | 2 | | N00 57553<br>S/M2,2×5,5-6IP | 1,01 Nm | L05 00810<br>6IP |
| W80 24010.088425<br>W80 24010.082730<br>W80 24010.086115<br>W80 24010.087710 | SOGX 080308-01 BK8425<br>SOGX 080308-01 BK2730<br>SOGX 080308-01 BK6115 ⚠<br>SOGX 080308-01 BK7710 | 2 | | N00 57571<br>S/M2,5×6,3-8IP | 1,28 Nm | L05 00830<br>8IP |

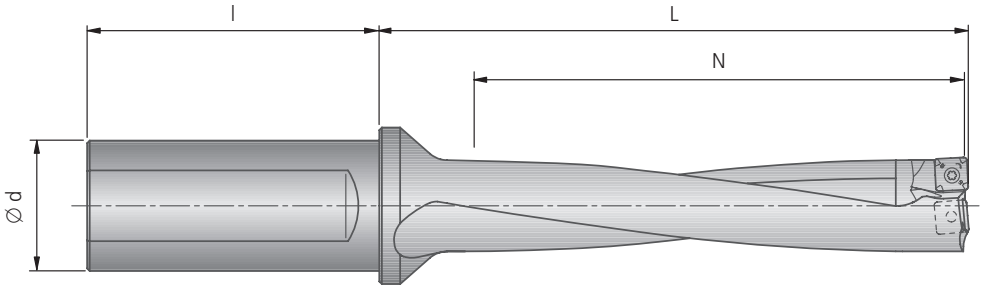
⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge:
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

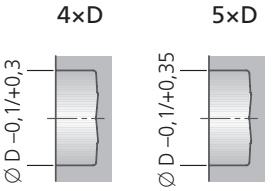
Guideline values for solid drilling: pages 68-71 / alternative inserts: page 73.

# KOMET KUB Pentron®

## Ø 26,2 – 37,0 mm

### Insert Drill with Cylindrical Shank ISO 9766, R.H. cutting

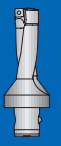



| Ø D mm (inch) | max. diameter with offset mm | Cylindrical shank Ø d × l | 4×D Order No. | 4×D N | 4×D L | 4×D kg | 5×D Order No. | 5×D N | 5×D L | 5×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 26,2 (1.031)* | 26,7 | 32x60 | **U44 22620** | 108 | 130 | 0,57 | **U45 22620** | 135 | 157 | 0,63 |
| 26,5 | 27,0 | 32×60 | **U44 22650** | 108 | 130 | 0,57 | **U45 22650** | 135 | 157 | 0,63 |
| 27,0 (1.062) | 27,5 | 32×60 | **U44 22700** | 108 | 130 | 0,58 | **U45 22700** | 135 | 157 | 0,64 |
| 27,5 | 28,0 | 32×60 | **U44 22750** | 112 | 134 | 0,60 | **U45 22750** | 140 | 162 | 0,66 |
| 28,0 | 28,5 | 32×60 | **U44 22800** | 112 | 134 | 0,62 | **U45 22800** | 140 | 162 | 0,68 |
| 28,2 (1.109)* | 28,6 | 32x60 | **U44 22820** | 116 | 139 | 0,63 | **U45 22820** | 145 | 168 | 0,70 |
| 28,5 | 29,0 | 32×60 | **U44 22850** | 116 | 139 | 0,64 | **U45 22850** | 145 | 168 | 0,71 |
| 28,6 (1.125)* | 29,1 | 32x60 | **U44 22860** | 116 | 139 | 0,64 | **U45 22860** | 145 | 168 | 0,71 |
| 29,0 | 29,5 | 32×60 | **U44 22900** | 116 | 139 | 0,65 | **U45 22900** | 145 | 168 | 0,72 |
| 29,4 (1.156)* | 29,9 | 32x60 | **U44 22940** | 120 | 143 | 0,66 | **U45 22940** | 150 | 173 | 0,73 |
| 29,5 | 30,0 | 32×60 | **U44 22950** | 120 | 143 | 0,66 | **U45 22950** | 150 | 173 | 0,73 |
| 30,0 | 30,5 | 32×60 | **U44 23000** | 120 | 143 | 0,67 | **U45 23000** | 150 | 173 | 0,75 |
| 30,2 (1.187)* | 30,7 | 40x68 | **U44 33020** | 124 | 148 | 0,89 | **U45 33020** | 155 | 179 | 0,99 |
| 30,5 | 31,0 | 40x68 | **U44 33050** | 124 | 148 | 0,90 | **U45 33050** | 155 | 179 | 1,00 |
| 30,9 (1.218)* | 31,4 | 40x68 | **U44 33090** | 124 | 148 | 0,91 | **U45 33090** | 155 | 179 | 1,01 |
| 31,0 | 31,5 | 40x68 | **U44 33100** | 124 | 148 | 0,92 | **U45 33100** | 155 | 179 | 1,01 |
| 31,5 | 32,0 | 40x68 | **U44 33150** | 128 | 152 | 0,96 | **U45 33150** | 160 | 184 | 1,05 |
| 31,8 (1.250)* | 32,3 | 40x68 | **U44 33180** | 128 | 152 | 0,97 | **U45 33180** | 160 | 184 | 1,06 |
| 32,0 | 32,5 | 40x68 | **U44 33200** | 128 | 152 | 0,97 | **U45 33200** | 160 | 184 | 1,06 |
| 32,5 (1.281) | 33,0 | 40x68 | **U44 33250** | 132 | 157 | 1,01 | **U45 33250** | 165 | 190 | 1,10 |
| 33,0 | 33,5 | 40x68 | **U44 33300** | 132 | 157 | 1,02 | **U45 33300** | 165 | 190 | 1,12 |
| 33,2 | 33,7 | 40x68 | **U44 33320** | 136 | 161 | 1,01 | **U45 33320** | 170 | 195 | 1,13 |
| 33,3 (1.312)* | 33,8 | 40x68 | **U44 33330** | 136 | 161 | 1,02 | **U45 33330** | 170 | 195 | 1,13 |
| 33,5 | 34,0 | 40x68 | **U44 33350** | 136 | 161 | 1,03 | **U45 33350** | 170 | 195 | 1,14 |
| 33,7 (1.328)* | 34,2 | 40x68 | **U44 33370** | 136 | 161 | 1,03 | **U45 33370** | 170 | 195 | 1,14 |
| 34,0 | 34,5 | 40x68 | **U44 33400** | 136 | 161 | 1,04 | **U45 33400** | 170 | 195 | 1,15 |
| 34,5 | 35,0 | 40x68 | **U44 33450** | 140 | 166 | 1,08 | **U45 33450** | 175 | 201 | 1,19 |
| 34,9 (1.375)* | 35,4 | 40x68 | **U44 33490** | 140 | 166 | 1,09 | **U45 33490** | 175 | 201 | 1,21 |
| 35,0 | 35,5 | 40x68 | **U44 33500** | 140 | 166 | 1,09 | **U45 33500** | 175 | 201 | 1,21 |
| 35,5 | 36,0 | 40x68 | **U44 33550** | 144 | 170 | 1,13 | **U45 33550** | 180 | 206 | 1,25 |
| 36,0 | 36,5 | 40x68 | **U44 33600** | 144 | 170 | 1,14 | **U45 33600** | 180 | 206 | 1,27 |
| 36,5 (1.437) | 37,0 | 40x68 | **U44 33650** | 148 | 175 | 1,18 | **U45 33650** | 185 | 212 | 1,32 |
| 37,0 | 37,5 | 40x68 | **U44 33700** | 148 | 175 | 1,20 | **U45 33700** | 185 | 212 | 1,34 |

All intermediate dimensions can be supplied quickly on request.
* Inch measurements marked with an asterisk (*) can be supplied quickly.

**Supply includes:**
KUB Pentron® drill with assembly parts. Please order insert and accessories separately.



| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ○ | ◐ | ✕ | ◐ |
| 5×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ◐ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, page 72 ✕ not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| W80 28010.088425<br>W80 28010.082730<br>W80 28010.086115<br>W80 28010.087710 | SOGX 09T308-01 BK8425<br>SOGX 09T308-01 BK2730<br>SOGX 09T308-01 BK6115 ⚠<br>SOGX 09T308-01 BK7710 | 2 | | N00 57251<br>S3076-8IP | 2,25 Nm | L05 00830<br>8IP |
| W80 32010.088425<br>W80 32010.082730<br>W80 32010.086115<br>W80 32010.087710 | SOGX 100408-01 BK8425<br>SOGX 100408-01 BK2730<br>SOGX 100408-01 BK6115 ⚠<br>SOGX 100408-01 BK7710 | 2 | | N00 57261<br>S3575-15IP | 2,8 Nm | L05 00860<br>15IP |
| W80 38010.088425<br>W80 38010.082730<br>W80 38010.086115<br>W80 38010.087710 | SOGX 110408-01 BK8425<br>SOGX 110408-01 BK2730<br>SOGX 110408-01 BK6115 ⚠<br>SOGX 110408-01 BK7710 | 2 | | N00 57261<br>S3575-15IP | 2,8 Nm | L05 00860<br>15IP |

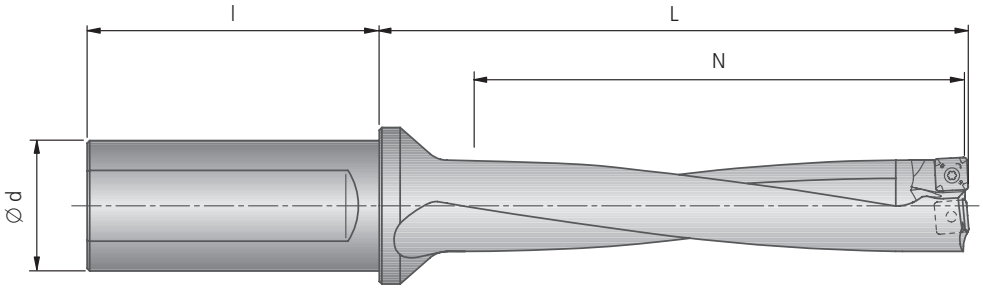
⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge:
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

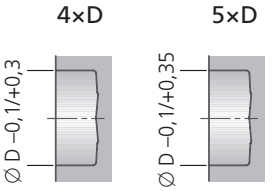
Guideline values for solid drilling: pages 68-71 / alternative inserts: page 73.

# KOMET KUB Pentron®

## Ø 37,3 – 46,0 mm

### Insert Drill with Cylindrical Shank ISO 9766, R.H. cutting




| Ø D mm (inch) | max. diameter with offset mm | Cylindrical shank Ø d | 4×D Order No. | 4×D N | 4×D L | 4×D kg | 5×D Order No. | 5×D N | 5×D L | 5×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 37,3 (1.469)* | 37,8 | 40x68 | **U44 33730** | 152 | 179 | 1,22 | **U45 33730** | 190 | 217 | 1,36 |
| 37,5 | 38,0 | 40x68 | **U44 33750** | 152 | 179 | 1,23 | **U45 33750** | 190 | 217 | 1,37 |
| 38,0 | 38,5 | 40x68 | **U44 33800** | 152 | 179 | 1,24 | **U45 33800** | 190 | 217 | 1,39 |
| 38,1 (1.500)* | 38,6 | 40x68 | **U44 33810** | 156 | 184 | 1,27 | **U45 33810** | 195 | 223 | 1,41 |
| 38,5 | 39,0 | 40x68 | **U44 33850** | 156 | 184 | 1,28 | **U45 33850** | 195 | 223 | 1,43 |
| 39,0 | 39,5 | 40x68 | **U44 33900** | 156 | 184 | 1,29 | **U45 33900** | 195 | 223 | 1,45 |
| 39,2 | 39,7 | 40x68 | **U44 33920** | 160 | 188 | 1,33 | **U45 33920** | 200 | 228 | 1,49 |
| 39,5 | 40,0 | 40x68 | **U44 33950** | 160 | 188 | 1,34 | **U45 33950** | 200 | 228 | 1,50 |
| 39,7 (1.562)* | 40,2 | 40x68 | **U44 33970** | 160 | 188 | 1,34 | **U45 33970** | 200 | 228 | 1,51 |
| 40,0 | 40,5 | 40x68 | **U44 34000** | 160 | 188 | 1,35 | **U45 34000** | 200 | 228 | 1,52 |
| 40,5 | 41,0 | 40x68 | **U44 34050** | 164 | 193 | 1,40 | **U45 34050** | 205 | 234 | 1,58 |
| 41,0 | 41,5 | 40x68 | **U44 34100** | 164 | 193 | 1,42 | **U45 34100** | 205 | 234 | 1,61 |
| 41,3 (1.625)* | 41,8 | 40x68 | **U44 34130** | 168 | 197 | 1,46 | **U45 34130** | 210 | 239 | 1,66 |
| 41,5 | 42,0 | 40x68 | **U44 34150** | 168 | 197 | 1,47 | **U45 34150** | 210 | 239 | 1,67 |
| 42,0 | 42,5 | 40x68 | **U44 34200** | 168 | 197 | 1,49 | **U45 34200** | 210 | 239 | 1,70 |
| 42,1 (1.656)* | 42,6 | 40x68 | **U44 34210** | 172 | 202 | 1,52 | **U45 34210** | 215 | 245 | 1,73 |
| 42,5 | 43,0 | 40x68 | **U44 34250** | 172 | 202 | 1,53 | **U45 34250** | 215 | 245 | 1,74 |
| 42,9 (1.687)* | 43,4 | 40x68 | **U44 34290** | 172 | 202 | 1,54 | **U45 34290** | 215 | 245 | 1,76 |
| 43,0 | 43,5 | 40x68 | **U44 34300** | 172 | 202 | 1,54 | **U45 34300** | 215 | 245 | 1,76 |
| 43,5 | 44,0 | 40x68 | **U44 34350** | 176 | 206 | 1,60 | **U45 34350** | 220 | 250 | 1,82 |
| 44,0 | 44,5 | 40x68 | **U44 34400** | 176 | 206 | 1,62 | **U45 34400** | 220 | 250 | 1,85 |
| 44,5 (1.750) | 45,0 | 40x68 | **U44 34450** | 180 | 211 | 1,68 | **U45 34450** | 225 | 256 | 1,92 |
| 45,0 | 45,5 | 40×68 | **U44 34500** | 180 | 211 | 1,70 | **U45 34500** | 225 | 256 | 1,96 |
| 45,5 | 46,0 | 40×68 | **U44 34550** | 184 | 215 | 1,76 | **U45 34550** | 230 | 261 | 2,03 |
| 46,0 | 46,5 | 40×68 | **U44 34600** | 184 | 215 | 1,79 | **U44 34600** | 230 | 261 | 2,07 |

All intermediate dimensions can be supplied quickly on request.
* Inch measurements marked with an asterisk (*) can be supplied quickly.

**Supply includes:**
KUB Pentron® drill with assembly parts. Please order insert and accessories separately.

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ○ | ◐ | >< | ◐ |
| 5×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | >< | ◐ | >< | ◐ |

● very good ◐ good ○ possible: see technical notes, page 72 >< not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| **W80 42010.088425**<br>**W80 42010.082730**<br>**W80 42010.086115**<br>**W80 42010.087710** | SOGX 120408-01 BK8425<br>SOGX 120408-01 BK2730<br>SOGX 120408-01 BK6115 ⚠<br>SOGX 120408-01 BK7710 | 2 | | **N00 57301**<br>S45100-20IP | 6,25 Nm | **L05 00870**<br>20IP |
| **W80 46010.088425**<br>**W80 46010.082730**<br>**W80 46010.086115**<br>**W80 46010.087710** | SOGX 130508-01 BK8425<br>SOGX 130508-01 BK2730<br>SOGX 130508-01 BK6115 ⚠<br>SOGX 130508-01 BK7710 | 2 | | **N00 57301**<br>S45100-20IP | 6,25 Nm | **L05 00870**<br>20IP |

⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge:
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

## Technical Notes





| Guideline values for solid drilling | | | | | | Cutting speed $v_c$ (m/min) 4×D | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | |  BK8425 | | |  BK2730 | | |  BK6425 | | |  BK6115 | | |  BK7710 | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | min | opt. | max | min | opt. | max | min | opt. | max | min | opt. | max | min | opt. | max |
| P | 1.0 | ≤ 500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 200 | 260 | 320 | 200 | 250 | 300 | 270 | 320 | 370 | 250 | 300 | 350 | | – | |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 270 | 300 | 250 | 270 | 300 | 250 | 280 | 320 | 250 | 270 | 300 | | – | |
| P | 2.1 | < 500 | | lead alloys | 9SMnPb28 / 1.0718 | 200 | 260 | 320 | 160 | 220 | 280 | 270 | 320 | 370 | 250 | 300 | 350 | | – | |
| P | 3.0 | > 900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 140 | 180 | 220 | 120 | 160 | 200 | 220 | 260 | 300 | 200 | 240 | 280 | | – | |
| P | 4.0 | > 900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 120 | 160 | 200 | 100 | 140 | 180 | 190 | 220 | 250 | 170 | 200 | 230 | | – | |
| P | 4.1 | | | HSS | | 50 | 70 | 90 | 40 | 60 | 80 | 80 | 100 | 120 | 70 | 90 | 110 | | – | |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | | | | | | | on request | | | | | | | | |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | | | | | | | on request | | | | | | | | |
| M | 6.0 | ≤ 600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 150 | 170 | 210 | 140 | 180 | 220 | 190 | 220 | 250 | 210 | 240 | 270 | | – | |
| M | 6.1 | < 900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 120 | 150 | 200 | 120 | 160 | 200 | 170 | 200 | 230 | 190 | 220 | 250 | | – | |
| M | 7.0 | > 900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 110 | 150 | 190 | 120 | 160 | 200 | 170 | 200 | 230 | 190 | 220 | 250 | | – | |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 140 | 180 | 220 | 120 | 160 | 200 | 150 | 200 | 250 | 160 | 240 | 320 | | – | |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 120 | 150 | 180 | 100 | 130 | 160 | 100 | 140 | 180 | 100 | 140 | 180 | | – | |
| K | 9.0 | ≤ 600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 140 | 180 | 220 | 120 | 160 | 200 | 120 | 160 | 200 | 120 | 160 | 200 | | – | |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic/perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 120 | 150 | 180 | 110 | 130 | 160 | 100 | 140 | 180 | 100 | 140 | 180 | | – | |
| K | 10.0 | > 600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 110 | 140 | 170 | 90 | 120 | 150 | 90 | 120 | 150 | 90 | 120 | 150 | | – | |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 110 | 140 | 170 | 90 | 120 | 150 | 90 | 120 | 150 | 90 | 120 | 150 | | – | |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 90 | 110 | 130 | 80 | 100 | 120 | 70 | 100 | 130 | 70 | 100 | 130 | | – | |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 150 | 200 | 250 | 150 | 200 | 250 | | – | | | – | | 150 | 250 | 350 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 200 | 300 | 400 | 200 | 300 | 400 | | – | | | – | | 250 | 350 | 450 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 300 | 400 | 500 | 300 | 400 | 500 | | – | | | – | | 300 | 500 | 700 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 180 | 250 | 320 | 180 | 250 | 320 | | – | | | – | | 210 | 280 | 350 |
| N | 14.0 | | 100 | cast alum.alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 150 | 200 | 250 | 150 | 200 | 250 | | – | | | – | | 140 | 220 | 300 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | | | | | | | on request | | | | | | | | |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | | | | | | | on request | | | | | | | | |

Cutting values shown are relating to the basic recommendations for cutting materials given.



Patent applications (KUB Pentron)

| Feed f (mm/rev) | | |

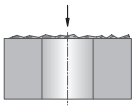
| Guideline values for solid drilling | | | | | | Cutting speed $v_c$ (m/min) 5×D | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN |  BK8425 | | |  BK2730 | | |  BK6425 | | |  BK6115 | | |  BK7710 | | |
| | | | | | | min | opt. | max | min | opt. | max | min | opt. | max | min | opt. | max | min | opt. | max |
| P | 1.0 | ≤ 500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 200 | 260 | 320 | 200 | 250 | 300 | 270 | 320 | 370 | 250 | 300 | 350 | | – | |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 270 | 300 | 250 | 270 | 300 | 250 | 280 | 320 | 250 | 270 | 300 | | – | |
| P | 2.1 | < 500 | | lead alloys | 9SMnPb28 / 1.0718 | 200 | 260 | 320 | 160 | 220 | 280 | 270 | 320 | 370 | 250 | 300 | 350 | | – | |
| P | 3.0 | > 900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 140 | 180 | 220 | 120 | 160 | 200 | 220 | 260 | 300 | 200 | 240 | 280 | | – | |
| P | 4.0 | > 900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 120 | 160 | 200 | 100 | 140 | 180 | 190 | 220 | 250 | 170 | 200 | 230 | | – | |
| P | 4.1 | | | HSS | | 50 | 70 | 90 | 40 | 60 | 80 | 80 | 100 | 120 | 70 | 90 | 110 | | – | |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | | | | | | | on request | | | | | | | | |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | | | | | | | on request | | | | | | | | |
| M | 6.0 | ≤ 600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 150 | 170 | 210 | 140 | 180 | 220 | 190 | 220 | 250 | 210 | 240 | 270 | | – | |
| M | 6.1 | < 900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 120 | 150 | 200 | 120 | 160 | 200 | 170 | 200 | 230 | 190 | 220 | 250 | | – | |
| M | 7.0 | > 900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 110 | 150 | 190 | 120 | 160 | 200 | 170 | 200 | 230 | 190 | 220 | 250 | | – | |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 140 | 180 | 220 | 120 | 160 | 200 | 150 | 200 | 250 | 160 | 240 | 320 | | – | |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 120 | 150 | 180 | 100 | 130 | 160 | 100 | 140 | 180 | 100 | 140 | 180 | | – | |
| K | 9.0 | ≤ 600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 140 | 180 | 220 | 120 | 160 | 200 | 120 | 160 | 200 | 120 | 160 | 200 | | – | |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic/perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 120 | 150 | 180 | 110 | 130 | 160 | 100 | 140 | 180 | 100 | 140 | 180 | | – | |
| K | 10.0 | > 600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 110 | 140 | 170 | 90 | 120 | 150 | 90 | 120 | 150 | 90 | 120 | 150 | | – | |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 110 | 140 | 170 | 90 | 120 | 150 | 90 | 120 | 150 | 90 | 120 | 150 | | – | |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 90 | 110 | 130 | 80 | 100 | 120 | 70 | 100 | 130 | 70 | 100 | 130 | | – | |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 150 | 200 | 250 | 150 | 200 | 250 | | – | | | – | | 150 | 250 | 350 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 200 | 300 | 400 | 200 | 300 | 400 | | – | | | – | | 250 | 350 | 450 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 300 | 400 | 500 | 300 | 400 | 500 | | – | | | – | | 300 | 500 | 700 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 180 | 250 | 320 | 180 | 250 | 320 | | – | | | – | | 210 | 280 | 350 |
| N | 14.0 | | 100 | cast alum.alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 150 | 200 | 250 | 150 | 200 | 250 | | – | | | – | | 140 | 220 | 300 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | | | | | | | on request | | | | | | | | |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | | | | | | | on request | | | | | | | | |

Cutting values shown are relating to the basic recommendations for cutting materials given.

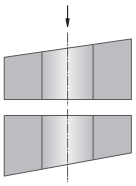
| Feed f (mm/rev) | | |

## Technical Informations

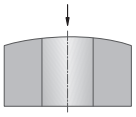


1. 

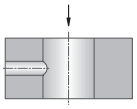
**Starting on uneven surfaces (cast surfaces)**
- when inserting and withdrawing the drill, reduce the feed rate by approx. 30-50% (depending on component stability, clamping and surface quality)

2. 

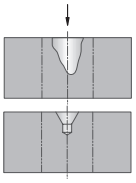
**Starting on angled surfaces / angled bore exit**
- when inserting the drill, reduce the feed rate by approx. 30-60% until full diameter is reached
- when withdrawing the drill after interruption to the cut, reduce the feed rate by approx. 30-60%
- use tough insert and stable corner radius

3. 

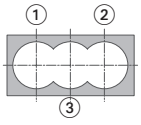
**Starting on cambered surfaces**
- when inserting the drill, reduce the feed rate by approx. 30-60% until full diameter is reached
- when withdrawing the drill after interruption to the cut, reduce the feed rate by approx. 30-60% (depending on component stability and clamping).

4. 

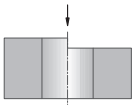
**Drilling through a cross bore**
- when inserting and withdrawing the drill, reduce the feed rate by approx. 30-50% (depending on component stability, clamping and surface quality)
- in the vicinity of the cross bore, reduce the feed rate by 50%
- watch for chip jamming around tool
- use tough insert and stable corner radius

5. 

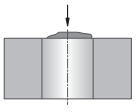
**Starting on a groove or large centering bore**
- when inserting the drill, reduce the feed rate by approx. 30-50% until centring depth is reached
- reduce feed rate
- use tough insert for internal cutting edge
- spot face if required

6. 

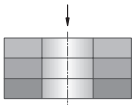

**Drilling a chamber**
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- use tough insertand stable corner radius
- Continuous drilling: when inserting the drill, reduce the feed rate by approx. 30-60% (depending on component stability and clamping)
- Interruption to cut: when drilling the cut interruption, reduce the feed rate by approx. 50-60%

7. 

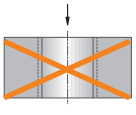
**Starting on an edge**
- when inserting and withdrawing the drill, reduce the feed rate by approx. 30-50% (depending on component stability, clamping and surface quality)
- use tough insert and stable corner radius

8. 

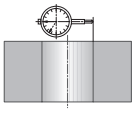
**Starting on a welded seam**
- when inserting the drill, reduce the feed rate by approx. 30-60% until full diameter is reached
- when withdrawing the drill after interruption to the cut, reduce the feed rate by approx. 30-60% (depending on component stability and clamping).

9. 

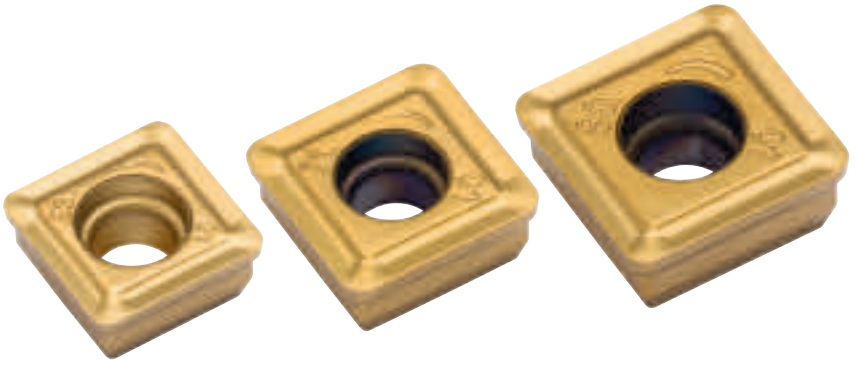
**Drilling through stacked plates**
- good workpiece clamping required
- max. gap = 1 mm

10. 

**Roughing**
- not possible

11. 

**Adjustable**
- when inserting and withdrawing the drill reduce the feed rate by approx. 30-50% until full bore diameter is reached (depending on component stability and clamping).
- use tough insert and stable corner radius



| for higher cutting speed | | | |
|---|---|---|---|
| Ø D | Order No.<br>▽▽size | ISO-Code | P M K N S H |
| 14,0 – 16,0 | **W80 10010.046425**<br>**W80 10010.046115** | SOGX 040204-01 BK6425<br>SOGX 040204-01 BK6115 ⚠ | ◐<br>◑ |
| 16,1 – 18,0 | **W80 12010.046425**<br>**W80 12010.046115** | SOGX 050204-01 BK6425<br>SOGX 050204-01 BK6115 ⚠ | ◐<br>◑ |
| 18,1 – 20,0 | **W80 18010.066425**<br>**W80 18010.066115** | SOGX 060206-01 BK6425<br>SOGX 060206-01 BK6115 ⚠ | ◐<br>◑ |
| 20,1 – 23,0 | **W80 20010.086425**<br>**W80 20010.086115** | SOGX 07T208-01 BK6425<br>SOGX 07T208-01 BK6115 ⚠ | ◐<br>◑ |
| 23,1 – 26,0 | **W80 24010.086425**<br>**W80 24010.086115** | SOGX 080308-01 BK6425<br>SOGX 080308-01 BK6115 ⚠ | ◐<br>◑ |
| 26,1 – 30,0 | **W80 28010.086425**<br>**W80 28010.086115** | SOGX 09T308-01 BK6425<br>SOGX 09T308-01 BK6115 ⚠ | ◐<br>◑ |
| 30,1 – 33,0 | **W80 32010.086425**<br>**W80 32010.086115** | SOGX 100408-01 BK6425<br>SOGX 100408-01 BK6115 ⚠ | ◐<br>◑ |
| 33,1 – 37,0 | **W80 38010.086425**<br>**W80 38010.086115** | SOGX 110408-01 BK6425<br>SOGX 110408-01 BK6115 ⚠ | ◐<br>◑ |
| 37,1 – 42,0 | **W80 42010.086425**<br>**W80 42010.086115** | SOGX 120408-01 BK6425<br>SOGX 120408-01 BK6115 ⚠ | ◐<br>◑ |
| 42,1 – 46,0 | **W80 46010.086425**<br>**W80 46010.086115** | SOGX 130508-01 BK6425<br>SOGX 130508-01 BK6115 ⚠ | ◐<br>◑ |

⚠ Note: Only use this insert with KUB Pentron® as an external cutting edge:
SOGX ... -01 (geometry 01) in BK6115, internal cutting edge in BK8425

# KOMET KUB Trigon® / KUB® Drill

## Continuous Drilling to 4×D



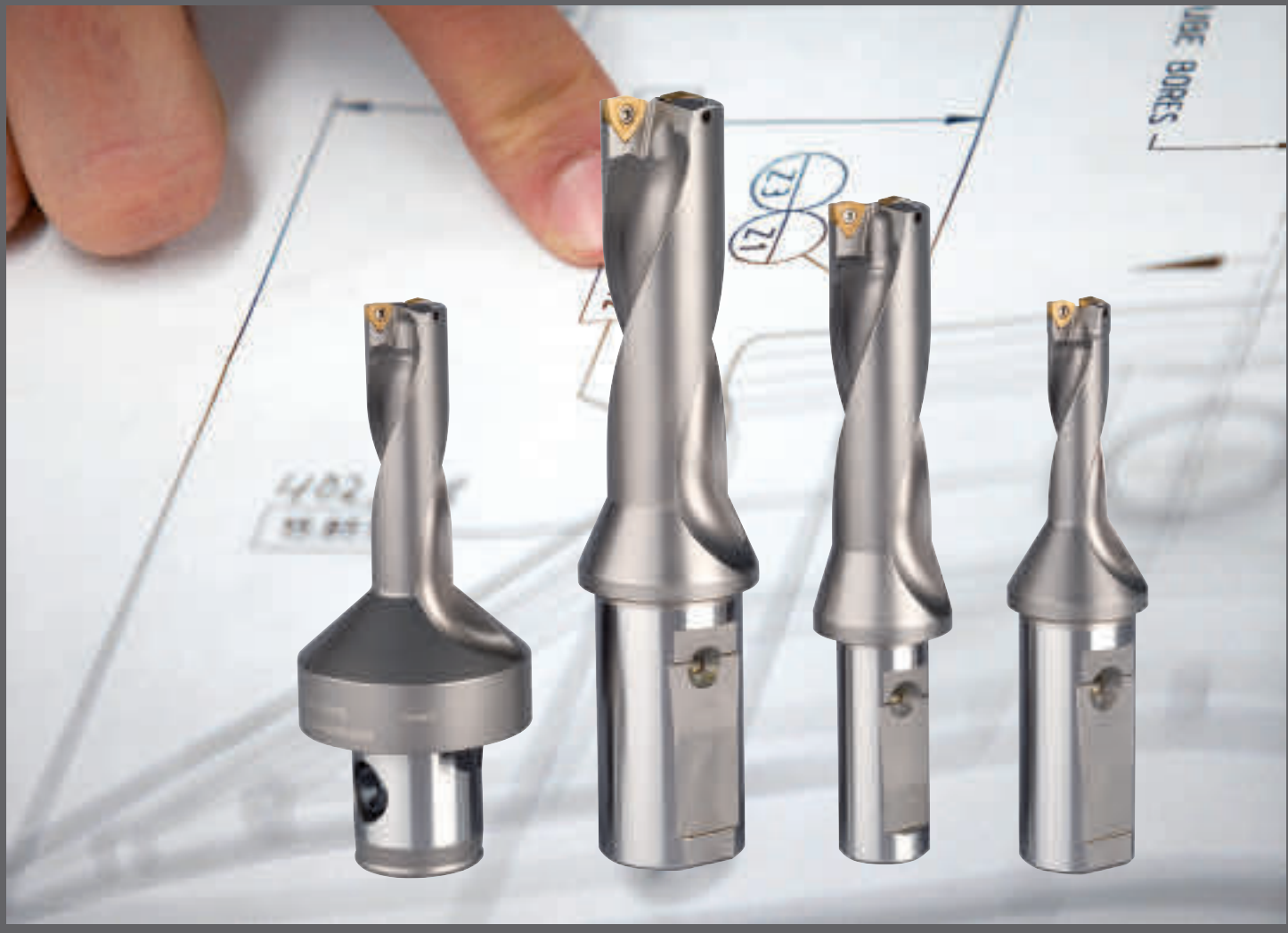
As early as 1977, KOMET® introduced the world's first indexable insert solid drill bit without an HSS centring tip, thereby laying the foundation for the triumphal procession of the KOMET KUB® drills.

It was based on the familiar Unisix® indexable insert with three cutting edges.

This is also why it was known as the KOMET Unisix® drill.

The indexable insert today known by the name KUB Trigon® has 84° edge angles and a variable radial fitting angle which enable an ideal balancing of thrust forces. This has significantly contributed to the resounding success of the new solid drill bit tools.

In just a few years, the KOMET KUB Trigon® indexable insert drills have become the most commonly used solid drill bit tools in the diameter ranges from 12 millimetres to a maximum of 350 millimetres, with drilling depths of up to 4 × D.





BENEFITS for you:

- Flexibility in application with various geometries and coatings
- Close bore tolerances up to IT 8
- Extremely good surface finish can be achieved
- Machining to production dimension without separate fine machining
- Universal use – suitable for rotating and stationary operations


## KOMET KUB Trigon® — Page

### ABS® Connection

R.H. cutting
Drilling depth 2×D, 3×D, 4×D – ∅ 14 - 44 mm 76 – 77
Guideline values for solid drilling 78 – 79
Alternative Inserts 95

### Cylindrical Shank (combination shank)

R.H. cutting
Drilling depth 2×D, 3×D, 4×D – ∅ 12 - 44 mm 80 – 85
Guideline values for solid drilling 86 – 87
Alternative Inserts 95

### Cylindrical Shank (parallel clamping surface)

R.H. cutting
Drilling depth 3×D, 4×D – ∅ 14 - 54 mm 88 – 93
Guideline values for solid drilling 94
Alternative Inserts 95

### ABS® Connection

L.H. cutting
Drilling depth 3×D, 4×D – ∅ 14 - 44 mm 96 – 97
Guideline values for solid drilling 98
Alternative Inserts 99

### Cylindrical Shank (parallel clamping surface)

L.H. cutting
Drilling depth 3×D – ∅ 14 - 54 mm 100 – 101
Guideline values for solid drilling 102
Alternative Inserts 103

## KOMET KUB®

### ABS® Connection

R.H. cutting, adjustable
Drilling depth 3×D – ∅ 38,5 - 82 mm 104 – 105
Guideline values for solid drilling 106
Alternative Inserts 107

### ABS® Connection

R.H. cutting
Drilling depth 2×D, 3×D – ∅ 45 - 82 mm 108 – 109
Guideline values for solid drilling 110
Alternative Inserts 111

Technical Informations 112 – 114

Problems → Causes → Solutions 115

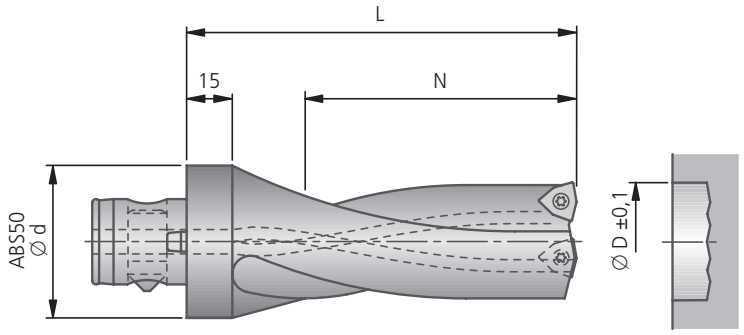



Milling cartridge for KUB Trigon® see chapter 6

# KOMET KUB Trigon®

# Ø 14 – 44 mm

## Insert Drill with ABS® Connection, R.H. cutting




| Ø D | *max. diameter with offset | ABS Ø d | 2×D | | | | 3×D | | | | 4×D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Order No. | N | L | kg | Order No. | N | L | kg | Order No. | N | L | kg |
| 14,0 | 15,0 | 50 | V30 31403 | 28 | 63 | 0,46 | V30 71403 | 42 | 77 | 0,47 | V30 91403 | 56 | 91 | 0,47 |
| 15,0 | 16,0 | 50 | V30 31503 | 30 | 65 | 0,46 | V30 71503 | 45 | 80 | 0,47 | V30 91503 | 60 | 95 | 0,48 |
| 15,5 | 16,5 | 50 | V30 31551 | 32 | 67 | 0,46 | V30 71551 | 48 | 83 | 0,47 | V30 91551 | 64 | 99 | 0,48 |
| 16,0 | 17,0 | 50 | V30 31601 | 32 | 67 | 0,47 | V30 71601 | 48 | 83 | 0,48 | V30 91601 | 64 | 99 | 0,49 |
| 17,0 | 18,0 | 50 | V30 31701 | 34 | 69 | 0,47 | V30 71701 | 51 | 86 | 0,48 | V30 91701 | 68 | 103 | 0,50 |
| 17,5 | 18,5 | 50 | V30 31751 | 36 | 71 | 0,48 | V30 71751 | 54 | 89 | 0,49 | V30 91751 | 72 | 107 | 0,50 |
| 18,0 | 19,0 | 50 | V30 31801 | 36 | 71 | 0,48 | V30 71801 | 54 | 89 | 0,49 | V30 91801 | 72 | 107 | 0,51 |
| 18,5 | 19,0 | 50 | V30 31851 | 38 | 73 | 0,48 | V30 71851 | 57 | 92 | 0,50 | V30 91851 | 76 | 111 | 0,52 |
| 19,0 | 20,0 | 50 | V30 31901 | 38 | 73 | 0,48 | V30 71901 | 57 | 92 | 0,48 | V30 91901 | 76 | 111 | 0,52 |
| 19,5 | 20,0 | 50 | V30 31951 | 40 | 75 | 0,48 | V30 71951 | 60 | 95 | 0,51 | V30 91951 | 80 | 115 | 0,52 |
| 20,0 | 21,0 | 50 | V30 32001 | 40 | 75 | 0,50 | V30 72001 | 60 | 95 | 0,52 | V30 92001 | 80 | 115 | 0,54 |
| 21,0 | 22,0 | 50 | V30 32101 | 42 | 77 | 0,51 | V30 72101 | 63 | 98 | 0,53 | V30 92101 | 84 | 119 | 0,56 |
| 22,0 | 23,0 | 50 | V30 32201 | 44 | 79 | 0,52 | V30 72201 | 66 | 101 | 0,52 | V30 92201 | 88 | 123 | 0,58 |
| 22,5 | 23,5 | 50 | V30 32251 | 46 | 81 | 0,53 | V30 72251 | 69 | 104 | 0,56 | V30 92251 | 92 | 127 | 0,55 |
| 23,0 | 24,0 | 50 | V30 32301 | 46 | 81 | 0,53 | V30 72301 | 69 | 104 | 0,59 | V30 92301 | 92 | 127 | 0,60 |
| 24,0 | 25,0 | 50 | V30 32401 | 48 | 83 | 0,55 | V30 72401 | 72 | 107 | 0,60 | V30 92401 | 96 | 131 | 0,62 |
| 24,5 | 25,5 | 50 | V30 32451 | 50 | 85 | 0,55 | V30 72451 | 75 | 110 | 0,60 | V30 92451 | 100 | 135 | 0,64 |
| 25,0 | 26,0 | 50 | V30 32501 | 50 | 85 | 0,62 | V30 72501 | 75 | 110 | 0,60 | V30 92501 | 100 | 135 | 0,63 |
| 26,0 | 28,0 | 50 | V30 32601 | 52 | 87 | 0,64 | V30 72601 | 78 | 113 | 0,61 | V30 92601 | 104 | 139 | 0,66 |
| 26,5 | 28,5 | 50 | V30 32651 | 54 | 89 | 0,57 | V30 72651 | 81 | 116 | 0,63 | V30 92651 | 108 | 143 | 0,67 |
| 27,0 | 30,0 | 50 | V30 32701 | 54 | 89 | 0,58 | V30 72701 | 81 | 116 | 0,63 | V30 92701 | 108 | 143 | 0,72 |
| 28,0 | 31,0 | 50 | V30 32801 | 56 | 91 | 0,59 | V30 72801 | 84 | 119 | 0,65 | V30 92801 | 112 | 147 | 0,70 |
| 28,5 | 31,5 | 50 | V30 32851 | 58 | 93 | 0,60 | V30 72851 | 87 | 122 | 0,67 | V30 92851 | 116 | 151 | 0,73 |
| 29,0 | 32,0 | 50 | V30 32901 | 58 | 93 | 0,61 | V30 72901 | 87 | 122 | 0,67 | V30 92901 | 116 | 151 | 0,75 |
| 29,5 | 32,5 | 50 | V30 32951 | 60 | 95 | 0,62 | V30 72951 | 90 | 125 | 0,69 | V30 92951 | 120 | 155 | 0,76 |
| 30,0 | 32,5 | 50 | V30 33001 | 60 | 100 | 0,74 | V30 73001 | 90 | 130 | 0,79 | V30 93001 | 120 | 160 | 0,82 |
| 31,0 | 33,5 | 50 | V30 33101 | 62 | 102 | 0,69 | V30 73101 | 93 | 133 | 0,79 | V30 93101 | 124 | 164 | 0,86 |
| 31,5 | 33,5 | 50 | V30 33151 | 64 | 104 | 0,70 | V30 73151 | 96 | 136 | 0,78 | V30 93151 | 128 | 168 | 0,88 |
| 32,0 | 34,0 | 50 | V30 33201 | 64 | 104 | 0,71 | V30 73201 | 96 | 136 | 0,8 | V30 93201 | 128 | 168 | 0,91 |
| 33,0 | 34,0 | 50 | V30 33301 | 66 | 106 | 0,82 | V30 73301 | 99 | 139 | 0,84 | V30 93301 | 132 | 172 | 0,94 |
| 34,0 | 35,0 | 50 | V30 33401 | 68 | 108 | 0,78 | V30 73401 | 102 | 142 | 0,85 | V30 93401 | 136 | 176 | 0,97 |
| 35,0 | 36,0 | 50 | V30 33501 | 70 | 110 | 0,77 | V30 73501 | 105 | 145 | 0,89 | V30 93501 | 140 | 180 | 1,01 |
| 36,0 | 37,0 | 50 | V30 33601 | 72 | 112 | 0,79 | V30 73601 | 108 | 148 | 0,93 | V30 93601 | 144 | 184 | 1,06 |
| 37,0 | 40,0 | 50 | V30 33701 | 74 | 124 | 0,89 | V30 73701 | 111 | 161 | 1,04 | V30 93701 | 148 | 198 | 1,18 |
| 37,5 | 40,5 | 50 | V30 33751 | 76 | 126 | 0,9 | V30 73751 | 114 | 164 | 1,02 | V30 93751 | 152 | 202 | 1,19 |
| 38,0 | 41,0 | 50 | V30 33801 | 76 | 126 | 0,92 | V30 73801 | 114 | 164 | 1,08 | V30 93801 | 152 | 202 | 1,22 |
| 39,0 | 42,0 | 50 | V30 33901 | 78 | 128 | 0,95 | V30 73901 | 117 | 167 | 1,13 | V30 93901 | 156 | 206 | 1,29 |
| 39,5 | 42,5 | 50 | V30 33951 | 80 | 130 | 0,96 | V30 73951 | 120 | 170 | 1,14 | V30 93951 | 160 | 210 | 1,32 |
| 40,0 | 43,0 | 50 | V30 34001 | 80 | 130 | 0,98 | V30 74001 | 120 | 170 | 1,17 | V30 94001 | 160 | 210 | 1,36 |
| 41,0 | 44,0 | 50 | V30 34101 | 82 | 132 | 1,10 | V30 74101 | 123 | 173 | 1,22 | V30 94101 | 164 | 214 | 1,43 |
| 42,0 | 45,0 | 50 | V30 34201 | 84 | 134 | 1,10 | V30 74201 | 126 | 176 | 1,27 | V30 94201 | 168 | 218 | 1,50 |
| 43,0 | 45,0 | 50 | V30 34301 | 86 | 136 | 1,10 | V30 74301 | 129 | 179 | 1,33 | V30 94301 | 172 | 222 | 1,52 |
| 44,0 | 45,0 | 50 | V30 34401 | 88 | 138 | 1,13 | V30 74401 | 132 | 182 | 1,41 | V30 94401 | 176 | 226 | 1,66 |

Any **intermediate dimensions** from ∅ 14 – 44 mm and **inch dimensions** are available on request.

**Supply includes:** KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

* Adjustment device see "KomPass Bore machining – chapter 5"

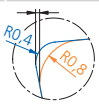


Patent applied for inside and outside Germany (ABS), EP 883 455 and other patents (KUB Trigon)

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ◐ | ● | ✕ | ◐ | ◐ |
| 3×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ○ | ◐ |
| 4×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 112-114 ✕ not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert -01 -11 | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| W29 10010.048425<br>W29 10010.047930<br>W29 10010.0462<br>W29 10110.0477 | WOEX 030204-01 BK8425<br>WOEX 030204-01 BK7930<br>WOEX 030204-01 BK62<br>WOEX 030204-11 BK77 | 2 | ● ◐ ● ● ● ○ | N00 56041<br>S/M2×4,3-6IP | 0,62 Nm | L05 00810<br>6IP |
| W29 18010.048425<br>W29 18010.047930<br>W29 18010.0462<br>W29 18110.0477 | WOEX 040304-01 BK8425<br>WOEX 040304-01 BK7930<br>WOEX 040304-01 BK62<br>WOEX 040304-11 BK77 | 2 | ● ◐ ● ● ● ○ | N00 57553<br>S/M2,2×5,5-6IP | 1,01 Nm | L05 00810<br>6IP |
| W29 24010.048425<br>W29 24010.047930<br>W29 24010.0462<br>W29 24110.0477 | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK62<br>WOEX 05T304-11 BK77 | 2 | ● ◐ ● ● ● ○ | N00 57511<br>S/M2,5×7,2-8IP | 1,28 Nm | L05 00830<br>8IP |
| W29 34010.048425<br>W29 34010.047930<br>W29 34010.0462<br>W29 34110.0477 | WOEX 06T304-01 BK8425<br>WOEX 06T304-01 BK7930<br>WOEX 06T304-01 BK62<br>WOEX 06T304-11 BK77 | 2 | ● ◐ ● ● ● ○ | N00 57521<br>S/M3,5×7,3-10IP | 2,8 Nm | L05 00850<br>10IP |




**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

Guideline values for solid drilling: pages 78-79 / alternative inserts: page 95.

# KOMET KUB Trigon®

## Ø 14 – 44 mm

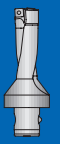
### Insert Drill with ABS® Connection, R.H. cutting

| Guideline values for solid drilling | | | | | | $v_c$ | Max. feed f (mm/rev) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2×D | | | | | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | Cutting speed $v_c$ (m/min) | Ø 14 – 16,9 | Ø 17 – 19,9 | Ø 20 – 24,9 | Ø 25 – 29,9 | Ø 30 – 36,9 | Ø 37 – 40,9 | Ø 41 – 44,0 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,06 | 0,08 | 0,12 | 0,14 | 0,14 | 0,14 | 0,16 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,08 | 0,10 | 0,12 | 0,14 | 0,16 | 0,16 | 0,20 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 200 | 0,06 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 180 | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 | 0,12 | 0,14 |
| P | 4.1 | | | HSS | | 80 | 0,04 | 0,06 | 0,08 | 0,10 | – | – | – |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 60 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 80 | 0,06 | 0,08 | 0,10 | 0,12 | 0,10 | 0,12 | 0,12 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 180 | 0,06 | 0,08 | 0,10 | 0,14 | 0,14 | 0,14 | 0,14 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 160 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,14 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 160 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,12 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 200 | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 160 | 0,08 | 0,08 | 0,10 | 0,14 | 0,14 | 0,16 | 0,18 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 160 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 140 | 0,10 | 0,12 | 0,16 | 0,25 | 0,16 | 0,18 | 0,18 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 | 0,20 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,05 | 0,08 | 0,12 | 0,16 | 0,16 | 0,18 | 0,20 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 400 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,12 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 600 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,10 | 0,12 | 0,14 | 0,18 | 0,18 | 0,20 | 0,20 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | 0,05 | 0,05 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 40 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



Patent applied for inside and outside Germany (ABS), EP 883 455 and other patents (KUB Trigon)



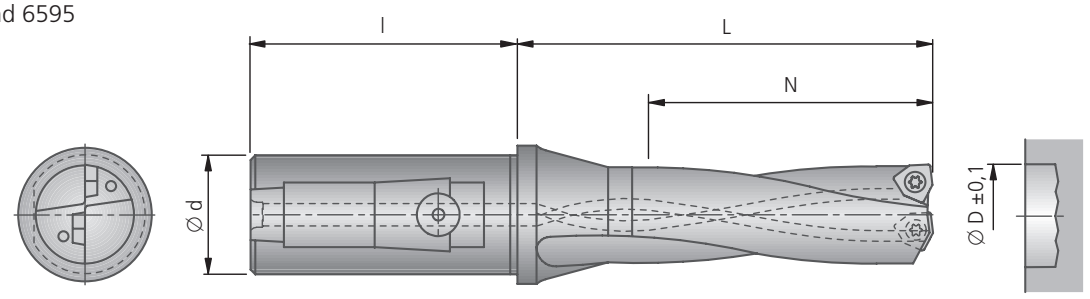
| Max. feed f (mm/rev) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3×D | | | | | | | 4×D | | | | | | |
| | Ø 14 – 16,9 | Ø 17 – 19,9 | Ø 20 – 24,9 | Ø 25 – 29,9 | Ø 30 – 36,9 | Ø 37 – 40,9 | Ø 41 – 44,0 | Ø 14 – 16,9 | Ø 17 – 19,9 | Ø 20 – 24,9 | Ø 25 – 29,9 | Ø 30 – 36,9 | Ø 37 – 40,9 | Ø 41 – 44,0 |
| | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 | 0,06 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 |
| | 0,06 | 0,08 | 0,12 | 0,14 | 0,14 | 0,14 | 0,16 | 0,04 | 0,06 | 0,10 | 0,12 | 0,12 | 0,12 | 0,14 |
| | 0,08 | 0,10 | 0,12 | 0,14 | 0,16 | 0,16 | 0,20 | 0,06 | 0,08 | 0,10 | 0,12 | 0,14 | 0,14 | 0,18 |
| | 0,06 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 | 0,04 | 0,06 | 0,08 | 0,12 | 0,14 | 0,14 | 0,14 |
| | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 | 0,12 | 0,14 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,10 | 0,12 |
| | 0,04 | 0,06 | 0,08 | 0,10 | – | – | – | 0,02 | 0,04 | 0,06 | 0,08 | – | – | – |
| | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,02 | 0,04 | 0,06 | 0,08 | 0,08 | 0,08 | 0,08 |
| | 0,06 | 0,08 | 0,10 | 0,12 | 0,10 | 0,12 | 0,12 | 0,04 | 0,06 | 0,08 | 0,10 | 0,08 | 0,10 | 0,10 |
| | 0,06 | 0,08 | 0,10 | 0,14 | 0,14 | 0,14 | 0,14 | 0,04 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,12 |
| | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,14 | 0,04 | 0,04 | 0,06 | 0,10 | 0,10 | 0,10 | 0,12 |
| | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,12 | 0,04 | 0,04 | 0,06 | 0,10 | 0,10 | 0,10 | 0,10 |
| | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,08 | 0,10 | 0,12 | 0,18 | 0,18 | 0,18 | 0,23 |
| | 0,08 | 0,08 | 0,10 | 0,14 | 0,14 | 0,16 | 0,18 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,14 | 0,16 |
| | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,06 | 0,08 | 0,12 | 0,18 | 0,18 | 0,18 | 0,23 |
| | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,06 | 0,08 | 0,12 | 0,18 | 0,18 | 0,18 | 0,23 |
| | 0,10 | 0,12 | 0,16 | 0,25 | 0,25 | 0,25 | 0,25 | 0,08 | 0,10 | 0,14 | 0,23 | 0,23 | 0,23 | 0,23 |
| | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,06 | 0,08 | 0,12 | 0,18 | 0,18 | 0,18 | 0,23 |
| | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 | 0,20 | 0,06 | 0,08 | 0,12 | 0,14 | 0,14 | 0,14 | 0,18 |
| | 0,05 | 0,08 | 0,12 | 0,16 | 0,16 | 0,18 | 0,20 | 0,03 | 0,06 | 0,10 | 0,14 | 0,14 | 0,16 | 0,18 |
| | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,12 | 0,03 | 0,06 | 0,06 | 0,08 | 0,08 | 0,08 | 0,10 |
| | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,03 | 0,06 | 0,06 | 0,08 | 0,08 | 0,10 | 0,10 |
| | 0,10 | 0,12 | 0,14 | 0,18 | 0,18 | 0,20 | 0,20 | 0,08 | 0,10 | 0,12 | 0,16 | 0,16 | 0,18 | 0,18 |
| | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,08 | 0,10 | 0,12 | 0,18 | 0,18 | 0,18 | 0,23 |
| | 0,05 | 0,05 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,03 | 0,03 | 0,06 | 0,08 | 0,08 | 0,10 | 0,10 |
| | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,03 | 0,06 | 0,06 | 0,08 | 0,08 | 0,08 | 0,08 |

# KOMET KUB Trigon®

# Ø 12 – 19,5 mm

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

■ cylindrical shank
(combination shank)
DIN 6535 HE (similar
1835 E) and 6595




| Ø D | max. diameter with offset | Cylindrical shank Ø d×l | 2×D | | | | 3×D | | | | 4×D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Order No. | N | L | kg | Order No. | N | L | kg | Order No. | N | L | kg |
| 12,0 | 13,0 | 20 × 50 | V43 31202 | 24 | 48 | 0,17 | V43 71202 | 36 | 60 | 0,17 | – | | | |
| 12,7 | 13,7 | 20 × 50 | V43 31272 | 26 | 50 | 0,17 | V43 71272 | 39 | 63 | 0,17 | – | | | |
| 13,0 | 14,0 | 20 × 50 | V43 31302 | 26 | 50 | 0,17 | V43 71302 | 39 | 63 | 0,18 | – | | | |
| 13,7 | 14,7 | 20 × 50 | V43 31372 | 28 | 52 | 0,17 | V43 71372 | 42 | 66 | 0,18 | – | | | |
| 14,0 | 15,0 | 20 × 50 | V43 31404 | 28 | 52 | 0,17 | V43 71404 | 42 | 66 | 0,20 | V43 91404 | 56 | 80 | 0,22 |
| | | 25 × 56 | – | | | | V44 71404 | 42 | 66 | 0,24 | – | | | |
| 15,0 | 16,0 | 20 × 50 | V43 31504 | 30 | 54 | 0,18 | V43 71504 | 45 | 69 | 0,20 | V43 91504 | 60 | 84 | 0,20 |
| | | 25 × 56 | – | | | | V44 71504 | 45 | 69 | 0,28 | – | | | |
| 15,5 | 16,5 | 20 × 50 | V43 31552 | 32 | 56 | 0,18 | V43 71552 | 48 | 72 | 0,20 | – | | | |
| | | 25 × 56 | – | | | | V44 71552 | 48 | 72 | 0,28 | – | | | |
| 16,0 | 17,0 | 20 × 50 | V43 31602 | 32 | 56 | 0,19 | V43 71602 | 48 | 72 | 0,20 | V43 91602 | 64 | 88 | 0,19 |
| | | 25 × 56 | – | | | | V44 71602 | 48 | 72 | 0,28 | – | | | |
| 17,0 | 18,0 | 20 × 50 | V43 31702 | 34 | 58 | 0,19 | V43 71702 | 51 | 75 | 0,20 | V43 91702 | 68 | 92 | 0,21 |
| | | 25 × 56 | – | | | | V44 71702 | 51 | 75 | 0,29 | – | | | |
| 17,5 | 18,5 | 20 × 50 | V43 31752 | 36 | 60 | 0,20 | V43 71752 | 54 | 78 | 0,21 | – | | | |
| | | 25 × 56 | – | | | | V44 71752 | 54 | 78 | 0,29 | – | | | |
| 18,0 | 19,0 | 20 × 50 | V43 31802 | 36 | 60 | 0,20 | V43 71802 | 54 | 78 | 0,21 | V43 91802 | 72 | 96 | 0,27 |
| | | 25 × 56 | – | | | | V44 71802 | 54 | 78 | 0,29 | – | | | |
| 18,5 | 19,0 | 20 × 50 | V43 31852 | 38 | 62 | 0,20 | V43 71852 | 57 | 81 | 0,22 | – | | | |
| | | 25 × 56 | – | | | | V44 71852 | 57 | 81 | 0,31 | – | | | |
| 19,0 | 19,5 | 20 × 50 | V43 31902 | 38 | 62 | 0,20 | V43 71902 | 57 | 81 | 0,22 | V43 91902 | 76 | 100 | 0,28 |
| | | 25 × 56 | – | | | | V44 71902 | 57 | 81 | 0,31 | – | | | |
| 19,5 | 20,0 | 20 × 50 | V43 31952 | 40 | 64 | 0,21 | V43 71952 | 60 | 84 | 0,23 | – | | | |
| | | 25 × 56 | – | | | | V44 71952 | 60 | 84 | 0,34 | – | | | |

For other diameters see following page.
Any **intermediate dimensions** from ∅ 12 – 44 mm and **inch dimensions** are available on request.

**Supply includes:**
KUB Trigon® drill with assembly parts. Please order insert and accessories separately.



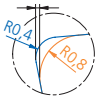
EP 883 455 and other patents (KUB Trigon)

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ◐ | ● | ✕ | ◐ | ◐ |
| 3×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ○ | ◐ |
| 4×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 112-114 ✕ not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert -01 -11 | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| **W29 04010.028425**<br>**W29 04010.0279** | WOEX 020102-01 BK8425<br>WOEX 020102-01 BK79 | 2 | ● ● ● ● | **N00 56051**<br>S/M1,8×3,8-5IP | 0,38 Nm | **L05 00800**<br>5IP |
| **W29 10010.048425**<br>**W29 10010.047930**<br>**W29 10010.0462**<br>**W29 10110.0477** | WOEX 030204-01 BK8425<br>WOEX 030204-01 BK7930<br>WOEX 030204-01 BK62<br>WOEX 030204-11 BK77 | 2 | ● ● ● ● ● ○ | **N00 56041**<br>S/M2×4,3-6IP | 0,62 Nm | **L05 00810**<br>6IP |




**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

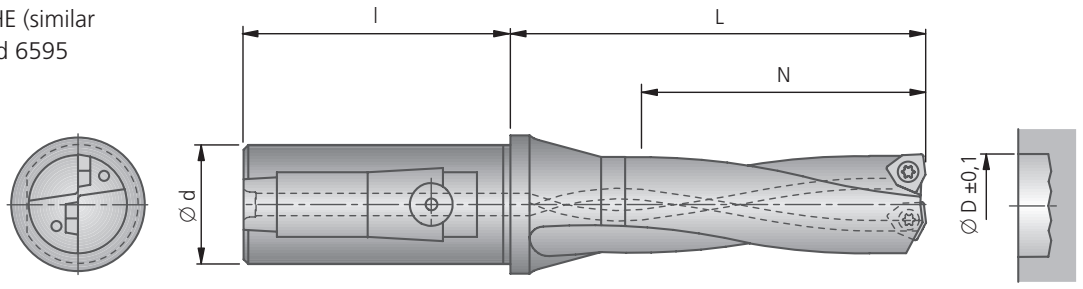
Guideline values for solid drilling: pages 86-87 / alternative inserts: page 95.

# KOMET KUB Trigon®

# Ø 20 – 29,5 mm

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

■ cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595




| Ø D | max. diameter with offset | Cylindrical shank Ø d×l | 2×D Order No. | 2×D N | 2×D L | 2×D kg | 3×D Order No. | 3×D N | 3×D L | 3×D kg | 4×D Order No. | 4×D N | 4×D L | 4×D kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20,0 | 21,0 | 20 × 50 | V43 32002 | 40 | 64 | 0,25 | V43 72002 | 60 | 84 | 0,23 | – | | | |
| | | 25 × 56 | V44 32002 | 40 | 64 | 0,30 | V44 72002 | 60 | 84 | 0,32 | V44 92002 | 80 | 104 | 0,34 |
| | | 32 × 60 | – | | | | V45 72002 | 60 | 84 | 0,51 | – | | | |
| 21,0 | 22,0 | 20 × 50 | V43 32102 | 42 | 66 | 0,22 | V43 72102 | 63 | 87 | 0,2 | – | | | |
| | | 25 × 56 | V44 32102 | 42 | 66 | 0,31 | V44 72102 | 63 | 87 | 0,33 | V44 92102 | 84 | 108 | 0,36 |
| | | 32 × 60 | – | | | | V45 72102 | 63 | 87 | 0,55 | – | | | |
| 22,0 | 23,0 | 20 × 50 | V43 32202 | 44 | 68 | 0,22 | V43 72202 | 66 | 90 | 0,26 | – | | | |
| | | 25 × 56 | V44 32202 | 44 | 68 | 0,32 | V44 72202 | 66 | 90 | 0,35 | V44 92202 | 88 | 112 | 0,38 |
| | | 32 × 60 | – | | | | V45 72202 | 66 | 90 | 0,54 | – | | | |
| 22,5 | 23,5 | 20 × 50 | V43 32252 | 46 | 70 | 0,24 | V43 72252 | 69 | 93 | 0,23 | – | | | |
| | | 25 × 56 | V44 32252 | 46 | 70 | 0,32 | V44 72252 | 69 | 93 | 0,36 | – | | | |
| | | 32 × 60 | – | | | | V45 72252 | 69 | 93 | 0,56 | – | | | |
| 23,0 | 24,0 | 20 × 50 | V43 32302 | 46 | 70 | 0,24 | V43 72302 | 69 | 93 | 0,28 | – | | | |
| | | 25 × 56 | V44 32302 | 46 | 70 | 0,33 | V44 72302 | 69 | 93 | 0,36 | V44 92302 | 92 | 116 | 0,40 |
| | | 32 × 60 | – | | | | V45 72302 | 69 | 93 | 0,56 | – | | | |
| 24,0 | 25,0 | 20 × 50 | V43 32402 | 48 | 72 | 0,25 | V43 72402 | 72 | 96 | 0,30 | – | | | |
| | | 25 × 56 | V44 32402 | 48 | 72 | 0,34 | V44 72402 | 72 | 96 | 0,38 | V44 92402 | 96 | 120 | 0,45 |
| | | 32 × 60 | V45 32402 | 48 | 72 | 0,57 | V45 72402 | 72 | 96 | 0,57 | – | | | |
| 24,5 | 25,5 | 20 × 50 | V43 32452 | 50 | 74 | 0,26 | V43 72452 | 75 | 99 | 0,31 | – | | | |
| | | 25 × 56 | V44 32452 | 50 | 74 | 0,35 | V44 72452 | 75 | 99 | 0,4 | V44 92452 | 100 | 124 | 0,43 |
| | | 32 × 60 | V45 32452 | 50 | 74 | 0,54 | V45 72452 | 75 | 99 | 0,58 | – | | | |
| 25,0 | 26,0 | 25 × 56 | V44 32502 | 50 | 74 | 0,35 | V44 72502 | 75 | 99 | 0,4 | – | | | |
| | | 32 × 60 | V45 32502 | 50 | 74 | 0,55 | V45 72502 | 75 | 99 | 0,59 | V45 92502 | 100 | 124 | 0,63 |
| 26,0 | 28,0 | 25 × 56 | V44 32602 | 52 | 76 | 0,37 | V44 72602 | 78 | 102 | 0,44 | – | | | |
| | | 32 × 60 | V45 32602 | 52 | 76 | 0,56 | V45 72602 | 78 | 102 | 0,61 | V45 92602 | 104 | 128 | 0,65 |
| 26,5 | 28,5 | 25 × 56 | V44 32652 | 54 | 78 | 0,37 | V44 72652 | 81 | 105 | 0,43 | – | | | |
| | | 32 × 60 | V45 32652 | 54 | 78 | 0,57 | V45 72652 | 81 | 105 | 0,62 | – | | | |
| 27,0 | 30,0 | 25 × 56 | V44 32702 | 54 | 78 | 0,40 | V44 72702 | 81 | 105 | 0,44 | – | | | |
| | | 32 × 60 | V45 32702 | 54 | 78 | 0,57 | V45 72702 | 81 | 105 | 0,62 | V45 92702 | 108 | 132 | 0,68 |
| 28,0 | 31,0 | 25 × 56 | V44 32802 | 56 | 80 | 0,40 | V44 72802 | 84 | 108 | 0,45 | – | | | |
| | | 32 × 60 | V45 32802 | 56 | 80 | 0,59 | V45 72802 | 84 | 108 | 0,65 | V45 92802 | 112 | 136 | 0,71 |
| 28,5 | 31,5 | 25 × 56 | V44 32852 | 58 | 82 | 0,40 | V44 72852 | 87 | 111 | 0,47 | – | | | |
| | | 32 × 60 | V45 32852 | 58 | 82 | 0,59 | V45 72852 | 87 | 111 | 0,66 | – | | | |
| 29,0 | 32,0 | 25 × 56 | V44 32902 | 58 | 82 | 0,41 | V44 72902 | 87 | 111 | 0,48 | – | | | |
| | | 32 × 60 | V45 32902 | 58 | 82 | 0,60 | V45 72902 | 87 | 111 | 0,68 | V45 92902 | 116 | 140 | 0,74 |
| 29,5 | 32,5 | 25 × 56 | V44 32952 | 60 | 84 | 0,42 | V44 72952 | 90 | 114 | 0,49 | – | | | |
| | | 32 × 60 | V45 32952 | 60 | 84 | 0,61 | V45 72952 | 90 | 114 | 0,69 | – | | | |

For other diameters see following page.

Any **intermediate dimensions** from ∅ 12 – 44 mm and **inch dimensions** are available on request.

**Supply includes:** KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

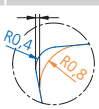


EP 883 455 and other patents (KUB Trigon)

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ◐ | ● | ✕ | ◐ | ◐ |
| 3×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ○ | ◐ |
| 4×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 112-114 ✕ not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert -01 -11 | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| **W29 18010.048425**<br>**W29 18010.047930**<br>**W29 18010.0462**<br>**W29 18110.0477** | WOEX 040304-01 BK8425<br>WOEX 040304-01 BK7930<br>WOEX 040304-01 BK62<br>WOEX 040304-11 BK77 | 2 | ● ◐ ● ● ● ○ | **N00 57553**<br>S/M2,2×5,5-6IP | 1,01 Nm | **L05 00810**<br>6IP |
| **W29 24010.048425**<br>**W29 24010.047930**<br>**W29 24010.0462**<br>**W29 24110.0477** | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK62<br>WOEX 05T304-11 BK77 | 2 | ● ◐ ● ● ● ○ | **N00 57511**<br>S/M2,5×7,2-8IP | 1,28 Nm | **L05 00830**<br>8IP |



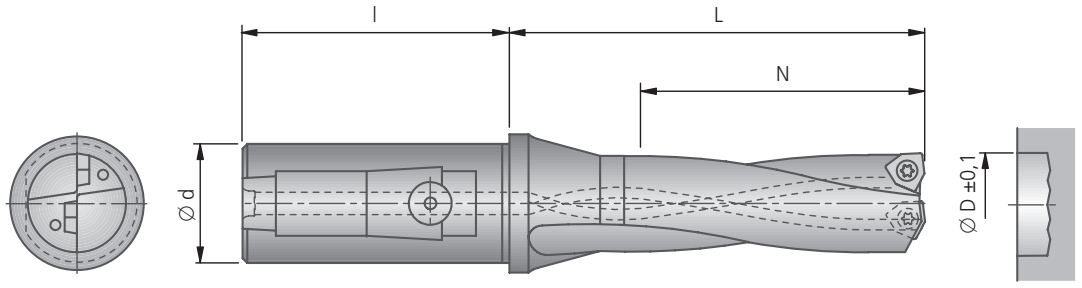

**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

Guideline values for solid drilling: pages 86-87 / alternative inserts: page 95.

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

1

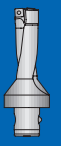
■ cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595




| Ø D | max. diameter with offset | Cylindrical shank Ø d×l | 2×D | | | | 3×D | | | | 4×D | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Order No. | N | L | kg | Order No. | N | L | kg | Order No. | N | L | kg |
| 30,0 | 32,5 | 32 × 60 | **V45 33002** | 60 | 89 | 0,65 | **V45 73002** | 90 | 119 | 0,72 | **V45 93002** | 120 | 149 | 0,81 |
| 31,0 | 33,5 | 32 × 60 | **V45 33102** | 62 | 91 | 0,67 | **V45 73102** | 93 | 122 | 0,76 | **V45 93102** | 124 | 153 | 0,84 |
| 31,5 | 33,5 | 32 × 60 | **V45 33152** | 64 | 93 | 0,68 | **V45 73152** | 96 | 125 | 0,77 | – | | | |
| 32,0 | 34,0 | 32 × 60 | **V45 33202** | 64 | 93 | 0,69 | **V45 73202** | 96 | 125 | 0,78 | **V45 93202** | 128 | 157 | 0,87 |
| 33,0 | 34,0 | 32 × 60 | **V45 33302** | 66 | 95 | 0,71 | **V45 73302** | 99 | 128 | 0,82 | **V45 93302** | 132 | 161 | 0,93 |
| 34,0 | 35,0 | 32 × 60 | **V45 33402** | 68 | 97 | 0,73 | **V45 73402** | 102 | 131 | 0,84 | **V45 93402** | 136 | 165 | 0,95 |
| 35,0 | 36,0 | 32 × 60 | **V45 33502** | 70 | 99 | 0,75 | **V45 73502** | 105 | 134 | 0,87 | **V45 93502** | 140 | 169 | 0,99 |
| 36,0 | 37,0 | 32 × 60 | **V45 33602** | 72 | 101 | 0,78 | **V45 73602** | 108 | 137 | 0,91 | **V45 93602** | 144 | 173 | 1,05 |
| 37,0 | 40,0 | 32 × 60 | **V45 33702** | 74 | 113 | 0,85 | **V45 73702** | 111 | 150 | 1,00 | – | | | |
| 37,5 | 40,5 | 32 × 60 | **V45 33752** | 76 | 115 | 0,86 | **V45 73752** | 114 | 153 | 1,01 | – | | | |
| 38,0 | 41,0 | 32 × 60 | **V45 33802** | 76 | 115 | 0,87 | **V45 73802** | 114 | 153 | 1,04 | – | | | |
| 39,0 | 42,0 | 32 × 60 | **V45 33902** | 78 | 117 | 0,90 | **V45 73902** | 117 | 156 | 1,09 | – | | | |
| 39,5 | 42,5 | 32 × 60 | **V45 33952** | 80 | 119 | 0,92 | **V45 73952** | 120 | 159 | 1,10 | – | | | |
| 40,0 | 43,0 | 32 × 60 | **V45 34002** | 80 | 119 | 0,94 | **V45 74002** | 120 | 159 | 1,12 | – | | | |
| 41,0 | 44,0 | 32 × 60 | **V45 34102** | 82 | 121 | 0,98 | **V45 74102** | 123 | 162 | 1,20 | – | | | |
| 42,0 | 45,0 | 32 × 60 | **V45 34202** | 84 | 123 | 1,04 | **V45 74202** | 126 | 165 | 1,25 | – | | | |
| 43,0 | 45,0 | 32 × 60 | **V45 34302** | 86 | 125 | 1,10 | **V45 74302** | 129 | 168 | 1,32 | – | | | |
| 44,0 | 45,0 | 32 × 60 | **V45 34402** | 88 | 127 | 1,13 | **V45 74402** | 132 | 171 | 1,39 | – | | | |

Any **intermediate dimensions** from ∅ 12 – 44 mm and **inch dimensions** are available on request.

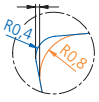
**Supply includes:**
KUB Trigon® drill with assembly parts. Please order insert and accessories separately.



| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ◐ | ● | ✕ | ◐ | ◐ |
| 3×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ○ | ◐ |
| 4×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 112-114 ✕ not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert -01 -11 | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| **W29 24010.048425**<br>**W29 24010.047930**<br>**W29 24010.0462**<br>**W29 24110.0477** | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK62<br>WOEX 05T304-11 BK77 | 2 | ● ● ● ● ● ○ | **N00 57511**<br>S/M2,5×7,2-8IP | 1,28 Nm | **L05 00830**<br>8IP |
| **W29 34010.048425**<br>**W29 34010.047930**<br>**W29 34010.0462**<br>**W29 34110.0477** | WOEX 06T304-01 BK8425<br>WOEX 06T304-01 BK7930<br>WOEX 06T304-01 BK62<br>WOEX 06T304-11 BK77 | 2 | ● ● ● ● ● ○ | **N00 57521**<br>S/M3,5×7,3-10IP | 2,8 Nm | **L05 00850**<br>10IP |




**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

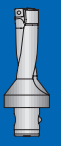
# KOMET KUB Trigon®

## Ø 12 – 44 mm

### Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

| Guideline values for solid drilling | | | | | | $v_c$ | Max. feed f (mm/rev) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2×D | | | | | | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | Cutting speed $v_c$ (m/min) | Ø 12 – 13,9 | Ø 14 – 16,9 | Ø 17 – 19,9 | Ø 20 – 24,9 | Ø 25 – 29,9 | Ø 30 – 36,9 | Ø 37 – 40,9 | Ø 41 – 44,0 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,05 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,05 | 0,06 | 0,08 | 0,12 | 0,14 | 0,14 | 0,14 | 0,16 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,08 | 0,08 | 0,10 | 0,12 | 0,14 | 0,16 | 0,16 | 0,20 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 200 | 0,05 | 0,06 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 180 | 0,03 | 0,05 | 0,08 | 0,10 | 0,12 | 0,12 | 0,12 | 0,14 |
| P | 4.1 | | | HSS | | 80 | 0,02 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 60 | 0,02 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 80 | 0,02 | 0,06 | 0,08 | 0,10 | 0,12 | 0,10 | 0,12 | 0,12 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 180 | 0,03 | 0,06 | 0,08 | 0,10 | 0,14 | 0,14 | 0,14 | 0,14 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 160 | 0,05 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,14 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 160 | 0,05 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,12 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 200 | 0,10 | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 160 | 0,08 | 0,08 | 0,08 | 0,10 | 0,14 | 0,14 | 0,16 | 0,18 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,06 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 160 | 0,05 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 140 | 0,05 | 0,10 | 0,12 | 0,16 | 0,25 | 0,25 | 0,25 | 0,25 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,03 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,05 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 | 0,20 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,05 | 0,05 | 0,08 | 0,12 | 0,16 | 0,16 | 0,18 | 0,20 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 400 | 0,03 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,12 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 600 | 0,03 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,08 | 0,10 | 0,12 | 0,14 | 0,18 | 0,18 | 0,20 | 0,20 |
| N | 14.0 | | 100 | cast alum.alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,05 | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | – | 0,05 | 0,05 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 40 | – | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

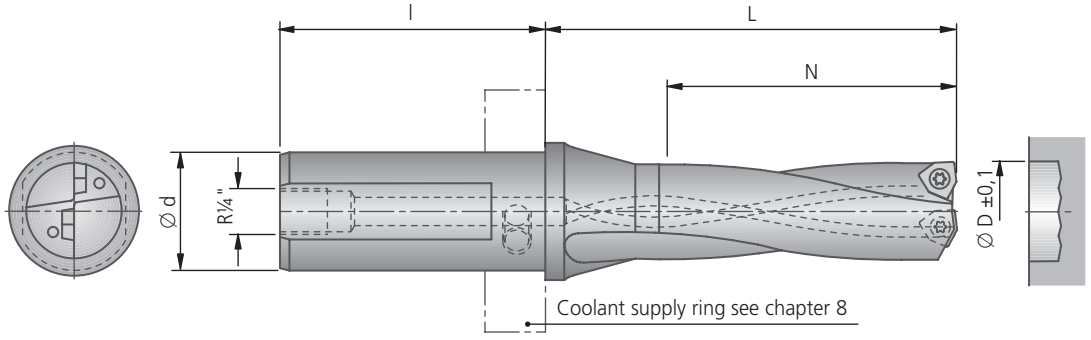


| Max. feed f (mm/rev) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3×D | | | | | | | | 4×D | | | | |
| | Ø 12 – 13,9 | Ø 14 – 16,9 | Ø 17 – 19,9 | Ø 20 – 24,9 | Ø 25 – 29,9 | Ø 30 – 36,9 | Ø 37 – 40,9 | Ø 41 – 44,0 | Ø 14 – 16,9 | Ø 17 – 19,9 | Ø 20 – 24,9 | Ø 25 – 29,9 | Ø 30 – 36,9 |
| | 0,05 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 | 0,06 | 0,08 | 0,08 | 0,10 | 0,11 |
| | 0,05 | 0,06 | 0,08 | 0,12 | 0,14 | 0,14 | 0,14 | 0,16 | 0,04 | 0,06 | 0,10 | 0,12 | 0,12 |
| | 0,08 | 0,08 | 0,10 | 0,12 | 0,14 | 0,16 | 0,16 | 0,20 | 0,06 | 0,08 | 0,10 | 0,12 | 0,14 |
| | 0,05 | 0,06 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 | 0,04 | 0,06 | 0,08 | 0,12 | 0,14 |
| | 0,03 | 0,05 | 0,08 | 0,10 | 0,12 | 0,12 | 0,12 | 0,14 | 0,04 | 0,06 | 0,08 | 0,10 | 0,11 |
| | 0,02 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,03 | 0,05 | 0,07 | 0,08 | 0,09 |
| | 0,02 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,03 | 0,05 | 0,07 | 0,08 | 0,09 |
| | 0,02 | 0,06 | 0,08 | 0,10 | 0,12 | 0,10 | 0,12 | 0,12 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 |
| | 0,03 | 0,06 | 0,08 | 0,10 | 0,14 | 0,14 | 0,14 | 0,14 | 0,04 | 0,06 | 0,08 | 0,12 | 0,13 |
| | 0,05 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,14 | 0,04 | 0,04 | 0,06 | 0,10 | 0,11 |
| | 0,05 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,12 | 0,04 | 0,04 | 0,06 | 0,10 | 0,11 |
| | 0,10 | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,08 | 0,10 | 0,12 | 0,18 | 0,19 |
| | 0,08 | 0,08 | 0,08 | 0,10 | 0,14 | 0,14 | 0,16 | 0,18 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 |
| | 0,06 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,06 | 0,08 | 0,12 | 0,18 | 0,19 |
| | 0,05 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,06 | 0,08 | 0,12 | 0,18 | 0,19 |
| | 0,05 | 0,10 | 0,12 | 0,16 | 0,25 | 0,25 | 0,25 | 0,25 | 0,08 | 0,10 | 0,14 | 0,23 | 0,24 |
| | 0,03 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,06 | 0,08 | 0,12 | 0,18 | 0,19 |
| | 0,05 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 | 0,20 | 0,06 | 0,08 | 0,12 | 0,14 | 0,15 |
| | 0,05 | 0,05 | 0,08 | 0,12 | 0,16 | 0,16 | 0,18 | 0,20 | 0,04 | 0,06 | 0,10 | 0,14 | 0,15 |
| | 0,03 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,12 | 0,03 | 0,06 | 0,06 | 0,08 | 0,09 |
| | 0,03 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,03 | 0,06 | 0,06 | 0,08 | 0,09 |
| | 0,08 | 0,10 | 0,12 | 0,14 | 0,18 | 0,18 | 0,20 | 0,20 | 0,08 | 0,10 | 0,12 | 0,16 | 0,17 |
| | 0,05 | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,08 | 0,10 | 0,12 | 0,18 | 0,19 |
| | – | 0,05 | 0,05 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,03 | 0,03 | 0,06 | 0,08 | 0,09 |
| | – | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,03 | 0,06 | 0,06 | 0,08 | 0,08 |

# KOMET KUB Trigon®

## Ø 14 – 19,5 mm

### Insert Drill with Cylindrical Shank (parallel clamping surface), R.H. cutting




| Ø D | max. diameter with offset | Cylindrical shank Ø d×l | 3×D Order No. | 3×D N | 3×D L | 3×D kg | 4×D Order No. | 4×D N | 4×D L | 4×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 14,0 | 15,0 | 20 × 50 | V36 71402 | 42 | 66 | 0,18 | – | | | |
| | | 25 × 56 | V37 71402 | 42 | 66 | 0,27 | – | | | |
| | | 30 × 58 | V38 71402 | 42 | 66 | 0,37 | V38 91402 | 56 | 80 | 0,39 |
| | | 40 × 68 | V39 71402 | 42 | 66 | 0,73 | V39 91402 | 56 | 80 | 0,74 |
| 15,0 | 16,0 | 20 × 50 | V36 71502 | 45 | 69 | 0,19 | – | | | |
| | | 25 × 56 | V37 71502 | 45 | 69 | 0,25 | – | | | |
| | | 30 × 58 | V38 71502 | 45 | 69 | 0,38 | V38 91502 | 60 | 84 | 0,40 |
| | | 40 × 68 | V39 71502 | 45 | 69 | 0,74 | V39 91502 | 60 | 84 | 0,97 |
| 15,5 | 16,5 | 30 × 58 | – | | | | V38 91550 | 64 | 88 | 0,40 |
| | | 40 × 68 | – | | | | V39 91550 | 64 | 88 | 0,97 |
| 16,0 | 17,0 | 20 × 50 | V36 71600 | 48 | 72 | 0,20 | – | | | |
| | | 25 × 56 | V37 71600 | 48 | 72 | 0,28 | – | | | |
| | | 30 × 58 | V38 71600 | 48 | 72 | 0,39 | V38 91600 | 64 | 88 | 0,40 |
| | | 40 × 68 | V39 71600 | 48 | 72 | 0,75 | V39 91600 | 64 | 88 | 0,76 |
| 17,0 | 18,0 | 20 × 50 | V36 71700 | 51 | 75 | 0,20 | – | | | |
| | | 25 × 56 | V37 71700 | 51 | 75 | 0,29 | – | | | |
| | | 30 × 58 | V38 71700 | 51 | 75 | 0,40 | V38 91700 | 68 | 92 | 0,41 |
| | | 40 × 68 | V39 71700 | 51 | 75 | 0,76 | V39 91700 | 68 | 92 | 0,76 |
| 17,5 | 18,5 | 30 × 58 | – | | | | V38 91750 | 72 | 96 | 0,42 |
| | | 40 × 68 | – | | | | V39 91750 | 72 | 96 | 0,77 |
| 18,0 | 19,0 | 20 × 50 | V36 71800 | 54 | 78 | 0,21 | – | | | |
| | | 25 × 56 | V37 71800 | 54 | 78 | 0,27 | – | | | |
| | | 30 × 58 | V38 71800 | 54 | 78 | 0,40 | V38 91800 | 72 | 96 | 0,42 |
| | | 40 × 68 | V39 71800 | 54 | 78 | 0,76 | V39 91800 | 72 | 96 | 0,76 |
| 18,5 | 19,0 | 30 × 58 | – | | | | V38 91850 | 76 | 100 | 0,43 |
| | | 40 × 68 | – | | | | V39 91850 | 76 | 100 | 0,79 |
| 19,0 | 19,5 | 20 × 50 | V36 71900 | 57 | 81 | 0,22 | – | | | |
| | | 25 × 56 | V37 71900 | 57 | 81 | 0,31 | – | | | |
| | | 30 × 58 | V38 71900 | 57 | 81 | 0,41 | V38 91900 | 76 | 100 | 0,43 |
| | | 40 × 68 | V39 71900 | 57 | 81 | 0,78 | V39 91900 | 76 | 100 | 0,79 |
| 19,5 | 20,0 | 30 × 58 | – | | | | V38 91950 | 80 | 104 | 0,44 |
| | | 40 × 68 | – | | | | V39 91950 | 80 | 104 | 0,79 |

For other diameters see following page.

Any **intermediate dimensions** from ∅ 14 – 54 mm and **inch dimensions** are available on request.

**Supply includes:**

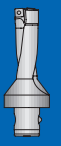
KUB Trigon® drill with assembly parts. Please order insert and accessories separately.



EP 883 455 and other patents (KUB Trigon)

## Insert Drill with Cylindrical Shank (parallel clamping surface), R.H. cutting

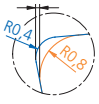




| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ○ | ◐ |
| 4×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 112-114 ✕ not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert -01 -11 | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| **W29 10010.048425**<br>**W29 10010.047930**<br>**W29 10010.0462**<br>**W29 10110.0477** | WOEX 030204-01 BK8425<br>WOEX 030204-01 BK7930<br>WOEX 030204-01 BK62<br>WOEX 030204-11 BK77 | 2 | ● ● ● ● ● ● | **N00 56041**<br>S/M2×4,3-6IP | 0,62 Nm | **L05 00810**<br>6IP |



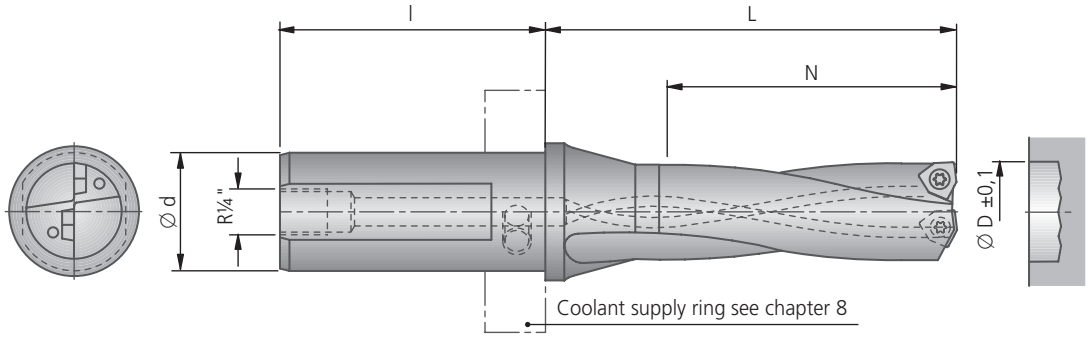

**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

Guideline values for solid drilling: page 94 / alternative inserts: page 95.

# KOMET KUB Trigon®

## Ø 20 – 29,5 mm

### Insert Drill with Cylindrical Shank (parallel clamping surface), R.H. cutting




| Ø D | max. diameter with offset | Cylindrical shank Ø d×l | 3×D Order No. | 3×D N | 3×D L | 3×D kg | 4×D Order No. | 4×D N | 4×D L | 4×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 20,0 | 21,0 | 20 × 50 | V36 72000 | 60 | 84 | 0,23 | – | | | |
| | | 25 × 56 | V37 72000 | 60 | 84 | 0,32 | – | | | |
| | | 30 × 58 | V38 72000 | 60 | 84 | 0,44 | V38 92000 | 80 | 104 | 0,46 |
| | | 40 × 68 | V39 72000 | 60 | 84 | 0,79 | V39 92000 | 80 | 104 | 0,81 |
| 21,0 | 22,0 | 20 × 50 | V36 72100 | 63 | 87 | 0,23 | – | | | |
| | | 25 × 56 | V37 72100 | 63 | 87 | 0,33 | – | | | |
| | | 30 × 58 | V38 72100 | 63 | 87 | 0,45 | V38 92100 | 84 | 108 | 0,47 |
| | | 40 × 68 | V39 72100 | 63 | 87 | 0,81 | V39 92100 | 84 | 108 | 0,82 |
| 22,0 | 23,0 | 20 × 50 | V36 72200 | 66 | 90 | 0,23 | – | | | |
| | | 25 × 56 | V37 72200 | 66 | 90 | 0,35 | – | | | |
| | | 30 × 58 | V38 72200 | 66 | 90 | 0,46 | V38 92200 | 88 | 112 | 0,49 |
| | | 40 × 68 | V39 72200 | 66 | 90 | 0,82 | V39 92200 | 88 | 112 | 0,84 |
| 22,5 | 23,5 | 30 × 58 | – | | | | V38 92250 | 92 | 116 | 0,51 |
| | | 40 × 68 | – | | | | V39 92250 | 92 | 116 | 0,85 |
| 23,0 | 24,0 | 20 × 50 | V36 72300 | 69 | 93 | 0,27 | – | | | |
| | | 25 × 56 | V37 72300 | 69 | 93 | 0,37 | – | | | |
| | | 30 × 58 | V38 72300 | 69 | 93 | 0,48 | V38 92300 | 92 | 116 | 0,52 |
| | | 40 × 68 | V39 72300 | 69 | 93 | 0,84 | V39 92300 | 92 | 116 | 0,87 |
| 24,0 | 25,0 | 20 × 50 | V36 72400 | 72 | 96 | 0,29 | – | | | |
| | | 25 × 56 | V37 72400 | 72 | 96 | 0,38 | – | | | |
| | | 30 × 58 | V38 72400 | 72 | 96 | 0,49 | V38 92400 | 96 | 120 | 0,51 |
| | | 40 × 68 | V39 72400 | 72 | 96 | 0,86 | V39 92400 | 96 | 120 | 0,88 |
| 24,5 | 25,5 | 30 × 58 | – | | | | V38 92450 | 100 | 124 | 0,55 |
| | | 40 × 68 | – | | | | V39 92450 | 100 | 124 | 0,90 |
| 25,0 | 26,0 | 30 × 58 | V38 72500 | 75 | 99 | 0,48 | V38 92500 | 100 | 124 | 0,54 |
| | | 40 × 68 | V39 72500 | 75 | 99 | 0,86 | V39 92500 | 100 | 124 | 0,91 |
| 26,0 | 28,0 | 25 × 56 | V37 72600 | 78 | 102 | 0,35 | – | | | |
| | | 30 × 58 | V38 72600 | 78 | 102 | 0,55 | V38 92600 | 104 | 128 | 0,57 |
| | | 40 × 68 | V39 72600 | 78 | 102 | 0,88 | V39 92600 | 104 | 128 | 0,93 |
| 26,5 | 28,5 | 30 × 58 | – | | | | V38 92650 | 108 | 132 | 0,59 |
| | | 40 × 68 | – | | | | V39 92650 | 108 | 132 | 0,98 |
| 27,0 | 30,0 | 30 × 58 | V38 72700 | 81 | 105 | 0,54 | V38 92700 | 108 | 132 | 0,65 |
| | | 40 × 68 | V39 72700 | 81 | 105 | 0,90 | V39 92700 | 108 | 132 | 0,95 |
| 28,0 | 31,0 | 25 × 56 | V37 72800 | 84 | 108 | 0,38 | – | | | |
| | | 30 × 58 | V38 72800 | 84 | 108 | 0,57 | V38 92800 | 112 | 136 | 0,63 |
| | | 40 × 68 | V39 72800 | 84 | 108 | 0,91 | V39 92800 | 112 | 136 | 0,98 |
| 28,5 | 31,5 | 30 × 58 | – | | | | V38 92850 | 116 | 140 | 0,70 |
| | | 40 × 68 | – | | | | V39 92850 | 116 | 140 | 1,00 |
| 29,0 | 32,0 | 25 × 56 | V37 72900 | 87 | 111 | 0,40 | – | | | |
| | | 30 × 58 | V38 72900 | 87 | 111 | 0,59 | V38 92900 | 116 | 140 | 0,68 |
| | | 40 × 68 | V39 72900 | 87 | 111 | 0,96 | V39 92900 | 116 | 140 | 0,70 |
| 29,5 | 32,5 | 30 × 58 | – | | | | V38 92950 | 120 | 144 | 1,01 |
| | | 40 × 68 | – | | | | V39 92950 | 120 | 144 | 1,04 |

For other diameters see following page.
Any **intermediate dimensions** from ∅ 14 – 54 mm and **inch dimensions** are available on request.
**Supply includes:** KUB Trigon® drill with assembly parts. Please order insert and accessories separately.

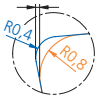
## Insert Drill with Cylindrical Shank (parallel clamping surface), R.H. cutting



| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ○ | ◐ |
| 4×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 112-114 ✕ not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert -01 -11 | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| W29 18010.048425<br>W29 18010.047930<br>W29 18010.0462<br>W29 18110.0477 | WOEX 040304-01 BK8425<br>WOEX 040304-01 BK7930<br>WOEX 040304-01 BK62<br>WOEX 040304-11 BK77 | 2 | | N00 57553<br>S/M2,2×5,5-6IP | 1,01 Nm | L05 00810<br>6IP |
| W29 24010.048425<br>W29 24010.047930<br>W29 24010.0462<br>W29 24110.0477 | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK62<br>WOEX 05T304-11 BK77 | 2 | | N00 57511<br>S/M2,5×7,2-8IP | 1,28 Nm | L05 00830<br>8IP |



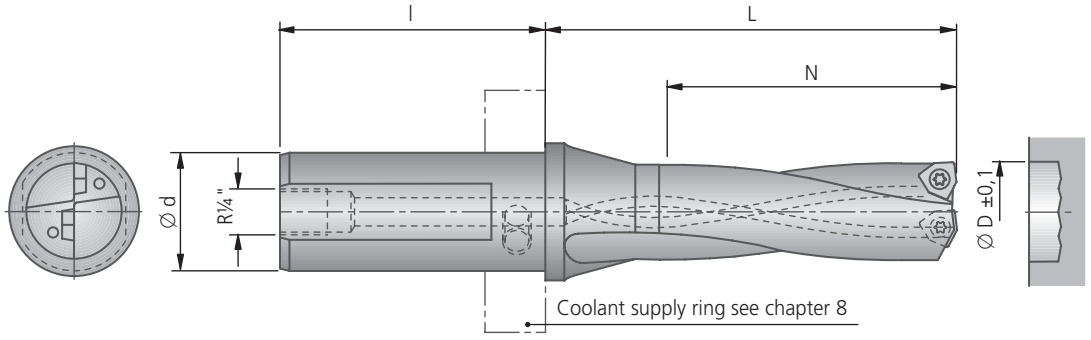

**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

Guideline values for solid drilling: page 94 / alternative inserts: page 95.

# KOMET KUB Trigon®

# Ø 30 – 54 mm

## Insert Drill with Cylindrical Shank (parallel clamping surface), R.H. cutting




| Ø D | max. diameter with offset | Cylindrical shank Ø d×l | 3×D Order No. | 3×D N | 3×D L | 3×D kg | 4×D Order No. | 4×D N | 4×D L | 4×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 30,0 | 32,5 | 30 × 58 | V38 73000 | 90 | 119 | 0,65 | V38 93000 | 120 | 149 | 0,72 |
| | | 40 × 68 | V39 73000 | 90 | 119 | 1,01 | V39 93000 | 120 | 149 | 1,09 |
| 31,0 | 33,5 | 30 × 58 | V38 73100 | 93 | 122 | 0,68 | V38 93100 | 124 | 153 | 0,76 |
| | | 40 × 68 | V39 73100 | 93 | 122 | 0,99 | V39 93100 | 124 | 153 | 1,13 |
| 31,5 | 33,5 | 30 × 58 | – | | | | V38 93150 | 128 | 157 | 0,78 |
| | | 40 × 68 | – | | | | V39 93150 | 128 | 157 | 1,15 |
| 32,0 | 34,0 | 30 × 58 | V38 73200 | 96 | 125 | 0,71 | V38 93200 | 128 | 157 | 0,80 |
| | | 40 × 68 | V39 73200 | 96 | 125 | 1,08 | V39 93200 | 128 | 157 | 1,17 |
| 33,0 | 34,0 | 30 × 58 | V38 73300 | 99 | 128 | 0,74 | V38 93300 | 132 | 161 | 0,85 |
| | | 40 × 68 | V39 73300 | 99 | 128 | 1,12 | V39 93300 | 132 | 161 | 1,21 |
| 34,0 | 35,0 | 30 × 58 | V38 73400 | 102 | 131 | 0,75 | V38 93400 | 136 | 165 | 0,86 |
| | | 40 × 68 | V39 73400 | 102 | 131 | 1,13 | V39 93400 | 136 | 165 | 1,23 |
| 35,0 | 36,0 | 30 × 58 | V38 73500 | 105 | 134 | 0,79 | V38 93500 | 140 | 169 | 0,91 |
| | | 40 × 68 | V39 73500 | 105 | 134 | 1,16 | V39 93500 | 140 | 169 | 1,28 |
| 36,0 | 37,0 | 30 × 58 | V38 73600 | 108 | 137 | 0,82 | V38 93600 | 144 | 173 | 0,96 |
| | | 40 × 68 | V39 73600 | 108 | 137 | 1,19 | V39 93600 | 144 | 173 | 1,33 |
| 37,0 | 40,0 | 30 × 58 | V38 73700 | 111 | 150 | 0,9 | – | | | |
| | | 40 × 68 | V39 73700 | 111 | 150 | 1,29 | V39 93700 | 148 | 187 | 1,44 |
| 37,5 | 40,5 | 40 × 68 | – | | | | V39 93750 | 152 | 191 | 1,57 |
| 38,0 | 41,0 | 30 × 58 | V38 73800 | 114 | 153 | 0,94 | – | | | |
| | | 40 × 68 | V39 73800 | 114 | 153 | 1,33 | V39 93800 | 152 | 191 | 1,50 |
| 39,0 | 42,0 | 30 × 58 | V38 73900 | 117 | 156 | 0,99 | – | | | |
| | | 40 × 68 | V39 73900 | 117 | 156 | 1,38 | V39 93900 | 156 | 195 | 1,55 |
| 39,5 | 42,5 | 40 × 68 | – | | | | V39 93950 | 160 | 199 | 1,59 |
| 40,0 | 43,0 | 30 × 58 | V38 74000 | 120 | 159 | 1,03 | – | | | |
| | | 40 × 68 | V39 74000 | 120 | 159 | 1,43 | V39 94000 | 160 | 199 | 1,62 |
| 41,0 | 44,0 | 30 × 58 | V38 74100 | 123 | 162 | 1,08 | – | | | |
| | | 40 × 68 | V39 74100 | 123 | 162 | 1,48 | V39 94100 | 164 | 203 | 1,68 |
| 42,0 | 45,0 | 30 × 58 | V38 74200 | 126 | 165 | 1,15 | – | | | |
| | | 40 × 68 | V39 74200 | 126 | 165 | 1,54 | V39 94200 | 168 | 207 | 1,76 |
| 43,0 | 45,0 | 30 × 58 | V38 74300 | 129 | 168 | 1,22 | – | | | |
| | | 40 × 68 | V39 74300 | 129 | 168 | 1,60 | V39 94300 | 172 | 211 | 1,83 |
| 44,0 | 45,0 | 30 × 58 | V38 74400 | 132 | 171 | 1,23 | – | | | |
| | | 40 × 68 | V39 74400 | 132 | 171 | 1,66 | V39 94400 | 176 | 215 | 1,91 |
| 45,0 | 48,0 | 40 × 68 | V59 74500 | 135 | 179 | 1,88 | – | | | |
| 46,0 | 49,0 | 40 × 68 | V59 74600 | 138 | 182 | 1,87 | – | | | |
| 47,0 | 50,0 | 40 × 68 | V59 74700 | 141 | 185 | 1,94 | – | | | |
| 48,0 | 51,0 | 40 × 68 | V59 74800 | 144 | 188 | 2,09 | – | | | |
| 49,0 | 52,0 | 40 × 68 | V59 74900 | 147 | 191 | 2,19 | – | | | |
| 50,0 | 53,0 | 40 × 68 | V59 75000 | 150 | 194 | 2,28 | – | | | |
| 51,0 | 54,0 | 40 × 68 | V59 75100 | 153 | 197 | 2,40 | – | | | |
| 52,0 | 55,0 | 40 × 68 | V59 75200 | 156 | 200 | 2,42 | – | | | |
| 53,0 | 55,0 | 40 × 68 | V59 75300 | 159 | 203 | 2,51 | – | | | |
| 54,0 | 55,0 | 40 × 68 | V59 75400 | 162 | 206 | 2,64 | – | | | |

Any **intermediate dimensions** from ∅ 14 – 54 mm and **inch dimensions** are available on request.

**Supply includes:**

KUB Trigon® drill with assembly parts. Please order insert and accessories separately.



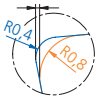
EP 883 455 and other patents (KUB Trigon)

## Insert Drill with Cylindrical Shank (parallel clamping surface), R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ○ | ◐ |
| 4×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 112-114 ✕ not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert -01 -11 | | | for workpiece material | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| **W29 24010.048425**<br>**W29 24010.047930**<br>**W29 24010.0462**<br>**W29 24110.0477** | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK62<br>WOEX 05T304-11 BK77 | 2 | ● ● ● ● ● ○ | **N00 57511**<br>S/M2,5×7,2-8IP | 1,28 Nm | **L05 00830**<br>8IP |
| **W29 34010.048425**<br>**W29 34010.047930**<br>**W29 34010.0462**<br>**W29 34110.0477** | WOEX 06T304-01 BK8425<br>WOEX 06T304-01 BK7930<br>WOEX 06T304-01 BK62<br>WOEX 06T304-11 BK77 | 2 | ● ● ● ● ● ○ | **N00 57521**<br>S/M3,5×7,3-10IP | 2,8 Nm | **L05 00850**<br>10IP |
| **W29 42010.048425**<br>**W29 42010.047930**<br>**W29 42010.0462**<br>**W29 42110.0477** | WOEX 080404-01 BK8425<br>WOEX 080404-01 BK7930<br>WOEX 080404-01 BK62<br>WOEX 080404-11 BK77 | 2 | ● ● ● ● ● ○ | **N00 57531**<br>S/M4,5×9-15IP | 6,25 Nm | **L05 00860**<br>15IP |




**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

Guideline values for solid drilling: page 94 / alternative inserts: page 95.

# KOMET KUB Trigon®

## Ø 14 – 54 mm, 3×D / 4×D

### Insert Drill with Cylindrical Shank (parallel clamping surface), R.H. cutting

| Guideline values for solid drilling | | | | | | $v_c$ | Max. feed f (mm/rev) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 3×D | | | | | | | | 4×D | | | | | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | Cutting speed $v_c$ (m/min) | Ø 14 – 16,9 | Ø 17 – 19,9 | Ø 20 – 24,9 | Ø 25 – 29,9 | Ø 30 – 36,9 | Ø 37 – 40,9 | Ø 41 – 44,0 | Ø 44,5 – 54,0 | Ø 14 – 16,9 | Ø 17 – 19,9 | Ø 20 – 24,9 | Ø 25 – 29,9 | Ø 30 – 36,9 | Ø 37 – 40,9 | Ø 41 – 44,0 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 | 0,14 | 0,06 | 0,08 | 0,08 | 0,12 | 0,12 | 0,12 | 0,12 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,06 | 0,08 | 0,12 | 0,14 | 0,14 | 0,14 | 0,16 | 0,18 | 0,04 | 0,06 | 0,10 | 0,14 | 0,14 | 0,14 | 0,16 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,08 | 0,10 | 0,12 | 0,14 | 0,16 | 0,16 | 0,20 | 0,22 | 0,06 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,20 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 200 | 0,06 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 | 0,18 | 0,04 | 0,06 | 0,08 | 0,14 | 0,16 | 0,16 | 0,16 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 180 | 0,06 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,14 | 0,16 | 0,04 | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 | 0,14 |
| P | 4.1 | | | HSS | | 80 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,14 | 0,03 | 0,05 | 0,07 | 0,10 | 0,10 | 0,12 | 0,12 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 60 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 | 0,03 | 0,05 | 0,07 | 0,10 | 0,10 | 0,10 | 0,10 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 80 | 0,06 | 0,08 | 0,10 | 0,12 | 0,10 | 0,12 | 0,12 | 0,12 | 0,04 | 0,06 | 0,08 | 0,12 | 0,10 | 0,12 | 0,12 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 180 | 0,06 | 0,08 | 0,10 | 0,14 | 0,14 | 0,14 | 0,14 | 0,14 | 0,04 | 0,06 | 0,08 | 0,14 | 0,14 | 0,14 | 0,14 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 160 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,14 | 0,15 | 0,04 | 0,04 | 0,06 | 0,12 | 0,12 | 0,12 | 0,14 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 160 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,12 | 0,14 | 0,04 | 0,04 | 0,06 | 0,12 | 0,12 | 0,12 | 0,12 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 200 | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,28 | 0,08 | 0,10 | 0,12 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 160 | 0,08 | 0,08 | 0,10 | 0,14 | 0,14 | 0,16 | 0,18 | 0,20 | 0,06 | 0,06 | 0,08 | 0,14 | 0,14 | 0,16 | 0,18 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,26 | 0,06 | 0,08 | 0,12 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 160 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,26 | 0,06 | 0,08 | 0,12 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 140 | 0,10 | 0,12 | 0,16 | 0,25 | 0,25 | 0,25 | 0,25 | 0,26 | 0,08 | 0,10 | 0,14 | 0,25 | 0,25 | 0,25 | 0,25 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,26 | 0,06 | 0,08 | 0,12 | 0,20 | 0,20 | 0,20 | 0,25 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 | 0,20 | 0,22 | 0,06 | 0,08 | 0,12 | 0,16 | 0,16 | 0,16 | 0,20 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,05 | 0,08 | 0,12 | 0,16 | 0,16 | 0,18 | 0,20 | 0,22 | 0,04 | 0,06 | 0,10 | 0,16 | 0,16 | 0,18 | 0,20 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 400 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,12 | 0,14 | 0,03 | 0,06 | 0,06 | 0,10 | 0,10 | 0,10 | 0,12 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 600 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,14 | 0,03 | 0,06 | 0,06 | 0,10 | 0,10 | 0,12 | 0,12 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,10 | 0,12 | 0,14 | 0,18 | 0,18 | 0,20 | 0,20 | 0,22 | 0,08 | 0,10 | 0,12 | 0,18 | 0,18 | 0,20 | 0,20 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,26 | 0,08 | 0,10 | 0,12 | 0,20 | 0,20 | 0,20 | 0,25 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | 0,05 | 0,05 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,12 | 0,03 | 0,03 | 0,06 | 0,10 | 0,10 | 0,12 | 0,12 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 40 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 | 0,03 | 0,06 | 0,06 | 0,10 | 0,10 | 0,10 | 0,10 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| | | Insert -03 -13 | | |
| for better chip control | 12-13,7 | – | | |
| | 14 – 19,5 | **W29 10130.048425**<br>**W29 10130.0479** | WOEX 030204-13 BK8425<br>WOEX 030204-13 BK79 | |
| | 20 – 24,5 | **W29 18130.048425**<br>**W29 18130.0479** | WOEX 040304-13 BK8425<br>WOEX 040304-13 BK79 | |
| | 25 – 36 | **W29 24130.048425**<br>**W29 24030.046425**<br>**W29 24130.0479** | WOEX 05T304-13 BK8425<br>WOEX 05T304-03 BK6425 ⚠<br>WOEX 05T304-13 BK79 | |
| | 37 – 44 | **W29 34130.048425**<br>**W29 34030.046425**<br>**W29 34130.0479** | WOEX 06T304-13 BK8425<br>WOEX 06T304-03 BK6425 ⚠<br>WOEX 06T304-13 BK79 | |
| | 45 – 54 | **W29 42030.046425**<br>**W29 42000.048425** | WOEX 080404-03 BK6425 ⚠<br>WOEX 080404-00 BK8425 | |

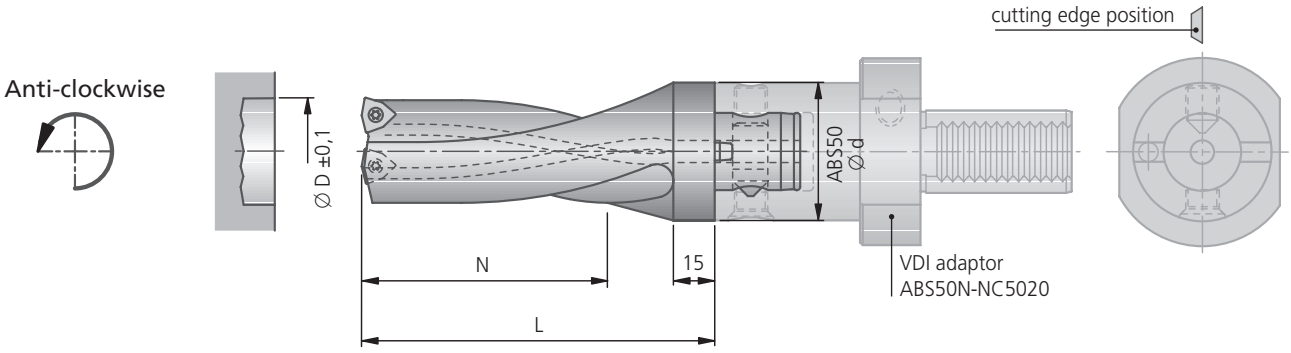
⚠ Only use this insert with KUB Trigon® as an external cutting edge:
WOEX ... -03 (Geometry 03)
WOEX ... -01 (Geometry 01) in BK6115
WOEX ... -01 (Geometry 01) in BK6420

| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| | | Insert -00 -01 -11 | | |
| for higher cutting speed | 12-13,7 | – | | |
| | 14 – 19,5 | W29 10010.0472<br>W29 10110.0450 | WOEX 030204-01 BK72<br>WOEX 030204-11 BK50 | |
| | 20 – 24,5 | W29 18010.0472<br>W29 18110.0450 | WOEX 040304-01 BK72<br>WOEX 040304-11 BK50 | |
| | 25 – 36 | W29 24010.0472<br>W29 24110.0450 | WOEX 05T304-01 BK72<br>WOEX 05T304-11 BK50 | |
| | 37 – 44 | W29 34010.0472<br>W29 34110.0450 | WOEX 06T304-01 BK72<br>WOEX 06T304-11 BK50 | |
| | 45 – 54 | W29 42010.0472<br>W01 42940.0455<br>W01 42600.0461 | WOEX 080404-01 BK72<br>WOHX 080404 F PKD55<br>WOHX 080404 EN BK61 | |
| for greater strength | 12-13,7 | W29 04010.0279 | WOEX 020102-01 BK79 | |
| | 14 – 19,5 | **W29 10010.047930**<br>**W29 10010.0404**<br>**W29 10010.0421**<br>**W29 10110.0421** | WOEX 030204-01 BK7930<br>WOEX 030204-01 P40<br>WOEX 030204-01 K10<br>WOEX 030204-11 K10 | |
| | 20 – 24,5 | **W29 18010.047930**<br>**W29 18010.0404**<br>**W29 18010.0421**<br>**W29 18110.0421** | WOEX 040304-01 BK7930<br>WOEX 040304-01 P40<br>WOEX 040304-01 K10<br>WOEX 040304-11 K10 | |
| | 25 – 36 | **W29 24010.047930**<br>**W29 24010.0404**<br>**W29 24010.0421**<br>**W29 24110.0421** | WOEX 05T304-01 BK7930<br>WOEX 05T304-01 P40<br>WOEX 05T304-01 K10<br>WOEX 05T304-11 K10 | |
| | 37 – 44 | **W29 34010.047930**<br>**W29 34010.0404**<br>**W29 34010.0421**<br>**W29 34110.0421** | WOEX 06T304-01 BK7930<br>WOEX 06T304-01 P40<br>WOEX 06T304-01 K10<br>WOEX 06T304-11 K10 | |
| | 45 – 54 | **W29 42010.047930**<br>**W29 42010.0404**<br>**W29 42010.0421**<br>**W29 42000.0421** | WOEX 080404-01 BK7930<br>WOEX 080404-01 P40<br>WOEX 080404-01 K10<br>WOEX 080404-00 K10 | |

# KOMET KUB Trigon®

## Ø 14 – 44 mm

### Insert Drill with ABS® Connection, L.H. cutting

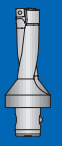



| Ø D | max. diameter with offset | ABS Ø d | 2×D Order No. | 2×D N | 2×D L | 2×D kg | 3×D Order No. | 3×D N | 3×D L | 3×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 14,0 | 15,0 | 50 | V30 21402 | 28 | 63 | 0,40 | V30 61402 | 42 | 77 | 0,50 |
| 15,0 | 16,0 | 50 | V30 21502 | 30 | 65 | 0,40 | V30 61502 | 45 | 80 | 0,50 |
| 16,0 | 17,0 | 50 | V30 21600 | 32 | 67 | 0,40 | V30 61600 | 48 | 83 | 0,50 |
| 17,0 | 18,0 | 50 | V30 21700 | 34 | 69 | 0,40 | V30 61700 | 51 | 86 | 0,50 |
| 18,0 | 19,0 | 50 | V30 21800 | 36 | 71 | 0,40 | V30 61800 | 54 | 89 | 0,50 |
| 19,0 | 20,0 | 50 | V30 21900 | 38 | 73 | 0,50 | V30 61900 | 57 | 92 | 0,55 |
| 20,0 | 21,0 | 50 | V30 22000 | 40 | 75 | 0,50 | V30 62000 | 60 | 95 | 0,60 |
| 21,0 | 22,0 | 50 | V30 22100 | 42 | 77 | 0,55 | V30 62100 | 63 | 98 | 0,60 |
| 22,0 | 23,0 | 50 | V30 22200 | 44 | 79 | 0,55 | V30 62200 | 66 | 101 | 0,60 |
| 23,0 | 24,0 | 50 | V30 22300 | 46 | 81 | 0,55 | V30 62300 | 69 | 104 | 0,60 |
| 24,0 | 25,0 | 50 | V30 22400 | 48 | 83 | 0,60 | V30 62400 | 72 | 107 | 0,65 |
| 25,0 | 26,0 | 50 | V30 22500 | 50 | 85 | 0,60 | V30 62500 | 75 | 110 | 0,65 |
| 26,0 | 28,0 | 50 | V30 22600 | 52 | 87 | 0,60 | V30 62600 | 78 | 113 | 0,70 |
| 27,0 | 30,0 | 50 | V30 22700 | 54 | 89 | 0,60 | V30 62700 | 81 | 116 | 0,70 |
| 28,0 | 31,0 | 50 | V30 22800 | 56 | 91 | 0,65 | V30 62800 | 84 | 119 | 0,75 |
| 29,0 | 32,0 | 50 | V30 22900 | 58 | 93 | 0,70 | V30 62900 | 87 | 122 | 0,75 |
| 30,0 | 32,5 | 50 | V30 23000 | 60 | 100 | 0,75 | V30 63000 | 90 | 130 | 0,80 |
| 31,0 | 33,5 | 50 | V30 23100 | 62 | 102 | 0,75 | V30 63100 | 93 | 133 | 0,85 |
| 32,0 | 34,0 | 50 | V30 23200 | 64 | 104 | 0,75 | V30 63200 | 96 | 136 | 0,90 |
| 33,0 | 34,0 | 50 | V30 23300 | 66 | 106 | 0,80 | V30 63300 | 99 | 139 | 0,95 |
| 34,0 | 35,0 | 50 | V30 23400 | 68 | 108 | 0,85 | V30 63400 | 102 | 142 | 1,00 |
| 35,0 | 36,0 | 50 | V30 23500 | 70 | 110 | 0,90 | V30 63500 | 105 | 145 | 1,00 |
| 36,0 | 37,0 | 50 | V30 23600 | 72 | 112 | 0,90 | V30 63600 | 108 | 148 | 1,05 |
| 37,0 | 40,0 | 50 | V30 23700 | 74 | 124 | 1,05 | V30 63700 | 111 | 161 | 1,20 |
| 38,0 | 41,0 | 50 | V30 23800 | 76 | 126 | 1,05 | V30 63800 | 114 | 164 | 1,25 |
| 39,0 | 42,0 | 50 | V30 23900 | 78 | 128 | 1,10 | V30 63900 | 117 | 167 | 1,30 |
| 40,0 | 43,0 | 50 | V30 24000 | 80 | 130 | 1,15 | V30 64000 | 120 | 170 | 1,40 |
| 41,0 | 44,0 | 50 | V30 24100 | 82 | 132 | 1,20 | V30 64100 | 123 | 173 | 1,45 |
| 42,0 | 45,0 | 50 | V30 24200 | 84 | 134 | 1,20 | V30 64200 | 126 | 176 | 1,50 |
| 43,0 | 45,0 | 50 | V30 24300 | 86 | 136 | 1,25 | V30 64300 | 129 | 179 | 1,55 |
| 44,0 | 45,0 | 50 | V30 24400 | 88 | 138 | 1,25 | V30 64400 | 132 | 182 | 1,55 |

**Supply includes:**
KUB Trigon® drill with assembly parts. Please order insert and accessories separately.



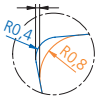
Patent applied for inside and outside Germany (ABS), EP 883 455 and other patents (KUB Trigon)



| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ◐ | ● | >< | ◐ | ◐ |
| 3×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | >< | ○ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 112-114 >< not possible

| Basic recommendation | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|
| Insert  -01 -11 | | | for workpiece material | Clamping screw  | Starting torque | Screwdriver  |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | Order No. Article | | Order No. Article |
| **W29 10010.048425**<br>**W29 10010.047930**<br>**W29 10010.0462**<br>**W29 10110.0477** | WOEX 030204-01 BK8425<br>WOEX 030204-01 BK7930<br>WOEX 030204-01 BK62<br>WOEX 030204-11 BK77 | 2 |  | **N00 56041**<br>S/M2×4,3-6IP | 0,62 Nm | **L05 00810**<br>6IP |
| **W29 18010.048425**<br>**W29 18010.047930**<br>**W29 18010.0462**<br>**W29 18110.0477** | WOEX 040304-01 BK8425<br>WOEX 040304-01 BK7930<br>WOEX 040304-01 BK62<br>WOEX 040304-11 BK77 | 2 |  | **N00 57553**<br>S/M2,2×5,5-6IP | 1,01 Nm | **L05 00810**<br>6IP |
| **W29 24010.048425**<br>**W29 24010.047930**<br>**W29 24010.0462**<br>**W29 24110.0477** | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK62<br>WOEX 05T304-11 BK77 | 2 |  | **N00 57511**<br>S/M2,5×7,2-8IP | 1,28 Nm | **L05 00830**<br>8IP |
| **W29 34010.048425**<br>**W29 34010.047930**<br>**W29 34010.0462**<br>**W29 34110.0477** | WOEX 06T304-01 BK8425<br>WOEX 06T304-01 BK7930<br>WOEX 06T304-01 BK62<br>WOEX 06T304-11 BK77 | 2 |  | **N00 57521**<br>S/M3,5×7,3-10IP | 2,8 Nm | **L05 00850**<br>10IP |




**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

Guideline values for solid drilling: page 98 / alternative inserts: page 99.

# KOMET KUB Trigon®

## Ø 14 – 44 mm

### Insert Drill with ABS® Connection, L.H. cutting

| Guideline values for solid drilling | | | | | | $v_c$ | Max. feed f (mm/rev) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2×D | | | | | 3×D | | | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | Cutting speed $v_c$ (m/min) | Ø 14 – 16,9 | Ø 17 – 19,9 | Ø 20 – 24,9 | Ø 25 – 36,9 | Ø 37 – 44,0 | Ø 14 – 16,9 | Ø 17 – 19,9 | Ø 20 – 24,9 | Ø 25 – 36,9 | Ø 37 – 44,0 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,06 | 0,08 | 0,12 | 0,14 | 0,16 | 0,06 | 0,08 | 0,12 | 0,14 | 0,16 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,08 | 0,10 | 0,12 | 0,14 | 0,20 | 0,08 | 0,10 | 0,12 | 0,14 | 0,20 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 200 | 0,06 | 0,08 | 0,10 | 0,14 | 0,16 | 0,06 | 0,08 | 0,10 | 0,14 | 0,16 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 180 | 0,06 | 0,08 | 0,10 | 0,12 | 0,14 | 0,06 | 0,08 | 0,10 | 0,12 | 0,14 |
| P | 4.1 | | | HSS | | 80 | 0,04 | 0,06 | 0,08 | 0,10 | – | 0,04 | 0,06 | 0,08 | 0,10 | 0,12 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 60 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 80 | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 180 | 0,06 | 0,08 | 0,10 | 0,14 | 0,14 | 0,06 | 0,08 | 0,10 | 0,14 | 0,14 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 160 | 0,06 | 0,06 | 0,08 | 0,12 | 0,14 | 0,06 | 0,06 | 0,08 | 0,12 | 0,14 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 160 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 200 | 0,10 | 0,12 | 0,14 | 0,20 | 0,25 | 0,10 | 0,12 | 0,14 | 0,20 | 0,25 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 160 | 0,08 | 0,08 | 0,10 | 0,14 | 0,18 | 0,08 | 0,08 | 0,10 | 0,14 | 0,18 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,08 | 0,10 | 0,14 | 0,20 | 0,25 | 0,08 | 0,10 | 0,14 | 0,20 | 0,25 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 160 | 0,08 | 0,10 | 0,14 | 0,20 | 0,25 | 0,08 | 0,10 | 0,14 | 0,20 | 0,25 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 140 | 0,10 | 0,12 | 0,16 | 0,25 | 0,25 | 0,10 | 0,12 | 0,16 | 0,25 | 0,25 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,08 | 0,10 | 0,14 | 0,20 | 0,25 | 0,08 | 0,10 | 0,14 | 0,20 | 0,25 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,08 | 0,10 | 0,14 | 0,16 | 0,20 | 0,08 | 0,10 | 0,14 | 0,16 | 0,20 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,05 | 0,08 | 0,12 | 0,16 | 0,20 | 0,05 | 0,08 | 0,12 | 0,16 | 0,20 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 400 | 0,05 | 0,08 | 0,08 | 0,10 | 0,12 | 0,05 | 0,08 | 0,08 | 0,10 | 0,12 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 600 | 0,05 | 0,08 | 0,08 | 0,10 | 0,12 | 0,05 | 0,08 | 0,08 | 0,10 | 0,12 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,10 | 0,12 | 0,14 | 0,18 | 0,20 | 0,10 | 0,12 | 0,14 | 0,18 | 0,20 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,10 | 0,12 | 0,14 | 0,20 | 0,25 | 0,10 | 0,12 | 0,14 | 0,20 | 0,25 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | 0,05 | 0,05 | 0,08 | 0,10 | 0,12 | 0,05 | 0,05 | 0,08 | 0,10 | 0,12 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 40 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



Patent applied for inside and outside Germany (ABS), EP 883 455 and other patents (KUB Trigon)

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| | | Insert  -03 -13 | | |
| for better chip control | 14 – 19,5 | **W29 10130.046425** | WOEX 030204-13 BK6425 ⚠ | |
| | 20 – 24,5 | **W29 18130.046425** | WOEX 040304-13 BK6425 ⚠ | |
| | 25 – 36 | **W29 24030.046425** | WOEX 05T304-03 BK6425 ⚠ | |
| | 37 – 44 | **W29 34030.046425** | WOEX 06T304-03 BK6425 ⚠ | |

⚠ Only use this insert with KUB Trigon® as an external cutting edge:
WOEX ... -03 (Geometry 03)
WOEX ... -01 (Geometry 01) in BK6115
WOEX ... -01 (Geometry 01) in BK6420

## Alternative Inserts

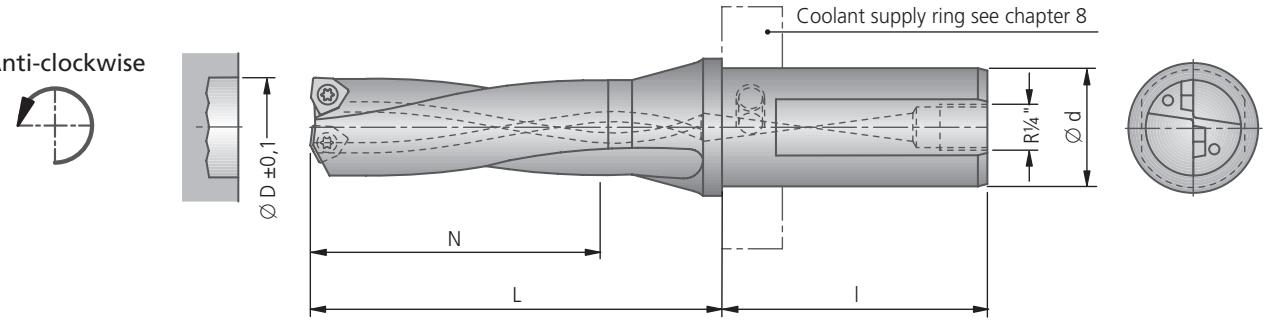
| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| | | Insert  -00 -01 -11 | | |
| for higher cutting speed | 14 – 19,5 | W29 10010.0472<br>W29 10110.0450 | WOEX 030204-01 BK72<br>WOEX 030204-11 BK50 | |
| | 20 – 24,5 | W29 18010.0472<br>W29 18110.0450 | WOEX 040304-01 BK72<br>WOEX 040304-11 BK50 | |
| | 25 – 36 | W29 24010.0472<br>W29 24110.0450 | WOEX 05T304-01 BK72<br>WOEX 05T304-11 BK50 | |
| | 37 – 44 | W29 34010.0472<br>W29 34110.0450 | WOEX 06T304-01 BK72<br>WOEX 06T304-11 BK50 | |
| for greater strength | 14 – 19,5 | **W29 10010.047930**<br>**W29 10010.0404**<br>**W29 10010.0421**<br>**W29 10110.0421** | WOEX 030204-01 BK7930<br>WOEX 030204-01 P40<br>WOEX 030204-01 K10<br>WOEX 030204-11 K10 | |
| | 20 – 24,5 | **W29 18010.047930**<br>**W29 18010.0404**<br>**W29 18010.0421**<br>**W29 18110.0421** | WOEX 040304-01 BK7930<br>WOEX 040304-01 P40<br>WOEX 040304-01 K10<br>WOEX 040304-11 K10 | |
| | 25 – 36 | **W29 24010.047930**<br>**W29 24010.0404**<br>**W29 24010.0421**<br>**W29 24110.0421** | WOEX 05T304-01 BK7930<br>WOEX 05T304-01 P40<br>WOEX 05T304-01 K10<br>WOEX 05T304-11 K10 | |
| | 37 – 44 | **W29 34010.047930**<br>**W29 34010.0404**<br>**W29 34010.0421**<br>**W29 34110.0421** | WOEX 080404-01 BK7930<br>WOEX 080404-01 P40<br>WOEX 080404-01 K10<br>WOEX 080404-00 K10 | |

# KOMET KUB Trigon®

## Ø 14 – 54 mm

### Insert Drill with Cylindrical Shank (parallel clamping surface), L.H. cutting

Anti-clockwise




| Ø D | max. diameter with offset | N | L | 3×D Cylindrical shank Ø d × l Ø 25 × 56 Order No. | kg | Cylindrical shank Ø d × l Ø 30 × 58 Order No. | kg | Cylindrical shank Ø d × l Ø 40 × 68 Order No. | kg |
|---|---|---|---|---|---|---|---|---|---|
| 14,0 | 15,0 | 42 | 66 | V37 61402 | 0,27 | V38 61402 | 0,37 | V39 61402 | 0,73 |
| 15,0 | 16,0 | 45 | 69 | V37 61502 | 0,25 | V38 61502 | 0,38 | V39 61502 | 0,74 |
| 16,0 | 17,0 | 48 | 72 | V37 61600 | 0,28 | V38 61600 | 0,39 | V39 61600 | 0,75 |
| 17,0 | 18,0 | 51 | 75 | V37 61700 | 0,29 | V38 61700 | 0,40 | V39 61700 | 0,76 |
| 18,0 | 19,0 | 54 | 78 | V37 61800 | 0,27 | V38 61800 | 0,40 | V39 61800 | 0,76 |
| 19,0 | 19,5 | 57 | 81 | V37 61900 | 0,31 | V38 61900 | 0,41 | V39 61900 | 0,78 |
| 20,0 | 21,0 | 60 | 84 | V37 62000 | 0,32 | V38 62000 | 0,44 | V39 62000 | 0,79 |
| 21,0 | 22,0 | 63 | 87 | V37 62100 | 0,33 | V38 62100 | 0,45 | V39 62100 | 0,81 |
| 22,0 | 23,0 | 66 | 90 | V37 62200 | 0,35 | V38 62200 | 0,46 | V39 62200 | 0,82 |
| 23,0 | 24,0 | 69 | 93 | V37 62300 | 0,37 | V38 62300 | 0,48 | V39 62300 | 0,84 |
| 24,0 | 25,0 | 72 | 96 | V37 62400 | 0,38 | V38 62400 | 0,49 | V39 62400 | 0,86 |
| 25,0 | 26,0 | 75 | 99 | – | | V38 62500 | 0,48 | V39 62500 | 0,86 |
| 26,0 | 28,0 | 78 | 102 | – | | V38 62600 | 0,55 | V39 62600 | 0,88 |
| 27,0 | 30,0 | 81 | 105 | – | | V38 62700 | 0,54 | V39 62700 | 0,90 |
| 28,0 | 31,0 | 84 | 108 | – | | V38 62800 | 0,57 | V39 62800 | 0,91 |
| 29,0 | 32,0 | 87 | 111 | – | | V38 62900 | 0,59 | V39 62900 | 0,96 |
| 30,0 | 32,5 | 90 | 119 | – | | V38 63000 | 0,65 | V39 63000 | 1,01 |
| 31,0 | 33,5 | 93 | 122 | – | | V38 63100 | 0,68 | V39 63100 | 0,99 |
| 32,0 | 34,0 | 96 | 125 | – | | V38 63200 | 0,71 | V39 63200 | 1,08 |
| 33,0 | 35,0 | 99 | 128 | – | | V38 63300 | 0,74 | V39 63300 | 1,12 |
| 34,0 | 35,0 | 102 | 131 | – | | V38 63400 | 0,75 | V39 63400 | 1,13 |
| 35,0 | 36,0 | 105 | 134 | – | | V38 63500 | 0,79 | V39 63500 | 1,16 |
| 36,0 | 37,0 | 108 | 137 | – | | V38 63600 | 0,82 | V39 63600 | 1,19 |
| 37,0 | 40,0 | 111 | 150 | – | | V38 63700 | 0,90 | V39 63700 | 1,29 |
| 38,0 | 41,0 | 114 | 153 | – | | V38 63800 | 0,94 | V39 63800 | 1,33 |
| 39,0 | 42,0 | 117 | 156 | – | | V38 63900 | 0,99 | V39 63900 | 1,38 |
| 40,0 | 43,0 | 120 | 159 | – | | V38 64000 | 1,03 | V39 64000 | 1,43 |
| 41,0 | 44,0 | 123 | 162 | – | | V38 64100 | 1,08 | V39 64100 | 1,48 |
| 42,0 | 45,0 | 126 | 165 | – | | V38 64200 | 1,15 | V39 64200 | 1,54 |
| 43,0 | 45,0 | 129 | 168 | – | | V38 64300 | 1,22 | V39 64300 | 1,60 |
| 44,0 | 45,0 | 132 | 171 | – | | V38 64400 | 1,23 | V39 64400 | 1,66 |
| 45,0 | 48,0 | 135 | 179 | – | | – | | V59 64500 | 1,88 |
| 46,0 | 49,0 | 138 | 182 | – | | – | | V59 64600 | 1,87 |
| 47,0 | 50,0 | 141 | 185 | – | | – | | V59 64700 | 1,94 |
| 48,0 | 51,0 | 144 | 188 | – | | – | | V59 64800 | 2,09 |
| 49,0 | 52,0 | 147 | 191 | – | | – | | V59 64900 | 2,19 |
| 50,0 | 53,0 | 150 | 194 | – | | – | | V59 65000 | 2,28 |
| 51,0 | 54,0 | 153 | 197 | – | | – | | V59 65100 | 2,40 |
| 54,0 | 55,0 | 162 | 206 | – | | – | | V59 65400 | 2,64 |

**Supply includes:**
KUB Trigon® drill with assembly parts. Please order insert and accessories separately.



EP 883 455 and other patents (KUB Trigon)

## Insert Drill with Cylindrical Shank (parallel clamping surface), L.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3×D | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ○ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 112-114 ✕ not possible

| Basic recommendation | | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|---|
| Insert -01 -11 | | | for workpiece material | | Clamping screw | Starting torque | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | | Order No. Article | | Order No. Article |
| **W29 10010.048425**<br>**W29 10010.047930**<br>**W29 10010.0462**<br>**W29 10110.0477** | WOEX 030204-01 BK8425<br>WOEX 030204-01 BK7930<br>WOEX 030204-01 BK62<br>WOEX 030204-11 BK77 | 2 | | | **N00 56041**<br>S/M2×4,3-6IP | 0,62 Nm | **L05 00810**<br>6IP |
| **W29 18010.048425**<br>**W29 18010.047930**<br>**W29 18010.0462**<br>**W29 18110.0477** | WOEX 040304-01 BK8425<br>WOEX 040304-01 BK7930<br>WOEX 040304-01 BK62<br>WOEX 040304-11 BK77 | 2 | | | **N00 57553**<br>S/M2,2×5,5-6IP | 1,01 Nm | **L05 00810**<br>6IP |
| **W29 24010.048425**<br>**W29 24010.047930**<br>**W29 24010.0462**<br>**W29 24110.0477** | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK62<br>WOEX 05T304-11 BK77 | 2 | | | **N00 57511**<br>S/M2,5×7,2-8IP | 1,28 Nm | **L05 00830**<br>8IP |
| **W29 34010.048425**<br>**W29 34010.047930**<br>**W29 34010.0462**<br>**W29 34110.0477** | WOEX 06T304-01 BK8425<br>WOEX 06T304-01 BK7930<br>WOEX 06T304-01 BK62<br>WOEX 06T304-11 BK77 | 2 | | | **N00 57521**<br>S/M3,5×7,3-10IP | 2,8 Nm | **L05 00850**<br>10IP |
| **W29 42010.048425**<br>**W29 42010.047930**<br>**W29 42010.0462**<br>**W29 42110.0477** | WOEX 080404-01 BK8425<br>WOEX 080404-01 BK7930<br>WOEX 080404-01 BK62<br>WOEX 080404-11 BK77 | 2 | | | **N00 57531**<br>S/M4,5×9-15IP | 6,25 Nm | **L05 00860**<br>15IP |




**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

Guideline values for solid drilling: page 102 / alternative inserts: page 103.

## Insert Drill with Cylindrical Shank (parallel clamping surface), L.H. cutting





| Guideline values for solid drilling | | | | | | $v_c$ | Max. feed f (mm/rev) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 3×D | | | | | | | |
| | Material group | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | Cutting speed $v_c$ (m/min) | Ø 14 – 16,9 | Ø 17 – 19,9 | Ø 20 – 24,9 | Ø 25 – 29,9 | Ø 30 – 36,9 | Ø 37 – 40,9 | Ø 41 – 44,0 | Ø 44,5 – 54,0 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 | 0,14 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,06 | 0,08 | 0,12 | 0,14 | 0,14 | 0,14 | 0,16 | 0,18 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,08 | 0,10 | 0,12 | 0,14 | 0,16 | 0,16 | 0,20 | 0,22 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 200 | 0,06 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 | 0,18 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 180 | 0,06 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,14 | 0,16 |
| P | 4.1 | | | HSS | | 80 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,14 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 60 | 0,04 | 0,06 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 80 | 0,06 | 0,08 | 0,10 | 0,12 | 0,10 | 0,12 | 0,12 | 0,12 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 180 | 0,06 | 0,08 | 0,10 | 0,14 | 0,14 | 0,14 | 0,14 | 0,14 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 160 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,14 | 0,15 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 160 | 0,06 | 0,06 | 0,08 | 0,12 | 0,12 | 0,12 | 0,12 | 0,14 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 200 | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,28 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 160 | 0,08 | 0,08 | 0,10 | 0,14 | 0,14 | 0,16 | 0,18 | 0,20 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,26 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic/ perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 160 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,26 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 140 | 0,10 | 0,12 | 0,16 | 0,25 | 0,25 | 0,25 | 0,25 | 0,26 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,08 | 0,10 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,26 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,08 | 0,10 | 0,14 | 0,16 | 0,16 | 0,16 | 0,20 | 0,22 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,05 | 0,08 | 0,12 | 0,16 | 0,16 | 0,18 | 0,20 | 0,22 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 400 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,12 | 0,14 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 600 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,14 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,10 | 0,12 | 0,14 | 0,18 | 0,18 | 0,20 | 0,20 | 0,22 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,10 | 0,12 | 0,14 | 0,20 | 0,20 | 0,20 | 0,25 | 0,26 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | 0,05 | 0,05 | 0,08 | 0,10 | 0,10 | 0,12 | 0,12 | 0,12 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 40 | 0,05 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | Insert -03 | Insert -13 | for workpiece material P | M | K | N | S | H |
|---|---|---|---|---|---|---|---|---|---|---|---|
| for better chip control | 14 – 19,5 | **W29 10130.046425** | WOEX 030204-13 BK6425 ⚠ | ◐ | ◑ | | | | | | |
| | 20 – 24,5 | **W29 18130.046425** | WOEX 040304-13 BK6425 ⚠ | ◐ | ◑ | | | | | | |
| | 25 – 36 | **W29 24030.046425** | WOEX 05T304-03 BK6425 ⚠ | ◐ | ◑ | | | | | | |
| | 37 – 44 | **W29 34130.048425** | WOEX 06T304-13 BK8425 | ◐ | | | | | | | |
| | | **W29 34030.046425** | WOEX 06T304-03 BK6425 ⚠ | ◐ | | | | | | | |
| | | **W29 34130.0479** | WOEX 06T304-13 BK79 | | ◑ | | | | | ◐ | |
| | 45 – 54 | **W29 42030.046425** | WOEX 080404-03 BK6425 ⚠ | ◐ | ◑ | | | | | | |
| | | **W29 42000.048425** | WOEX 080404-00 BK8425 | | | | | | | ◐ | |

⚠ Only use this insert with KUB Trigon®
as an external cutting edge:
WOEX ... -03 (Geometry 03)
WOEX ... -01 (Geometry 01) in BK6115
WOEX ... -01 (Geometry 01) in BK6420

## Alternative Inserts

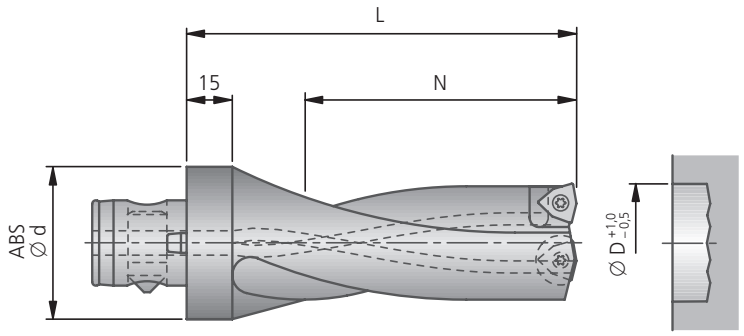
| | ØD | Order No. ▽▽ Size | ISO-Code | Insert -00 -01 | Insert -11 | for workpiece material P | M | K | N | S | H |
|---|---|---|---|---|---|---|---|---|---|---|---|
| for higher cutting speed | 14 – 19,5 | W29 10010.0472 | WOEX 030204-01 BK72 | ◐ | | | | | | | |
| | | W29 10110.0450 | WOEX 030204-11 BK50 | | ◐ | | | | | | |
| | 20 – 24,5 | W29 18010.0472 | WOEX 040304-01 BK72 | ◐ | | | | | | | |
| | | W29 18110.0450 | WOEX 040304-11 BK50 | | ◐ | | | | | | |
| | 25 – 36 | W29 24010.0472 | WOEX 05T304-01 BK72 | ◐ | | | | | | | |
| | | W29 24110.0450 | WOEX 05T304-11 BK50 | | ◐ | | | | | | |
| | 37 – 44 | W29 34010.0472 | WOEX 06T304-01 BK72 | ◐ | | | | | | | |
| | | W29 34110.0450 | WOEX 06T304-11 BK50 | | ◐ | | | | | | |
| | 45 – 54 | W29 42010.0472 | WOEX 080404-01 BK72 | ◐ | ◑ | | | | | | |
| | | W01 42940.0455 | WOHX 080404 F PKD55 | | ◐ | | | | | | |
| | | W01 42600.0461 | WOHX 080404 EN BK61 | | | | | | | | ◑ |
| for greater strength | 14 – 19,5 | **W29 10010.047930** | WOEX 030204-01 BK7930 | ◐ | | | | | | ◐ | |
| | | **W29 10010.0404** | WOEX 030204-01 P40 | ◐ | ◑ | | | | | ◐ | |
| | | **W29 10010.0421** | WOEX 030204-01 K10 | | | | | ◐ | | | |
| | | **W29 10110.0421** | WOEX 030204-11 K10 | | | | | | ◐ | | |
| | 20 – 24,5 | **W29 18010.047930** | WOEX 040304-01 BK7930 | ◐ | | | | | | ◐ | |
| | | **W29 18010.0404** | WOEX 040304-01 P40 | ◐ | ◑ | | | | | ◐ | |
| | | **W29 18010.0421** | WOEX 040304-01 K10 | | | | | ◐ | | | |
| | | **W29 18110.0421** | WOEX 040304-11 K10 | | | | | | ◐ | | |
| | 25 – 36 | **W29 24010.047930** | WOEX 05T304-01 BK7930 | ◐ | | | | | | ◐ | |
| | | **W29 24010.0404** | WOEX 05T304-01 P40 | ◐ | ◑ | | | | | ◐ | |
| | | **W29 24010.0421** | WOEX 05T304-01 K10 | | | | | ◐ | | | |
| | | **W29 24110.0421** | WOEX 05T304-11 K10 | | | | | | ◐ | | |
| | 37 – 44 | **W29 34010.047930** | WOEX 080404-01 BK7930 | ◐ | | | | | | ◐ | |
| | | **W29 34010.0404** | WOEX 080404-01 P40 | ◐ | ◑ | | | | | ◐ | |
| | | **W29 34010.0421** | WOEX 080404-01 K10 | | | | | ◐ | | | |
| | | **W29 34110.0421** | WOEX 080404-00 K10 | | | | | | ◐ | | |
| | 45 – 54 | **W29 42010.047930** | WOEX 080404-01 BK7930 | ◐ | | | | | | | |
| | | **W29 42010.0404** | WOEX 080404-01 P40 | ◐ | ◑ | | | | | ◐ | |
| | | **W29 42010.0421** | WOEX 080404-01 K10 | | | | | ◐ | ◐ | | |
| | | **W29 42000.0421** | WOEX 080404-00 K10 | | | | | | | | ◑ |

# KOMET KUB®

## Ø 38,5 – 82 mm

### Insert Drill with ABS® Connection, R.H. cutting

2×D on request




| Ø D adjustable | ABS Ø d | 3×D Order No. | N | L | kg | Basic recommendation Insert Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|---|---|---|---|
| 38,5 – 40 | 50 | V82 73900 | 117 | 167 | 1,17 | | | |
| 39,5 – 41 | 50 | V82 74000 | 120 | 170 | 1,20 | W29 34010.048425 | WOEX 06T304-01 BK8425 | |
| 40,5 – 42 | 50 | V82 74100 | 123 | 173 | 1,32 | W29 34010.047930 | WOEX 06T304-01 BK7930 | |
| 41,5 – 43 | 50 | V82 74200 | 126 | 176 | 1,33 | W29 34010.0462 | WOEX 06T304-01 BK62 | |
| 42,5 – 44 | 50 | V82 74300 | 129 | 179 | 1,44 | W29 34110.0477 | WOEX 06T304-11 BK77 | |
| 43,5 – 45 | 50 | V82 74400 | 132 | 182 | 1,44 | | | |
| 44,5 – 46 | 63 | V83 74500 | 135 | 190 | 1,91 | | | |
| 45,5 – 47 | 63 | V83 74600 | 138 | 193 | 1,79 | | | |
| 46,5 – 48 | 63 | V83 74700 | 141 | 196 | 2,02 | | | |
| 47,5 – 49 | 63 | V83 74800 | 144 | 199 | 2,01 | W29 42010.048425 | WOEX 080404-01 BK8425 | |
| 48,5 – 50 | 63 | V83 74900 | 147 | 202 | 2,18 | W29 42010.047930 | WOEX 080404-01 BK7930 | |
| 49,5 – 51 | 63 | V83 75000 | 150 | 205 | 2,23 | W29 42010.0462 | WOEX 080404-01 BK62 | |
| 50,5 – 52 | 63 | V83 75100 | 153 | 208 | 2,30 | W29 42110.0477 | WOEX 080404-11 BK77 | |
| 51,5 – 53 | 63 | V83 75200 | 156 | 211 | 2,40 | | | |
| 52,5 – 54 | 63 | V83 75300 | 159 | 214 | 2,48 | | | |
| 53,5 – 55 | 63 | V83 75400 | 162 | 217 | 2,55 | | | |
| 54,5 – 56 | 80 | V84 75500 | 165 | 220 | 3,50 | | | |
| 55,5 – 57 | 80 | V84 75600 | 168 | 223 | 3,68 | | | |
| 56,5 – 58 | 80 | V84 75700 | 171 | 226 | 3,70 | | | |
| 57,5 – 59 | 80 | V84 75800 | 174 | 229 | 3,80 | | | |
| 58,5 – 60 | 80 | V84 75900 | 177 | 232 | 3,92 | | | |
| 59,5 – 61 | 80 | V84 76000 | 180 | 235 | 4,00 | W29 50010.048425 | WOEX 100504-01 BK8425 | |
| 60,5 – 62 | 80 | V84 76100 | 183 | 238 | 4,00 | W29 50010.047930 | WOEX 100504-01 BK7930 | |
| 61,5 – 63 | 80 | V84 76200 | 186 | 241 | 4,10 | W29 50010.0462 | WOEX 100504-01 BK62 | |
| 62,5 – 64 | 80 | V84 76300 | 189 | 244 | 4,43 | W29 50110.0477 | WOEX 100504-11 BK77 | |
| 63,5 – 65 | 80 | V84 76400 | 192 | 247 | 4,31 | | | |
| 64,5 – 66 | 80 | V84 76500 | 195 | 250 | 4,61 | | | |
| 65,5 – 67 | 80 | V84 76600 | 198 | 253 | 4,65 | | | |
| 66,5 – 68 | 80 | V84 76700 | 201 | 256 | 4,70 | | | |
| 67,5 – 69 | 80 | V84 76800 | 204 | 259 | 5,00 | | | |
| 68,5 – 70 | 80 | V84 76900 | 207 | 272 | 5,44 | | | |
| 69,5 – 71 | 80 | V84 77000 | 210 | 275 | 5,51 | | | |
| 70,5 – 72 | 80 | V84 77100 | 213 | 278 | 5,58 | | | |
| 71,5 – 73 | 80 | V84 77200 | 216 | 281 | 5,91 | | | |
| 72,5 – 74 | 80 | V84 77300 | 219 | 284 | 6,07 | | | |
| 73,5 – 75 | 80 | V84 77400 | 222 | 287 | 6,15 | W29 58010.088425 | WOEX 120608-01 BK8425 | |
| 74,5 – 76 | 80 | V84 77500 | 225 | 290 | 6,21 | W29 58010.087930 | WOEX 120608-01 BK7930 | |
| 75,5 – 77 | 80 | V84 77600 | 228 | 293 | 6,35 | W29 58010.0862 | WOEX 120608-01 BK62 | |
| 76,5 – 78 | 80 | V84 77700 | 231 | 296 | 6,50 | W29 58000.088425 | WOEX 120608-00 BK8425 | |
| 77,5 – 79 | 80 | V84 77800 | 234 | 299 | 6,80 | W29 58000.0821 | WOEX 120608-00 K10 | |
| 78,5 – 80 | 80 | V84 77900 | 237 | 302 | 7,00 | | | |
| 79,5 – 81 | 80 | V84 78000 | 240 | 305 | 7,39 | | | |
| 80,5 – 82 | 80 | V84 78100 | 243 | 308 | 7,61 | | | |

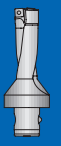
Any **intermediate dimensions** from ∅ 38,5 – 82 mm and **inch dimensions** are available on request.

**Supply includes:**

KUB® drill with assembly parts. Please order insert and accessories separately.



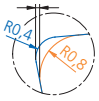
Patent applied for inside and outside Germany (ABS)



| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3×D | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 112-114 ✕ not possible

| | Assembly parts | Accessories | Assembly parts | | | | |
|---|---|---|---|---|---|---|---|
| | Clamping screw | Screwdriver | Insert seating external | Clamping screw | Insert seating internal | Clamping screw | Pin |
| | Order No.<br>Article | Order No.<br>Article | Order No. | Order No. | Order No. | Order No.<br>Article | Order No.<br>Article |
| | N00 57611<br>S/M3,5×6,6-10IP<br>2,8 Nm | L05 00850<br>10IP | D53 56201 | N10 11400 | D50 55100 | N00 55701<br>M3,5×5-8IP<br>2,25 Nm | N00 52000<br>1,8/2×4,5 |
| | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP | D53 56211 | N10 11500 | D50 55110 | N00 55821<br>M4,5×9-10IP<br>4,3 Nm | N00 52010<br>3/4×5,5 |
| | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP | D53 56221 | N10 11510 | D50 55120 | N00 55821<br>M4,5×9-10IP<br>4,3 Nm | N00 52010<br>3/4×5,5 |
| | N00 57541<br>S/M5,5×11-20IP<br>6,25 Nm | L05 00870<br>20IP | D53 56231 | N10 11010 | D50 55130 | N00 55891<br>M5,5×8,5-20IP<br>6,25 Nm | N00 52020<br>4/5×7,0 |




**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

Guideline values for solid drilling: page 106 / alternative inserts: page 107.

# KOMET KUB®

## Ø 38,5 – 82 mm

### Insert Drill with ABS® Connection, R.H. cutting

| Guideline values for solid drilling | | | | | | $v_c$ | Max. feed f (mm/rev) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 3×D | | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | Cutting speed $v_c$ (m/min) | Ø 38,5 – 44 | Ø 44,5 – 54 | Ø 54,5 – 68 | Ø 68,5 – 82 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,10 | 0,12 | 0,12 | 0,14 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,10 | 0,12 | 0,12 | 0,14 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,12 | 0,14 | 0,14 | 0,16 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 200 | 0,10 | 0,12 | 0,12 | 0,14 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 180 | 0,08 | 0,10 | 0,10 | 0,12 |
| P | 4.1 | | | HSS | | 80 | 0,06 | 0,08 | 0,08 | 0,10 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 60 | 0,06 | 0,08 | 0,08 | 0,10 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 80 | 0,06 | 0,08 | 0,08 | 0,10 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 180 | 0,08 | 0,10 | 0,10 | 0,12 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 160 | 0,08 | 0,10 | 0,10 | 0,12 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 160 | 0,06 | 0,08 | 0,08 | 0,10 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 200 | 0,16 | 0,18 | 0,18 | 0,23 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 160 | 0,16 | 0,18 | 0,18 | 0,23 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,14 | 0,16 | 0,16 | 0,18 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic/ perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 160 | 0,14 | 0,16 | 0,16 | 0,18 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 140 | 0,12 | 0,14 | 0,14 | 0,16 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,10 | 0,12 | 0,12 | 0,14 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,12 | 0,14 | 0,14 | 0,16 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,14 | 0,16 | 0,16 | 0,18 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 400 | 0,14 | 0,16 | 0,16 | 0,18 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 600 | 0,14 | 0,16 | 0,16 | 0,18 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,16 | 0,18 | 0,18 | 0,23 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,16 | 0,18 | 0,18 | 0,23 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | 0,06 | 0,08 | 0,08 | 0,10 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 40 | 0,04 | 0,06 | 0,06 | 0,08 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



Patent applied for inside and outside Germany (ABS)

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | Insert -02 -03 -13 | for workpiece material P M K N S H |
|---|---|---|---|---|---|
| for better chip control | 38,5 – 44 | W29 34130.048425 | WOEX 06T304-13 BK8425 | | |
| | | W29 34020.0464 | WOEX 06T304-02 BK64 | | |
| | | W29 34030.046425 | WOEX 06T304-03 BK6425 ⚠ | | |
| | | W29 34130.0479 | WOEX 06T304-13 BK79 | | |
| | 44,5 – 54 | W29 42130.048425 | WOEX 080404-13 BK8425 | | |
| | | W29 42020.0464 | WOEX 080404-02 BK64 | | |
| | | W29 42030.046425 | WOEX 080404-03 BK6425 ⚠ | | |
| | | W29 42130.0479 | WOEX 080404-13 BK79 | | |
| | 54,5 – 68 | W29 50130.048425 | WOEX 100504-13 BK8425 | | |
| | | W29 50020.0864 | WOEX 100508-02 BK64 | | |
| | | W29 50030.086425 | WOEX 100508-03 BK6425 ⚠ | | |
| | | W29 50130.0479 | WOEX 100504-13 BK79 | | |
| | 68,5 – 82 | W29 58130.088425 | WOEX 120608-13 BK8425 | | |
| | | W29 58030.086425 | WOEX 120608-03 BK6425 ⚠ | | |
| | | W29 58130.0879 | WOEX 120608-13 BK79 | | |

⚠ Only use this insert with KUB®
as an external cutting edge:
WOEX ... -03 (Geometry 03)
WOEX ... -01 (Geometry 01) in BK6115
WOEX ... -01 (Geometry 01) in BK6420

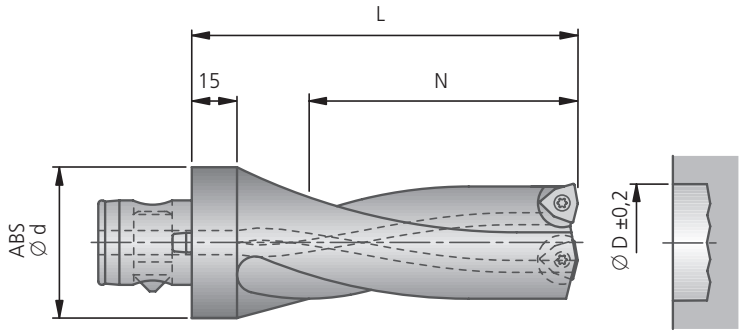
## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | Insert -00 -01 -11 | for workpiece material P M K N S H |
|---|---|---|---|---|---|
| for higher cutting speed | 38,5 – 44 | W29 34010.0472 | WOEX 06T304-01 BK72 | | |
| | | W29 34110.0450 | WOEX 06T304-11 BK50 | | |
| | 44,5 – 54 | W29 42010.0472 | WOEX 080404-01 BK72 | | |
| | | W29 42110.0450 | WOEX 080404-11 BK50 | | |
| | 54,5 – 68 | W29 50010.0872 | WOEX 100508-01 BK72 | | |
| | | W29 50110.0450 | WOEX 100504-11 BK50 | | |
| | 68,5 – 82 | W29 58010.0872 | WOEX 120608-01 BK72 | | |
| | | W29 58000.0862 | WOEX 120608-00 BK62 | | |
| for greater strength | 38,5 – 44 | W29 34010.047930 | WOEX 06T304-01 BK7930 | | |
| | | W29 34010.0404 | WOEX 06T304-01 P40 | | |
| | | W29 34010.0421 | WOEX 06T304-01 K10 | | |
| | | W29 34110.0421 | WOEX 06T304-11 K10 | | |
| | 44,5 – 54 | W29 42010.047930 | WOEX 080404-01 BK7930 | | |
| | | W29 42010.0404 | WOEX 080404-01 P40 | | |
| | | W29 42010.0421 | WOEX 080404-01 K10 | | |
| | | W29 42110.0421 | WOEX 080404-11 K10 | | |
| | 54,5 – 68 | W29 50010.047930 | WOEX 100504-01 BK7930 | | |
| | | W29 50010.0804 | WOEX 100508-01 P40 | | |
| | | W29 50010.0821 | WOEX 100508-01 K10 | | |
| | | W29 50110.0421 | WOEX 100504-11 K10 | | |
| | 68,5 – 82 | W29 58010.087930 | WOEX 120608-01 BK7930 | | |
| | | W29 58010.0804 | WOEX 120608-01 P40 | | |
| | | W29 58010.0821 | WOEX 120608-01 K10 | | |
| | | W29 58000.0821 | WOEX 120608-00 K10 | | |

# KOMET KUB®

## Ø 45 – 82 mm

### Insert Drill with ABS® Connection, R.H. cutting




| Ø D | *max. diameter with offset | ABS Ø d | 2×D Order No. | 2×D N | 2×D L | 2×D kg | 3×D Order No. | 3×D N | 3×D L | 3×D kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 45 | 48 | 63 | V13 34500 | 90 | 145 | 1,61 | V13 74500 | 135 | 190 | 1,61 |
| 46 | 49 | 63 | V13 34600 | 92 | 147 | 1,66 | V13 74600 | 138 | 193 | 1,95 |
| 47 | 50 | 63 | V13 34700 | 94 | 149 | 1,70 | V13 74700 | 141 | 196 | 2,02 |
| 48 | 51 | 63 | V13 34800 | 96 | 151 | 1,75 | V13 74800 | 144 | 199 | 2,08 |
| 49 | 52 | 63 | V13 34900 | 98 | 153 | 1,80 | V13 74900 | 147 | 202 | 2,16 |
| 50 | 53 | 63 | V13 35000 | 100 | 155 | 1,85 | V13 75000 | 150 | 205 | 2,23 |
| 51 | 54 | 63 | V13 35100 | 102 | 157 | 1,89 | V13 75100 | 153 | 208 | 2,27 |
| 52 | 55 | 63 | V13 35200 | 104 | 159 | 1,94 | V13 75200 | 156 | 211 | 2,45 |
| 53 | 55 | 63 | V13 35300 | 106 | 161 | 2,00 | V13 75300 | 159 | 214 | 2,45 |
| 54 | 55 | 63 | V13 35400 | 108 | 163 | 2,07 | V13 75400 | 162 | 217 | 2,54 |
| 55 | 58 | 80 | V14 35500 | 110 | 165 | 2,91 | V14 75500 | 165 | 220 | 3,41 |
| 56 | 59 | 80 | V14 35600 | 112 | 167 | 2,96 | V14 75600 | 168 | 223 | 3,51 |
| 57 | 60 | 80 | V14 35700 | 114 | 169 | 3,06 | V14 75700 | 171 | 226 | 3,62 |
| 58 | 61 | 80 | V14 35800 | 116 | 171 | 3,13 | V14 75800 | 174 | 229 | 3,73 |
| 59 | 62 | 80 | V14 35900 | 118 | 173 | 3,21 | V14 75900 | 177 | 232 | 3,82 |
| 60 | 63 | 80 | V14 36000 | 120 | 175 | 3,32 | V14 76000 | 180 | 235 | 3,93 |
| 61 | 64 | 80 | V14 36100 | 122 | 177 | 3,32 | V14 76100 | 183 | 238 | 4,05 |
| 62 | 65 | 80 | V14 36200 | 124 | 179 | 3,44 | V14 76200 | 186 | 241 | 4,19 |
| 63 | 66 | 80 | V14 36300 | 126 | 181 | 3,54 | V14 76300 | 189 | 244 | 4,31 |
| 64 | 67 | 80 | V14 36400 | 128 | 183 | 3,59 | V14 76400 | 192 | 247 | 4,34 |
| 65 | 68 | 80 | V14 36500 | 130 | 185 | 3,65 | V14 76500 | 195 | 250 | 4,60 |
| 66 | 69 | 80 | V14 36600 | 132 | 187 | 3,73 | V14 76600 | 198 | 253 | 4,61 |
| 67 | 69,5 | 80 | V14 36700 | 134 | 189 | 3,82 | V14 76700 | 201 | 256 | 4,80 |
| 68 | 70 | 80 | V14 36800 | 136 | 191 | 3,99 | V14 76800 | 204 | 259 | 4,93 |
| 69 | 72 | 80 | V14 36900 | 138 | 203 | 4,30 | V14 76900 | 207 | 272 | 5,25 |
| 70 | 73 | 80 | V14 37000 | 140 | 205 | 4,38 | V14 77000 | 210 | 275 | 5,32 |
| 71 | 74 | 80 | V14 37100 | 142 | 207 | 4,57 | V14 77100 | 213 | 278 | 5,55 |
| 72 | 75 | 80 | V14 37200 | 144 | 209 | 4,53 | V14 77200 | 216 | 281 | 5,79 |
| 73 | 76 | 80 | V14 37300 | 146 | 211 | 4,65 | V14 77300 | 219 | 284 | 5,96 |
| 74 | 77 | 80 | V14 37400 | 148 | 213 | 4,76 | V14 77400 | 222 | 287 | 6,13 |
| 75 | 78 | 80 | V14 37500 | 150 | 215 | 4,90 | V14 77500 | 225 | 290 | 6,32 |
| 76 | 79 | 80 | V14 37600 | 152 | 217 | 5,10 | V14 77600 | 228 | 293 | 6,43 |
| 77 | 80 | 80 | V14 37700 | 154 | 219 | 5,18 | V14 77700 | 231 | 296 | 6,60 |
| 78 | 81 | 80 | V14 37800 | 156 | 221 | 5,39 | V14 77800 | 234 | 299 | 6,80 |
| 79 | 82 | 80 | V14 37900 | 158 | 223 | 5,42 | V14 77900 | 237 | 302 | 7,10 |
| 80 | 82 | 80 | V14 38000 | 160 | 225 | 5,66 | V14 78000 | 240 | 305 | 7,23 |
| 81 | 82,5 | 80 | V14 38100 | 162 | 227 | 5,75 | V14 78100 | 243 | 308 | 7,57 |
| 82 | 83 | 80 | V14 38200 | 164 | 229 | 5,97 | V14 78200 | 246 | 311 | 7,69 |

Any **intermediate dimensions** from Ø 45 – 82 mm and **inch dimensions** are available on request.

**Supply includes:** KUB® drill with assembly parts. Please order insert and accessories separately.

* Adjustment device see "KomPass Bore machining – chapter 5"

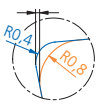


Patent applied for inside and outside Germany (ABS)

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ◐ | ◐ | ● | ✕ | ◐ | ◐ |
| 3×D | ● | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ✕ | ✕ | ◐ |

● very good ◐ good ○ possible: see technical notes, pages 112-114 ✕ not possible

| Basic recommendation | | | Assembly parts | Accessories | Assembly parts | | | |
|---|---|---|---|---|---|---|---|---|
| Insert -00 -01 -11 | | for workpiece material | Clamping screw | Screwdriver | Insert seating external | Insert seating internal | Clamping screw | Pin |
| Order No. ▽▽ Size | ISO-Code | P M K N S H | Order No. Article | Order No. Article | Order No. | Order No. | Order No. Article | Order No. Article |
| **W29 42010.048425**<br>**W29 42010.047930**<br>**W29 42010.0462**<br>**W29 42110.0477** | WOEX 080404-01 BK8425<br>WOEX 080404-01 BK7930<br>WOEX 080404-01 BK62<br>WOEX 080404-11 BK77 | ● ◐ ● ● ● ○ | **N00 57531**<br>S/M4,5×9-15IP<br>6,25 Nm | **L05 00860**<br>15IP | **D50 55310** | **D50 55110** | **N00 55821**<br>M4,5×9-10IP<br>4,3 Nm | **N00 52010**<br>3/4×5,5 |
| **W29 50010.048425**<br>**W29 50010.047930**<br>**W29 50010.0462**<br>**W29 50110.0477** | WOEX 100504-01 BK8425<br>WOEX 100504-01 BK7930<br>WOEX 100504-01 BK62<br>WOEX 100504-11 BK77 | ● ◐ ● ● ● ○ | **N00 57531**<br>S/M4,5×9-15IP<br>6,25 Nm | **L05 00860**<br>15IP | **D50 55320** | **D50 55120** | **N00 55821**<br>M4,5×9-10IP<br>4,3 Nm | **N00 52010**<br>3/4×5,5 |
| **W29 58010.088425**<br>**W29 58010.087930**<br>**W29 58010.0862**<br>**W29 58000.088425**<br>**W29 58000.0821** | WOEX 120608-01 BK8425<br>WOEX 120608-01 BK7930<br>WOEX 120608-01 BK62<br>WOEX 120608-00 BK8425<br>WOEX 120608-00 K10 | ● ◐ ● ● ● ○ | **N00 57541**<br>S/M5,5×11-20IP<br>6,25 Nm | **L05 00870**<br>20IP | **D50 55330** | **D50 55130** | **N00 55901**<br>M5,5×13,5-20IP<br>6,25 Nm | **N00 52020**<br>4/5×7,0 |




**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

Guideline values for solid drilling: page 110 / alternative inserts: page 111.

# KOMET KUB®

## Ø 45 – 82 mm

### Insert Drill with ABS® Connection, R.H. cutting

| Guideline values for solid drilling | | | | | | $v_c$ | Max. feed f (mm/rev) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2×D | | | 3×D | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | Cutting speed $v_c$ (m/min) | Ø 45 – 54 | Ø 54,5 – 68 | Ø 68,5 – 82 | Ø 45 – 54 | Ø 54,5 – 68 | Ø 68,5 – 82 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,12 | 0,14 | 0,16 | 0,12 | 0,14 | 0,14 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,16 | 0,20 | 0,25 | 0,16 | 0,20 | 0,20 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,20 | 0,25 | 0,25 | 0,20 | 0,25 | 0,25 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 200 | 0,16 | 0,20 | 0,20 | 0,16 | 0,18 | 0,18 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 180 | 0,14 | 0,16 | 0,16 | 0,14 | 0,14 | 0,16 |
| P | 4.1 | | | HSS | | – | – | – | – | – | – | – |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 60 | 0,10 | 0,12 | 0,14 | 0,10 | 0,12 | 0,14 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 80 | 0,12 | 0,14 | 0,16 | 0,12 | 0,14 | 0,14 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 180 | 0,14 | 0,16 | 0,16 | 0,14 | 0,14 | 0,16 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 160 | 0,14 | 0,16 | 0,16 | 0,14 | 0,16 | 0,16 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 160 | 0,12 | 0,16 | 0,18 | 0,12 | 0,16 | 0,16 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 200 | 0,25 | 0,30 | 0,30 | 0,25 | 0,25 | 0,30 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 160 | 0,18 | 0,30 | 0,30 | 0,18 | 0,20 | 0,25 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,25 | 0,30 | 0,30 | 0,25 | 0,25 | 0,30 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic/ perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 160 | 0,25 | 0,30 | 0,30 | 0,25 | 0,25 | 0,30 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 140 | 0,25 | 0,30 | 0,30 | 0,25 | 0,25 | 0,30 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,25 | 0,30 | 0,30 | 0,25 | 0,25 | 0,30 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,20 | 0,25 | 0,30 | 0,20 | 0,20 | 0,20 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,20 | 0,25 | 0,25 | 0,20 | 0,20 | 0,25 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 400 | 0,12 | 0,16 | 0,16 | 0,12 | 0,12 | 0,14 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 600 | 0,12 | 0,12 | 0,14 | 0,12 | 0,12 | 0,14 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,20 | 0,25 | 0,25 | 0,20 | 0,25 | 0,25 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,25 | 0,30 | 0,30 | 0,25 | 0,30 | 0,30 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | 0,12 | 0,14 | 0,14 | 0,12 | 0,14 | 0,14 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 40 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



Patent applied for inside and outside Germany (ABS)

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | Insert -03 | Insert -13 | for workpiece material P | M | K | N | S | H |
|---|---|---|---|---|---|---|---|---|---|---|---|
| for better chip control | 45 – 54 | **W29 42130.048425** | WOEX 080404-13 BK8425 | ◐ | | | | | | | |
| | | **W29 42030.046425** | WOEX 080404-03 BK6425 ⚠ | ◐ | | | | | | | |
| | | **W29 42130.0479** | WOEX 080404-13 BK79 | | ◑ | | | | | ◐ | |
| | 55 – 68 | **W29 50130.048425** | WOEX 100504-13 BK8425 | ◐ | | | | | | | |
| | | **W29 50030.086425** | WOEX 100508-03 BK6425 ⚠ | ◐ | | | | | | | |
| | | **W29 50130.0479** | WOEX 100504-13 BK79 | | ◑ | | | | | ◐ | |
| | 69 – 82 | **W29 58130.088425** | WOEX 120608-13 BK8425 | ◐ | | | | | | | |
| | | **W29 58030.086425** | WOEX 120608-03 BK6425 ⚠ | ◐ | | | | | | | |
| | | **W29 58130.0879** | WOEX 120608-13 BK79 | | ◑ | | | | | | |

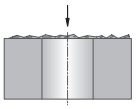
⚠ Only use this insert with KUB® as an external cutting edge:
WOEX ... -03 (Geometry 03)
WOEX ... -01 (Geometry 01) in BK6115
WOEX ... -01 (Geometry 01) in BK6420

## Alternative Inserts

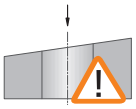
| | ØD | Order No. ▽▽ Size | ISO-Code | Insert -00 -01 | Insert -11 | for workpiece material P | M | K | N | S | H |
|---|---|---|---|---|---|---|---|---|---|---|---|
| for higher cutting speed | 45 – 54 | **W29 42010.0472** | WOEX 080404-01 BK72 | ◐ | | | | | | | |
| | | **W29 42110.0450** | WOEX 080404-11 BK50 | | ◐ | | | | | | |
| | 55 – 68 | **W29 50010.0872** | WOEX 100508-01 BK72 | ◐ | | | | | | | |
| | | **W29 50110.0450** | WOEX 100504-11 BK50 | | ◐ | | | | | | |
| | 69 – 82 | **W29 58010.0872** | WOEX 120608-01 BK72 | ◐ | | | | | | | |
| | | **W29 58000.0862** | WOEX 120608-00 BK62 | | ◐ | | | | | | ◑ |
| for greater strength | 45 – 54 | **W29 42010.047930** | WOEX 080404-01 BK7930 | ◐ | | | | | | ◐ | |
| | | **W29 42010.0404** | WOEX 080404-01 P40 | ◐ | | | ◑ | | | ◐ | |
| | | **W29 42010.0421** | WOEX 080404-01 K10 | ◐ | | | | ◐ | | | |
| | | **W29 42110.0421** | WOEX 080404-11 K10 | | ◐ | | | | | | |
| | 55 – 68 | **W29 50010.047930** | WOEX 100504-01 BK7930 | ◐ | | | | | | ◐ | |
| | | **W29 50010.0804** | WOEX 100508-01 P40 | ◐ | | | ◑ | | | ◐ | |
| | | **W29 50010.0821** | WOEX 100508-01 K10 | ◐ | | | | ◐ | | | |
| | | **W29 50110.0421** | WOEX 100504-11 K10 | | ◐ | | | | | | |
| | 69 – 82 | **W29 58010.087930** | WOEX 120608-01 BK7930 | ◐ | | | | | | ◐ | |
| | | **W29 58010.0804** | WOEX 120608-01 P40 | ◐ | | | ◑ | | | ◐ | |
| | | **W29 58010.0821** | WOEX 120608-01 K10 | ◐ | | | | ◐ | | | |
| | | **W29 58000.0821** | WOEX 120608-00 K10 | | ◐ | | | | | | |

## Technical Informations

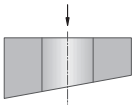


1. 

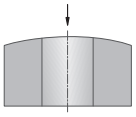
**Starting on uneven surfaces (cast surfaces)**
- subject to the surface, reduce feed as required when starting the bore

2. 

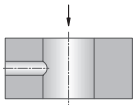
**Starting on angled surfaces**
- subject to the starting angle, the feed must be reduced when starting the bore.
  Rule of thumb: 3° ≙ 30%; 10° ≙ 40%; 25° ≙ 60% use tools max. 2×D
- use tough insertand stable corner radius

3. 

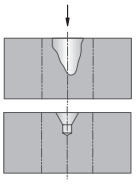
**Angled bore exit**
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insertand stable corner radius

4. 

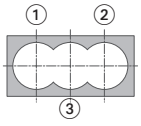
**Starting on cambered surfaces**
- no problems
- reduce feed rate if necessary

5. 

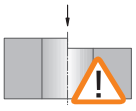
**Drilling through a cross bore**
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insertand stable corner radius

6. 

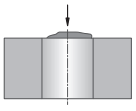
**Starting on a groove or large centering bore**
- use short tools, max. 3×D
- spot face if required
- reduce feed
- use tough insert for internal cutting edge

7. 

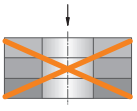

**Drilling a chamber**
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- if necessary reduce to approx. 1-1.5 mm in the ∅ on circumference
- reduce feed rate 50% for interrupted cut
- use tough insertand stable corner radius

8. 

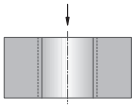
**Starting on an edge**
- reduce feed rate by 50%
- use tough insertand stable corner radius

9. 

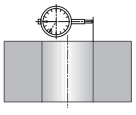
**Starting on a welded seam**
- reduce feed rate
- use max. 3×D tools

10. 

**Drilling through stacked plates**
- not possible

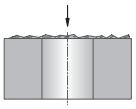
11. 

**Roughing**
- possible

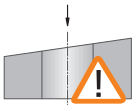
12. 

**Adjustable**
- using adjusting device (ABS-MV) and eccentric adjusting device
- for turning machines over axis

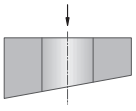
Note: please note max. offset ∅ in tables

1. 

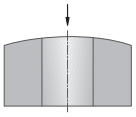
**Starting on uneven surfaces (cast surfaces)**
- subject to the surface, reduce feed as required when starting the bore

2. 

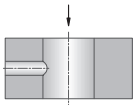
**Starting on angled surfaces**
- max. 3° angled position possible (cast angles)
- reduce feed rate when starting bore
- use stable corner radius

3. 

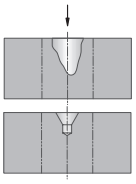
**Angled bore exit**
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insertand stable corner radius

4. 

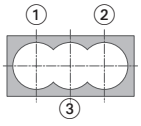
**Starting on cambered surfaces**
- no problems
- reduce feed rate if necessary

5. 

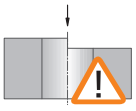
**Drilling through a cross bore**
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insertand stable corner radius

6. 

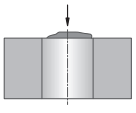
**Starting on a groove or large centering bore**
- use short tools, max. 3×D
- spot face if required
- reduce feed
- use tough insert for internal cutting edge

7. 

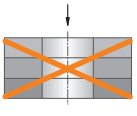

**Drilling a chamber**
- first bore Nos. 1 + 2, then bore No. 3
- check distribution is symmetrical
- avoid chip jams
- if necessary reduce to approx. 1-1.5 mm in the ∅ on circumference
- reduce feed rate 50% for interrupted cut
- use tough insertand stable corner radius

8. 

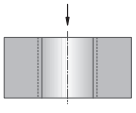
**Starting on an edge**
- not possible for 3×D tools
- because of the undefined surface for starting the bore, pre-machining is required (spot facing, face milling)
- then continue as described under Point 1

9. 

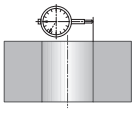
**Starting on a welded seam**
- reduce feed rate
- use max. 3×D tools

10. 

**Drilling through stacked plates**
- not possible

11. 

**Roughing**
- possible

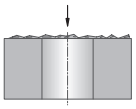
12. 

**Adjustable**
- using adjusting device (ABS-MV) and eccentric adjusting device
- for turning machines over axis

Note: please note max. offset ∅ in tables

## Technical Notes

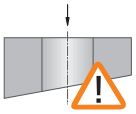


1. 

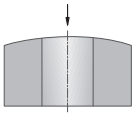
**Starting on uneven surfaces (cast surfaces)**
- subject to the surface, reduce feed as required when starting the bore

2. 

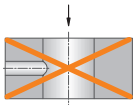
**Starting on angled surfaces**
- not possible for 4×D tools
- starting surface must be spot faced or spot milled

3. 

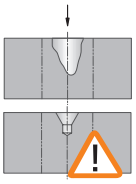
**Angled bore exit**
- reduce feed by up to 50% for 4×D tools

4. 

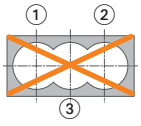
**Starting on cambered surfaces**
- starting surface must be milled evenly

5. 

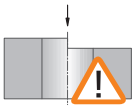
**Drilling through a cross bore**
- not possible with 4×D tools
- if necessary apply cross bore later

6. 

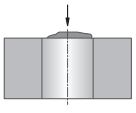
**Starting on a groove or large centering bore**
- points for starting bore must be rough machined first

7. 

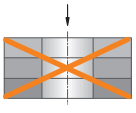

**Drilling a chamber**
- not possible

8. 

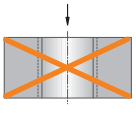
**Starting on an edge**
- not possible for 4×D tools
- because of the undefined surface for starting the bore, pre-machining is required (spot facing, face milling)
- then continue as described under Point 1

9. 

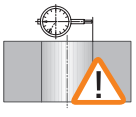
**Starting on a welded seam**
- reduce feed by up to 50% for 4×D tools
- if necessary pre-machine point for starting bore

10. 

**Drilling through stacked plates**
- not possible

11. 

**Roughing**
- not possible

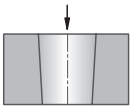
12. 

**adjustable**
- dimensional adjustment within 1/10 range possible

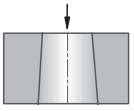
## rotating and stationary use



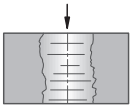
**Short tool life** types of wear on inserts
- cutting speed to high → select correct cutting speed
- cutting material with too little wear resistance → select grade with higher wear resistance
- tool overhang too great → if possible use shorter tool
- damaged insert seating → check tool, change if necessary
- clamping device not stable enough → improve stability



**Bore narrows at bottom**
- chip jam on external cutting edge → use different chip fracture geometry, increase feed if necessary
- material very soft → increase cutting speed, reduce feed. Use positive chip geometry



**Bore widens at bottom**
- chip jam on internal cutting edge → use different chip fracture geometry, increase feed if necessary



**Bad surface finish**
- bad chip removal → improve cutting parameters: increase cutting speed reduce feed

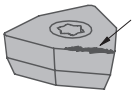
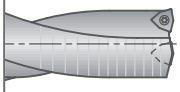
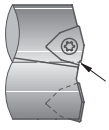


**Bild up on cutting edge**
- cutting speed too low → increase cutting speed
- insert too negative → use positive geometry
- coating not suitable → select correct coating

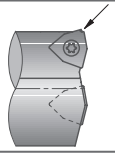


**Friction marks on tool shank**
- bore diameter too small → check setting
- chip removal problems → improve cutting parameters, check geometry of inserts
- cutting edge corner radius too large → use correct cutting edge radius

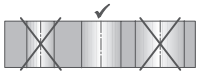
## stationary use



**Fracture on internal cutting edge**
- drill bit height of tool too high/too low → tool turret/holder may have shifted. Readjust machine
- mix-up between renforced/non renforced insert → use correct insert
- feed rate too high → reduce feed rate
- insert grade too brittle → use tougher insert grade
- wrong insert geometry → use geometry with chamfered cutting edge

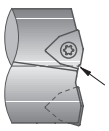


**Fracture on external cutting edge**
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius

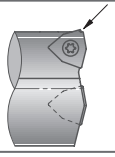


**Bore too small/ too large**
- machine not at X-0 position → move axis to correct position
- machine axis shifted → readjust machine

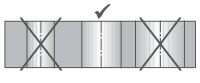
## rotating use



**Fracture on internal cutting edge**
- mix-up between renforced/non renforced insert → use correct insert
- feed rate too high → reduce feed rate
- insert grade too brittle → use tougher insert grade
- wrong insert geometry → use geometry with chamfered cutting edge



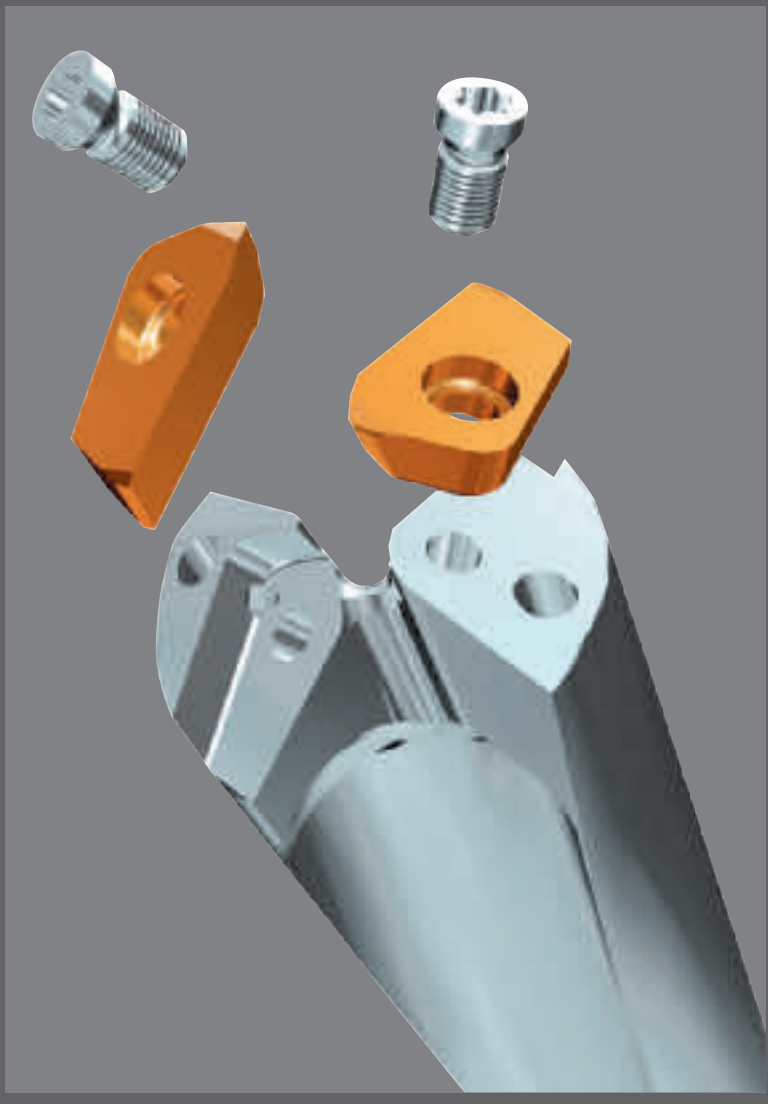
**Fracture on external cutting edge**
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius



**Bore too small/ too large** with adjustable tool
- wrong cutting edge radius used → use correct cutting edge radius
- setting wrong → correct setting

# KOMET KUB Duon®

## Continuous Drilling to 5×D



With our KOMET KUB Duon® drill concept, we have incorporated the principle of exchangeable cutting elements in double-edged tools.

The KOMET KUB Duon® is supplied as standard in drilling depths up to 5×D with combination shank DIN 6536 HE and DIN 6595 and also with ABS® connection.

BENEFITS for you:

- Twin cutting edges with high cutting speeds
- Drills with 2 replaceable screw-on cutter bodies; no regrinding necessary
- Face side, tangential mounting of inserts produces greater stability
- Precision ground inserts
- Intermediate dimensions can be changed very flexibly on standard tool bodies by means of the inserts
- Bore machining accurate and highly productive

Flexibility is the trump card:

1 Design to customer requirement e.g. with integral steps or chamfering insert

2 Suitable for retro-fitting a chamfering cartridge









## KOMET KUB Duon® Page

**ABS® Connection** 118 – 133

R.H. cutting
Drilling depth 5×D – ∅ 17.3 - 44.2 mm

**Cylindrical Shank (combination shank)** 118 – 129

R.H. cutting
Drilling depth 5×D – ∅ 17.3 - 36.2 mm

**Technical Notes** 134

Guideline values for solid drilling

**Pre-centering** 135

ABS® Connection
Cylindrical Shank (combination shank)

**Technical Informations** 136

**Problems → Causes → Solutions** 137

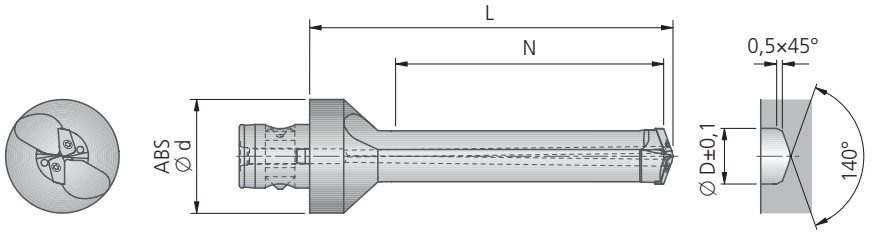
**Milling cartridge** Chapter 6

# KOMET KUB Duon®

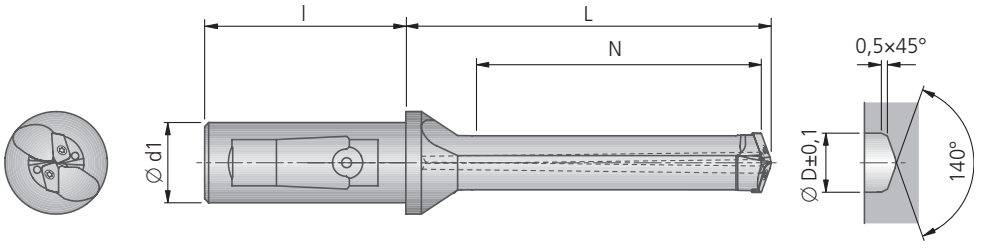
## Ø 17,3 – 20,7 mm

### Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

ABS® connection




Cylindrical shank
(combination shank)
DIN 6535 HE
(similar to DIN 1835 E)
and DIN 6595




| | ABS® | | | | | Cylindrical shank | | | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø D | ABS Ø d | Order No. | N | L | kg ca. | Cylindrical shank Ød1×l | Order No. | N | L | kg ca. | Clamping screw Order No. Article | Screwdriver Order No. Article | |
| 17,3 | | | | | | | | | | | | | |
| 17,4 | | | | | | | | | | | | | |
| **17,5** | 50 | **U20 01750** | 90 | 125 | 0,6 | 25×56 | **U20 71750** | 90 | 114 | 0,34 | **N00 57660** S/M2,2×4,8-6IP 1,01 Nm | **L05 00810** 6IP | |
| 17,6 | | | | | | | | | | | | | |
| 17,7 | | | | | | | | | | | | | |
| 17,8 | | | | | | | | | | | | | |
| 17,9 | | | | | | | | | | | | | |
| **18,0** | 50 | **U20 01800** | 90 | 125 | 0,6 | 25×56 | **U20 71800** | 90 | 114 | 0,34 | **N00 57660** S/M2,2×4,8-6IP 1,01 Nm | **L05 00810** 6IP | |
| 18,1 | | | | | | | | | | | | | |
| 18,2 | | | | | | | | | | | | | |
| 18,3 | | | | | | | | | | | | | |
| 18,4 | | | | | | | | | | | | | |
| **18,5** | 50 | **U20 01850** | 95 | 130 | 0,6 | 25×56 | **U20 71850** | 95 | 119 | 0,35 | **N00 57660** S/M2,2×4,8-6IP 1,01 Nm | **L05 00810** 6IP | |
| 18,6 | | | | | | | | | | | | | |
| 18,7 | | | | | | | | | | | | | |
| 18,8 | | | | | | | | | | | | | |
| 18,9 | | | | | | | | | | | | | |
| **19,0** | 50 | **U20 01900** | 95 | 130 | 0,6 | 25×56 | **U20 71900** | 95 | 119 | 0,35 | **N00 57660** S/M2,2×4,8-6IP 1,01 Nm | **L05 00810** 6IP | |
| 19,1 | | | | | | | | | | | | | |
| 19,2 | | | | | | | | | | | | | |
| 19,3 | | | | | | | | | | | | | |
| 19,4 | | | | | | | | | | | | | |
| **19,5** | 50 | **U20 01950** | 100 | 135 | 0,6 | 32×60 | **U20 81950** | 100 | 124 | 0,56 | **N00 57660** S/M2,2×4,8-6IP 1,01 Nm | **L05 00810** 6IP | |
| 19,6 | | | | | | | | | | | | | |
| 19,7 | | | | | | | | | | | | | |
| 19,8 | | | | | | | | | | | | | |
| 19,9 | | | | | | | | | | | | | |
| **20,0** | 50 | **U20 02000** | 100 | 135 | 0,6 | 32×60 | **U20 82000** | 100 | 124 | 0,56 | **N00 57660** S/M2,2×4,8-6IP 1,01 Nm | **L05 00810** 6IP | |
| 20,1 | | | | | | | | | | | | | |
| 20,2 | | | | | | | | | | | | | |
| 20,3 | | | | | | | | | | | | | |
| 20,4 | | | | | | | | | | | | | |
| **20,5** | 50 | **U20 02050** | 105 | 140 | 0,6 | 32×60 | **U20 82050** | 105 | 134 | 0,57 | **N00 57660** S/M2,2×4,8-6IP 1,01 Nm | **L05 00810** 6IP | |
| 20,6 | | | | | | | | | | | | | |
| 20,7 | | | | | | | | | | | | | |

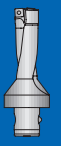
For other diameters see following page.



Patent applied for inside and outside Germany (ABS)
EP 1 296 793 and other patents and patent applications (KUB Duon)

# Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting





| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×D | ● | ● | ◐ | ○ | ◐ | ◐ | ○ | ✕ | ● | ○ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 136 ✕ not possible

Areas of use:

- P high tensile strength steels, heat treated steels and tool steels
- K grey cast iron, SG cast iron
- N cast aluminium alloys, brass and bronze which produce short chips
- ● main use
- ◐ alternative cutting material

**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.
**Order example insert:**
for ∅ 18.0 mm, coating BK84,
Order No.: H60 18000.84

**Supply includes:**
KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

| Basic recommendation | | | | alternative for ... | | | | Basic recommendation | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Insert | | for workpiece material | | higher cutting speed / greater strength → | | | | Insert | | |
| ISO-Code enter carbide | Order No. | BK8440 | BK2715 | BK84 | BK8125 | BK2740 | BK8140 | ISO-Code enter carbide | Order No. | BK7710 |
| XOHX 0802-17,3... | H60 17300. .. | | | | | | | XOHX 0802-17,3-62... | H62 17300. .. | |
| XOHX 0802-17,4... | H60 17400. .. | | | | | | | XOHX 0802-17,4-62... | H62 17400. .. | |
| **XOHX 0802-17,5...** | **H60 17500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX 0802-17,5-62...** | **H62 17500. ..** | **7710** |
| XOHX 0802-17,6... | H60 17600. .. | | | | | | | XOHX 0802-17,6-62... | H62 17600. .. | |
| XOHX 0802-17,7... | H60 17700. .. | | | | | | | XOHX 0802-17,7-62... | H62 17700. .. | |
| XOHX 0802-17,8... | H60 17800. .. | | | | | | | XOHX 0802-17,8-62... | H62 17800. .. | |
| XOHX 0802-17,9... | H60 17900. .. | | | | | | | XOHX 0802-17,9-62... | H62 17900. .. | |
| **XOHX 0802-18,0...** | **H60 18000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX 0802-18,0-62...** | **H62 18000. ..** | **7710** |
| XOHX 0802-18,1... | H60 18100. .. | | | | | | | XOHX 0802-18,1-62... | H62 18100. .. | |
| XOHX 0802-18,2... | H60 18200. .. | | | | | | | XOHX 0802-18,2-62... | H62 18200. .. | |
| XOHX 0802-18,3... | H60 18300. .. | | | | | | | XOHX 0802-18,3-62... | H62 18300. .. | |
| XOHX 0802-18,4... | H60 18400. .. | | | | | | | XOHX 0802-18,4-62... | H62 18400. .. | |
| **XOHX 0802-18,5...** | **H60 18500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX 0802-18,5-62...** | **H62 18500. ..** | **7710** |
| XOHX 0802-18,6... | H60 18600. .. | | | | | | | XOHX 0802-18,6-62... | H62 18600. .. | |
| XOHX 0802-18,7... | H60 18700. .. | | | | | | | XOHX 0802-18,7-62... | H62 18700. .. | |
| XOHX 0802-18,8... | H60 18800. .. | | | | | | | XOHX 0802-18,8-62... | H62 18800. .. | |
| XOHX 0802-18,9... | H60 18900. .. | | | | | | | XOHX 0802-18,9-62... | H62 18900. .. | |
| **XOHX 0802-19,0...** | **H60 19000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX 0802-19,0-62...** | **H62 19000. ..** | **7710** |
| XOHX 0802-19,1... | H60 19100. .. | | | | | | | XOHX 0802-19,1-62... | H62 19100. .. | |
| XOHX 0802-19,2... | H60 19200. .. | | | | | | | XOHX 0802-19,2-62... | H62 19200. .. | |
| XOHX 0802-19,3... | H60 19300. .. | | | | | | | XOHX 0802-19,3-62... | H62 19300. .. | |
| XOHX 0802-19,4... | H60 19400. .. | | | | | | | XOHX 0802-19,4-62... | H62 19400. .. | |
| **XOHX 0802-19,5...** | **H60 19500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX 0802-19,5-62...** | **H62 19500. ..** | **7710** |
| XOHX 0802-19,6... | H60 19600. .. | | | | | | | XOHX 0802-19,6-62... | H62 19600. .. | |
| XOHX 0802-19,7... | H60 19700. .. | | | | | | | XOHX 0802-19,7-62... | H62 19700. .. | |
| XOHX 0802-19,8... | H60 19800. .. | | | | | | | XOHX 0802-19,8-62... | H62 19800. .. | |
| XOHX 0802-19,9... | H60 19900. .. | | | | | | | XOHX 0802-19,9-62... | H62 19900. .. | |
| **XOHX 0802-20,0...** | **H60 20000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX 0802-20,0-62...** | **H62 20000. ..** | **7710** |
| XOHX 0802-20,1... | H60 20100. .. | | | | | | | XOHX 0802-20,1-62... | H62 20100. .. | |
| XOHX 0802-20,2... | H60 20200. .. | | | | | | | XOHX 0802-20,2-62... | H62 20200. .. | |
| XOHX 0802-20,3... | H60 20300. .. | | | | | | | XOHX 0802-20,3-62... | H62 20300. .. | |
| XOHX 0802-20,4... | H60 20400. .. | | | | | | | XOHX 0802-20,4-62... | H62 20400. .. | |
| **XOHX 0802-20,5...** | **H60 20500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX 0802-20,5-62...** | **H62 20500. ..** | **7710** |
| XOHX 0802-20,6... | H60 20600. .. | | | | | | | XOHX 0802-20,6-62... | H62 20600. .. | |
| XOHX 0802-20,7... | H60 20700. .. | | | | | | | XOHX 0802-20,7-62... | H62 20700. .. | |

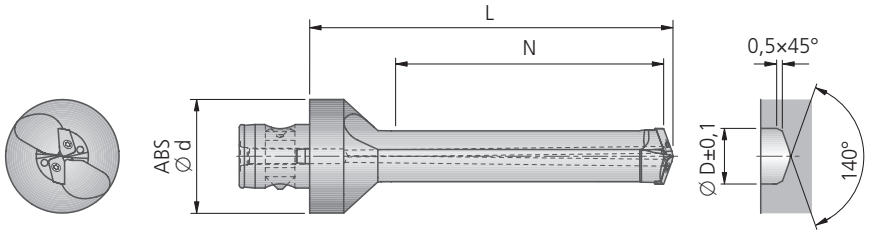
Guideline values for solid drilling: page 134.

# KOMET KUB Duon®

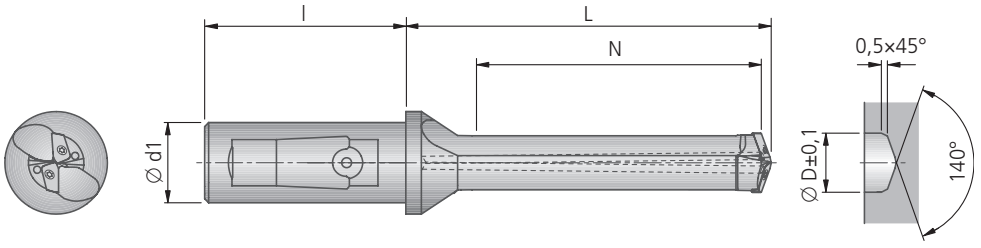
## Ø 20,8 – 24,2 mm

### Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

ABS® connection




Cylindrical shank
(combination shank)
DIN 6535 HE
(similar to DIN 1835 E)
and DIN 6595




| | ABS® | | | | | Cylindrical shank | | | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø D | ABS Ø d | Order No. | N | L | kg ca. | Cylindrical shank Ød1×l | Order No. | N | L | kg ca. | Clamping screw Order No. Article | Screwdriver Order No. Article | |
| 20,8 | | | | | | | | | | | | | |
| 20,9 | | | | | | | | | | | | | |
| **21,0** | 50 | U20 02100 | 105 | 140 | 0,6 | 32×60 | U20 82100 | 105 | 134 | 0,58 | N00 57630 S/M3×5,8-8IP 2,25 Nm | L05 00830 8IP | |
| 21,1 | | | | | | | | | | | | | |
| 21,2 | | | | | | | | | | | | | |
| 21,3 | | | | | | | | | | | | | |
| 21,4 | | | | | | | | | | | | | |
| **21,5** | 50 | U20 02150 | 110 | 145 | 0,6 | 32×60 | U20 82150 | 110 | 139 | 0,59 | N00 57630 S/M3×5,8-8IP 2,25 Nm | L05 00830 8IP | |
| 21,6 | | | | | | | | | | | | | |
| 21,7 | | | | | | | | | | | | | |
| 21,8 | | | | | | | | | | | | | |
| 21,9 | | | | | | | | | | | | | |
| **22,0** | 50 | U20 02200 | 110 | 145 | 0,6 | 32×60 | U20 82200 | 110 | 139 | 0,6 | N00 57630 S/M3×5,8-8IP 2,25 Nm | L05 00830 8IP | |
| 22,1 | | | | | | | | | | | | | |
| 22,2 | | | | | | | | | | | | | |
| 22,3 | | | | | | | | | | | | | |
| 22,4 | | | | | | | | | | | | | |
| **22,5** | 50 | U20 02250 | 115 | 150 | 0,6 | 32×60 | U20 82250 | 115 | 144 | 0,61 | N00 57630 S/M3×5,8-8IP 2,25 Nm | L05 00830 8IP | |
| 22,6 | | | | | | | | | | | | | |
| 22,7 | | | | | | | | | | | | | |
| 22,8 | | | | | | | | | | | | | |
| 22,9 | | | | | | | | | | | | | |
| **23,0** | 50 | U20 02300 | 115 | 150 | 0,6 | 32×60 | U20 82300 | 115 | 144 | 0,62 | N00 57630 S/M3×5,8-8IP 2,25 Nm | L05 00830 8IP | |
| 23,1 | | | | | | | | | | | | | |
| 23,2 | | | | | | | | | | | | | |
| 23,3 | | | | | | | | | | | | | |
| 23,4 | | | | | | | | | | | | | |
| **23,5** | 50 | U20 02350 | 120 | 155 | 0,7 | 32×60 | U20 82350 | 120 | 149 | 0,64 | N00 57630 S/M3×5,8-8IP 2,25 Nm | L05 00830 8IP | |
| 23,6 | | | | | | | | | | | | | |
| 23,7 | | | | | | | | | | | | | |
| 23,8 | | | | | | | | | | | | | |
| 23,9 | | | | | | | | | | | | | |
| **24,0** | 50 | U20 02400 | 120 | 155 | 0,7 | 32×60 | U20 82400 | 120 | 149 | 0,65 | N00 57630 S/M3×5,8-8IP 2,25 Nm | L05 00830 8IP | |
| 24,1 | | | | | | | | | | | | | |
| 24,2 | | | | | | | | | | | | | |

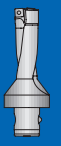
For other diameters see following page.



Patent applied for inside and outside Germany (ABS)
EP 1 296 793 and other patents and patent applications (KUB Duon)

# Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting





| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×D | ● | ● | ◐ | ○ | ◐ | ◐ | ○ | ✕ | ● | ○ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 136 ✕ not possible

Areas of use:

- P high tensile strength steels, heat treated steels and tool steels
- K grey cast iron, SG cast iron
- N cast aluminium alloys, brass and bronze which produce short chips
- ● main use
- ◐ alternative cutting material

**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.
**Order example insert:**
for ∅ 21.0 mm, coating BK84,
Order No.: H60 21000.84

**Supply includes:**
KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

| Basic recommendation | | | | alternative for ... | | | | Basic recommendation | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Insert | | for workpiece material | | higher cutting speed / greater strength → | | | | Insert | | |
| ISO-Code enter carbide | Order No. | BK8440 | BK2715 | BK84 | BK8125 | BK2740 | BK8140 | ISO-Code enter carbide | Order No. | BK7710 |
| XOHX1003-20,8.... | H60 20800. .. | | | | | | | XOHX1003-20,8-62... | H62 20800. .. | |
| XOHX1003-20,9.... | H60 20900. .. | | | | | | | XOHX1003-20,9-62... | H62 20900. .. | |
| **XOHX1003-21,0....** | **H60 21000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-21,0-62...** | **H62 21000. ..** | **7710** |
| XOHX1003-21,1.... | H60 21100. .. | | | | | | | XOHX1003-21,1-62... | H62 21100. .. | |
| XOHX1003-21,2.... | H60 21200. .. | | | | | | | XOHX1003-21,2-62... | H62 21200. .. | |
| XOHX1003-21,3.... | H60 21300. .. | | | | | | | XOHX1003-21,3-62... | H62 21300. .. | |
| XOHX1003-21,4.... | H60 21400. .. | | | | | | | XOHX1003-21,4-62... | H62 21400. .. | |
| **XOHX1003-21,5....** | **H60 21500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-21,5-62...** | **H62 21500. ..** | **7710** |
| XOHX1003-21,6.... | H60 21600. .. | | | | | | | XOHX1003-21,6-62... | H62 21600. .. | |
| XOHX1003-21,7.... | H60 21700. .. | | | | | | | XOHX1003-21,7-62... | H62 21700. .. | |
| XOHX1003-21,8.... | H60 21800. .. | | | | | | | XOHX1003-21,8-62... | H62 21800. .. | |
| XOHX1003-21,9.... | H60 21900. .. | | | | | | | XOHX1003-21,9-62... | H62 21900. .. | |
| **XOHX1003-22,0....** | **H60 22000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-22,0-62...** | **H62 22000. ..** | **7710** |
| XOHX1003-22,1.... | H60 22100. .. | | | | | | | XOHX1003-22,1-62... | H62 22100. .. | |
| XOHX1003-22,2.... | H60 22200. .. | | | | | | | XOHX1003-22,2-62... | H62 22200. .. | |
| XOHX1003-22,3.... | H60 22300. .. | | | | | | | XOHX1003-22,3-62... | H62 22300. .. | |
| XOHX1003-22,4.... | H60 22400. .. | | | | | | | XOHX1003-22,4-62... | H62 22400. .. | |
| **XOHX1003-22,5....** | **H60 22500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-22,5-62...** | **H62 22500. ..** | **7710** |
| XOHX1003-22,6.... | H60 22600. .. | | | | | | | XOHX1003-22,6-62... | H62 22600. .. | |
| XOHX1003-22,7.... | H60 22700. .. | | | | | | | XOHX1003-22,7-62... | H62 22700. .. | |
| XOHX1003-22,8.... | H60 22800. .. | | | | | | | XOHX1003-22,8-62... | H62 22800. .. | |
| XOHX1003-22,9.... | H60 22900. .. | | | | | | | XOHX1003-22,9-62... | H62 22900. .. | |
| **XOHX1003-23,0....** | **H60 23000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-23,0-62...** | **H62 23000. ..** | **7710** |
| XOHX1003-23,1.... | H60 23100. .. | | | | | | | XOHX1003-23,1-62... | H62 23100. .. | |
| XOHX1003-23,2.... | H60 23200. .. | | | | | | | XOHX1003-23,2-62... | H62 23200. .. | |
| XOHX1003-23,3.... | H60 23300. .. | | | | | | | XOHX1003-23,3-62... | H62 23300. .. | |
| XOHX1003-23,4.... | H60 23400. .. | | | | | | | XOHX1003-23,4-62... | H62 23400. .. | |
| **XOHX1003-23,5....** | **H60 23500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-23,5-62...** | **H62 23500. ..** | **7710** |
| XOHX1003-23,6.... | H60 23600. .. | | | | | | | XOHX1003-23,6-62... | H62 23600. .. | |
| XOHX1003-23,7.... | H60 23700. .. | | | | | | | XOHX1003-23,7-62... | H62 23700. .. | |
| XOHX1003-23,8.... | H60 23800. .. | | | | | | | XOHX1003-23,8-62... | H62 23800. .. | |
| XOHX1003-23,9.... | H60 23900. .. | | | | | | | XOHX1003-23,9-62... | H62 23900. .. | |
| **XOHX1003-24,0....** | **H60 24000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-24,0-62...** | **H62 24000. ..** | **7710** |
| XOHX1003-24,1.... | H60 24100. .. | | | | | | | XOHX1003-24,1-62... | H62 24100. .. | |
| XOHX1003-24,2.... | H60 24200. .. | | | | | | | XOHX1003-24,2-62... | H62 24200. .. | |

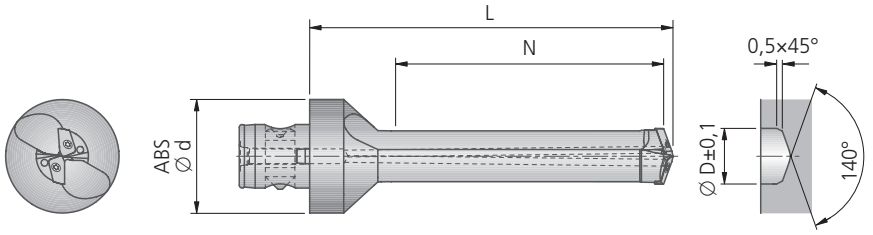
Guideline values for solid drilling: page 134.

# KOMET KUB Duon®

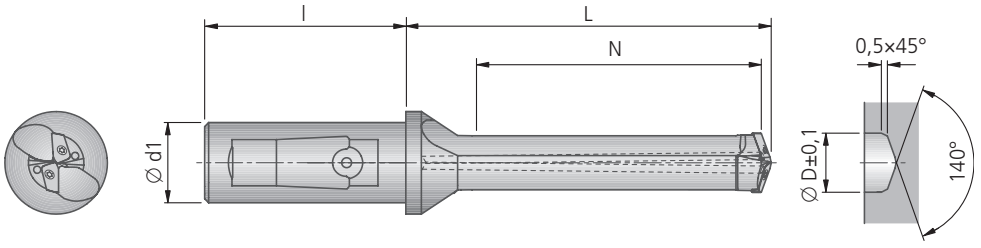
## Ø 24,3 – 27,7 mm

### Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

ABS® connection




Cylindrical shank
(combination shank)
DIN 6535 HE
(similar to DIN 1835 E)
and DIN 6595




| | ABS® | | | | | Cylindrical shank | | | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø D | ABS Ø d | Order No. | N | L | kg ca. | Cylindrical shank Ød1×l | Order No. | N | L | kg ca. | Clamping screw Order No. Article | Screwdriver Order No. Article | |
| 24,3 | | | | | | | | | | | | | |
| 24,4 | | | | | | | | | | | | | |
| **24,5** | 50 | U20 02450 | 125 | 160 | 0,7 | 32×60 | U20 82450 | 125 | 154 | 0,67 | N00 57630 S/M3×5,8-8IP 2,25 Nm | L05 00830 8IP | |
| 24,6 | | | | | | | | | | | | | |
| 24,7 | | | | | | | | | | | | | |
| 24,8 | | | | | | | | | | | | | |
| 24,9 | | | | | | | | | | | | | |
| **25,0** | 50 | U20 02500 | 125 | 160 | 0,7 | 32×60 | U20 82500 | 125 | 154 | 0,68 | N00 57640 S/M3,5×6,9-10IP 2,8 Nm | L05 00850 10IP | |
| 25,1 | | | | | | | | | | | | | |
| 25,2 | | | | | | | | | | | | | |
| 25,3 | | | | | | | | | | | | | |
| 25,4 | | | | | | | | | | | | | |
| **25,5** | 50 | U20 02550 | 130 | 165 | 0,7 | 32×60 | U20 82550 | 130 | 159 | 0,69 | N00 57640 S/M3,5×6,9-10IP 2,8 Nm | L05 00850 10IP | |
| 25,6 | | | | | | | | | | | | | |
| 25,7 | | | | | | | | | | | | | |
| 25,8 | | | | | | | | | | | | | |
| 25,9 | | | | | | | | | | | | | |
| **26,0** | 50 | U20 02600 | 130 | 165 | 0,7 | 32×60 | U20 82600 | 130 | 159 | 0,71 | N00 57640 S/M3,5×6,9-10IP 2,8 Nm | L05 00850 10IP | |
| 26,1 | | | | | | | | | | | | | |
| 26,2 | | | | | | | | | | | | | |
| 26,3 | | | | | | | | | | | | | |
| 26,4 | | | | | | | | | | | | | |
| **26,5** | 50 | U20 02650 | 135 | 170 | 0,7 | 32×60 | U20 82650 | 135 | 164 | 0,73 | N00 57640 S/M3,5×6,9-10IP 2,8 Nm | L05 00850 10IP | |
| 26,6 | | | | | | | | | | | | | |
| 26,7 | | | | | | | | | | | | | |
| 26,8 | | | | | | | | | | | | | |
| 26,9 | | | | | | | | | | | | | |
| **27,0** | 50 | U20 02700 | 135 | 170 | 0,7 | 32×60 | U20 82700 | 135 | 164 | 0,74 | N00 57640 S/M3,5×6,9-10IP 2,8 Nm | L05 00850 10IP | |
| 27,1 | | | | | | | | | | | | | |
| 27,2 | | | | | | | | | | | | | |
| 27,3 | | | | | | | | | | | | | |
| 27,4 | | | | | | | | | | | | | |
| **27,5** | 50 | U20 02750 | 140 | 175 | 0,8 | 40×68 | U20 92750 | 140 | 169 | 1,11 | N00 57640 S/M3,5×6,9-10IP 2,8 Nm | L05 00850 10IP | |
| 27,6 | | | | | | | | | | | | | |
| 27,7 | | | | | | | | | | | | | |

For other diameters see following page.



Patent applied for inside and outside Germany (ABS)
EP 1 296 793 and other patents and patent applications (KUB Duon)

# Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×D | ● | ● | ◐ | ○ | ◐ | ◐ | ○ | ✕ | ● | ○ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 136 ✕ not possible





Areas of use:

- P high tensile strength steels, heat treated steels and tool steels
- K grey cast iron, SG cast iron
- N cast aluminium alloys, brass and bronze which produce short chips
- ● main use
- ◐ alternative cutting material

**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.
**Order example insert:**
for ∅ 24.5 mm, coating BK84,
Order No.: H60 24500.84

**Supply includes:**
KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

| Basic recommendation | | | | alternative for ... | | | | Basic recommendation | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Insert | | for workpiece material | | higher cutting speed / greater strength → | | | | Insert | | |
| ISO-Code enter carbide | Order No. | BK8440 | BK2715 | BK84 | BK8125 | BK2740 | BK8140 | ISO-Code enter carbide | Order No. | BK7710 |
| XOHX1003-24,3.... | H60 24300. .. | | | | | | | XOHX1003-24,3-62... | H62 24300. .. | |
| XOHX1003-24,4.... | H60 24400. .. | | | | | | | XOHX1003-24,4-62... | H62 24400. .. | |
| **XOHX1003-24,5....** | **H60 24500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-24,5-62...** | **H62 24500. ..** | **7710** |
| XOHX1003-24,6.... | H60 24600. .. | | | | | | | XOHX1003-24,6-62... | H62 24600. .. | |
| XOHX1003-24,7.... | H60 24700. .. | | | | | | | XOHX1003-24,7-62... | H62 24700. .. | |
| XOHX12T3-24,8.... | H60 24800. .. | | | | | | | XOHX12T3-24,8-62... | H62 24800. .. | |
| XOHX12T3-24,9.... | H60 24900. .. | | | | | | | XOHX12T3-24,9-62... | H62 24900. .. | |
| **XOHX12T3-25,0....** | **H60 25000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-25,0-62...** | **H62 25000. ..** | **7710** |
| XOHX12T3-25,1.... | H60 25100. .. | | | | | | | XOHX12T3-25,1-62... | H62 25100. .. | |
| XOHX12T3-25,2.... | H60 25200. .. | | | | | | | XOHX12T3-25,2-62... | H62 25200. .. | |
| XOHX12T3-25,3.... | H60 25300. .. | | | | | | | XOHX12T3-25,3-62... | H62 25300. .. | |
| XOHX12T3-25,4.... | H60 25400. .. | | | | | | | XOHX12T3-25,4-62... | H62 25400. .. | |
| **XOHX12T3-25,5....** | **H60 25500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-25,5-62...** | **H62 25500. ..** | **7710** |
| XOHX12T3-25,6.... | H60 25600. .. | | | | | | | XOHX12T3-25,6-62... | H62 25600. .. | |
| XOHX12T3-25,7.... | H60 25700. .. | | | | | | | XOHX12T3-25,7-62... | H62 25700. .. | |
| XOHX12T3-25,8.... | H60 25800. .. | | | | | | | XOHX12T3-25,8-62... | H62 25800. .. | |
| XOHX12T3-25,9.... | H60 25900. .. | | | | | | | XOHX12T3-25,9-62... | H62 25900. .. | |
| **XOHX12T3-26,0....** | **H60 26000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-26,0-62...** | **H62 26000. ..** | **7710** |
| XOHX12T3-26,1.... | H60 26100. .. | | | | | | | XOHX12T3-26,1-62... | H62 26100. .. | |
| XOHX12T3-26,2.... | H60 26200. .. | | | | | | | XOHX12T3-26,2-62... | H62 26200. .. | |
| XOHX12T3-26,3.... | H60 26300. .. | | | | | | | XOHX12T3-26,3-62... | H62 26300. .. | |
| XOHX12T3-26,4.... | H60 26400. .. | | | | | | | XOHX12T3-26,4-62... | H62 26400. .. | |
| **XOHX12T3-26,5....** | **H60 26500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-26,5-62...** | **H62 26500. ..** | **7710** |
| XOHX12T3-26,6.... | H60 26600. .. | | | | | | | XOHX12T3-26,6-62... | H62 26600. .. | |
| XOHX12T3-26,7.... | H60 26700. .. | | | | | | | XOHX12T3-26,7-62... | H62 26700. .. | |
| XOHX12T3-26,8.... | H60 26800. .. | | | | | | | XOHX12T3-26,8-62... | H62 26800. .. | |
| XOHX12T3-26,9.... | H60 26900. .. | | | | | | | XOHX12T3-26,9-62... | H62 26900. .. | |
| **XOHX12T3-27,0....** | **H60 27000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-27,0-62...** | **H62 27000. ..** | **7710** |
| XOHX12T3-27,1.... | H60 27100. .. | | | | | | | XOHX12T3-27,1-62... | H62 27100. .. | |
| XOHX12T3-27,2.... | H60 27200. .. | | | | | | | XOHX12T3-27,2-62... | H62 27200. .. | |
| XOHX12T3-27,3.... | H60 27300. .. | | | | | | | XOHX12T3-27,3-62... | H62 27300. .. | |
| XOHX12T3-27,4.... | H60 27400. .. | | | | | | | XOHX12T3-27,4-62... | H62 27400. .. | |
| **XOHX12T3-27,5....** | **H60 27500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-27,5-62...** | **H62 27500. ..** | **7710** |
| XOHX12T3-27,6.... | H60 27600. .. | | | | | | | XOHX12T3-27,6-62... | H62 27600. .. | |
| XOHX12T3-27,7.... | H60 27700. .. | | | | | | | XOHX12T3-27,7-62... | H62 27700. .. | |

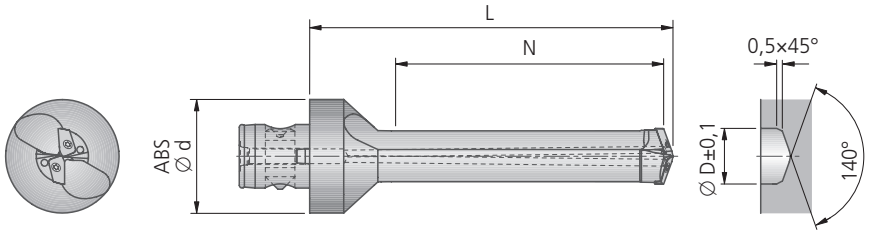
Guideline values for solid drilling: page 134.

# KOMET KUB Duon®

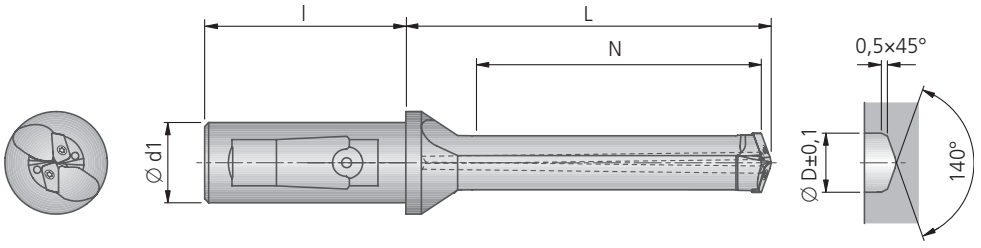
# Ø 27,8 – 31,2 mm

## Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

ABS® connection




Cylindrical shank
(combination shank)
DIN 6535 HE
(similar to DIN 1835 E)
and DIN 6595




| | ABS® | | | | | Cylindrical shank | | | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø D | ABS Ø d | Order No. | N | L | kg ca. | Cylindrical shank Ød1×l | Order No. | N | L | kg ca. | Clamping screw Order No. Article | Screwdriver Order No. Article | |
| 27,8 | | | | | | | | | | | | | |
| 27,9 | | | | | | | | | | | | | |
| **28,0** | 50 | U20 02800 | 140 | 175 | 0,8 | 40×68 | U20 92800 | 140 | 169 | 1,12 | N00 57640 S/M3,5×6,9-10IP 2,8 Nm | L05 00850 10IP | |
| 28,1 | | | | | | | | | | | | | |
| 28,2 | | | | | | | | | | | | | |
| 28,3 | | | | | | | | | | | | | |
| 28,4 | | | | | | | | | | | | | |
| **28,5** | 50 | U20 02850 | 145 | 180 | 0,8 | 40×68 | U20 92850 | 145 | 174 | 1,14 | N00 57640 S/M3,5×6,9-10IP 2,8 Nm | L05 00850 10IP | |
| 28,6 | | | | | | | | | | | | | |
| 28,7 | | | | | | | | | | | | | |
| 28,8 | | | | | | | | | | | | | |
| 28,9 | | | | | | | | | | | | | |
| **29,0** | 50 | U20 02900 | 145 | 180 | 0,8 | 40×68 | U20 92900 | 145 | 174 | 1,16 | N00 57640 S/M3,5×6,9-10IP 2,8 Nm | L05 00850 10IP | |
| 29,1 | | | | | | | | | | | | | |
| 29,2 | | | | | | | | | | | | | |
| 29,3 | | | | | | | | | | | | | |
| 29,4 | | | | | | | | | | | | | |
| **29,5** | 50 | U20 02950 | 150 | 185 | 0,9 | 40×68 | U20 92950 | 150 | 179 | 1,18 | N00 57640 S/M3,5×6,9-10IP 2,8 Nm | L05 00850 10IP | |
| 29,6 | | | | | | | | | | | | | |
| 29,7 | | | | | | | | | | | | | |
| 29,8 | | | | | | | | | | | | | |
| 29,9 | | | | | | | | | | | | | |
| **30,0** | 50 | U20 03000 | 150 | 185 | 0,9 | 40×68 | U20 93000 | 150 | 179 | 1,20 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 30,1 | | | | | | | | | | | | | |
| 30,2 | | | | | | | | | | | | | |
| 30,3 | | | | | | | | | | | | | |
| 30,4 | | | | | | | | | | | | | |
| **30,5** | 50 | U20 03050 | 155 | 190 | 0,9 | 40×68 | U20 93050 | 155 | 184 | 1,22 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 30,6 | | | | | | | | | | | | | |
| 30,7 | | | | | | | | | | | | | |
| 30,8 | | | | | | | | | | | | | |
| 30,9 | | | | | | | | | | | | | |
| **31,0** | 50 | U20 03100 | 155 | 190 | 0,9 | 40×68 | U20 93100 | 155 | 184 | 1,24 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 31,1 | | | | | | | | | | | | | |
| 31,2 | | | | | | | | | | | | | |

For other diameters see following page.



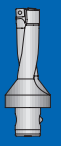
Patent applied for inside and outside Germany (ABS)
EP 1 296 793 and other patents and patent applications (KUB Duon)

# Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×D | ● | ● | ◐ | ○ | ◐ | ◐ | ○ | ✕ | ● | ○ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 136 ✕ not possible





Areas of use:

- P high tensile strength steels, heat treated steels and tool steels
- K grey cast iron, SG cast iron
- N cast aluminium alloys, brass and bronze which produce short chips
- ● main use
- ◐ alternative cutting material

**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.
**Order example insert:**
for ∅ 28.0 mm, coating BK84,
Order No.: H60 28000.84

**Supply includes:**
KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

| Basic recommendation | | | | alternative for ... | | | | Basic recommendation | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Insert | | for workpiece material | | higher cutting speed / greater strength → | | | | Insert | | |
| ISO-Code enter carbide | Order No. | BK8440 | BK2715 | BK84 | BK8125 | BK2740 | BK8140 | ISO-Code enter carbide | Order No. | BK7710 |
| XOHX12T3-27,8... | H60 27800. .. | | | | | | | XOHX12T3-27,8-62... | H62 27800. .. | |
| XOHX12T3-27,9.... | H60 27900. .. | | | | | | | XOHX12T3-27,9-62... | H62 27900. .. | |
| **XOHX12T3-28,0....** | **H60 28000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-28,0-62...** | **H62 28000. ..** | **7710** |
| XOHX12T3-28,1.... | H60 28100. .. | | | | | | | XOHX12T3-28,1-62... | H62 28100. .. | |
| XOHX12T3-28,2.... | H60 28200. .. | | | | | | | XOHX12T3-28,2-62... | H62 28200. .. | |
| XOHX12T3-28,3.... | H60 28300. .. | | | | | | | XOHX12T3-28,3-62... | H62 28300. .. | |
| XOHX12T3-28,4.... | H60 28400. .. | | | | | | | XOHX12T3-28,4-62... | H62 28400. .. | |
| **XOHX12T3-28,5....** | **H60 28500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-28,5-62...** | **H62 28500. ..** | **7710** |
| XOHX12T3-28,6.... | H60 28600. .. | | | | | | | XOHX12T3-28,6-62... | H62 28600. .. | |
| XOHX12T3-28,7.... | H60 28700. .. | | | | | | | XOHX12T3-28,7-62... | H62 28700. .. | |
| XOHX12T3-28,8.... | H60 28800. .. | | | | | | | XOHX12T3-28,8-62... | H62 28800. .. | |
| XOHX12T3-28,9.... | H60 28900. .. | | | | | | | XOHX12T3-28,9-62... | H62 28900. .. | |
| **XOHX12T3-29,0....** | **H60 29000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-29,0-62...** | **H62 29000. ..** | **7710** |
| XOHX12T3-29,1.... | H60 29100. .. | | | | | | | XOHX12T3-29,1-62... | H62 29100. .. | |
| XOHX12T3-29,2.... | H60 29200. .. | | | | | | | XOHX12T3-29,2-62... | H62 29200. .. | |
| XOHX12T3-29,3.... | H60 29300. .. | | | | | | | XOHX12T3-29,3-62... | H62 29300. .. | |
| XOHX12T3-29,4.... | H60 29400. .. | | | | | | | XOHX12T3-29,4-62... | H62 29400. .. | |
| **XOHX12T3-29,5....** | **H60 29500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-29,5-62...** | **H62 29500. ..** | **7710** |
| XOHX12T3-29,6.... | H60 29600. .. | | | | | | | XOHX12T3-29,6-62... | H62 29600. .. | |
| XOHX12T3-29,7.... | H60 29700. .. | | | | | | | XOHX12T3-29,7-62... | H62 29700. .. | |
| XOHX1504-29,8.... | H60 29800. .. | | | | | | | XOHX1504-29,8-62... | H62 29800. .. | |
| XOHX1504-29,9.... | H60 29900. .. | | | | | | | XOHX1504-29,9-62... | H62 29900. .. | |
| **XOHX1504-30,0....** | **H60 30000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-30,0-62...** | **H62 30000. ..** | **7710** |
| XOHX1504-30,1.... | H60 30100. .. | | | | | | | XOHX1504-30,1-62... | H62 30100. .. | |
| XOHX1504-30,2.... | H60 30200. .. | | | | | | | XOHX1504-30,2-62... | H62 30200. .. | |
| XOHX1504-30,3.... | H60 30300. .. | | | | | | | XOHX1504-30,3-62... | H62 30300. .. | |
| XOHX1504-30,4.... | H60 30400. .. | | | | | | | XOHX1504-30,4-62... | H62 30400. .. | |
| **XOHX1504-30,5....** | **H60 30500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-30,5-62...** | **H62 30500. ..** | **7710** |
| XOHX1504-30,6.... | H60 30600. .. | | | | | | | XOHX1504-30,6-62... | H62 30600. .. | |
| XOHX1504-30,7.... | H60 30700. .. | | | | | | | XOHX1504-30,7-62... | H62 30700. .. | |
| XOHX1504-30,8.... | H60 30800. .. | | | | | | | XOHX1504-30,8-62... | H62 30800. .. | |
| XOHX1504-30,9.... | H60 30900. .. | | | | | | | XOHX1504-30,9-62... | H62 30900. .. | |
| **XOHX1504-31,0....** | **H60 31000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-31,0-62...** | **H62 31000. ..** | **7710** |
| XOHX1504-31,1.... | H60 31100. .. | | | | | | | XOHX1504-31,1-62... | H62 31100. .. | |
| XOHX1504-31,2.... | H60 31200. .. | | | | | | | XOHX1504-31,2-62... | H62 31200. .. | |

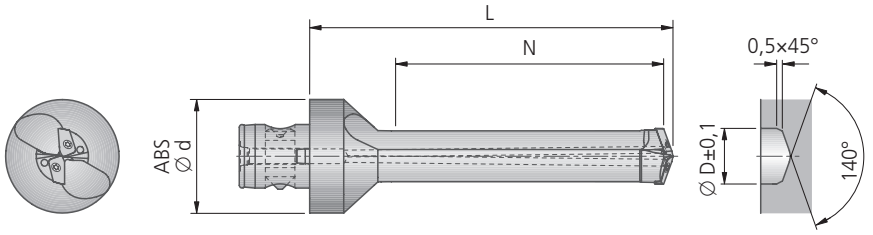
Guideline values for solid drilling: page 134.

# KOMET KUB Duon®

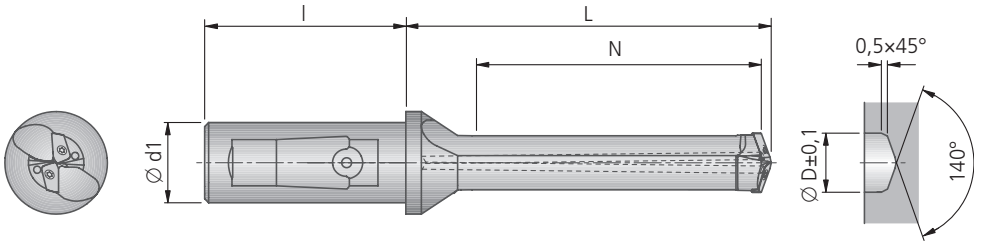
# Ø 31,3 – 34,7 mm

## Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

ABS® connection




Cylindrical shank
(combination shank)
DIN 6535 HE
(similar to DIN 1835 E)
and DIN 6595




| | ABS® | | | | | Cylindrical shank | | | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø D | ABS Ø d | Order No. | N | L | kg ca. | Cylindrical shank Ød1×l | Order No. | N | L | kg ca. | Clamping screw Order No. Article | Screwdriver Order No. Article | |
| 31,3 | | | | | | | | | | | | | |
| 31,4 | | | | | | | | | | | | | |
| **31,5** | 50 | U20 03150 | 160 | 195 | 0,9 | 40×68 | U20 93150 | 160 | 189 | 1,27 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 31,6 | | | | | | | | | | | | | |
| 31,7 | | | | | | | | | | | | | |
| 31,8 | | | | | | | | | | | | | |
| 31,9 | | | | | | | | | | | | | |
| **32,0** | 50 | U20 03200 | 160 | 195 | 0,9 | 40×68 | U20 93200 | 160 | 189 | 1,28 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 32,1 | | | | | | | | | | | | | |
| 32,2 | | | | | | | | | | | | | |
| 32,3 | | | | | | | | | | | | | |
| 32,4 | | | | | | | | | | | | | |
| **32,5** | 50 | U20 03250 | 165 | 200 | 0,9 | 40×68 | U20 93250 | 165 | 194 | 1,32 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 32,6 | | | | | | | | | | | | | |
| 32,7 | | | | | | | | | | | | | |
| 32,8 | | | | | | | | | | | | | |
| 32,9 | | | | | | | | | | | | | |
| **33,0** | 50 | U20 03300 | 165 | 200 | 0,9 | 40×68 | U20 93300 | 165 | 194 | 1,33 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 33,1 | | | | | | | | | | | | | |
| 33,2 | | | | | | | | | | | | | |
| 33,3 | | | | | | | | | | | | | |
| 33,4 | | | | | | | | | | | | | |
| **33,5** | 50 | U20 03350 | 170 | 205 | 0,9 | 40×68 | U20 93350 | 170 | 199 | 1,36 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 33,6 | | | | | | | | | | | | | |
| 33,7 | | | | | | | | | | | | | |
| 33,8 | | | | | | | | | | | | | |
| 33,9 | | | | | | | | | | | | | |
| **34,0** | 50 | U20 03400 | 170 | 205 | 1,0 | 40×68 | U20 93400 | 170 | 199 | 1,37 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 34,1 | | | | | | | | | | | | | |
| 34,2 | | | | | | | | | | | | | |
| 34,3 | | | | | | | | | | | | | |
| 34,4 | | | | | | | | | | | | | |
| **34,5** | 50 | U20 03450 | 175 | 210 | 1,0 | 40×68 | U20 93450 | 175 | 204 | 1,41 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 34,6 | | | | | | | | | | | | | |
| 34,7 | | | | | | | | | | | | | |

For other diameters see following page.



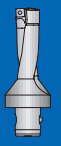
Patent applied for inside and outside Germany (ABS)
EP 1 296 793 and other patents and patent applications (KUB Duon)

# Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×D | ● | ● | ◐ | ○ | ◐ | ◐ | ○ | ✕ | ● | ○ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 136 ✕ not possible





Areas of use:

- P high tensile strength steels, heat treated steels and tool steels
- K grey cast iron, SG cast iron
- N cast aluminium alloys, brass and bronze which produce short chips
- ● main use
- ◐ alternative cutting material

**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.
**Order example insert:**
for ∅ 32.0 mm, coating BK84,
Order No.: H60 32000.84

**Supply includes:**
KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

| Basic recommendation | | | | alternative for ... | | | | Basic recommendation | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Insert | | for workpiece material | | higher cutting speed / greater strength → | | | | Insert | | |
| ISO-Code enter carbide | Order No. | BK8440 | BK2715 | BK84 | BK8125 | BK2740 | BK8140 | ISO-Code enter carbide | Order No. | BK7710 |
| XOHX1504-31,3.... | H60 31300. .. | | | | | | | XOHX1504-31,3-62... | H62 31300. .. | |
| XOHX1504-31,4.... | H60 31400. .. | | | | | | | XOHX1504-31,4-62... | H62 31400. .. | |
| **XOHX1504-31,5....** | **H60 31500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-31,5-62...** | **H62 31500. ..** | **7710** |
| XOHX1504-31,6.... | H60 31600. .. | | | | | | | XOHX1504-31,6-62... | H62 31600. .. | |
| XOHX1504-31,7.... | H60 31700. .. | | | | | | | XOHX1504-31,7-62... | H62 31700. .. | |
| XOHX1504-31,8.... | H60 31800. .. | | | | | | | XOHX1504-31,8-62... | H62 31800. .. | |
| XOHX1504-31,9.... | H60 31900. .. | | | | | | | XOHX1504-31,9-62... | H62 31900. .. | |
| **XOHX1504-32,0....** | **H60 32000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-32,0-62...** | **H62 32000. ..** | **7710** |
| XOHX1504-32,1.... | H60 32100. .. | | | | | | | XOHX1504-32,1-62... | H62 32100. .. | |
| XOHX1504-32,2.... | H60 32200. .. | | | | | | | XOHX1504-32,2-62... | H62 32200. .. | |
| XOHX1504-32,3.... | H60 32300. .. | | | | | | | XOHX1504-32,3-62... | H62 32300. .. | |
| XOHX1504-32,4.... | H60 32400. .. | | | | | | | XOHX1504-32,4-62... | H62 32400. .. | |
| **XOHX1504-32,5....** | **H60 32500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-32,5-62...** | **H62 32500. ..** | **7710** |
| XOHX1504-32,6.... | H60 32600. .. | | | | | | | XOHX1504-32,6-62... | H62 32600. .. | |
| XOHX1504-32,7.... | H60 32700. .. | | | | | | | XOHX1504-32,7-62... | H62 32700. .. | |
| XOHX1504-32,8.... | H60 32800. .. | | | | | | | XOHX1504-32,8-62... | H62 32800. .. | |
| XOHX1504-32,9.... | H60 32900. .. | | | | | | | XOHX1504-32,9-62... | H62 32900. .. | |
| **XOHX1504-33,0....** | **H60 33000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-33,0-62...** | **H62 33000. ..** | **7710** |
| XOHX1504-33,1.... | H60 33100. .. | | | | | | | XOHX1504-33,1-62... | H62 33100. .. | |
| XOHX1504-33,2.... | H60 33200. .. | | | | | | | XOHX1504-33,2-62... | H62 33200. .. | |
| XOHX1504-33,3.... | H60 33300. .. | | | | | | | XOHX1504-33,3-62... | H62 33300. .. | |
| XOHX1504-33,4.... | H60 33400. .. | | | | | | | XOHX1504-33,4-62... | H62 33400. .. | |
| **XOHX1504-33,5....** | **H60 33500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX1504-33,5-62... | H62 33500. .. | **7710** |
| XOHX1504-33,6.... | H60 33600. .. | | | | | | | XOHX1504-33,6-62... | H62 33600. .. | |
| XOHX1504-33,7.... | H60 33700. .. | | | | | | | XOHX1504-33,7-62... | H62 33700. .. | |
| XOHX1504-33,8.... | H60 33800. .. | | | | | | | XOHX1504-33,8-62... | H62 33800. .. | |
| XOHX1504-33,9.... | H60 33900. .. | | | | | | | XOHX1504-33,9-62... | H62 33900. .. | |
| **XOHX1504-34,0....** | **H60 34000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-34,0-62...** | **H62 34000. ..** | **7710** |
| XOHX1504-34,1.... | H60 34100. .. | | | | | | | XOHX1504-34,1-62... | H62 34100. .. | |
| XOHX1504-34,2.... | H60 34200. .. | | | | | | | XOHX1504-34,2-62... | H62 34200. .. | |
| XOHX1504-34,3.... | H60 34300. .. | | | | | | | XOHX1504-34,3-62... | H62 34300. .. | |
| XOHX1504-34,4.... | H60 34400. .. | | | | | | | XOHX1504-34,4-62... | H62 34400. .. | |
| **XOHX1504-34,5....** | **H60 34500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-34,5-62...** | **H62 34500. ..** | **7710** |
| XOHX1504-34,6.... | H60 34600. .. | | | | | | | XOHX1504-34,6-62... | H62 34600. .. | |
| XOHX1504-34,7.... | H60 34700. .. | | | | | | | XOHX1504-34,7-62... | H62 34700. .. | |

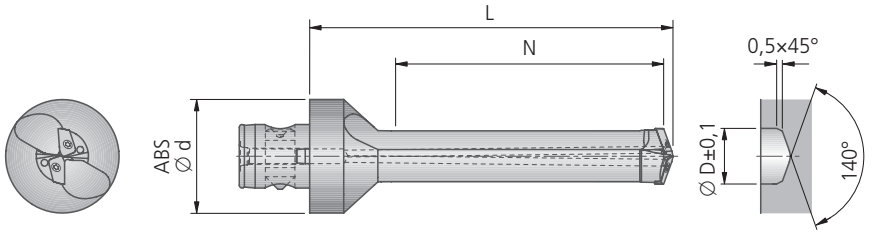
Guideline values for solid drilling: page 134.

# KOMET KUB Duon®

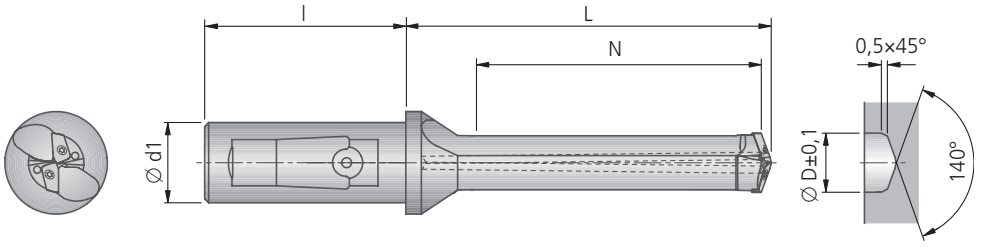
# Ø 34,8 – 38,2 mm

## Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

ABS® connection




Cylindrical shank
(combination shank)
DIN 6535 HE
(similar to DIN 1835 E)
and DIN 6595




| | ABS® | | | | | Cylindrical shank | | | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø D | ABS Ø d | Order No. | N | L | kg ca. | Cylindrical shank Ød1×l | Order No. | N | L | kg ca. | Clamping screw Order No. Article | Screwdriver Order No. Article | |
| 34,8 | | | | | | | | | | | | | |
| 34,9 | | | | | | | | | | | | | |
| **35,0** | 50 | U20 03500 | 175 | 210 | 1,0 | 40×68 | U20 93500 | 175 | 204 | 1,43 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 35,1 | | | | | | | | | | | | | |
| 35,2 | | | | | | | | | | | | | |
| 35,3 | | | | | | | | | | | | | |
| 35,4 | | | | | | | | | | | | | |
| **35,5** | 50 | U20 03550 | 180 | 215 | 1,0 | 40×68 | U20 93550 | 180 | 209 | 1,47 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 35,6 | | | | | | | | | | | | | |
| 35,7 | | | | | | | | | | | | | |
| 35,8 | | | | | | | | | | | | | |
| 35,9 | | | | | | | | | | | | | |
| **36,0** | 50 | U20 03600 | 180 | 215 | 1,0 | 40×68 | U20 93600 | 180 | 209 | 1,49 | N00 57650 S/M4×8,7-15IP 4,3 Nm | L05 00860 15IP | |
| 36,1 | | | | | | | | | | | | | |
| 36,2 | | | | | | | | | | | | | |
| 36,3 | | | | | | | | | | | | | |
| 36,4 | | | | | | | | | | | | | |
| **36,5** | 63 | U20 13650 | 185 | 243 | 1,7 | | – | | | | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 36,6 | | | | | | | | | | | | | |
| 36,7 | | | | | | | | | | | | | |
| 36,8 | | | | | | | | | | | | | |
| 36,9 | | | | | | | | | | | | | |
| **37,0** | 63 | U20 13700 | 185 | 243 | 1,7 | | – | | | | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 37,1 | | | | | | | | | | | | | |
| 37,2 | | | | | | | | | | | | | |
| 37,3 | | | | | | | | | | | | | |
| 37,4 | | | | | | | | | | | | | |
| **37,5** | 63 | U20 13750 | 190 | 248 | 1,77 | | – | | | | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 37,6 | | | | | | | | | | | | | |
| 37,7 | | | | | | | | | | | | | |
| 37,8 | | | | | | | | | | | | | |
| 37,9 | | | | | | | | | | | | | |
| **38,0** | 63 | U20 13800 | 190 | 248 | 1,77 | | – | | | | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 38,1 | | | | | | | | | | | | | |
| 38,2 | | | | | | | | | | | | | |

For other diameters see following page.



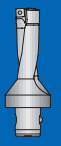
Patent applied for inside and outside Germany (ABS)
EP 1 296 793 and other patents and patent applications (KUB Duon)

## Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×D | ● | ● | ◐ | ○ | ◐ | ◐ | ○ | ✕ | ● | ○ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 136 ✕ not possible





Areas of use:

- P high tensile strength steels, heat treated steels and tool steels
- K grey cast iron, SG cast iron
- N cast aluminium alloys, brass and bronze which produce short chips
- ● main use
- ◐ alternative cutting material

**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.
**Order example insert:**
for ∅ 35.0 mm, coating BK84,
Order No.: H60 35000.84

**Supply includes:**
KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

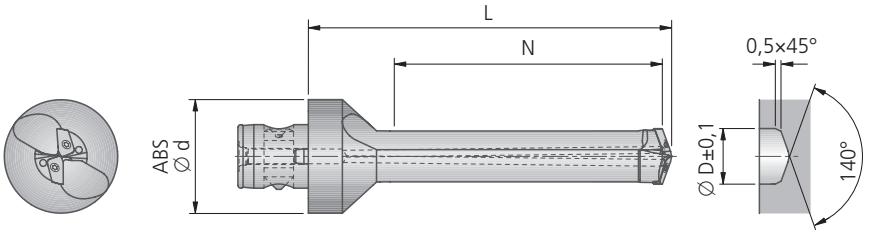
| Basic recommendation | | | | alternative for ... | | | | Basic recommendation | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Insert | | for workpiece material | | higher cutting speed / greater strength → | | | | Insert | | |
| ISO-Code enter carbide | Order No. | BK8440 | BK2715 | BK84 | BK8125 | BK2740 | BK8140 | ISO-Code enter carbide | Order No. | BK7710 |
| XOHX1504-34,8... | H60 34800. .. | | | | | | | XOHX1504-34,8-62... | H62 34800. .. | |
| XOHX1504-34,9.... | H60 34900. .. | | | | | | | XOHX1504-34,9-62... | H62 34900. .. | |
| **XOHX1504-35,0....** | **H60 35000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX1504-35,0-62... | H62 35000. .. | **7710** |
| XOHX1504-35,1.... | H60 35100. .. | | | | | | | XOHX1504-35,1-62... | H62 35100. .. | |
| XOHX1504-35,2.... | H60 35200. .. | | | | | | | XOHX1504-35,2-62... | H62 35200. .. | |
| XOHX1504-35,3.... | H60 35300. .. | | | | | | | XOHX1504-35,3-62... | H62 35300. .. | |
| XOHX1504-35,4.... | H60 35400. .. | | | | | | | XOHX1504-35,4-62... | H62 35400. .. | |
| **XOHX1504-35,5....** | **H60 35500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-35,5-62...** | **H62 35500. ..** | **7710** |
| XOHX1504-35,6.... | H60 35600. .. | | | | | | | XOHX1504-35,6-62... | H62 35600. .. | |
| XOHX1504-35,7.... | H60 35700. .. | | | | | | | XOHX1504-35,7-62... | H62 35700. .. | |
| XOHX1504-35,8.... | H60 35800. .. | | | | | | | XOHX1504-35,8-62... | H62 35800. .. | |
| XOHX1504-35,9.... | H60 35900. .. | | | | | | | XOHX1504-35,9-62... | H62 35900. .. | |
| **XOHX1504-36,0....** | **H60 36000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-36,0-62...** | **H62 36000. ..** | **7710** |
| XOHX1504-36,1.... | H60 36100. .. | | | | | | | XOHX1504-36,1-62... | H62 36100. .. | |
| XOHX1504-36,2.... | H60 36200. .. | | | | | | | XOHX1504-36,2-62... | H62 36200. .. | |
| XOHX2205-36,3.... | H60 36300. .. | | | | | | | XOHX2205-36,3-62... | H62 36300. .. | |
| XOHX2205-36,4.... | H60 36400. .. | | | | | | | XOHX2205-36,4-62... | H62 36400. .. | |
| **XOHX2205-36,5....** | **H60 36500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-36,5-62... | H62 36500. .. | **7710** |
| XOHX2205-36,6.... | H60 36600. .. | | | | | | | XOHX2205-36,6-62... | H62 36600. .. | |
| XOHX2205-36,7.... | H60 36700. .. | | | | | | | XOHX2205-36,7-62... | H62 36700. .. | |
| XOHX2205-36,8.... | H60 36800. .. | | | | | | | XOHX2205-36,8-62... | H62 36800. .. | |
| XOHX2205-36,9.... | H60 36900. .. | | | | | | | XOHX2205-36,9-62... | H62 36900. .. | |
| **XOHX2205-37,0....** | **H60 37000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-37,0-62... | H62 37000. .. | **7710** |
| XOHX2205-37,1.... | H60 37100. .. | | | | | | | XOHX2205-37,1-62... | H62 37100. .. | |
| XOHX2205-37,2.... | H60 37200. .. | | | | | | | XOHX2205-37,2-62... | H62 37200. .. | |
| XOHX2205-37,3.... | H60 37300. .. | | | | | | | XOHX2205-37,3-62... | H62 37300. .. | |
| XOHX2205-37,4.... | H60 37400. .. | | | | | | | XOHX2205-37,4-62... | H62 37400. .. | |
| **XOHX2205-37,5....** | **H60 37500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-37,5-62... | H62 37500. .. | **7710** |
| XOHX2205-37,6.... | H60 37600. .. | | | | | | | XOHX2205-37,6-62... | H62 37600. .. | |
| XOHX2205-37,7.... | H60 37700. .. | | | | | | | XOHX2205-37,7-62... | H62 37700. .. | |
| XOHX2205-37,8.... | H60 37800. .. | | | | | | | XOHX2205-37,8-62... | H62 37800. .. | |
| XOHX2205-37,9.... | H60 37900. .. | | | | | | | XOHX2205-37,9-62... | H62 37900. .. | |
| **XOHX2205-38,0....** | **H60 38000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-38,0-62... | H62 38000. .. | **7710** |
| XOHX2205-38,1.... | H60 38100. .. | | | | | | | XOHX2205-38,1-62... | H62 38100. .. | |
| XOHX2205-38,2.... | H60 38200. .. | | | | | | | XOHX2205-38,2-62... | H62 38200. .. | |

Guideline values for solid drilling: page 134.

# KOMET KUB Duon®

## Ø 38,3 – 41,7 mm

### Twin Cutting Drill with ABS® Connection, R.H. cutting




| | ABS® | | | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|
| Ø D | ABS Ø d | Order No. | N | L | kg ca. | Clamping screw Order No. Article | Screwdriver Order No. Article | |
| 38,3 | 63 | U20 13850 | 195 | 253 | 1,84 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 38,4 | | | | | | | | |
| **38,5** | | | | | | | | |
| 38,6 | | | | | | | | |
| 38,7 | | | | | | | | |
| 38,8 | 63 | U20 13900 | 195 | 253 | 1,84 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 38,9 | | | | | | | | |
| **39,0** | | | | | | | | |
| 39,1 | | | | | | | | |
| 39,2 | | | | | | | | |
| 39,3 | 63 | U20 13950 | 200 | 258 | 1,91 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 39,4 | | | | | | | | |
| **39,5** | | | | | | | | |
| 39,6 | | | | | | | | |
| 39,7 | | | | | | | | |
| 39,8 | 63 | U20 14000 | 200 | 258 | 1,91 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 39,9 | | | | | | | | |
| **40,0** | | | | | | | | |
| 40,1 | | | | | | | | |
| 40,2 | | | | | | | | |
| 40,3 | 63 | U20 14050 | 205 | 263 | 1,99 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 40,4 | | | | | | | | |
| **40,5** | | | | | | | | |
| 40,6 | | | | | | | | |
| 40,7 | | | | | | | | |
| 40,8 | 63 | U20 14100 | 205 | 263 | 1,99 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 40,9 | | | | | | | | |
| **41,0** | | | | | | | | |
| 41,1 | | | | | | | | |
| 41,2 | | | | | | | | |
| 41,3 | 63 | U20 14150 | 210 | 268 | 2,08 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 41,4 | | | | | | | | |
| **41,5** | | | | | | | | |
| 41,6 | | | | | | | | |
| 41,7 | | | | | | | | |

For other diameters see following page.



Patent applied for inside and outside Germany (ABS)
EP 1 296 793 and other patents and patent applications (KUB Duon)

## Twin Cutting Drill with ABS® Connection, R.H. cutting



| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×D | ● | ● | ◐ | ○ | ◐ | ◐ | ○ | ✕ | ● | ○ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 136 ✕ not possible

### Areas of use:

- P high tensile strength steels, heat treated steels and tool steels
- K grey cast iron, SG cast iron
- N cast aluminium alloys, brass and bronze which produce short chips
- ● main use
- ◐ alternative cutting material

**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.
**Order example insert:**
for ∅ 39.0 mm, coating BK84,
Order No.: H60 39000.84

### Supply includes:

KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

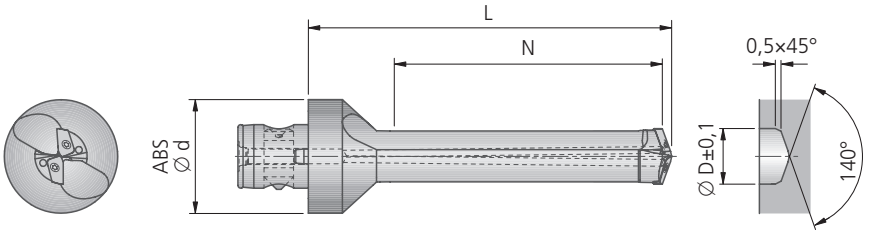
| Basic recommendation | | | | alternative for ... | | | | Basic recommendation | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Insert | | for workpiece material | | higher cutting speed / greater strength → | | | | Insert | | |
| ISO-Code enter carbide | Order No. | BK8440 | BK2715 | BK84 | BK8125 | BK2740 | BK8140 | ISO-Code enter carbide | Order No. | BK7710 |
| XOHX2205-38,3.... | H60 38300. .. | | | | | | | XOHX2205-38,3-62... | H62 38300. .. | |
| XOHX2205-38,4.... | H60 38400. .. | | | | | | | XOHX2205-38,4-62... | H62 38400. .. | |
| **XOHX2205-38,5....** | **H60 38500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-38,5-62...** | **H62 38500. ..** | **7710** |
| XOHX2205-38,6.... | H60 38600. .. | | | | | | | XOHX2205-38,6-62... | H62 38600. .. | |
| XOHX2205-38,7.... | H60 38700. .. | | | | | | | XOHX2205-38,7-62... | H62 38700. .. | |
| XOHX2205-38,8.... | H60 38800. .. | | | | | | | XOHX2205-38,8-62... | H62 38800. .. | |
| XOHX2205-38,9.... | H60 38900. .. | | | | | | | XOHX2205-38,9-62... | H62 38900. .. | |
| **XOHX2205-39,0....** | **H60 39000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-39,0-62...** | **H62 39000. ..** | **7710** |
| XOHX2205-39,1.... | H60 39100. .. | | | | | | | XOHX2205-39,1-62... | H62 39100. .. | |
| XOHX2205-39,2.... | H60 39200. .. | | | | | | | XOHX2205-39,2-62... | H62 39200. .. | |
| XOHX2205-39,3.... | H60 39300. .. | | | | | | | XOHX2205-39,3-62... | H62 39300. .. | |
| XOHX2205-39,4.... | H60 39400. .. | | | | | | | XOHX2205-39,4-62... | H62 39400. .. | |
| **XOHX2205-39,5....** | **H60 39500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-39,5-62... | H62 39500. .. | **7710** |
| XOHX2205-39,6.... | H60 39600. .. | | | | | | | XOHX2205-39,6-62... | H62 39600. .. | |
| XOHX2205-39,7.... | H60 39700. .. | | | | | | | XOHX2205-39,7-62... | H62 39700. .. | |
| XOHX2205-39,8.... | H60 39800. .. | | | | | | | XOHX2205-39,8-62... | H62 39800. .. | |
| XOHX2205-39,9.... | H60 39900. .. | | | | | | | XOHX2205-39,9-62... | H62 39900. .. | |
| **XOHX2205-40,0....** | **H60 40000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-40,0-62...** | **H62 40000. ..** | **7710** |
| XOHX2205-40,1.... | H60 40100. .. | | | | | | | XOHX2205-40,1-62... | H62 40100. .. | |
| XOHX2205-40,2.... | H60 40200. .. | | | | | | | XOHX2205-40,2-62... | H62 40200. .. | |
| XOHX2205-40,3.... | H60 40300. .. | | | | | | | XOHX2205-40,3-62... | H62 40300. .. | |
| XOHX2205-40,4.... | H60 40400. .. | | | | | | | XOHX2205-40,4-62... | H62 40400. .. | |
| **XOHX2205-40,5....** | **H60 40500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-40,5-62... | H62 40500. .. | **7710** |
| XOHX2205-40,6.... | H60 40600. .. | | | | | | | XOHX2205-40,6-62... | H62 40600. .. | |
| XOHX2205-40,7.... | H60 40700. .. | | | | | | | XOHX2205-40,7-62... | H62 40700. .. | |
| XOHX2205-40,8.... | H60 40800. .. | | | | | | | XOHX2205-40,8-62... | H62 40800. .. | |
| XOHX2205-40,9.... | H60 40900. .. | | | | | | | XOHX2205-40,9-62... | H62 40900. .. | |
| **XOHX2205-41,0....** | **H60 41000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-41,0-62... | H62 41000. .. | **7710** |
| XOHX2205-41,1.... | H60 41100. .. | | | | | | | XOHX2205-41,1-62... | H62 41100. .. | |
| XOHX2205-41,2.... | H60 41200. .. | | | | | | | XOHX2205-41,2-62... | H62 41200. .. | |
| XOHX2205-41,3.... | H60 41300. .. | | | | | | | XOHX2205-41,3-62... | H62 41300. .. | |
| XOHX2205-41,4.... | H60 41400. .. | | | | | | | XOHX2205-41,4-62... | H62 41400. .. | |
| **XOHX2205-41,5....** | **H60 41500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-41,5-62... | H62 41500. .. | **7710** |
| XOHX2205-41,6.... | H60 41600. .. | | | | | | | XOHX2205-41,6-62... | H62 41600. .. | |
| XOHX2205-41,7.... | H60 41700. .. | | | | | | | XOHX2205-41,7-62... | H62 41700. .. | |

Guideline values for solid drilling: page 134.

# KOMET KUB Duon®

## Ø 41,8 – 44,2 mm

Twin Cutting Drill with ABS® Connection, R.H. cutting




| | ABS® | | | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|
| Ø D | ABS Ø d | Order No. | N | L | kg ca. | Clamping screw Order No. Article | Screwdriver Order No. Article | |
| 41,8 | 63 | U20 14200 | 210 | 268 | 2,08 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 41,9 | | | | | | | | |
| **42,0** | | | | | | | | |
| 42,1 | | | | | | | | |
| 42,2 | | | | | | | | |
| 42,3 | 63 | U20 14250 | 215 | 273 | 0,17 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 42,4 | | | | | | | | |
| **42,5** | | | | | | | | |
| 42,6 | | | | | | | | |
| 42,7 | | | | | | | | |
| 42,8 | 63 | U20 14300 | 215 | 273 | 0,17 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 42,9 | | | | | | | | |
| **43,0** | | | | | | | | |
| 43,1 | | | | | | | | |
| 43,2 | | | | | | | | |
| 43,2 | 63 | U20 14350 | 220 | 278 | 2,23 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 43,4 | | | | | | | | |
| **43,5** | | | | | | | | |
| 43,6 | | | | | | | | |
| 43,7 | | | | | | | | |
| 43,8 | 63 | U20 14400 | 220 | 278 | 2,23 | N00 57670 S/M5×10,4-20IP 6,25 Nm | L05 00870 20IP | |
| 43,9 | | | | | | | | |
| **44,0** | | | | | | | | |
| 44,1 | | | | | | | | |
| 44,2 | | | | | | | | |



Patent applied for inside and outside Germany (ABS)
EP 1 296 793 and other patents and patent applications (KUB Duon)

## Twin Cutting Drill with ABS® Connection, R.H. cutting



| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5×D | ● | ● | ◐ | ○ | ◐ | ◐ | ○ | ✕ | ● | ○ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 136 ✕ not possible

### Areas of use:

- P high tensile strength steels, heat treated steels and tool steels
- K grey cast iron, SG cast iron
- N cast aluminium alloys, brass and bronze which produce short chips
- ● main use
- ◐ alternative cutting material

**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.
**Order example insert:**
for ∅ 42.0 mm, coating BK84,
Order No.: H60 42000.84

### Supply includes:

KUB Duon® drill with assembly parts. Please order accessories and insert (pack of 2 inserts) separately.

| Basic recommendation | | | | alternative for ... | | | | Basic recommendation | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Insert | | for workpiece material | | higher cutting speed / greater strength → | | | | Insert | | |
| ISO-Code enter carbide | Order No. | BK8440 | BK2715 | BK84 | BK8125 | BK2740 | BK8140 | ISO-Code enter carbide | Order No. | BK7710 |
| XOHX2205-41,8.... | H60 41800. .. | | | | | | | XOHX2205-41,8-62... | H62 41800. .. | |
| XOHX2205-41,9.... | H60 41900. .. | | | | | | | XOHX2205-41,9-62... | H62 41900. .. | |
| **XOHX2205-42,0....** | **H60 42000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-42,0-62...** | **H62 42000. ..** | **7710** |
| XOHX2205-42,1.... | H60 42100. .. | | | | | | | XOHX2205-42,1-62... | H62 42100. .. | |
| XOHX2205-42,2.... | H60 42200. .. | | | | | | | XOHX2205-42,2-62... | H62 42200. .. | |
| XOHX2205-42,3.... | H60 42300. .. | | | | | | | XOHX2205-42,3-62... | H62 42300. .. | |
| XOHX2205-42,4.... | H60 42400. .. | | | | | | | XOHX2205-42,4-62... | H62 42400. .. | |
| **XOHX2205-42,5....** | **H60 42500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-42,5-62...** | **H62 42500. ..** | **7710** |
| XOHX2205-42,6.... | H60 42600. .. | | | | | | | XOHX2205-42,6-62... | H62 42600. .. | |
| XOHX2205-42,7.... | H60 42700. .. | | | | | | | XOHX2205-42,7-62... | H62 42700. .. | |
| XOHX2205-42,8.... | H60 42800. .. | | | | | | | XOHX2205-42,8-62... | H62 42800. .. | |
| XOHX2205-42,9.... | H60 42900. .. | | | | | | | XOHX2205-42,9-62... | H62 42900. .. | |
| **XOHX2205-43,0....** | **H60 43000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-43,0-62... | H62 43000. .. | **7710** |
| XOHX2205-43,1.... | H60 43100. .. | | | | | | | XOHX2205-43,1-62... | H62 43100. .. | |
| XOHX2205-43,2.... | H60 43200. .. | | | | | | | XOHX2205-43,2-62... | H62 43200. .. | |
| XOHX2205-43,3.... | H60 43300. .. | | | | | | | XOHX2205-43,3-62... | H62 43300. .. | |
| XOHX2205-43,4.... | H60 43400. .. | | | | | | | XOHX2205-43,4-62... | H62 43400. .. | |
| **XOHX2205-43,5....** | **H60 43500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-43,5-62... | H62 43500. .. | **7710** |
| XOHX2205-43,6.... | H60 43600. .. | | | | | | | XOHX2205-43,6-62... | H62 43600. .. | |
| XOHX2205-43,7.... | H60 43700. .. | | | | | | | XOHX2205-43,7-62... | H62 43700. .. | |
| XOHX2205-43,8.... | H60 43800. .. | | | | | | | XOHX2205-43,8-62... | H62 43800. .. | |
| XOHX2205-43,9.... | H60 43900. .. | | | | | | | XOHX2205-43,9-62... | H62 43900. .. | |
| **XOHX2205-44,0....** | **H60 44000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-44,0-62...** | **H62 44000. ..** | **7710** |
| XOHX2205-44,1.... | H60 44100. .. | | | | | | | XOHX2205-44,1-62... | H62 44100. .. | |
| XOHX2205-44,2.... | H60 44200. .. | | | | | | | XOHX2205-44,2-62... | H62 44200. .. | |

Guideline values for solid drilling: page 134.

# KOMET KUB Duon®

# Ø 17,3 – 44,2 mm

## Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

| Guideline values for solid drilling | | | | | | $v_c$ | Max. feed f (mm/rev) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 5×D | | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | Cutting speed $v_c$ (m/min) | Ø 17,3 – 20,7 | Ø 20,8 – 29,7 | Ø 29,8 – 36,2 | Ø 36,3 – 44,2 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | – | – | – | – | – |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 140 | 0,15 | 0,20 | 0,22 | 0,25 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 160 | 0,15 | 0,20 | 0,22 | 0,25 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 120 | 0,15 | 0,20 | 0,25 | 0,30 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 100 | 0,15 | 0,18 | 0,20 | 0,25 |
| P | 4.1 | | | HSS | | – | – | – | – | – |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | – | – | – | – | – |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | – | – | – | – | – |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | – | – | – | – | – |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | – | – | – | – | – |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | – | – | – | – | – |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 140 | 0,30 | 0,40 | 0,50 | 0,55 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 100 | 0,20 | 0,30 | 0,40 | 0,50 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 120 | 0,25 | 0,35 | 0,45 | 0,50 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 100 | 0,20 | 0,30 | 0,40 | 0,45 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 120 | 0,20 | 0,30 | 0,40 | 0,45 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 100 | 0,25 | 0,35 | 0,45 | 0,50 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 80 | 0,20 | 0,30 | 0,35 | 0,40 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 180 | 0,30 | 0,40 | 0,45 | 0,50 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | – | – | – | – | – |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 600 | 0,20 | 0,20 | 0,25 | 0,30 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 500 | 0,20 | 0,20 | 0,25 | 0,30 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 350 | 0,20 | 0,20 | 0,25 | 0,30 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | – | – | – | – | – |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | – | – | – | – | – |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

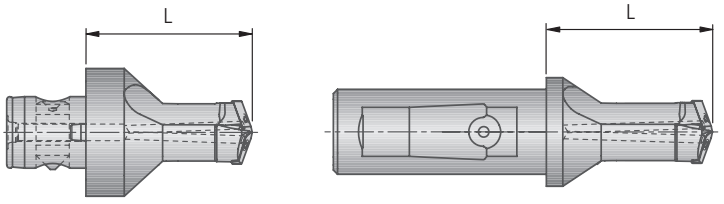


Important: See chapter 8 for more application details and safety notes!

# Twin Cutting Drill with ABS® Connection and Cylindrical Shank, R.H. cutting

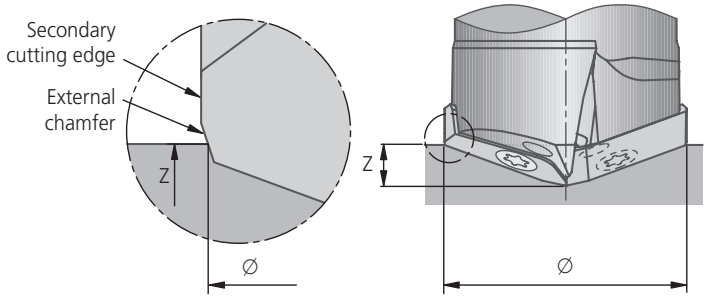
## for pre-centering from drilling depth > 5×D






**Application notes for pre-centering**

- from drilling depth > 5 × D (tools to customer requirement)
- where drilling starts on surfaces which are angled or have not been pre-machined
- where there are unstable conditions because of large tool overhang




**Method 1:**
Determining the centre depth Z

| Size | Centre depth Z |
|---|---|
| 1 | 2,7 mm |
| 2 | 3,3 mm |
| 3 | 4,0 mm |
| 4 | 4,7 mm |
| 5 | 6,5 mm |

**Method 2:**
Determining the centre dia.

| Size | Centre dia. |
|---|---|
| 1 | 17,3 mm |
| 2 | 20,8 mm |
| 3 | 24,8 mm |
| 4 | 29,8 mm |
| 5 | 36,5 mm |

| Size | for bore-Ø | Nominal-Ø | L | Connection | Order No. | Insert |
|---|---|---|---|---|---|---|
| 1 | 17,3 – 20,7 | 17,5 | 47,75 | ABS50 | **U22 21750** | H60 17500.. (XOHX0802..) |
| | | | 36,75 | 25×56 | **U22 71750** | |
| 2 | 20,8 – 24,7 | 21 | 51,2 | ABS50 | **U22 22100** | H60 21000.. (XOHX1003..) |
| | | | 40,2 | 32×60 | **U22 82100** | |
| 3 | 24,8 – 29,7 | 25 | 55,14 | ABS50 | **U22 22500** | H60 25000.. (XOHX12T3..) |
| | | | 44,14 | 32×60 | **U22 82500** | |
| 4 | 29,8 – 36,2 | 30 | 60 | ABS50 | **U22 23000** | H60 30000.. (XOHX1504..) |
| | | | 49 | 40×68 | **U22 93000** | |
| 5 | 36,3 – 44,2 | 36,5 | 94,5 | ABS63 | **U22 43650** | H60 36500.. (XOHX2205..) |

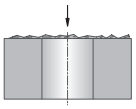
Short spot drills for KUB Duon® are fitted with standard H60… inserts.

**General note: Drill until the chamfer can be seen at the external bore diameter**

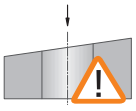
Patent applied for inside and outside Germany (ABS)
EP 1 296 793 and other patents and patent applications (KUB Duon)

## Technical Notes

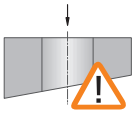


1. 

**Starting on uneven surfaces (cast surfaces)**
- possible in principle
- reduce feed rate when starting bore

2. 

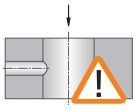
**Starting on angled surfaces**
- spot face surface before starting bore
- avoid chips jams

3. 

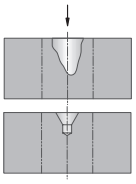
**Angled bore exit**
- possible under certain conditions
- reduce feed rate if necessary

4. 

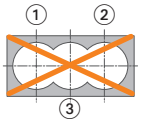
**Starting on cambered surfaces**
- centered boring can be started with reduced feed rate
- spot facing is required if the point for starting the bore is outside the radius centre

5. 

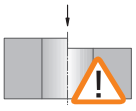
**Drilling through a cross bore**
- halve feed rate at interruption
- cross bore max. 1/3 of bore diameter
- off-centre cross bore not possible

6. 

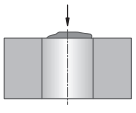
**Starting on a groove or large centering bore**
- possible under certain conditions
- reduce feed rate if necessary
- face beforehand where centre is particularly large

7. 

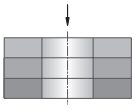

**Drilling a chamber**
- not possible

8. 

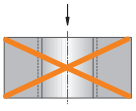
**Starting on an edge**
- start point must be flat

9. 

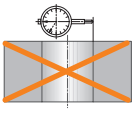
**Starting on a welded seam**
- reduce feed rate when starting bore
- face beforehand if necessary

10. 

**Drilling through stacked plates**
- possible in principle
- avoid large spaces between elements

11. 

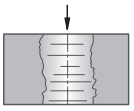
**Roughing**
- not possible

12. 

**adjustable**
- not possible
- dimensional adjustment of diameter by means of inserts



**Short tool life** types of wear on inserts
- cutting speed to high → select correct cutting speed
- cutting material with too little wear resistance → select grade with higher wear resistance
- tool overhang too great → if possible use shorter tool
- damaged insert seating → check tool, change if necessary
- clamping device not stable enough → improve stability
- run-out error → check tool, adaptor and spindle

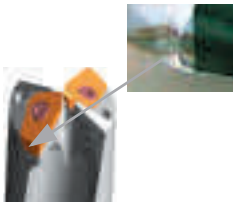


**Bad surface finish**
- chip jam on external cutting edge

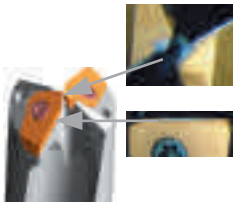
→ improve cutting parameters: increase cutting speed reduce feed
→ check cutting parameters: reduce feed rate when starting bore



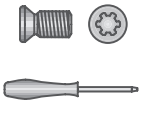
**Friction marks on tool shank**
- bore diameter too small → check setting
- chip removal problems → improve cutting parameters, check geometry of inserts



**Wear**
- cutting material not sufficiently wear resistant → better wear resistant material
- cutting speed too high → reduce cutting speed
- run-out error → check tool, adaptor and spindle



**Wear, micro fractures**
- cutting material too hard → use tougher cutting material with higher tensile strength
- feed rate not reduced when starting bore → reduce feed rate when starting bore and drilling out
- run-out error → check tool, adaptor and spindle



**Securing the inserts**
- wrong screwdriver used → only use Torx Plus screws and screwdriver
- starting torque too low → Check starting torques. Optimum starting torques only possible with Torx Plus

1

Extremely high performance data matched by a very high level of process reliability for drilling depths of up to 9 × D.

The KOMET KUB Centron® can be used to reliably machine virtually all materials.




### ① Inserts

New cutting materials and geometries guarantee maximum tool life and reliable machining.

The internal and external inserts are identical. This prevents confusion.

### ② Central drill bit

The central drill bit guides the solid drill precisely in the bore axis. This means dimensional stability even at bore depths of up to 9 × D.

Optimised concentricity properties for the whole system mean the central drill bit and for the inserts have a noticeably longer life.

### ③ Guide pads

The carbide guide pads prevent the drill from deflecting at the bore exit and reduce narrowing to a minimum (see "Setting the guide pads...").

The screw connection allows easy changing and setting on site by the user over the whole diameter range. Optimal guide control and high wear resistance through top quality coatings.



**BENEFITS for you:**

- High production reliability for boring depths up to 9×D
- Short process times from high performance parameters
- Long tool life means low operating costs
- Modular design gives high flexibility
- Reliable machining in almost any materials
- Suitable for rotating and stationary applications and for vertical and horizontal applications
- Combination options reduce tool costs


| KOMET KUB Centron® | Page |
|---|---|
| ABS® Connection | 140 – 143 |
| R.H. cutting<br>Drilling depth 4×D - 9×D – ∅ 20 - 81 mm | |
| Technical Notes | 144 |
| Guideline values for solid drilling | |
| Alternative Inserts | 145 |
| Assembly parts / accessories | 146 – 147 |
| Assembly instructions | 150 – 151 |
| Technical Informations | 148 |
| Problems → Causes → Solutions | 149 |



| KOMET KUB® V464 | |
|---|---|
| ABS® T Connection | 152 |
| R.H. cutting<br>Drilling depth 6×D – ∅ 80 - 155 mm | |
| Technical Notes | 154 |
| Guideline values for solid drilling | |
| Alternative Inserts | 155 |
| Assembly parts / accessories | 153 |


### ④ Connection point

The new-style connection point allows high torques to be transferred.

Central positioning is produced by means of an accurately fitting centering spigot. Two tapered screws which act in the direction of the torque pull the drill head onto large drive pins, producing a precise and stable connection between the drill head and the basic element.

### ⑤ Basic element

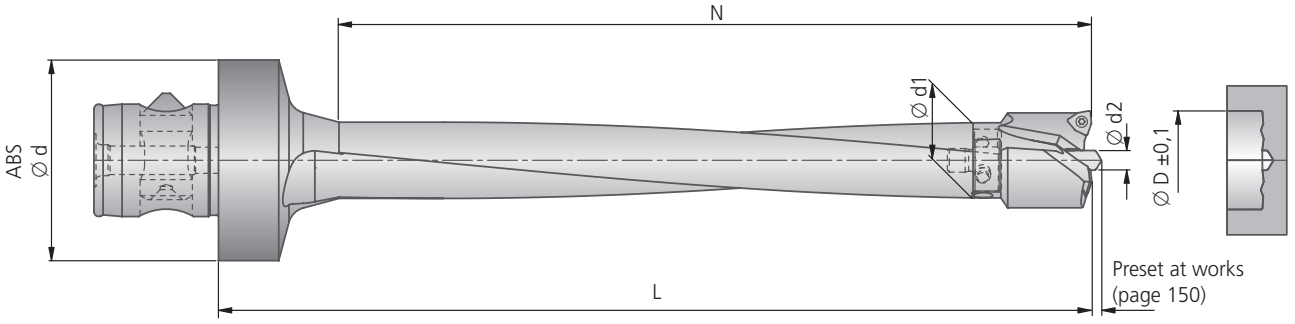
The newly designed chip channels improve chip removal and at the same time increase the rigidity of the tool body. The modular design is service-friendly and increases flexibility because of the bore diameters which are available.

With the tried and tested ABS connection, the KUB Centron® has no connection problems.

# KOMET KUB Centron®

## Ø 20 – 54 mm

### Insert Drill (drill head/basic element) with ABS® Connection, R.H. cutting




| Drill Head | | | Basic recommendation | | | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|
| | | | Insert -01 -11 | | | for workpiece material | | Clamping screw | Screwdriver |
| Ø D | Order No. | kg | Order No. ▽▽ Size | ISO-Code | Piece | P M K N S H | | Order No. Article | Order No. Article |
| 20,0 | V46 50200 | 0,03 | W29 10010.048425<br>W29 10010.047930<br>W29 10010.0462<br>W29 10110.0477 | WOEX 030204-01 BK8425<br>WOEX 030204-01 BK7930<br>WOEX 030204-01 BK62<br>WOEX 030204-11 BK77 | 2 | | | N00 56041<br>S/M2×4,3-6IP<br>0,62 Nm | L05 00810<br>6IP |
| 21,0 | V46 50210 | 0,04 | | | | | | | |
| 22,0 | V46 50220 | 0,04 | | | | | | | |
| 23,0 | V46 50230 | 0,04 | | | | | | | |
| 24,0 | V46 50240 | 0,05 | | | | | | | |
| 25,0 | V46 50250 | 0,05 | | | | | | | |
| 26,0 | V46 50260 | 0,05 | W29 18010.048425<br>W29 18010.047930<br>W29 18010.0462<br>W29 18110.0477 | WOEX 040304-01 BK8425<br>WOEX 040304-01 BK7930<br>WOEX 040304-01 BK62<br>WOEX 040304-11 BK77 | 2 | | | N00 57553<br>S/M2,2×5,5-6IP<br>1,01 Nm | L05 00810<br>6IP |
| 27,0 | V46 50270 | 0,06 | | | | | | | |
| 28,0 | V46 50280 | 0,06 | | | | | | | |
| 29,0 | V46 50290 | 0,06 | | | | | | | |
| 30,0 | V46 50300 | 0,07 | | | | | | | |
| 31,0 | V46 50310 | 0,07 | | | | | | | |
| 32,0 | V46 50320 | 0,07 | | | | | | | |
| 33,0 | V46 50330 | 0,09 | W29 24010.048425<br>W29 24010.047930<br>W29 24010.0461<br>W29 24110.0477 | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK61<br>WOEX 05T304-11 BK77 | 2 | | | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| 34,0 | V46 50340 | 0,09 | | | | | | | |
| 35,0 | V46 50350 | 0,09 | | | | | | | |
| 36,0 | V46 50360 | 0,10 | | | | | | | |
| 37,0 | V46 50370 | 0,10 | | | | | | | |
| 38,0 | V46 50380 | 0,11 | | | | | | | |
| 39,0 | V46 50390 | 0,11 | | | | | | | |
| 40,0 | V46 50400 | 0,13 | W29 24010.048425<br>W29 24010.047930<br>W29 24010.0461<br>W29 24110.0477 | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK61<br>WOEX 05T304-11 BK77 | 2 | | | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| 41,0 | V46 50410 | 0,16 | | | | | | | |
| 42,0 | V46 50420 | 0,16 | | | | | | | |
| 43,0 | V46 50430 | 0,16 | | | | | | | |
| 44,0 | V46 50440 | 0,16 | | | | | | | |
| 45,0 | V46 50450 | 0,16 | | | | | | | |
| 46,0 | V46 50460 | 0,18 | W29 34010.048425<br>W29 34010.047930<br>W29 34010.0461<br>W29 34110.0477 | WOEX 06T304-01 BK8425<br>WOEX 06T304-01 BK7930<br>WOEX 06T304-01 BK61<br>WOEX 06T304-11 BK77 | 2 | | | N00 57521<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |
| 47,0 | V46 50470 | 0,18 | | | | | | | |
| 48,0 | V46 50480 | 0,19 | | | | | | | |
| 49,0 | V46 50490 | 0,20 | | | | | | | |
| 50,0 | V46 50500 | 0,21 | | | | | | | |
| 51,0 | V46 50510 | 0,22 | | | | | | | |
| 52,0 | V46 50520 | 0,22 | | | | | | | |
| 53,0 | V46 50530 | 0,23 | | | | | | | |
| 54,0 | V46 50540 | 0,24 | | | | | | | |

Further diameters on request.

**Supply includes:** Basic element with assembly parts. Drill head with mounting parts.
Please order insert, central drill bit and accessories separately.
For assembly parts and accessories, see page 146.


Patent applied for inside and outside Germany (ABS), EP 0 586 423 and other patent applications (KUB Centron)

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-9×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 148 ✕ not possible

| Central drill bit | | | | Basic element | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Order No. | Coating | Ø d2 | for workpiece material P M K N S H | ABS Ø d | L/D* ~ | Order No. | Ø d1 | N | L | kg |
| V95 10012.0089<br>V95 10012.0090<br>V95 10310.8450 | HSS TiN<br>HSS TiAlN<br>VHM TiAlN/TiN | 5 | ● ◐ ● ● ◐ ◐ | 50 | 4×D | V47 20201 | 19 | 113 | 145 | 0,52 |
| | | | | 50 | 6×D | V47 40201 | 19 | 150 | 185 | 0,55 |
| | | | | 50 | 8×D | V47 60201 | 19 | 200 | 235 | 0,63 |
| V95 10022.0089<br>V95 10022.0090<br>V95 10320.8450 | HSS TiN<br>HSS TiAlN<br>VHM TiAlN/TiN | 6 | ● ◐ ● ● ◐ ◐ | 50 | 4×D | V47 20261 | 25 | 130 | 160 | 0,66 |
| | | | | 50 | 6×D | V47 40261 | 25 | 175 | 210 | 0,77 |
| | | | | 50 | 8×D | V47 60261 | 25 | 230 | 260 | 0,90 |
| V95 10022.0089<br>V95 10022.0090<br>V95 10320.8450 | HSS TiN<br>HSS TiAlN<br>VHM TiAlN/TiN | 6 | ● ◐ ● ● ◐ ◐ | 50 | 4×D | V47 20331 | 32 | 160 | 195 | 0,93 |
| | | | | 50 | 6×D | V47 40331 | 32 | 215 | 255 | 1,13 |
| | | | | 50 | 8×D | V47 60331 | 32 | 290 | 330 | 1,4 |
| V95 10032.0089<br>V95 10032.0090<br>V95 10330.8450 | HSS TiN<br>HSS TiAlN<br>VHM TiAlN/TiN | 8 | ● ◐ ● ● ◐ ◐ | 63 | 4×D | V47 20401 | 38,5 | 185 | 235 | 1,68 |
| | | | | 63 | 6×D | V47 40401 | 38,5 | 260 | 310 | 2,08 |
| | | | | 63 | 8×D | V47 60401 | 38,5 | 340 | 390 | 2,50 |
| V95 10042.0089<br>V95 10042.0090<br>V95 10340.8450 | HSS TiN<br>HSS TiAlN<br>VHM TiAlN/TiN | 10 | ● ◐ ● ● ◐ ◐ | 80 | 4×D | V47 20461 | 44,5 | 215 | 280 | 3,31 |
| | | | | 80 | 6×D | V47 40461 | 44,5 | 310 | 375 | 3,97 |
| | | | | 80 | 8×D | V47 60461 | 44,5 | 415 | 480 | 4,82 |

* The precise diameter to length ratio (L:D) is produced from relationship of the relevant basic element to the diameter of the drill head selected.



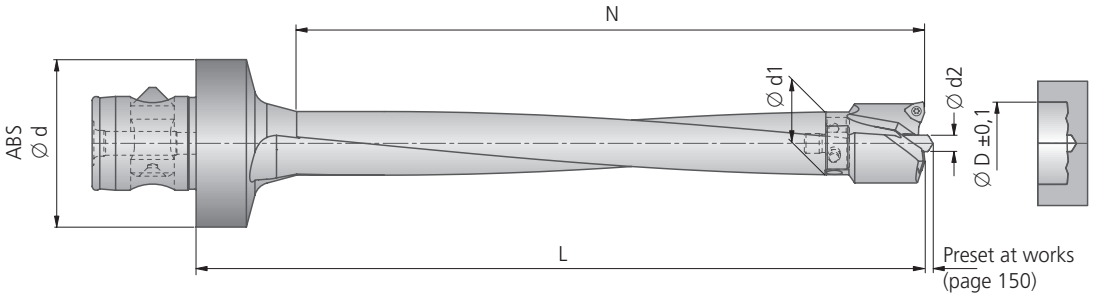

**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

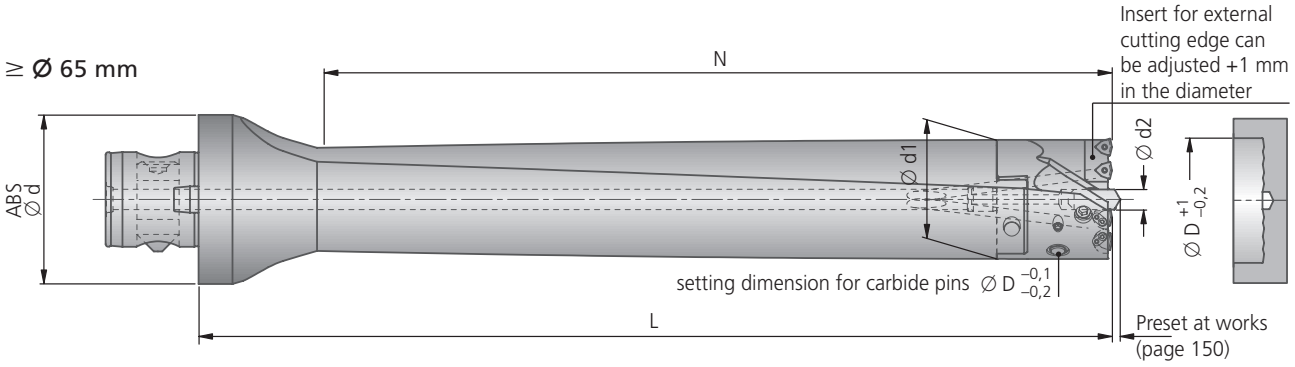
Guideline values for solid drilling: page 144 / alternative inserts: page 145.

# KOMET KUB Centron®

## Ø 55 – 81 mm

### Insert Drill (drill head/basic element) with ABS® Connection, R.H. cutting




| Drill Head | | | Basic recommendation | | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|
| | | | Insert -01 / -11 | | | for workpiece material | Clamping screw | Screwdriver |
| Ø D | Order No. | kg | Order No. ▽▽Size | ISO-Code | Piece | P M K N S H | Order No. Article | Order No. Article |
| 55,0 | V46 50550 | 0,29 | W29 42010.048425<br>W29 42010.047930<br>W29 42010.0461<br>W29 42110.0477 | WOEX 080404-01 BK8425<br>WOEX 080404-01 BK7930<br>WOEX 080404-01 BK61<br>WOEX 080404-11 BK77 | 2 | | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP |
| 56,0 | V46 50560 | 0,30 | | | | | | |
| 57,0 | V46 50570 | 0,31 | | | | | | |
| 58,0 | V46 50580 | 0,31 | | | | | | |
| 59,0 | V46 50590 | 0,32 | | | | | | |
| 60,0 | V46 50600 | 0,33 | | | | | | |
| 61,0 | V46 50610 | 0,34 | | | | | | |
| 62,0 | V46 50620 | 0,35 | | | | | | |
| 63,0 | V46 50630 | 0,36 | | | | | | |
| 64,0 | V46 50640 | 0,37 | | | | | | |
| 65,0 | V46 50650 | 0,49 | W29 24010.048425<br>W29 24010.047930<br>W29 24010.0461<br>W29 24110.0477 | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK61<br>WOEX 05T304-11 BK77 | 4 | | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| 66,0 | V46 50660 | 0,51 | | | | | | |
| 67,0 | V46 50670 | 0,43 | | | | | | |
| 68,0 | V46 50680 | 0,54 | | | | | | |
| 69,0 | V46 50690 | 0,55 | | | | | | |
| 70,0 | V46 50700 | 0,56 | | | | | | |
| 71,0 | V46 50710 | 0,57 | | | | | | |
| 72,0 | V46 50720 | 0,93 | W29 24010.048425<br>W29 24010.047930<br>W29 24010.0461<br>W29 24110.0477 | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK61<br>WOEX 05T304-11 BK77 | 4 | | at<br>N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm<br>at<br>N00 57571<br>S/M2,5×6,3-8IP<br>1,28 Nm | L05 00830<br>8IP |
| 73,0 | V46 50730 | 0,93 | | | | | | |
| 74,0 | V46 50740 | 0,93 | | | | | | |
| 75,0 | V46 50750 | 0,93 | | | | | | |
| 76,0 | V46 50760 | 0,93 | | | | | | |
| 77,0 | V46 50770 | 0,93 | | | | | | |
| 78,0 | V46 50780 | 0,93 | | | | | | |
| 79,0 | V46 50790 | 0,93 | | | | | | |
| 80,0 | V46 50800 | 0,93 | | | | | | |
| 81,0 | V46 50810 | 0,93 | | | | | | |

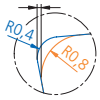

Patent applied for inside and outside Germany (ABS), EP 0 586 423 and other patent applications (KUB Centron)

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-9×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ✕ |

● very good ◐ good ○ possible: see technical notes, page 148 ✕ not possible

**Supply includes:** Basic element with assembly parts. Drill head with mounting parts.
Please order insert, central drill bit and accessories separately.
For assembly parts and accessories, see pages 146-147.

* The precise diameter to length ratio (L:D) is produced from relationship of the relevant basic element to the diameter of the drill head selected.




**Note re. insert radius:**
The nominal dimension ∅ is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension ∅ (see Chapter 8)

| Central drill bit | | | | Basic element | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Order No. | Coating | Ø d2 | for workpiece material P M K N S H | ABS Ø d | L/D* ~ | Order No. | Ø d1 | N | L | kg |
| V95 10042.0089<br>V95 10042.0090<br>V95 10340.8450 | HSS TiN<br>HSS TiAlN<br>VHM TiAlN/TiN | 10 | ● ◐ ● ● ● ◐ | 80 | 4×D | V47 20551 | 53,5 | 260 | 325 | 4,30 |
| | | | | 80 | 6×D | V47 40551 | 53,5 | 370 | 435 | 5,42 |
| | | | | 80 | 8×D | V47 60551 | 53,5 | 495 | 560 | 6,68 |
| V95 10050.0089<br>V95 10050.0090 | HSS TiN<br>HSS TiAlN | 12 | ● ◐ ● ● ● ◐ | 80 | 4×D | V47 20651 | 63,5 | 295 | 375 | 5,80 |
| | | | | 80 | 6×D | V47 40651 | 63,5 | 420 | 500 | 7,52 |
| | | | | 80 | 8×D | V47 60651 | 63,5 | 560 | 640 | 9,46 |
| V95 10050.0089<br>V95 10050.0090 | HSS TiN<br>HSS TiAlN | 12 | ● ◐ ● ● ● ◐ | 100 | 4×D | V47 20721 | 70,5 | 325 | 405 | 8,59 |
| | | | | 100 | 6×D | V47 40721 | 70,5 | 460 | 540 | 10,8 |
| | | | | 100 | 8×D | V47 60721 | 70,5 | 610 | 690 | 13,5 |

## Technical Notes





| Guideline values for solid drilling | | | | | | KUB Centron ® | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. feed f (mm/rev) · Cutting speed $v_c$ (m/min) | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | Ø20–25 | | | Ø26–32 | | | Ø33–45 | | | Ø46–54 | | | Ø55–64 | | | Ø65–71 | | Ø72–81 | | | |
| | | | | | | | HSS | VHM | | HSS | VHM | | HSS | VHM | | HSS | VHM | | HSS | VHM | | HSS | | HSS | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | f | $v_c$ | $v_c$ | f | $v_c$ | $v_c$ | f | $v_c$ | $v_c$ | f | $v_c$ | $v_c$ | f | $v_c$ | $v_c$ | f | $v_c$ | f | $v_c$ | f | $v_c$ |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 0,08 | 160 | 250 | 0,08 | 170 | 250 | 0,10 | 200 | 250 | 0,12 | 180 | 250 | 0,14 | 180 | 250 | 0,10 | 210 | 0,12 | 210 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 0,10 | 160 | 200 | 0,12 | 170 | 200 | 0,12 | 200 | 200 | 0,14 | 180 | 200 | 0,16 | 180 | 200 | 0,12 | 210 | 0,14 | 210 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 0,12 | 160 | 250 | 0,14 | 170 | 250 | 0,14 | 200 | 250 | 0,14 | 180 | 250 | 0,16 | 180 | 250 | 0,14 | 210 | 0,16 | 210 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 0,12 | 140 | 180 | 0,14 | 170 | 180 | 0,14 | 180 | 180 | 0,14 | 180 | 180 | 0,16 | 180 | 180 | 0,14 | 180 | 0,16 | 180 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 0,08 | 120 | 160 | 0,10 | 160 | 160 | 0,10 | 160 | 160 | 0,14 | 160 | 160 | 0,14 | 160 | 160 | 0,10 | 160 | 0,12 | 160 |
| P | 4.1 | | | HSS | | 0,07 | 80 | 80 | 0,07 | 80 | 80 | 0,07 | 80 | 80 | 0,08 | 80 | 80 | 0,10 | 80 | 80 | 0,08 | 80 | 0,10 | 80 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | – | | | – | | | – | | | – | | | – | | | – | | – | |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | – | | | – | | | – | | | – | | | – | | | – | | – | |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 0,07 | 70 | 180 | 0,10 | 70 | 180 | 0,10 | 90 | 180 | 0,10 | 90 | 180 | 0,12 | 90 | 180 | 0,10 | 100 | 0,12 | 100 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 0,10 | 70 | 160 | 0,12 | 70 | 160 | 0,12 | 90 | 160 | 0,12 | 90 | 160 | 0,14 | 90 | 160 | 0,12 | 100 | 0,14 | 100 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 0,08 | 70 | 120 | 0,10 | 70 | 120 | 0,10 | 90 | 120 | 0,10 | 90 | 120 | 0,12 | 90 | 120 | 0,10 | 100 | 0,12 | 100 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 0,14 | 100 | 200 | 0,16 | 110 | 200 | 0,16 | 120 | 200 | 0,18 | 120 | 200 | 0,25 | 120 | 200 | 0,16 | 140 | 0,20 | 140 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 0,12 | 100 | 160 | 0,14 | 110 | 160 | 0,14 | 120 | 160 | 0,15 | 120 | 160 | 0,20 | 120 | 160 | 0,16 | 140 | 0,20 | 140 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 0,12 | 100 | 160 | 0,14 | 110 | 160 | 0,14 | 120 | 160 | 0,18 | 120 | 160 | 0,25 | 120 | 160 | 0,16 | 140 | 0,20 | 140 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 0,12 | 100 | 140 | 0,14 | 110 | 140 | 0,14 | 120 | 140 | 0,18 | 120 | 140 | 0,25 | 120 | 140 | 0,14 | 140 | 0,16 | 140 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 0,12 | 100 | 120 | 0,14 | 110 | 120 | 0,14 | 120 | 120 | 0,18 | 120 | 120 | 0,25 | 120 | 120 | 0,14 | 120 | 0,16 | 120 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 0,10 | 100 | 100 | 0,12 | 100 | 100 | 0,12 | 100 | 100 | 0,15 | 100 | 100 | 0,20 | 100 | 100 | 0,12 | 100 | 0,14 | 100 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 0,10 | 80 | 80 | 0,12 | 80 | 80 | 0,12 | 80 | 80 | 0,15 | 80 | 80 | 0,20 | 80 | 80 | 0,12 | 80 | 0,14 | 80 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 0,14 | 200 | 200 | 0,16 | 200 | 200 | 0,16 | 200 | 200 | 0,20 | 200 | 200 | 0,25 | 200 | 200 | 0,16 | 200 | 0,20 | 200 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 0,08 | 250 | 250 | 0,08 | 250 | 250 | 0,10 | 250 | 250 | 0,12 | 250 | 250 | 0,15 | 250 | 250 | 0,08 | 250 | 0,10 | 250 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 0,07 | 350 | 350 | 0,07 | 350 | 350 | 0,07 | 350 | 350 | 0,10 | 350 | 350 | 0,12 | 350 | 350 | 0,08 | 350 | 0,10 | 350 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 0,10 | 250 | 250 | 0,12 | 250 | 250 | 0,14 | 250 | 250 | 0,18 | 250 | 250 | 0,25 | 250 | 250 | 0,14 | 250 | 0,16 | 250 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 0,12 | 200 | 200 | 0,14 | 200 | 200 | 0,14 | 200 | 200 | 0,15 | 200 | 200 | 0,20 | 200 | 200 | 0,12 | 200 | 0,14 | 200 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | – | | | – | | | – | | | – | | | – | | | – | | – | |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | – | | | – | | | – | | | – | | | – | | | – | | – | |

* Cutting values shown are maximum values relating on the nominal diameter of the drill head using the respective central drill bit.



Patent applied for inside and outside Germany (ABS), EP 0 586 423 and other patent applications (KUB Centron)

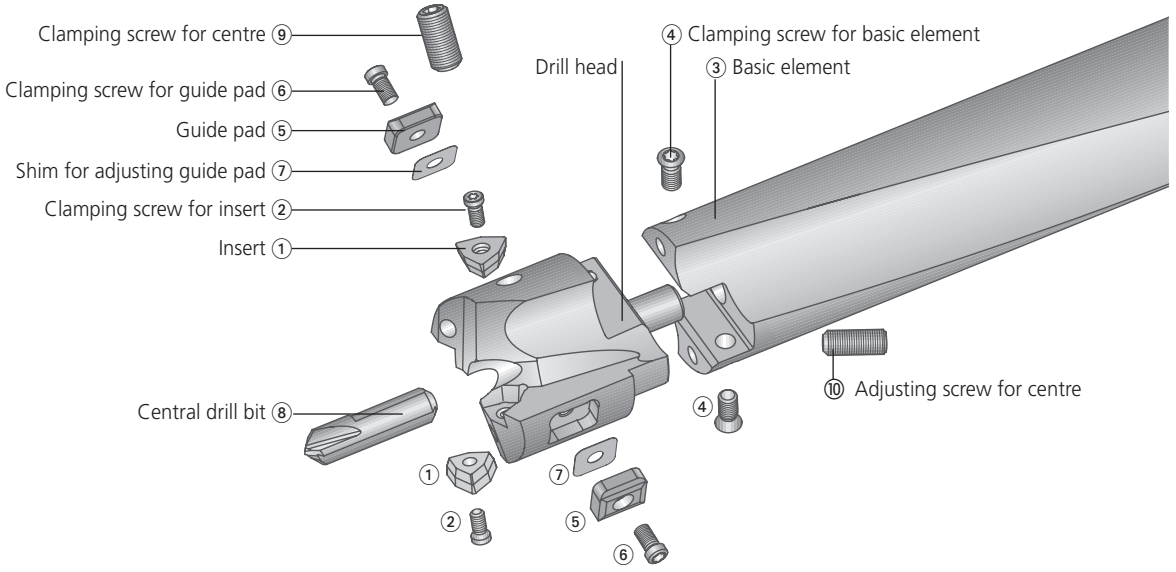
## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| for better chip control | 20 – 25 | **W29 10030.048425** | WOEX 030204-03 BK8425 | |
| | | **W29 10030.046425** | WOEX 030204-03 BK6425 | |
| | 26 – 33 | **W29 18030.048425** | WOEX 040304-03 BK8425 | |
| | | **W29 18030.046425** | WOEX 040304-03 BK6425 | |
| | 33 – 45 | **W29 24130.048425** | WOEX 05T304-13 BK8425 | |
| | | **W29 24030.046425** | WOEX 05T304-03 BK6425 | |
| | | **W29 24130.0479** | WOEX 05T304-13 BK79 | |
| | 46 – 54 | **W29 34130.048425** | WOEX 06T304-13 BK8425 | |
| | | **W29 34030.046425** | WOEX 06T304-03 BK6425 | |
| | | **W29 34130.0479** | WOEX 06T304-13 BK79 | |
| | 55 – 64 | **W29 42130.048425** | WOEX 080404-13 BK8425 | |
| | | **W29 42030.046425** | WOEX 080404-03 BK6425 | |
| | | **W29 42130.0479** | WOEX 080404-13 BK79 | |
| | 65 – 81 | **W29 24130.048425** | WOEX 05T304-13 BK8425 | |
| | | **W29 24030.046425** | WOEX 05T304-03 BK6425 | |
| | | **W29 24130.0479** | WOEX 05T304-13 BK79 | |

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| for higher cutting speed | 20 – 25 | W29 10010.0472 | WOEX 030204-01 BK72 | |
| | | W29 10130.047325 | WOEX 030204-13 BK7325 | |
| | | W29 10110.0450 | WOEX 030404-11 BK50 | |
| | 26 – 33 | W29 18010.0472 | WOEX 040304-01 BK72 | |
| | | W29 18130.047325 | WOEX 040304-13 BK7325 | |
| | | W29 18110.0450 | WOEX 040304-11 BK50 | |
| | 33 – 45 | W29 24010.0472 | WOEX 05T304-01 BK72 | |
| | | W29 24130.047325 | WOEX 05T304-13 BK7325 | |
| | | W29 24110.0450 | WOEX 05T304-11 BK50 | |
| | 46 – 54 | W29 34010.0472 | WOEX 06T304-01 BK72 | |
| | | W29 34130.047325 | WOEX 06T304-13 BK7325 | |
| | | W29 34110.0450 | WOEX 06T304-11 BK50 | |
| | 55 – 64 | W29 42010.0472 | WOEX 080404-01 BK72 | |
| | | W29 42130.047325 | WOEX 080404-13 BK7325 | |
| | | W29 42110.0450 | WOEX 080404-11 BK50 | |
| | 65 – 81 | W29 24010.0472 | WOEX 05T304-01 BK72 | |
| | | W29 24110.0450 | WOEX 05T304-11 BK50 | |
| for greater strength | 20 – 25 | **W29 10010.047930** | WOEX 030204-01 BK7930 | |
| | | **W29 10010.0404** | WOEX 030204-01 P40 | |
| | | **W29 10010.0421** | WOEX 030204-01 K10 | |
| | | **W29 10110.0421** | WOEX 030204-11 K10 | |
| | 26 – 33 | **W29 18010.047930** | WOEX 040304-01 BK7930 | |
| | | **W29 18010.0404** | WOEX 040304-01 P40 | |
| | | **W29 18010.0421** | WOEX 040304-01 K10 | |
| | | **W29 18110.0421** | WOEX 040304-11 K10 | |
| | 33 – 45 | **W29 24010.047930** | WOEX 05T304-01 BK7930 | |
| | | **W29 24010.0404** | WOEX 05T304-01 P40 | |
| | | **W29 24010.0421** | WOEX 05T304-01 K10 | |
| | | **W29 24110.0421** | WOEX 05T304-11 K10 | |
| | 46 – 54 | **W29 34010.047930** | WOEX 080404-01 BK7930 | |
| | | **W29 34010.0404** | WOEX 080404-01 P40 | |
| | | **W29 34010.0421** | WOEX 080404-01 K10 | |
| | | **W29 34110.0421** | WOEX 080404-11 K10 | |
| | 55 – 64 | **W29 42010.047930** | WOEX 080404-01 BK7930 | |
| | | **W29 42010.0404** | WOEX 080404-01 P40 | |
| | | **W29 42010.0421** | WOEX 080404-01 K10 | |
| | | **W29 42000.0421** | WOEX 080404-00 K10 | |
| | 65 – 81 | **W29 24010.047930** | WOEX 05T304-01 BK7930 | |
| | | **W29 24010.0404** | WOEX 05T304-01 P40 | |
| | | **W29 24010.0421** | WOEX 05T304-01 K10 | |
| | | **W29 24110.0421** | WOEX 05T304-11 K10 | |

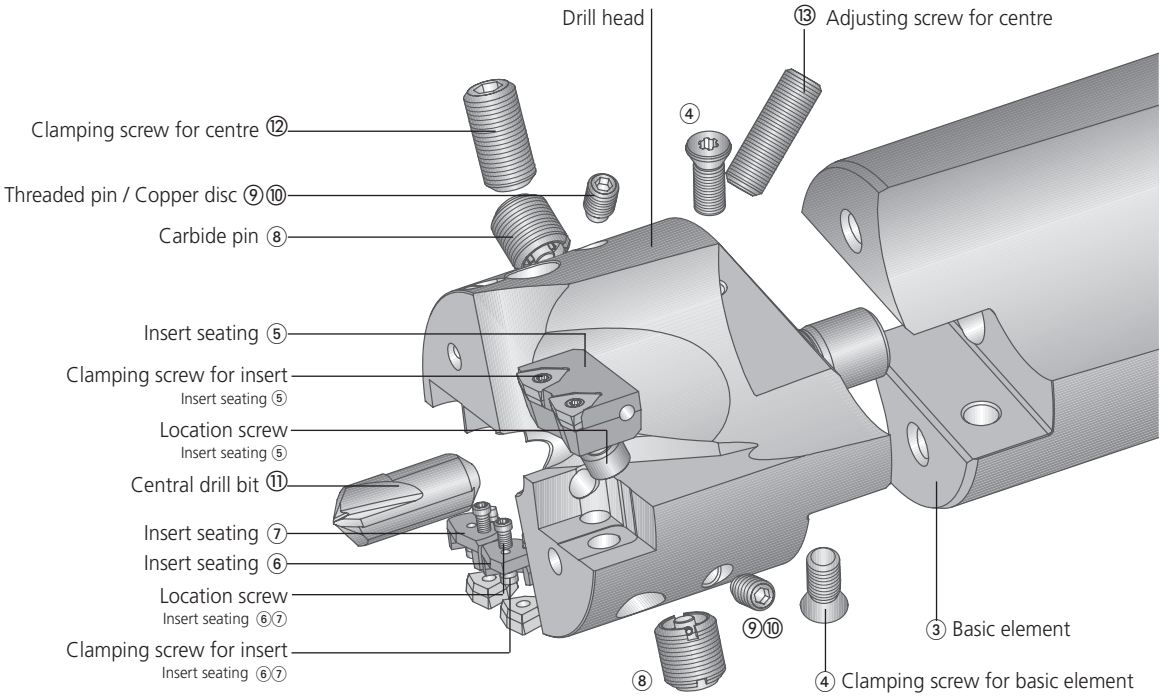
## Assembly Parts / Accessories




| Ø D | Inserts ① | | | | | Basic element ③ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Assembly parts | | | Accessories | | Assembly parts | | | Accessories | |
| | Clamping screw ② for inserts | | | Screwdriver | | Clamping screw ④ for basic element | | | Screwdriver | |
| | Article | Order No. | Nm | Article | Order No. | Article | Order No. | Nm | Article | Order No. |
| 20 – 25 | S/M2×4,3-6IP | **N00 56041** | 0,62 | 6IP | **L05 00810** | S2564-8IP | **N00 57480** | 1,28 | 8IP | **L05 00830** |
| 26 – 32 | S/M2,2×5,5-6IP | **N00 57553** | 1,01 | 6IP | **L05 00810** | S3074-8IP | **N00 57490** | 2,25 | 8IP | **L05 00830** |
| 33 – 39 | S/M2,5×7,2-8IP | **N00 57511** | 1,28 | 8IP | **L05 00830** | S4089-15IP | **N00 57440** | 4,3 | 15IP | **L05 00860** |
| 40 – 45 | S/M2,5×7,2-8IP | **N00 57511** | 1,28 | 8IP | **L05 00830** | S45105-20IP | **N00 57500** | 6,25 | 20IP | **L05 00870** |
| 46 – 54 | S/M3,5×7,3-10IP | **N00 57521** | 2,8 | 10IP | **L05 00850** | S50115-20IP | **N00 57450** | 6,25 | 20IP | **L05 00870** |
| 55 – 64 | S/M4,5×9-15IP | **N00 57531** | 6,25 | 15IP | **L05 00860** | S55140-20IP | **N00 57460** | 6,25 | 20IP | **L05 00870** |

| Ø D | Guide pads ⑤ | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Assembly parts | | | | Accessories | | Assembly parts | | |
| | Guide pads ⑤ | Clamping screw ⑥ for guide pads | | | Screwdriver | | Shim ⑦ for adjusting guide pads | | |
| | Order No. | Article | Order No. | Nm | Article | Order No. | Order No. Set of foils | t (mm) | Qty. |
| 20 – 22 | **L01 03990** | S2542-8IP | **N00 57211** | 1,28 | 8IP | **L05 00830** | **L01 04190** | 0,025<br>0,050<br>0,075<br>0,100 | 4<br>2<br>2<br>2 |
| 23 – 29 | **L01 04000** | M2,5×4,5-8IP | **N00 55581** | 1,28 | 8IP | **L05 00830** | | | |
| 30 – 36 | **L01 04010** | M2,5×4,5-8IP | **N00 55581** | 1,28 | 8IP | **L05 00830** | | | |
| 37 – 45 | **L01 04020** | M2,5×4,5-8IP | **N00 55581** | 1,28 | 8IP | **L05 00830** | | | |
| 46 – 54 | **L01 04150** | M3,5×5-8IP | **N00 55701** | 2,25 | 8IP | **L05 00830** | **L01 04240** | 0,025<br>0,050<br>0,075<br>0,100 | 4<br>2<br>2<br>2 |
| 55 – 64 | **L01 04160** | M3,5×5-8IP | **N00 55701** | 2,25 | 8IP | **L05 00830** | | | |

| Ø D | Central drill bit ⑧ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Accessories | | | | Assembly parts | | | | | |
| | Central drill bit ⑧ | | | | Clamping screw ⑨ for central drill bit | | | | Adjusting screw ⑩ for central drill bit | |
| | Ø | Order No. HSS TiAlN coated | Order No. HSS TiN coated | Order No. VHM TiAlN/TiN coated | Article | SW | Torque | Order No. | Article | Order No. |
| 20 | 5 | **V95 10012.0090** | **V95 10012.0089** | **V95 10310.8450** | M4×6 | 2 | 1,5 Nm | **N00 70910** | M3×8 | **5505103008** |
| 21 – 25 | 5 | **V95 10012.0090** | **V95 10012.0089** | **V95 10310.8450** | M4×8 | 2 | 1,5 Nm | **N00 70920** | M3×8 | **5505103008** |
| 26 – 32 | 6 | **V95 10022.0090** | **V95 10022.0089** | **V95 10320.8450** | M5×10 | 2,5 | 2,5 Nm | **N00 70930** | M4×10 | **5505104010** |
| 33 – 39 | 6 | **V95 10022.0090** | **V95 10022.0089** | **V95 10320.8450** | M5×12 | 2,5 | 2,5 Nm | **N00 70940** | M4×10 | **5505104010** |
| 40 – 45 | 8 | **V95 10032.0090** | **V95 10032.0089** | **V95 10330.8450** | M6×12 | 3 | 5 Nm | **N00 70950** | M5×10 | **5505105010** |
| 46 – 54 | 10 | **V95 10042.0090** | **V95 10042.0089** | **V95 10340.8450** | M8×16 | 4 | 8 Nm | **N00 70960** | M5×10 | **5505105010** |
| 55 – 64 | 10 | **V95 10042.0090** | **V95 10042.0089** | **V95 10340.8450** | M8×16 | 4 | 8 Nm | **N00 70960** | M5×8 | **5505105008** |



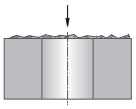

| Ø D | Basic element ③ | | | | | Carbide pin ⑧ | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Assembly parts | | | Accessories | | Assembly parts | | | |
| | Clamping screw ④ for drill head | | | Screwdriver | | Carbide pin ⑧ | Key for ⑧ | Threaded pin ⑨ | Copper disc ⑩ |
| | Article | **Order No.** | Nm | Article | **Order No.** | **Order No.** | **Order No.** | **Order No.** Article | **Order No.** Article |
| 65 – 81 | S60160-20IP | **N00 57470** | 6,25 | 20IP | **L05 00870** | **L01 04310** | **L01 04370** | **5505106008** M6×8 | **L01 04450** Ø4,5×1,5 |

| Ø D | Insert seating ⑤ | | | | Insert seating ⑥ and ⑦ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Assembly parts | | | Accessories | Assembly parts | | | | | Accessories |
| | Insert seating ⑤ | Location screw | Clamping screw for inserts | Screw-driver for clamping screw | Insert seating ⑥ | Insert seating ⑦ | Stift | Location screw | Clamping screw for inserts | Screw-driver for clamping screw |
| | **Order No.** | **Order No.** | **Order No.** Article | **Order No.** Article | **Order No.** | **Order No.** | **Order No.** | **Order No.** | **Order No.** Article | **Order No.** Article |
| 65 – 71 | **D53 53200** | **N10 11510** | **N00 57511** S/M2,5×7,2-8IP 1,28 Nm | **L05 00830** 8IP | – | – | – | – | – | – |
| 72 – 75 | **D53 53220** | **5501105012** | | | **D50 50290** | **D50 55090** | **N00 52000** | **N00 55571** | **N00 57571** S/M2,5×6,3-8IP 1,28 Nm | **L05 00830** 8IP |
| 76 – 78 | **D53 53230** | | | | | | | | | |
| 79 – 81 | **D53 53240** | | | | | | | | | |

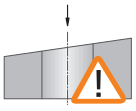
| Ø D | Central drill bit ⑪ | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Accessories | | | Assembly parts | | | | | |
| | Central drill bit ⑪ | | | Clamping screw ⑫ for central drill bit | | | | Adjusting screw ⑬ for central drill bit | |
| | Ø | **Order No.** HSS TiAlN coated | **Order No.** HSS TiN coated | Article | SW | Torque | **Order No.** | Article | **Order No.** |
| 65 – 71 | 12 | **V95 10050.0090** | **V95 10050.0089** | M10×20 | 5 | 16 Nm | **N00 70970** | M8×10 | **5505108010** |
| 72 – 81 | | | | M10×20 | 5 | 16 Nm | **N00 70970** | M8×25 | **5505108025** |

## Technical Notes

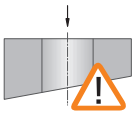


1. 

**Starting on uneven surfaces (cast surfaces)**
- possible in principle
- reduce feed rate when starting bore

2. 

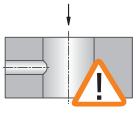
**Starting on angled surfaces**
- surface for starting bore must be spot faced beforehand
- avoid chip jams on drill shank

3. 

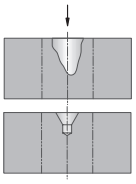
**Angled bore exit**
- possible under certain conditions
- reduce feed rate if necessary
- drilling angle max. 3°

4. 

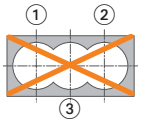
**Starting on cambered surfaces**
- centered boring can be started with reduced feed rate
- spot facing is required if the point for starting the bore is outside the radius centre

5. 

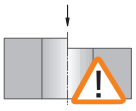
**Drilling through a cross bore**
- halve feed rate at interruption
- cross bore max. 1/3 of bore diameter
- off-centre cross bore not possible

6. 

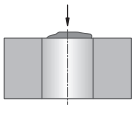
**Starting on a groove or large centering bore**
- possible under certain conditions
- reduce feed rate if necessary
- face beforehand where centre is particularly large
- central drill bit basic adjustment optimize if necessary

7. 

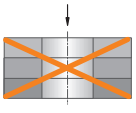

**Drilling a chamber**
- not possible

8. 

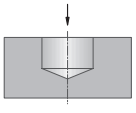
**Starting on an edge**
- surface for starting bore must be spot faced beforehand
- avoid chip jams on drill shank

9. 

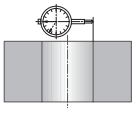
**Starting on a welded seam**
- reduce feed rate when starting bore
- face beforehand if necessary

10. 

**Drilling through stacked plates**
- not possible

11. 

**Blind hole**
- possible
- set guide pads 0.5 mm below actual ∅

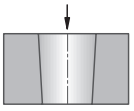
12. 

**adjustable**
- can be adjusted from 65 mm diameter

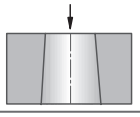
## Rotating and stationary use



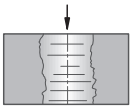
**Short tool life** types of wear on inserts
- cutting speed to high → select correct cutting speed
- cutting material with too little wear resistance → select grade with higher wear resistance
- tool overhang too great → if possible use shorter tool
- damaged insert seating → check tool, change if necessary
- clamping device not stable enough → improve stability



**Bore narrows at bottom**
- chip jam on external cutting edge → use different chip fracture geometry, increase feed if necessary
- material very soft → increase cutting speed, reduce feed. Use positive chip geometry
- axial adjustment of central drill bit not the best > adjust setting as shown on setting sheet in operating instructions



**Bore widens at bottom**
- chip jam on internal cutting edge → use different chip fracture geometry, increase feed if necessary



**Bad surface finish**
- bad chip removal → improve cutting parameters: increase cutting speed reduce feed

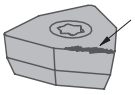
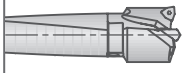
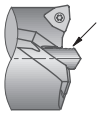


**Bild up on cutting edge**
- cutting speed too low → increase cutting speed
- insert too negative → use positive geometry
- coating not suitable → select correct coating

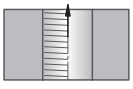


**Friction marks on tool shank**
- bore diameter too small → check setting
- chip removal problems → improve cutting parameters, check geometry of inserts
- cutting edge corner radius too large → use correct cutting edge radius
- chip jams on support element, fractured support element > where basic element < 6 × D use of support element can be dispensed with

## Stationary use



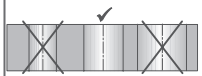
**Heavy wear on one side on central drill bit**
- tool not central → tool turret/holder may have shifted – readjust machine



**Withdrawal groove on one side**
- tool not central → tool turret/holder may have shifted – readjust machine

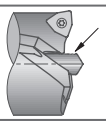


**Fracture on external cutting edge**
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius

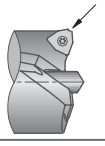


**Bore too small/ too large**
- machine not at X-0 position → move axis to correct position
- machine axis shifted → readjust machine

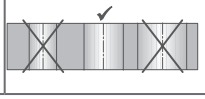
## Rotating use



**Heavy wear on one side on central drill bit**
- insufficient guiding → check length setting on central drill bit



**Fracture on external cutting edge**
- feed rate too high → reduce feed rate
- interrupted cut → change to tougher insert grade
- cutting edge corner radius too small → use insert with larger cutting edge radius



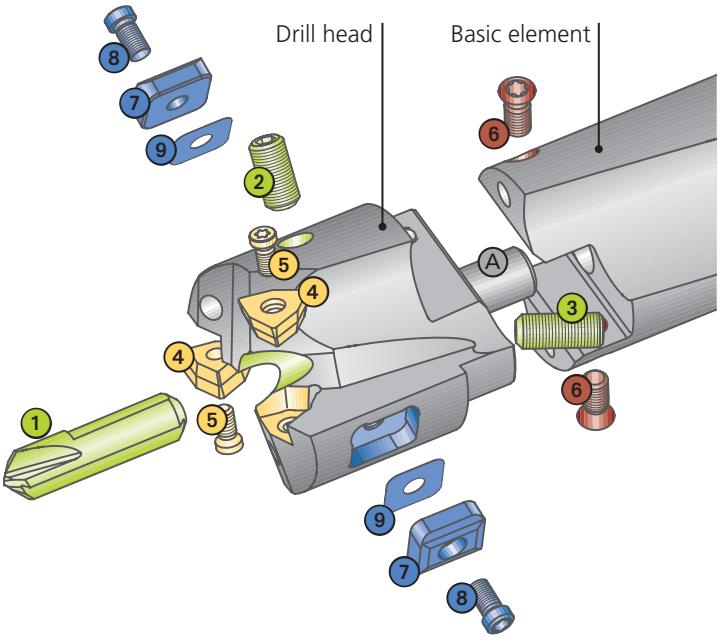
**Bore too small/ too large** with adjustable tool
- wrong cutting edge radius used → use correct cutting edge radius
- setting wrong → correct setting

# KOMET KUB Centron®

# Ø 20 – 64 mm

## Mounting Instructions

1. Central drill bit
2. Clamping screw for central drill bit
3. Adjusting screw for central drill bit
4. Indexable inserts
5. Clamping screw for indexable inserts
6. Clamping screw for basic element
7. Guide pad
8. Clamping screw for guide pad
9. Shim for adjusting guide pad

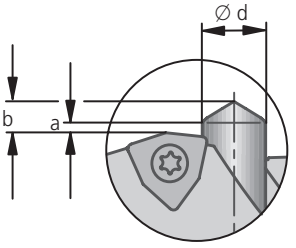



**Fitting central drill bit ① / indexable inserts ④:**

- Insert central drill bit ① in drill head with clamping surface toward clamping screw ② and clamp.
- Insert indexable inserts ④ and tighten clamping screw ⑤ with recommended torque. The bore diameters of the drill heads were produced for a corner radius of 0.4 mm. Ensure proper seating at contact surface and circumference when installing indexable insert ④.

**Length adjustment central drill bit ①: In principle there is no need to adjust the length of the central drill bit** (preset at works). However, if an alternative length setting is required, this can be achieved by applying the adjusting screw ③ (→ table).

| Ø d | a | b |
|---|---|---|
| 5 | 1,0 | 2,25 |
| 6 | 1,1 | 2,65 |
| 8 | 1,25 | 3,38 |
| 10 | 1,25 | 3,86 |
| 12 | 1,45 | 4,67 |
| 16 | 1,8 | 5,78 |
| 20 | 2,5 | 7,91 |

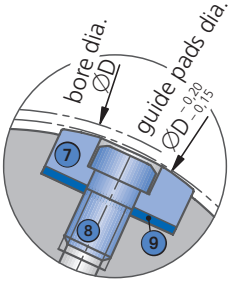



**Fitting drill head:**

- Insert drill head in basic element and measure diameter at outside indexable insert.
- Remove drill head again, turn by 180° and insert in basic element again. Measure diameter again.
- Production tolerances can result in different diameters. Always select position with largest measured diameter.
- Screw in both clamping screws ⑥ and alternately fasten them slightly. Then tighten with recommended torque.

**Changing the guide pads ⑦:**

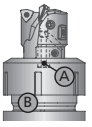
The guide pads can be changed if worn or damaged. When using new guide pads check these are correctly aligned. (→ Setting Guide Pads).




**Setting guide pads for through holes:**

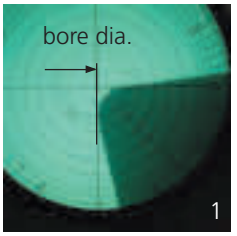
The bore diameters for the drill heads are quoted for inserts with corner radius of R0.4 mm.
**On delivery the guide pads are arranged for use with blind bores and lie a minimum of 0.25 mm below the bore diameter.**
**For through holes we recommend the use of our shim sets to adjust the guide pads.**

If the overall length (complete tool) exceeds the measurement range of the presetter, locate drill head on centering pin Ⓐ in chuck Ⓑ.




**Procedure:**

- Measure ACTUAL diameter of drill head with indexable insert installed (Figure 1).
- Determine diameter of guide pads individually and adjust to recommended value (Figure 2).




**Example:**

Drill Head dia. = 35.06 mm

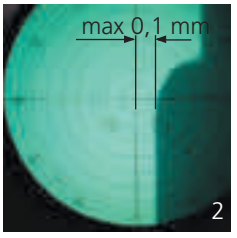
Guide pads dia. = 35.06 $^{-0.20}_{-0.15}$ = 34.86 mm = 34.91 mm

Guide pad diameter must be between 34.86 and 34.91 mm.

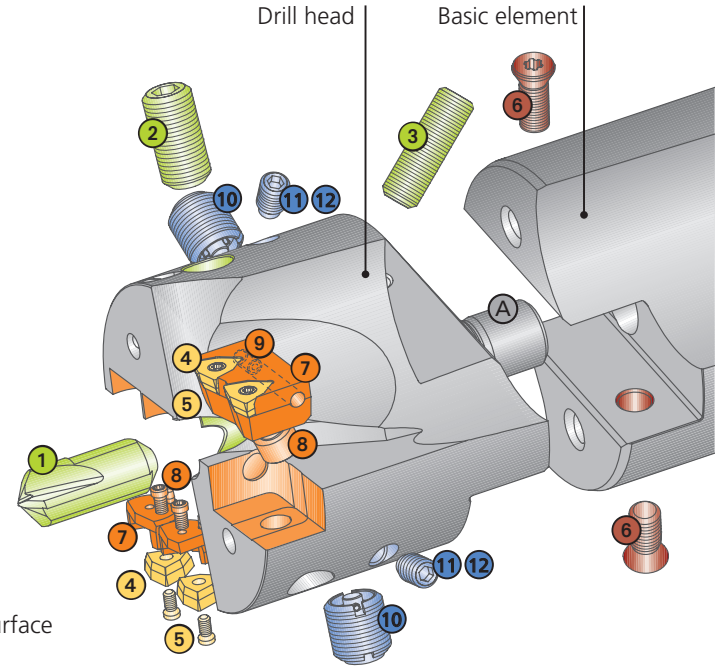
**Shims ⑨ for through holes**

Set 1: for Ø 20-45 mm, Order No. L01 04190
consisting of: 4× t = 0.025 mm, 2× t = 0.050 mm
2× t = 0.075 mm, 2× t = 0.100 mm

Set 2: for Ø 46-64 mm, Order No. L01 04240
consisting of: 4× t = 0.025 mm, 2× t = 0.050 mm
2× t = 0.075 mm, 2× t = 0.100 mm



1 Central drill bit
2 Clamping screw for central drill bit
3 Adjusting screw for central drill bit
4 Indexable inserts
5 Clamping screw for indexable inserts
6 Clamping screw for basic element
7 Insert seating
8 Location screw for insert seating
9 Adjusting screw for insert seating
10 Carbide pin
11 Threaded pin
12 Copper disc




**Fitting central drill bit ① / indexable inserts ④:**

- Insert central drill bit ① in drill head with clamping surface toward clamping screw ② and clamp.
- Insert indexable inserts ④ in insert seatings ⑦ and tighten clamping screw ⑤ with recommended torque. The bore diameters of the drill heads were produced for a corner radius of 0.4 mm. Ensure proper seating at contact surface and circumference when installing indexable insert ④.
- Insert indexable insert seatings ⑦ in drill head and tighten location screws ⑧ with recommended torque.

**Length adjustment central drill bit ①: see page 150**

**Fitting drill head: see page 150**

**Set bore diameter:**

- The external insert seating can be set 1 mm in the diameter.
- Loosen the location screw ⑧ and refasten slightly.
- Using adjusting screw ⑨ set the required diameter.
- Fully tighten location screw ⑧.

**Setting guide elements (carbide pin):**

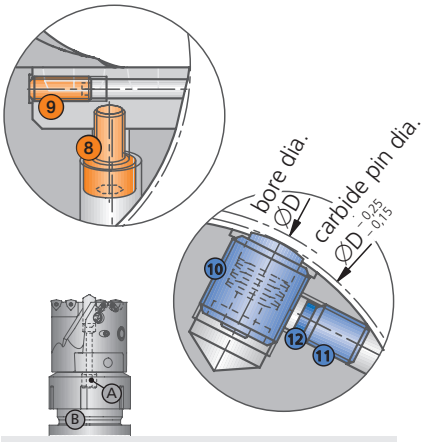
- Loosen threaded pin ⑪.
- Adjust carbide pin ⑩ with key L01 04370 to diameter (see section).
- Using threaded pin ⑪ clamp carbide pin ⑩.

**Please note:** Before the tool is used, the threaded pin ⑪ must be checked for firm seating due to possible settling of the copper disc ⑫.

If the overall length (complete tool) exceeds the measurement range of the presetter, locate drill head on centering pin Ⓐ in chuck Ⓑ.

**Procedure:**

- Measure ACTUAL diameter of drill head with indexable insert installed (Figure 1, page 150).
- Determine diameter of carbide pins individually and adjust to recommended value (Figure 2, page 150).



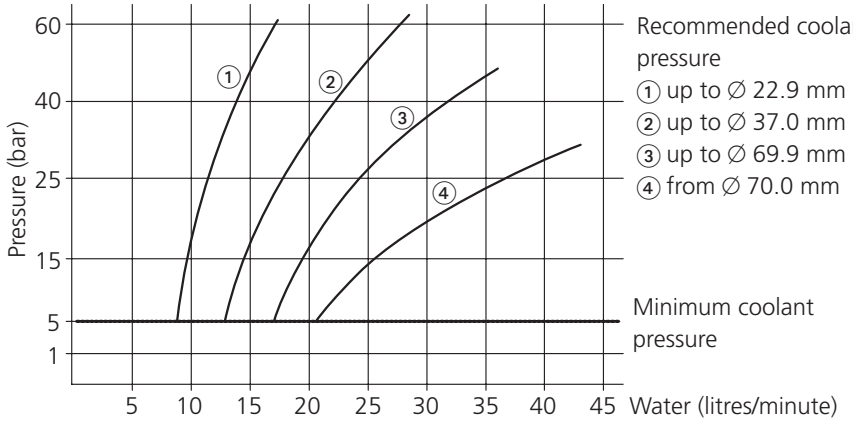

**Example:**

Drill Head dia. = 72.06 mm

Carbide pin dia. = 72.06 $^{-0.25}_{-0.15}$ = 71.81 mm = 71.91 mm

Carbide pin diameter must be between 71.81 and 71.91 mm.

**Coolant Flow / Coolant Pressure**




Recommended coolant pressure
① up to Ø 22.9 mm
② up to Ø 37.0 mm
③ up to Ø 69.9 mm
④ from Ø 70.0 mm

Minimum coolant pressure

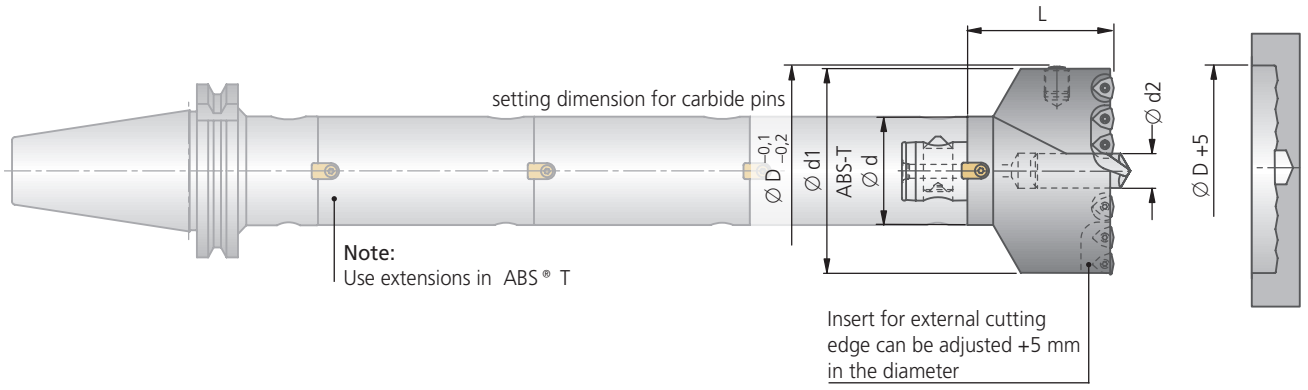
The coolant is supplied centrally onto the cutting edges through the basic element or the drill head by means of ground coolant channels in the central drill bit and on the drill head face. It is essential for central coolant supply to be used. The coolant helps produce the best possible chip formation and chip removal. Coolant pressure should not be less than the minimum 5 bar. Increasing the coolant pressure to 10–20 bar improves the boring process.

# KOMET KUB® V464 — Ø 80 – 155 mm

## Insert Drill (drill head) with ABS® T Connection, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ● |

● very good ◐ good ○ possible: see technical notes, page 148 ✕ not possible



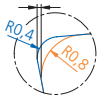

| Drill Head | | | | | | Basic recommendation | | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Insert -01 -11 | | | for workpiece material | Clamping screw | Screwdriver |
| Ø D +5mm | ABS-T Ø d | Order No. | Ø d1 | L | kg | Order No. ▽▽Size | ISO-Code | Piece | P M K N S H | Order No. Article | Order No. Article |
| 80 | 50 | V46 40801 | 78,5 | 75 | 1,75 | W29 34010.048425 | WOEX 06T304-01 BK8425 | 4 | ● ● ● ● | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| 85 | 50 | V46 40851 | 83,5 | 75 | 1,80 | W29 34010.047930 | WOEX 06T304-01 BK7930 | | | | |
| 90 | 50 | V46 40901 | 87,5 | 75 | 2,06 | W29 34010.0462 | WOEX 06T304-01 BK61 | | | | |
| 95 | 50 | V46 40951 | 92,5 | 75 | 2,16 | W29 34110.0477 | WOEX 06T304-11 BK77 | | | | |
| 100 | 63 | V46 41001 | 97,2 | 85 | 3,12 | W29 42010.048425 | WOEX 080404-01 BK8425 | 4 | ● ● ● ● | N00 57531 S/M4,5×9-15IP 6,25 Nm | L05 00860 15IP |
| 105 | 63 | V46 41051 | 102,5 | 85 | 2,92 | W29 42010.047930 | WOEX 080404-01 BK7930 | | | | |
| 110 | 63 | V46 41101 | 107,5 | 85 | 3,20 | W29 42010.0462 | WOEX 080404-01 BK62 | | | | |
| 115 | 63 | V46 41151 | 112,5 | 85 | 3,35 | W29 42110.0477 | WOEX 080404-11 BK77 | | | | |
| 120 | 63 | V46 41201 | 118,5 | 85 | 3,60 | | | | | | |
| 125 | 63 | V46 41251 | 123,5 | 85 | 3,82 | W29 34010.048425 | WOEX 06T304-01 BK8425 | 6 | ● ● ● ● | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| 130 | 80 | V46 41301 | 127,5 | 90 | 5,62 | W29 34010.047930 | WOEX 06T304-01 BK7930 | | | | |
| 135 | 80 | V46 41351 | 132,5 | 90 | 5,52 | W29 34010.0462 | WOEX 06T304-01 BK61 | | | | |
| 140 | 80 | V46 41401 | 137,5 | 90 | 5,79 | W29 34110.0477 | WOEX 06T304-11 BK77 | | | | |
| 145 | 80 | V46 41451 | 142,5 | 90 | 5,95 | W29 42010.048425 | WOEX 080404-01 BK8425 | 6 | ● ● ● ● | N00 57531 S/M4,5×9-15IP 6,25 Nm | L05 00860 15IP |
| 150 | 80 | V46 41501 | 147,5 | 90 | 6,08 | W29 42010.047930 | WOEX 080404-01 BK7930 | | | | |
| 155 | 80 | V46 41551 | 152,5 | 90 | 6,50 | W29 42010.0462 | WOEX 080404-01 BK62 | | | | |
| | | | | | | W29 42110.0477 | WOEX 080404-11 BK77 | | | | |

**Supply includes:**
Drill head with mounting parts. Please order insert, central drill bit and accessories separately.

For assembly parts and accessories, see page 153.

For torsional dampeners we recommend the use of appropriate reducers (available on request).

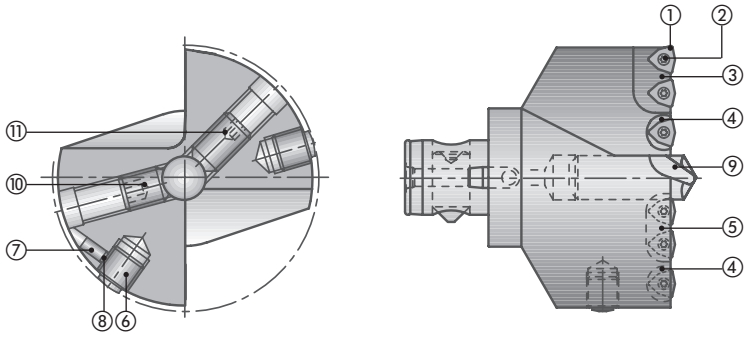
| | Central drill bit | | | |
|---|---|---|---|---|
| | | | | for workpiece material |
| Ø D | Order No. | Coating | Ø d2 | P M K N S H |
| 80 - 110 | V95 10063.0089<br>V95 10063.0090 | HSS TiN<br>HSS TiAlN | 16 | ● ● ● ● |
| 115 - 155 | V95 10213.0089<br>V95 10213.0090 | HSS TiN<br>HSS TiAlN | 20 | ● ● ● ● |




**Note re. insert radius:**
The nominal dimension Ø is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)


Patent applied for inside and outside Germany (ABS), EP 0 586 423 and other patents

Boring range ∅ 80-155 mm




| Ø D | Inserts ① | | | | | Carbide pin ⑥ | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Assembly parts | | | Accessories | | Assembly parts | | | |
| | Clamping screw ② for inserts | | | Screwdriver | | Carbide pin ⑥ | Key for ⑥ | Threaded pin ⑦ | Copper disc ⑧ |
| | Article | Order No. | Nm | Article | Order No. | Order No. | Order No. | Order No. Article | Order No. Article |
| 80 – 95 | S/M3,5×7,3-10IP | N00 57521 | 2,8 | 10IP | L05 00850 | L01 04300 | L01 04350 | 55051 06008 M6×8 | L01 04450 Ø4,5×1,5 |
| 100–115 | S/M4,5×9-15IP | N00 57531 | 6,25 | 15IP | L05 00860 | | | | |
| 120–125 | S/M3,5×7,3-10IP | N00 57521 | 2,8 | 10IP | L05 00850 | | | | |
| 130–140 | S/M3,5×7,3-10IP | N00 57521 | 2,8 | 10IP | L05 00850 | | | | |
| 145–155 | S/M4,5×9-15IP | N00 57531 | 6,25 | 15IP | L05 00860 | | | | |

| Ø D | Insert seating ③, ④ and ⑤ | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Assembly parts | | | | | | | | |
| | Insert seating ③ | | Location screw for ③ | Insert seating ④ | | Insert seating ⑤ | | Pin for ④+⑤ | Location screw for ④+⑤ |
| | Order No. | Qty. | Order No. Article | Order No. | Qty. | Order No. | Qty. | Order No. Article | Order No. Article |
| 80 | D53 53360 | 1 | 55011 05012 M5×12 | – | | D53 53350 | 1 | N00 52000 1,8/2×4,5 | N00 55701 M3,5×5-8IP |
| 85 | D53 53370 | 1 | 55011 05012 M5×12 | D50 55100 | 1 | D50 50300 | 1 | N00 52000 1,8/2×4,5 | N00 55701 M3,5×5-8IP |
| 90 | D53 53380 | 1 | | | | | | | |
| 95 | D53 53390 | 1 | | | | | | | |
| 100 | D53 53400 | 1 | 55011 05012 M5×12 | D50 55110 | 1 | D50 50310 | 1 | N00 52010 3/4×5,5 | N00 55821 M4,5×9-10IP |
| 105 | D53 53410 | 1 | | | | | | | |
| 110 | D53 53420 | 1 | | | | | | | |
| 115 | D53 53430 | 1 | | | | | | | |
| 120 | D53 53360 | 1 | 55011 05012 M5×12 | D50 55100 | 3 | D53 53350 | 1 | N00 52000 1,8/2×4,5 | N00 55701 M3,5×5-8IP |
| 125 | D53 53360 | 1 | | D50 55100 | 3 | D50 50300 | 1 | | |
| 130 | D53 53380 | 1 | 55011 05012 M5×12 | D50 55100 | 3 | D50 50300 | 1 | N00 52000 1,8/2×4,5 | N00 55701 M3,5×5-8IP |
| 135 | D53 53380 | 1 | | | | | | | |
| 140 | D53 53390 | 1 | | | | | | | |
| 145 | D53 53400 | 1 | 55011 05012 M5×12 | D50 55110 | 3 | D50 50310 | 1 | N00 52010 3/4×5,5 | N00 55821 M4,5×9-10IP |
| 150 | D53 53400 | 1 | | | | | | | |
| 155 | D53 53400 | 1 | | | | | | | |

| Ø D | Central drill bit ⑨ | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Accessories | | | Assembly parts | | | | | |
| | Central drill bit ⑨ | | | Clamping screw ⑩ for central drill bit | | | | Adjusting screw ⑪ for central drill bit | |
| | ∅ | Order No. HSS TiAlN coated | Order No. HSS TiN coated | Article | SW | Torque | Order No. | Article | Order No. |
| 80 | 16 | V95 10063.0090 | V95 10063.0089 | M12×16 | 6 | 25 Nm | N00 70370 | M12×16 | 5505212016 |
| 85 –110 | 16 | V95 10063.0090 | V95 10063.0089 | M12×20 | 6 | 25 Nm | N00 70380 | M12×20 | 5505212020 |
| 115–155 | 20 | V95 10213.0090 | V95 10213.0089 | M16×20 | 8 | 35 Nm | N00 70460 | M16×22 | N00 70800 |

## Technical Notes





| Guideline values for solid drilling | | | | | | KUB® V464 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. feed f (mm/rev) · Cutting speed $v_c$ (m/min) | | | | | |
| | | | | | | Ø 80 – 99 | | Ø 100 – 119 | | Ø 120 – 159 | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | f mm/U | HSS * $v_c$ m/min | f mm/rev | HSS * $v_c$ m/min | f mm/rev | HSS * $v_c$ m/min |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 0,10 | 200 | 0,12 | 200 | 0,12 | 200 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 0,12 | 180 | 0,14 | 180 | 0,16 | 180 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 0,12 | 200 | 0,14 | 200 | 0,16 | 200 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 0,12 | 160 | 0,14 | 160 | 0,16 | 160 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 0,12 | 140 | 0,14 | 140 | 0,16 | 140 |
| P | 4.1 | | | HSS | | 0,10 | 60 | 0,12 | 60 | 0,14 | 60 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | – | | – | | – | |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | – | | – | | – | |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 0,10 | 100 | 0,12 | 100 | 0,14 | 160 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 0,12 | 100 | 0,14 | 100 | 0,14 | 140 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 0,12 | 100 | 0,14 | 100 | 0,14 | 100 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 0,16 | 180 | 0,16 | 180 | 0,25 | 180 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 0,14 | 140 | 0,16 | 140 | 0,20 | 140 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 0,14 | 140 | 0,16 | 140 | 0,20 | 140 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 0,14 | 120 | 0,16 | 120 | 0,20 | 120 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 0,12 | 100 | 0,14 | 100 | 0,18 | 100 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 0,12 | 80 | 0,14 | 80 | 0,16 | 80 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 0,12 | 80 | 0,14 | 80 | 0,16 | 80 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 0,16 | 180 | 0,20 | 180 | 0,25 | 180 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 0,08 | 200 | 0,10 | 200 | 0,12 | 200 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 0,08 | 300 | 0,10 | 300 | 0,12 | 300 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 0,14 | 200 | 0,16 | 200 | 0,16 | 200 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 0,12 | 160 | 0,14 | 160 | 0,14 | 160 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | – | | – | | – | |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | – | | – | | – | |

* Cutting values shown are maximum values relating on the nominal diameter of the drill head using the respective central drill bit.



Patent applied for inside and outside Germany (ABS), EP 0 586 423 and other patents

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| | | Insert -03 -13 | | |
| for better chip control | 80 – 99 | W29 34130.048425 | WOEX 06T304-13 BK8425 | |
| | | W29 34030.046425 | WOEX 06T304-03 BK6425 | |
| | | W29 34130.0479 | WOEX 06T304-13 BK79 | |
| | 100 – 119 | W29 42130.048425 | WOEX 080404-13 BK8425 | |
| | | W29 42030.046425 | WOEX 080404-03 BK6425 | |
| | | W29 42130.0479 | WOEX 080404-13 BK79 | |
| | 120 – 144 | W29 34130.048425 | WOEX 06T304-13 BK8425 | |
| | | W29 34030.046425 | WOEX 06T304-03 BK6425 | |
| | | W29 34130.0479 | WOEX 06T304-13 BK79 | |
| | 145 – 159 | W29 42130.048425 | WOEX 080404-13 BK8425 | |
| | | W29 42030.046425 | WOEX 080404-03 BK6425 | |
| | | W29 42130.0479 | WOEX 080404-13 BK79 | |

## Alternative Inserts

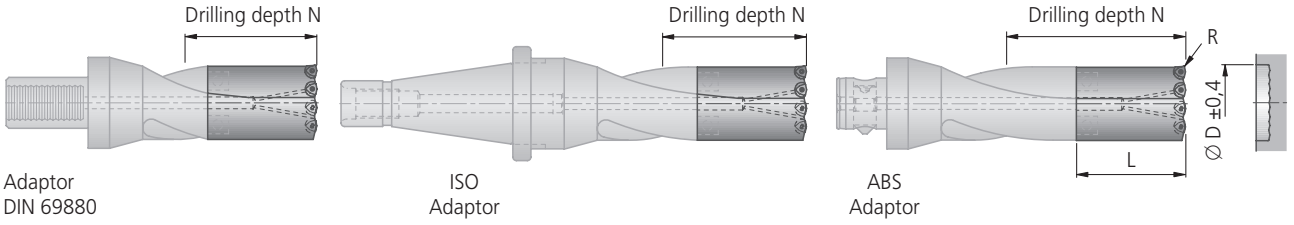
| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| | | Insert -01 -11 -13 | | |
| for higher cutting speed | 80 – 99 | W29 34010.0472 | WOEX 06T304-01 BK72 | |
| | | W29 34110.0450 | WOEX 06T304-11 BK50 | |
| | 100 – 119 | W29 42010.0472 | WOEX 080404-01 BK72 | |
| | | W29 42110.0450 | WOEX 080404-11 BK50 | |
| | 120 – 144 | W29 34010.0472 | WOEX 06T304-01 BK72 | |
| | | W29 34110.0450 | WOEX 06T304-11 BK50 | |
| | 145 – 159 | W29 42010.0472 | WOEX 080404-01 BK72 | |
| | | W29 42110.0450 | WOEX 080404-11 BK50 | |
| for greater strength | 80 – 99 | W29 34010.047930 | WOEX 06T304-01 BK7930 | |
| | | W29 34010.0404 | WOEX 06T304-01 P40 | |
| | | W29 34010.0421 | WOEX 06T304-01 K10 | |
| | | W29 34110.0421 | WOEX 06T304-11 K10 | |
| | 100 – 119 | W29 42010.047930 | WOEX 080404-01 BK7930 | |
| | | W29 42010.0404 | WOEX 080404-01 P40 | |
| | | W29 42010.0421 | WOEX 080404-01 K10 | |
| | | W29 42110.0421 | WOEX 080404-11 K10 | |
| | 120 – 144 | W29 34010.047930 | WOEX 06T304-01 BK7930 | |
| | | W29 34010.0404 | WOEX 06T304-01 P40 | |
| | | W29 34010.0421 | WOEX 06T304-01 K10 | |
| | | W29 34110.0421 | WOEX 06T304-11 K10 | |
| | 145 – 159 | W29 42010.047930 | WOEX 080404-01 BK7930 | |
| | | W29 42010.0404 | WOEX 080404-01 P40 | |
| | | W29 42010.0421 | WOEX 080404-01 K10 | |
| | | W29 42110.0421 | WOEX 080404-11 K10 | |

# KOMET KUB® V50 Ø 83 – 128 mm

## Drill Head with ABS® Connection, Taper or VDI Shank, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ✕ |

● very good ◐ good ○ possible ✕ not possible

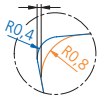



| Drill Head | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|
| | | | | Insert -01 -11 | | for workpiece material | Clamping screw | Screwdriver |
| Ø D | Order No. | for R0,8 L | kg | Order No. ▽▽ Size | ISO-Code | P M K N S H | Order No. Article | Order No. Article |
| 83 | V50 30830 | 120 | 2,35 | W29 34010.088425<br>W29 34010.047930<br>W29 34010.0862<br>W29 34110.0477 | WOEX 06T308-01 BK8425<br>WOEX 06T304-01 BK7930<br>WOEX 06T308-01 BK61<br>WOEX 06T304-11 BK77 | ● ● ● ● | N00 57521<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |
| 88 | V50 30880 | 120 | 2,56 | | | | | |
| 93 | V50 30930 | 120 | 2,88 | W29 42010.088425<br>W29 42010.047930<br>W29 42010.0862<br>W29 42110.0477 | WOEX 080408-01 BK8425<br>WOEX 080404-01 BK7930<br>WOEX 080408-01 BK62<br>WOEX 080404-11 BK77 | ● ● ● ● | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP |
| 98 | V50 30980 | 120 | 3,22 | | | | | |
| 103 | V50 31030 | 120 | 3,56 | | | | | |
| 108 | V50 31080 | 120 | 3,94 | | | | | |
| 113 | V50 31130 | 120 | 4,17 | W29 50010.088425<br>W29 50010.047930<br>W29 50010.0862<br>W29 50110.0477 | WOEX 100508-01 BK8425<br>WOEX 100504-01 BK7930<br>WOEX 100508-01 BK62<br>WOEX 100504-11 BK77 | ● ● ● ● | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP |
| 118 | V50 31180 | 120 | 4,71 | | | | | |
| 123 | V50 31230 | 120 | 5,11 | | | | | |
| 128 | V50 31280 | 120 | 5,66 | | | | | |

**Supply includes:**
Drill head with assembly parts. Please order insert and accessories separately.

The KUB® drill basic elements can be supplied on request for boring depths N 1×D to 4×D with ABS® connection (from ABS100) and with adaptors to DIN 69880 (VDI 3425 B/2) from NC50 and all ISO adaptors from ISO50.
To process the enquiry, we require details of the type and size of connection and required boring depth.

| | Assembly parts | | | | | | |
|---|---|---|---|---|---|---|---|
| | Insert seating internal | Insert seating external | Clamping screw | | | Pin | |
| Ø D | Order No. | Order No. | Article | Nm | Order No. | Article | Order No. |
| 83 – 88 | D50 55300 | D50 55100 | M3,5×5-8IP | 2,25 | N00 55701 | 1,8/2×4,5 | N00 52000 |
| 93 –108 | D50 55310 | D50 55110 | M4,5×9-10IP | 4,3 | N00 55821 | 3/4×5,5 | N00 52010 |
| 113–128 | D50 55320 | D50 55120 | M4,5×9-10IP | 4,3 | N00 55821 | 3/4×5,5 | N00 52010 |




**Note re. insert radius:**
The nominal dimension Ø is only achieved with the appropriate standardised insert radius.
Insert radii which deviate from this will alter the nominal dimension Ø (see Chapter 8)


Patent applied for inside and outside Germany (ABS)

## Drill Head with ABS® Connection, Taper or VDI Shank, R.H. cutting



| Guideline values for solid drilling | | | | | | $v_c$ | Max. f (mm/rev) | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 4×D | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 83 – 88 | Ø 93 – 108 | Ø 113 – 128 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 200 | 0,10 | 0,12 | 0,12 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 180 | 0,12 | 0,14 | 0,16 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 200 | 0,12 | 0,14 | 0,16 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 160 | 0,12 | 0,14 | 0,16 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 140 | 0,12 | 0,14 | 0,16 |
| P | 4.1 | | | HSS | | 60 | 0,10 | 0,12 | 0,14 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | – | – | – | – |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | – | – | – | – |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 160 | 0,10 | 0,12 | 0,14 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 140 | 0,12 | 0,14 | 0,14 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 100 | 0,12 | 0,14 | 0,14 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 180 | 0,16 | 0,16 | 0,25 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 140 | 0,14 | 0,16 | 0,20 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 140 | 0,14 | 0,16 | 0,20 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 120 | 0,14 | 0,16 | 0,20 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 100 | 0,12 | 0,14 | 0,18 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 80 | 0,12 | 0,14 | 0,16 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 80 | 0,12 | 0,14 | 0,16 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 180 | 0,16 | 0,20 | 0,25 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 200 | 0,08 | 0,10 | 0,12 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 300 | 0,08 | 0,10 | 0,12 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 200 | 0,14 | 0,16 | 0,16 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 160 | 0,12 | 0,14 | 0,14 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | – | – | – | – |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | – | – | – | – |

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | Insert -03 | -13 | -01 | -11 | for workpiece material P M K N S H |
|---|---|---|---|---|---|---|---|---|
| for better chip control | 83 – 88 | W29 34130.048425 | WOEX 06T304-13 BK8425 | | | | | |
| | | W29 34030.046425 | WOEX 06T304-03 BK6425 | | | | | |
| | | W29 34130.0479 | WOEX 06T304-13 BK79 | | | | | |
| | 93 – 108 | W29 42130.048425 | WOEX 080404-13 BK8425 | | | | | |
| | | W29 42030.046425 | WOEX 080404-03 BK6425 | | | | | |
| | | W29 42130.0479 | WOEX 080404-13 BK79 | | | | | |
| | 113 – 128 | W29 50130.048425 | WOEX 100504-13 BK8425 | | | | | |
| | | W29 50030.046425 | WOEX 100504-03 BK6425 | | | | | |
| | | W29 50130.0479 | WOEX 100504-13 BK79 | | | | | |
| for higher cutting speed | 83 – 88 | W29 34010.0472 | WOEX 06T304-01 BK72 | | | | | |
| | | W29 34110.0450 | WOEX 06T304-11 BK50 | | | | | |
| | 93 – 108 | W29 42010.0472 | WOEX 080404-01 BK72 | | | | | |
| | | W29 42110.0450 | WOEX 080404-11 BK50 | | | | | |
| | 113 – 128 | W29 50010.0872 | WOEX 100508-01 BK72 | | | | | |
| | | W29 50110.0450 | WOEX 100504-11 BK50 | | | | | |
| for greater strength | 83 – 88 | W29 34010.047930 | WOEX 06T304-01 BK7930 | | | | | |
| | | W29 34010.0404 | WOEX 06T304-01 P40 | | | | | |
| | | W29 34010.0421 | WOEX 06T304-01 K10 | | | | | |
| | | W29 34110.0421 | WOEX 06T304-11 K10 | | | | | |
| | 93 – 108 | W29 42010.047930 | WOEX 080404-01 BK7930 | | | | | |
| | | W29 42010.0404 | WOEX 080404-01 P40 | | | | | |
| | | W29 42010.0421 | WOEX 080404-01 K10 | | | | | |
| | | W29 42110.0421 | WOEX 080404-11 K10 | | | | | |
| | 113 – 128 | W29 50010.047930 | WOEX 100504-01 BK7930 | | | | | |
| | | W29 50010.0804 | WOEX 100508-01 P40 | | | | | |
| | | W29 50010.0821 | WOEX 100508-01 K10 | | | | | |
| | | W29 50110.0421 | WOEX 100504-11 K10 | | | | | |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

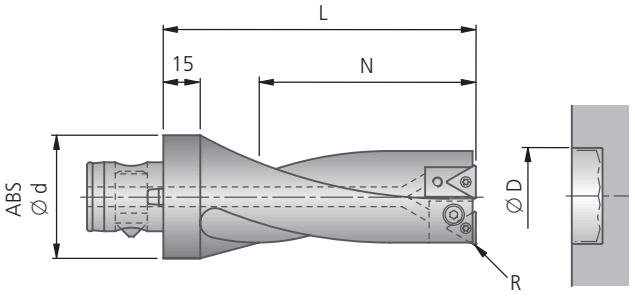
**Important: See chapter 8 for more application details and safety notes!**

# KOMET® V71 Ø 37 – 64 mm

## Flat Bottoming Tool with ABS® Connection, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3×D | ✕ | ◐ | ✕ | ✕ | ✕ | ✕ | ✕ | ✕ | ✕ | ● | ● |

● very good ◐ good ○ possible ✕ not possible




**Please note!** The flat bottoming tool must not be connected to the M01 (ABS-MV) adjustable device but only to adaptors, reducers or extensions.

| | | | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Adjustment range Ø D | ABS Ø d | Order No. | R | N | L | kg | Insert Order No. ▽▽Size | ISO-Code | for workpiece material P M K N S H | Clamping screw Order No. Article | Screwdriver Order No. Article |
| 37 – 43 | 50 | V71 00200 | 0,5 | 111 | 161 | 1,18 | W30 26660.058425<br>W30 26660.0503<br>W30 26660.0521<br>W30 26720.0521 | TOHX 140305EN-G06 BK8425<br>TOHX 140305EN-G06 P25M<br>TOHX 140305EN-G06 K10<br>TOHX140305FN-G12 K10 | ● ● ● ● | N00 56021<br>S/M3,5×6,2-10IP<br>2,8 Nm | L05 00850<br>10IP |
| 43 – 48 | 50 | V71 00210 | 0,5 | 129 | 179 | 1,49 | | | | | |
| 48 – 52 | 63 | V71 00250 | 0,8 | 144 | 199 | 2,27 | W30 44660.0803<br>W30 44660.0821<br>W30 44720.0821 | TOHX22T308EN-G06 P25M<br>TOHX22T308EN-G06 K10<br>TOHX22T308FN-G12 K10 | ● ● ● ● | N00 56401<br>S/M5×9,4-20IP<br>6,25 Nm | L05 00870<br>20IP |
| 52 – 58 | 63 | V71 00260 | 0,8 | 156 | 211 | 2,51 | | | | | |
| 58 – 64 | 80 | V71 00330 | 0,8 | 174 | 229 | 4,12 | | | | | |

**Supply includes:**
Flat bottoming tool with assembly parts. Please order insert and accessories separately.

**Rigid machine conditions are essential!**

The adjustable flat bottoming tool is primarily used for flat bottoming the the bottom face in blind bores. The external cutting edge is radially adjustable and the internal cutting edge axially adjustable for facing flat the bottom of the bore.
The flat bottoming tool will also remachine the bore diameter.

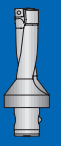
| | Assembly parts | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Insert seating internal | Insert seating external | Cylindrical screw DIN 7984 | | Screw | | Threaded pin DIN 913 | |
| Ø D | Order No. | Order No. | Article | Order No. | Article | Order No. | Article | Order No. |
| 37 – 48 | D53 05310 | D53 05110 | M4×8 | 55012 04008 | VPS-M2,6×6 | L02 30300 | M3×8 | 55051 03008 |
| 48 – 64 | D53 05320 | D53 05120 | M6×12 | 51247 06012 | | – | M4×8 | 55051 04008 |



Patent applied for inside and outside Germany (ABS)

# Flat Bottoming Tool with ABS® Connection, R.H. cutting





## Guideline values for flat bottoming

| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | $v_c$ Cutting speed $v_c$ (m/min) | Max. f (mm/rev) 3×D ∅ 37 – 48 | Max. f (mm/rev) 3×D ∅ 48 – 64 |
|---|---|---|---|---|---|---|---|---|
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 120 | 0,08 | 0,08 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 120 | 0,08 | 0,08 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 120 | 0,08 | 0,08 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 90 | 0,06 | 0,08 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 90 | 0,05 | 0,07 |
| P | 4.1 | | | HSS | | – | – | – |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | – | – | – |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | – | – | – |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 60 | 0,07 | 0,09 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 60 | 0,07 | 0,09 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 60 | 0,07 | 0,09 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 120 | 0,12 | 0,14 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 120 | 0,12 | 0,14 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 90 | 0,10 | 0,12 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 90 | 0,10 | 0,12 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 90 | 0,10 | 0,12 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 90 | 0,10 | 0,12 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 90 | 0,10 | 0,12 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 180 | 0,12 | 0,14 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 180 | 0,12 | 0,14 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 220 | 0,08 | 0,10 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 220 | 0,08 | 0,10 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 220 | 0,10 | 0,12 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | – | – | – |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | – | – | – |

## Alternative Inserts

| | ∅D | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| for better chip control | 37 – 48 | W30 26720.0503 | TOHX 140305EN-G12 P25M | ◐ ◐ |
| | 48 – 64 | – | | |
| for higher cutting speed | 37 – 48 | W30 26660.0560 | TOHX 140305EN-G06 BK60 | ◐ ◐ |
| | 48 – 64 | W30 44660.0860 | TOHX 22T308EN-G06 BK60 | ◐ |
| for greater strength | 37 – 48 | W30 26660.0503 | TOHX 140605EN-G06 P25M | ◐ |
| | 48 – 64 | – | | |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

**Important: See chapter 8 for more application details and safety notes!**

# KOMET®

# Ø 83 – 198 mm

## Trepannning tool with ABS® connection, taper or VDI shank, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3×D | ● | ✕ | ◐ | ◐ | ◐ | ◐ | ● | ● | ✕ | ✕ | ✕ |

● very good ◐ good ○ possible ✕ not possible

The KUB® drill basic elements are available on request for drilling depths N 1×D to 3×D with ABS® connection (ABS100, ABS125) and adaptors to SK 50 and cylindrical shank DIN 69880 from NC 50.

For administration purposes, please provide details of the type and size of connection and the required drilling depth with the enquiry.

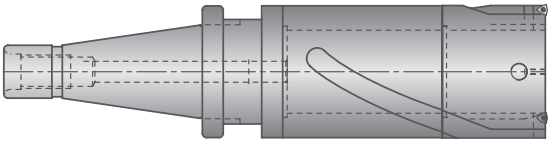
The KOMET® trepanning tool is used to enable recycling of residue when cutting particulary expensive materials or using this for verification. Because the tool only removes a ring of material, the amount of power required is very low, making it suitable for machining larger holes on less powerful machine tools.

With central coolant supply.

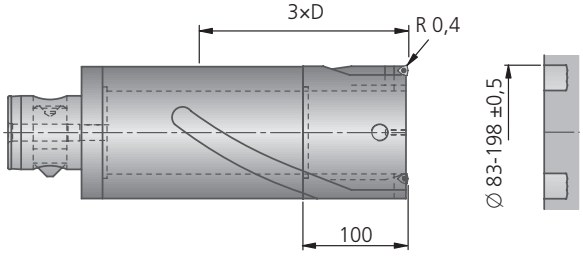


**available on request**

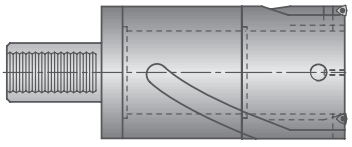
Taper shank



ABS Adaptor




Adaptor DIN 69880



**Please note:**
**Trepanning tool must be removed manually. Cutting width 25 mm**

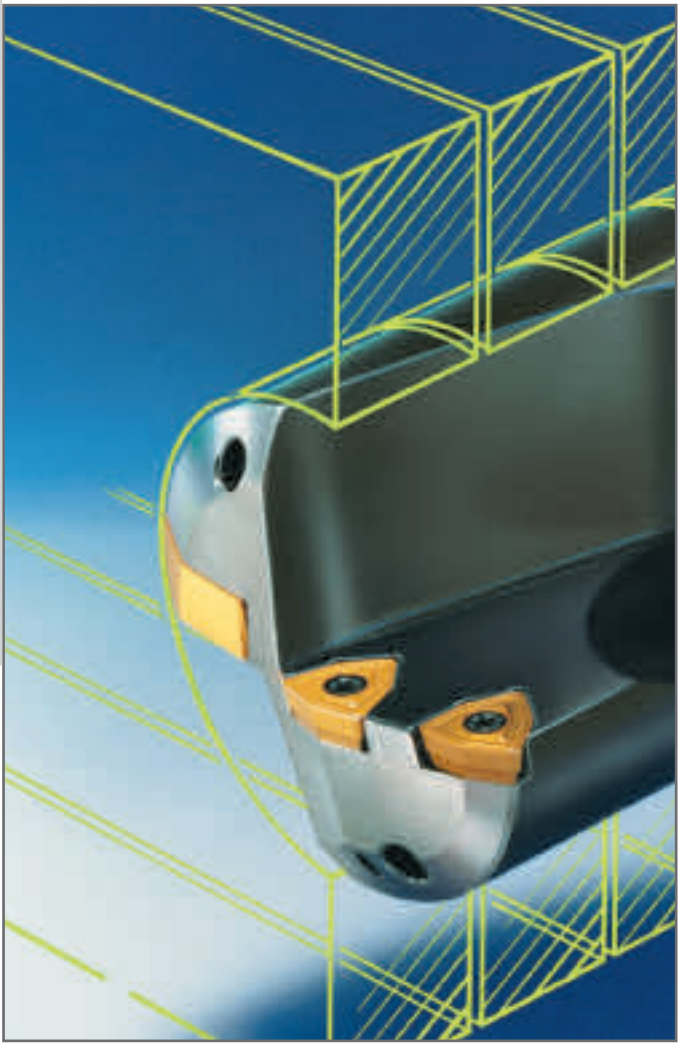
| Assembly parts | | | | |
|---|---|---|---|---|
| Insert seating external | Insert seating middle | Insert seating internal | Cylindrical screw | |
| Order No. | Order No. | Order No. | Article | Order No. |
| D53 55500 | D53 55600 | D53 55700 | M4×12 | 5501104012 |



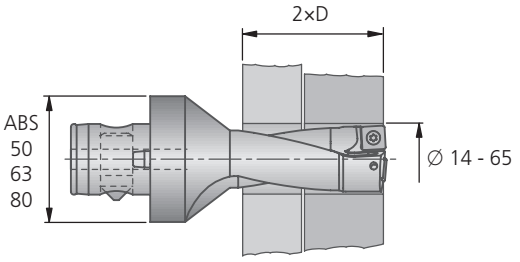
Patent applied for inside and outside Germany (ABS)

If workpieces are stacked close together, the disc produced would fall away during movement to the next workpiece and lie in front of the tool. This would destroy the inserts.

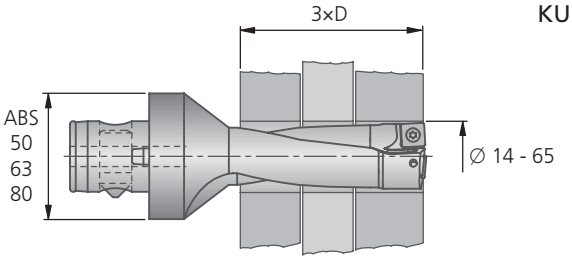
Because of the way their cutting edges are arranged, KUB® drills cut the material right up to the changeover point to the next workpiece.



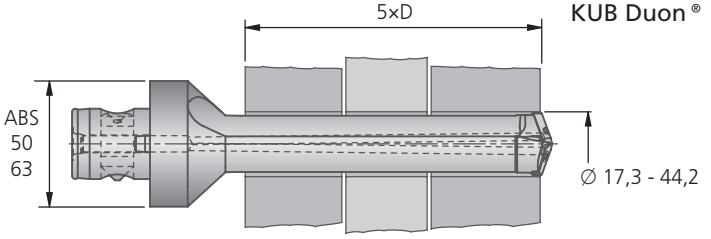
**KUB Quatron®**



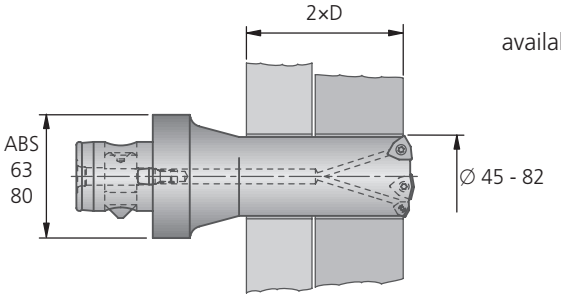

**KUB Quatron®**

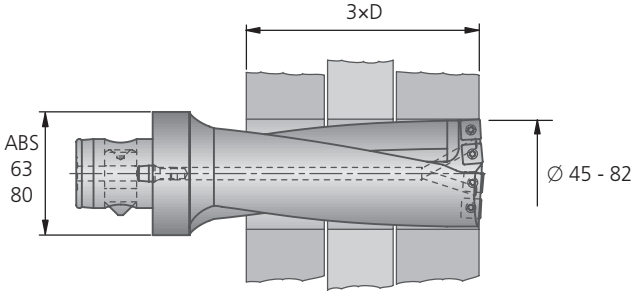



**KUB Duon®**




**KUB® Drill**
available on request



# KOMET® – Roughing



## Modules are the key!

The particular features of the innovative KOMET® twin cutter programme TwinKom® are a high level of efficiency and flexibility.

A large selection of different holders and inserts will solve every kind of application – even difficult machining tasks – with the right insert geometry.

BENEFITS for you:

- Axially adjustable insert holder for constant division of cut between the two cutting edges
- Radially adjustable insert holder for full twin cutter effect
- Radially adjustable insert holders allow conversion to stepped tool for larger depth
- Compact tool design
- For deep roughing operations chip removal is by means of the spiral flutes
- With ABS® connection
- Application range from 24 to 215 mm diameter







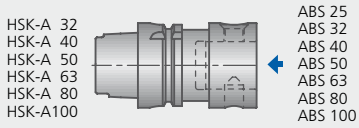
# Index


| | Page |
|---|---|
| **Programme summary** | 164 – 165 |
| **Tool selection** | 166 – 167 |
| **Twin cutter tool TwinKom® G01** | |
| Area of application | 168 – 169 |
| Construction | 170 |
| Technical informations | 171 |
| **WOEX inserts $\varkappa$ = 90° / 80°** | |
| Ø 24 – 215 mm | 172 – 175 |
| Ø 196 – 401 mm | 182 – 183 |
| Guideline values for roughing | 184 |
| Alternative inserts | 185 |
| **SOEX inserts $\varkappa$ = 80°** | |
| Ø 24 – 215 mm | 176 – 177 |
| Guideline values for roughing | 186 |
| Alternative inserts | 187 |
| **CCMT inserts $\varkappa$ = 90°** | |
| Ø 24 – 215 mm | 178 – 179 |
| Ø 196 – 401 mm | 182 – 183 |
| Guideline values for roughing | 190 |
| **TOHX / TOGX inserts $\varkappa$ = 90°** | |
| Ø 24 – 215 mm | 180 – 181 |
| Ø 196 – 401 mm | 182 – 183 |
| Guideline values for roughing | 188 |
| Alternative inserts | 189 |
| **Technical informations** | 192 |
| **Problems → Causes → Solutions** | 193 |
| **Twin cutter tool TwinKom® G04** | 194 – 195 |
| **Twin cutter tool TwinKom® Ø > 206 mm** | 196 – 197 |
| **Roughing / finishing tool PreciKom** | 198 – 199 |
| **Countersinking tool (KWZ)** | 200 – 201 |
| **Countersinking tool (KWS)** | 202 – 203 |

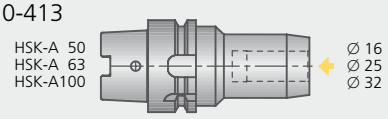
# Programme Summary – Roughing

## 5 Adaptors

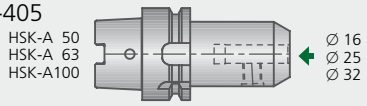
### HSK-A Adaptors
with ABS® connection
▸ 400



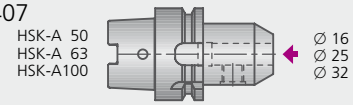

Expanding chuck
▸ 410-413



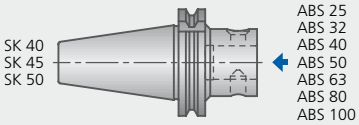

Adaptor sleeve Whistle Notch
▸ 404-405



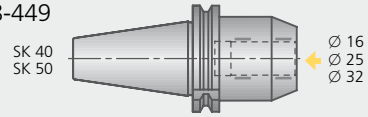

Adaptor sleeve Weldon
▸ 406-407



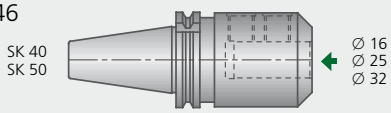

### Taper shanks DIN 69871
with ABS® connection
▸ 430



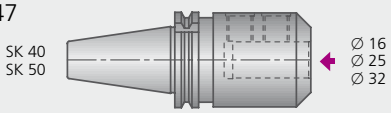

Expanding chuck
▸ 448-449



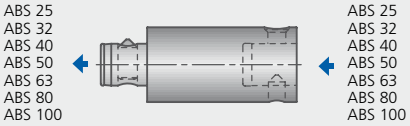

Adaptor sleeve Whistle Notch
▸ 446



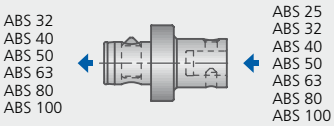

Adaptor sleeve Weldon
▸ 447



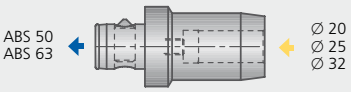

### ABS® Adaptors
Extension
▸ 466



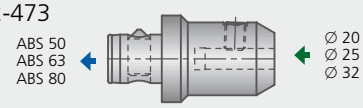

Reducer
▸ 464



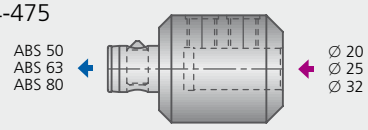

Expanding chuck
▸ 482



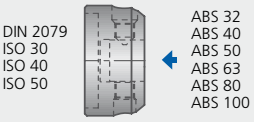

Adaptor sleeve Whistle Notch
▸ 472-473



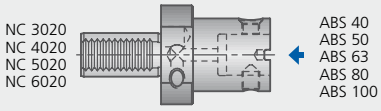

Adaptor sleeve Weldon
▸ 474-475



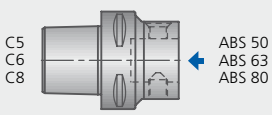

### Spindle adaptor flange
with ABS® connection
▸ 458




### VDI Adaptor
with ABS® connection
▸ 456




### PSC Adaptors ISO 26623
PSC interface with ABS® connection
▸ 460

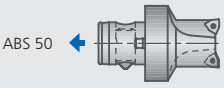




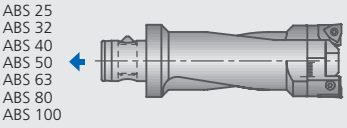

Further adaptors see chapter 5.

## 2 Tools for Roughing

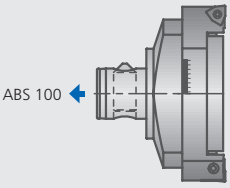
### with ABS® connection



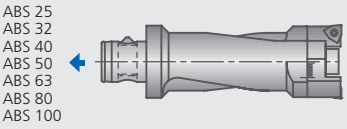

**Easy Special™**
∅ 14 – 44 mm
▸ Chapter 4



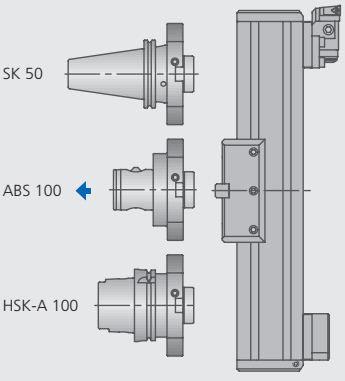

**TwinKom® G01**
∅ 24 – 215 mm
▸ 172 – 181



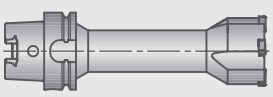

**TwinKom® G01**
∅ 196 – 401 mm
▸ 182 – 183




**TwinKom® G04**
∅ 30 – 204 mm
▸ 194 – 195




**TwinKom®**
∅ 206 – 1050 mm
▸ 196

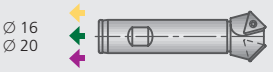


**PreciKom**
∅ 32 – 61,99 mm
▸ 198 – 199

### with cylindrical shank



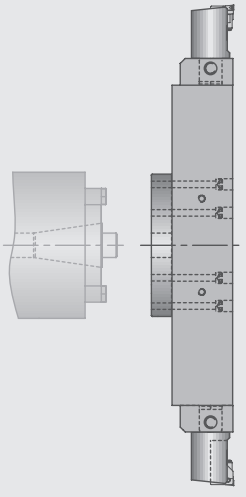

**Countersinking tool KWZ**
∅ 10 – 48 mm
▸ 200 – 201




**Countersinking tool KWS**
∅ 16,5 – 37 mm
▸ 202 – 203

**Key**

- ABS® connection
- Cylindrical connection
- Whistle Notch connection
- Weldon connection

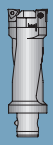


**TwinKom®**
∅ 400 – 2000 mm
▸ 197

# KOMET® Tool Selection

## Help Table for Roughing

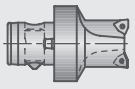
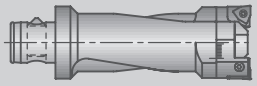
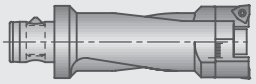
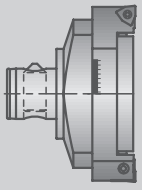
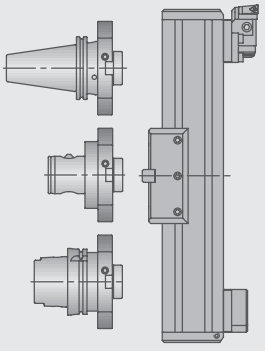
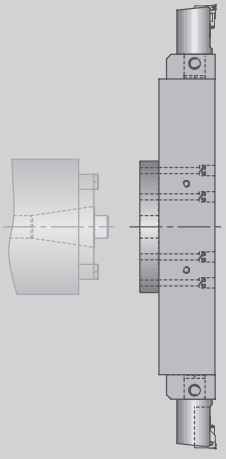
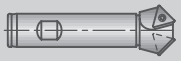
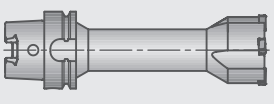




| Ø (mm) | Machining | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | through hole | blind hole | uneven | angled start and drilling out, interrupted cut | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
| 14 – 44 | ● | ● | ● | ● | ● | ● | | ● | 80° | ● |
| 24 – 215 | ● | ● | ● | ● | ● | ● | ● | ● | 80° | ● |
| 30 – 204 | ● | ● | ● | ● | ● | ● | | ● | 80° | ● |
| 196 – 401 | ● | ● | ● | ● | ● | ● | | ● | 80° | ● |
| 206 – 1050 larger diameters on request | ● | ● | ● | ● | ● | ● | | | | ● |
| 400 – 2000 on request | ● | ● | ● | ● | ● | ● | | ● | 80° | ● |
| 10 – 48 | ● | ● | ● | ● | ● | ● | | ● | | |
| 16,5 – 37 | for producing the 90° and 60° countersinks | | | for milling of trapezoidal slots | | | | for circular milling on machining centres | | for chamfering on machining centres |
| 32 – 61,99 larger dia. on request | ● | ● | ● | ◐ | ◐ | ● | | ● | | ● |

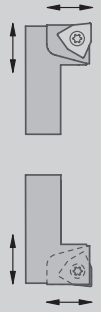
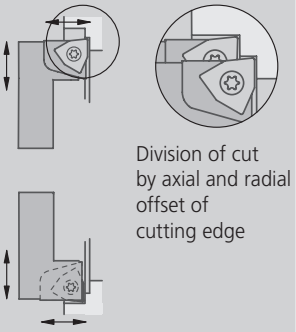


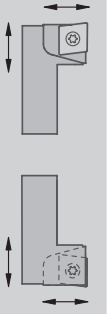
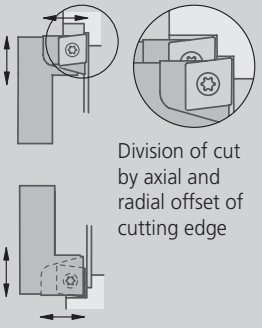
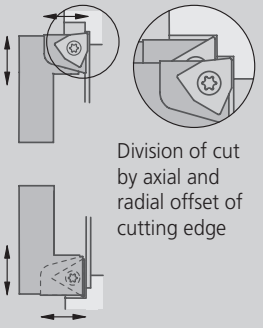
● very good ◐ good ○ possible: see technical notes

| Coolant | | | | Material | Tool | | Page |
|---|---|---|---|---|---|---|---|
| Emulsion | | MQL * for short boring depths | | Mild steel/tool steel P; Stainless and acid-resistant steel M; Grey cast iron, spheroidal cast iron K; Non-ferrous metals N; Heat-resistant steels S; Hardened tool steel H | | | |
| internal | external | internal | external | | | | |
| ● | ● | ● | ◐* | |  | Easy Special™ | ▸ Chapter 4 |
| ● | ● | ● | ◐* | ● ● ● ● |  | TwinKom® G01 | ▸ 172 - 181 |
| ● | ● | ● | ◐* | ● ● ● ● |  | TwinKom® G04 | ▸ 194 - 195 |
| ● | ● | ● | ◐* | ● ● ● ● |  | TwinKom® G01 | ▸ 182 - 183 |
| ● | ● | ● | ◐* | ● ● ● ● ● ○ |  | TwinKom® Lightweight twin cutter tool | ▸ 196 |
| | ● | | | ● ● ● ● ● ○ |  | TwinKom® Twin cutter tool | ▸ 197 |
| ● | ● | ● | ◐* | ● ● ● ● ● ○ |  | Countersinking tool KWZ | ▸ 200 - 201 |
| | | | | ● ● ● ● ● ○ |  | Countersinking tool KWS | ▸ 202 - 203 |
| | | | | ● |  | PreciKom Roughing / finishing tool | ▸ 198 - 199 |

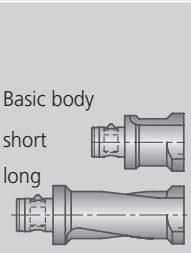
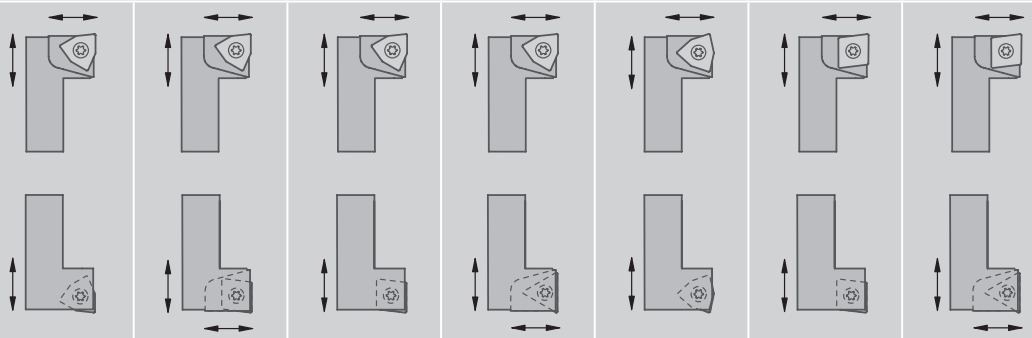
# KOMET TwinKom® G01 – High Performance and Flexibility

## Adaptors with the same approach angle can be combined among each other

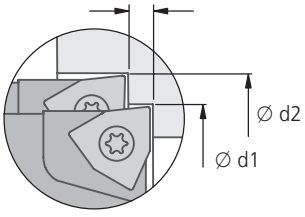
| Machining | Roughing | | | | | Combination roughing |
|---|---|---|---|---|---|---|
| for machining allowance $a_p$<br>Feed f | $a_p$ = 1 - 9 mm<br>2 cutting edge f = 2×$f_z$ | | | | | $a_p$ = 2 - 18 mm<br>1+1 cutting edge f = $f_z$ |
| ϰ | 90° | 90° | 80° | 80° | 90° | 90° |
| Insert | WOEX | WOEX | WOEX | WOEX | SOEX | WOEX |
| adjustable | axially + radially | radially | axially + radially | radially | radially | axially + radially |
| Page | 172 | 172 | 172 | 172 | 176 | 172 |
| Basic body<br>short<br>long |  | | | | |  <br>Division of cut by axial and radial offset of cutting edge |
| ● 1st choice<br>◐ may be possible | Roughing with largemachining allowance and large axial offset | | | | | |
| | ● | ● | ● | ● | ● | ● |
| | Roughing with extremely large allowance and large axial offset | | | | | |
| | ◐ | ◐ | ● | ● | ● | ● |
| | Roughing with large allowance and long tool overhang | | | | | |
| | ● | ● | ◐ | ◐ | ◐ | ● |

| Machining | Semi-finishing / Finishing | | | | Combination Semi-Finishing | Combination Finishing |
|---|---|---|---|---|---|---|
| for machining allowance $a_p$<br>Feed f | $a_p$ = 0,7 - 3 mm<br>2 cutting edge f = 2×$f_z$ | | $a_p$ = 0,1 - 2 mm<br>2 cutting edge f = 2×$f_z$ | | $a_p$ = 1,4 - 6 mm<br>1+1 cutting edge f = $f_z$ | $a_p$ = 1,5 - 5 mm<br>1+1 cutting edge f = $f_z$ |
| ϰ | 90° | 90° | 90° | 90° | 90° | 90° |
| Insert | CCMT | CCMT | TOGX | TOGX | CCMT | WOEX + TOGX |
| adjustable | axially + radially | radially | axially + radially | radially | axially + radially | axially + radially |
| Page | 178 | 178 | 180 | 180 | 178 | 172 + 180 |
| Basic body<br>short<br>long |  | | | |  <br>Division of cut by axial and radial offset of cutting edge |  <br>Division of cut by axial and radial offset of cutting edge |
| ● 1st choice<br>◐ may be possible | Light roughing, Semi-finishing with large axial offset | | | | | |
| | ◐ | ◐ | | | ● | |
| | Light roughing, Semi-finishing with slight axial offset | | | | | |
| | ● | ● | | | ● | ● |
| | Finishing with small to medium offset and slight axial offset | | | | | |
| | ◐ | ◐ | ◐ | ◐ | | ● |
| | Finishing with small allowance and no axial offset | | | | | |
| | | | ● | ● | | ● |

## Other Possible Combinations

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ϰ | 90° | 90° | 90° | 90° | 80° | 90° | 90° |
| Insert | WOEX | WOEX | WOEX | WOEX | WOEX | CCMT | CCMT |
| adjustable | axially + radially | axially + radially | axially + radially | axially + radially | axially + radially | axially + radially | axially + radially |
| Page | 172 | 172 | 172 | 172 | 172 | 178 | 178 |
| Basic body short long |  |  | | | | | |
| ϰ | 90° | 90° | 90° | 90° | 80° | 90° | 90° |
| Insert | WOEX | CCMT | CCMT | TOGX | WOEX | CCMT | TOGX |
| adjustable | radially | axially + radially | radially | axially + radially | radially | radially | axially + radially |
| Page | 172 | 178 | 178 | 180 | 172 | 178 | 180 |

### Combination roughing / Combination finishing




With combination roughing and combination finishing, division of the whole cutting width is produced by offsetting the cutting edge axially and radially. This should allow the ensuing cutting forces to be better distributed and produce an even cutting result.

With the roughing operation, this allows double the cutting width (using only a single feed rate $f=f_Z$)

With the finishing operation, the cutting width is divided so that some of the intermediate machining can be omitted.

With long chipping materials, improved chip control is achieved by means of division between axial and radial cutting.

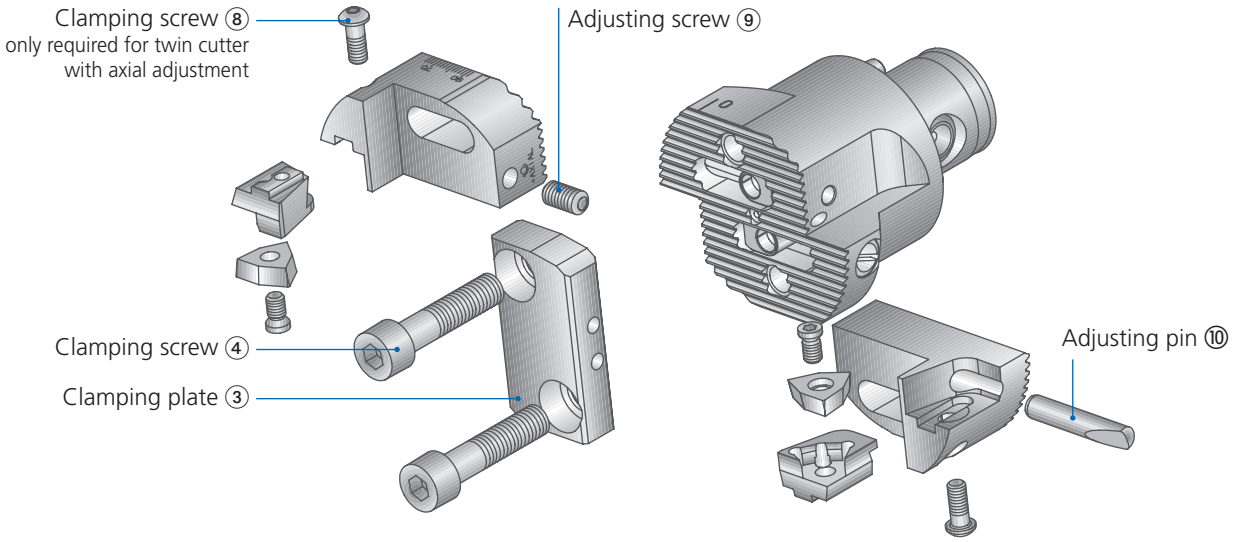
With long projection lengths, great operational smoothness is achieved.

- Axially adjustable insert holder for constant division of cut between the two cutting edges.
- Radially adjustable insert holder for full twin cutter effect.
- Radially adjustable insert holders allow conversion to stepped tool for larger depth.
- Compact tool design.
- For deep roughing operations chip removal is by means of the spiral flutes.
- With ABS connection.
- Application range from 24 to 215 mm diameter.



# KOMET TwinKom® G01

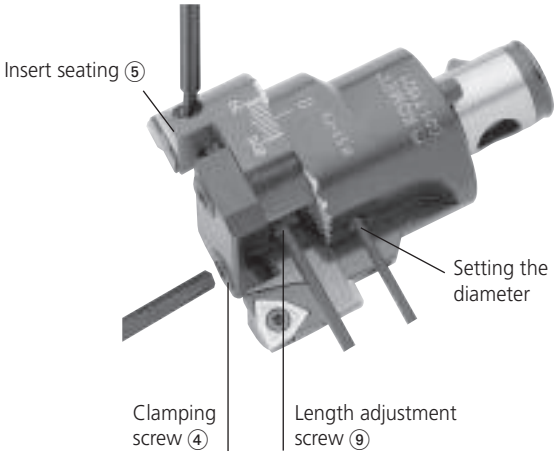
## Assembly Parts and Construction




For further assembly parts see pages 172 - 181.

| Boring range | Assembly parts | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Clamping plate ③ | Clamping screw DIN 912 ④ | | Clamping screw ⑧ | | | Adjusting screw DIN 913 ⑨ | | Adjusting pin ⑩ |
| Ø D min - max | Order No. | Article | Order No. | Article | Order No. | Nm | Article | Order No. | Order No. |
| 24 - 32 | G01 71050.12 | M3×16 | 55011 03016 | M2×4,5 / Tx6 | N10 11200 | 0,62 | M2,5×5 / SW1,3 | 55051 02505 | G03 70010.11 |
| 30 - 41 | G01 70521.12 | M4×20 | 55011 04020 | M2,5×5,3 /Tx8 | N10 11300 | 1,25 | M2,5×5 / SW1,3 | 55051 02505 | G03 70020.11 |
| 39 - 53 | G01 71011.12 | M5×25 | 55011 05025 | M2,5×7 / Tx8 | N10 11310 | 1,25 | M4×8 / SW2 | 55051 04008 | G03 70030.11 |
| 51 - 71 | G01 71511.12 | M6×30 | 55011 06030 | M3,5×9,4 / Tx10 | N10 11400 | 2,1 | M4×10 / SW2 | 55051 04010 | G03 70040.11 |
| 64 - 91 | G01 72011.12 | M8×35 | 55011 08035 | M4,5×10,5 / Tx15 | N10 11500 for D54 60450 | 4 | M6×12 / SW3 | 55051 06012 | G03 70060.11 |
| | | | | M4,5×11,5 / Tx15 | N10 11510 | 4 | | | |
| 83 - 124 | G01 72511.12 | M8×45 | 55011 08045 | M5×12 / SW4 | 55011 05012 | 9 | M6×20 / SW3 | 55051 06020 | G03 70070.11 |
| 109 - 167 | G01 73011.12 | M10×50 | 55011 10050 | M5×16 / SW4 | 55011 05016 | 9 | M8×20 / SW4 | 55051 08020 | G03 70080.11 |
| 139 - 215 | G01 73511.12 | M12×60 | 55011 12060 | M6×20 / SW5 | 55011 06020 | 15 | M10×20 / SW5 | 55051 10020 | G03 70090.11 |

## Handling



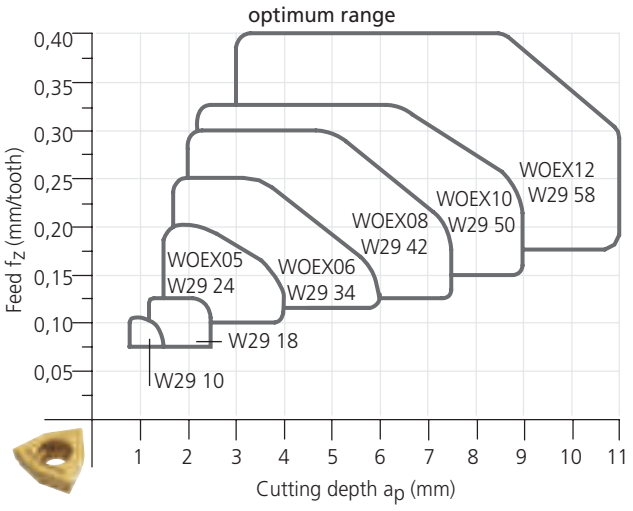

**Setting the diameter**
Loosen the clamping screw ④ on one side only.
Set the diameter and tighten clamping screw ④ again.
Repeat the same procedure on the second side.

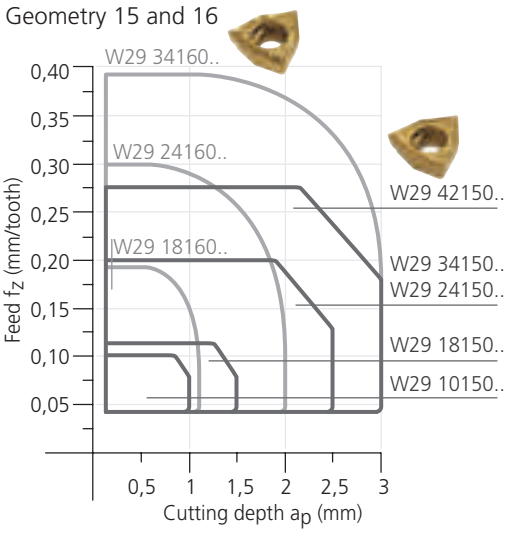
**Length adjustment**
Loosen insert seating ⑤ and then tighten again slightly.
Set length to 0.02 mm
in front of required dimension using length adjustment screw ⑨, tighten insert seating ⑤ and set to required height with length adjustment screw ⑨.
Repeat the same procedure on the second side.

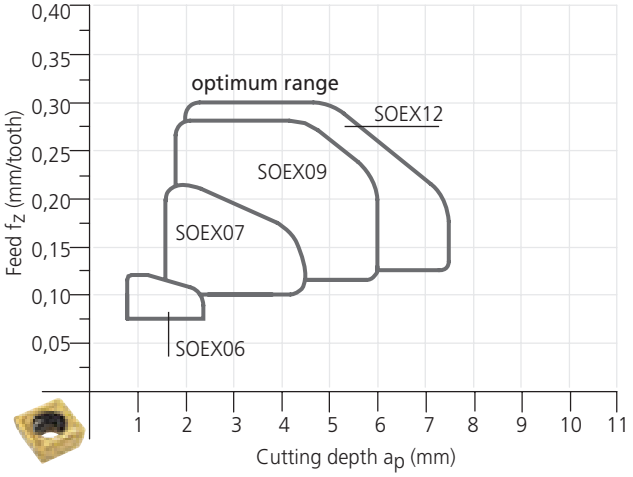
For performance calculation, see chapter 8

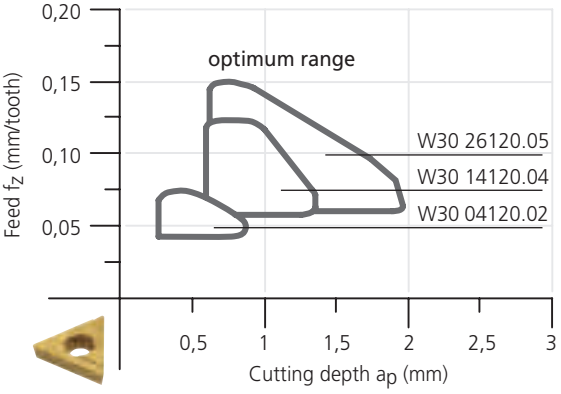
## Optimum cutting depth range

Guideline values for medium strength steels



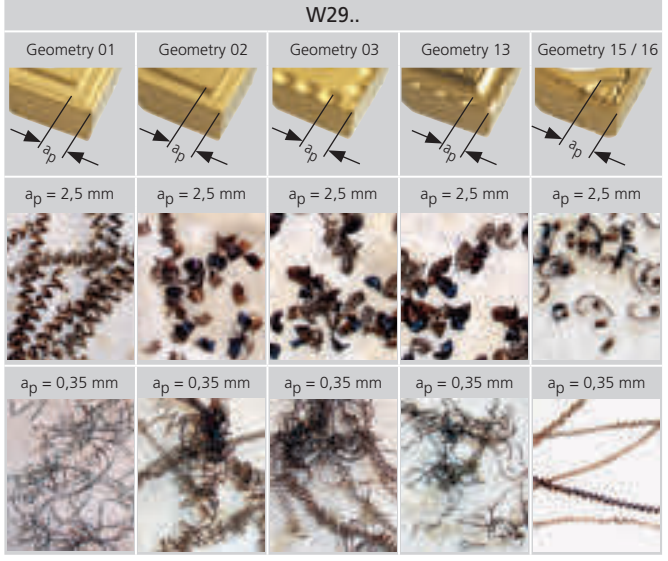



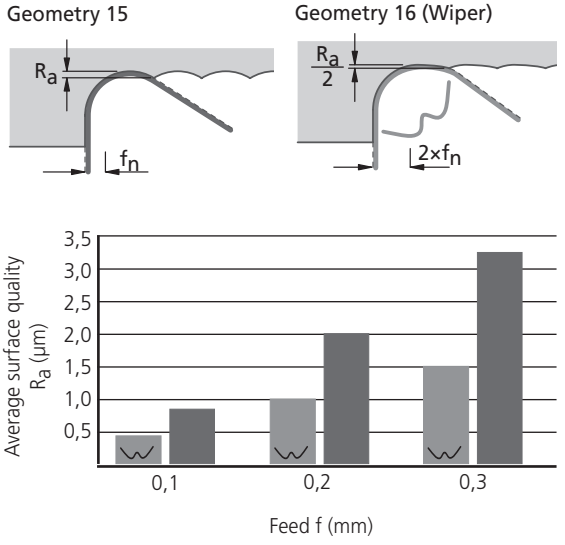




### Chip formation from various insert geometries

Tool: TwinKom® G01 twin cutter ∅ 40 mm
Material: 42CrMo4V 1100 N/mm²
Cutting data: $v_c$ = 140 m/min f = 0,35 mm/rev

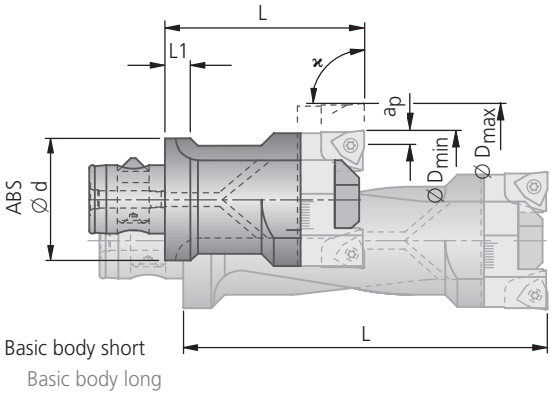


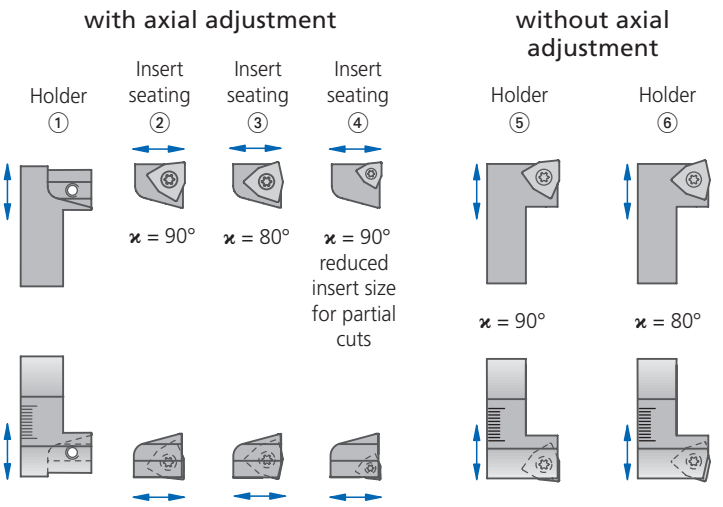

### Comparison of surface quality results for "Wiper" R04 for ϰ = 90° (in X40Cr13 / 1.4034)



# KOMET TwinKom® G01 — Ø 24 – 215 mm

## Twin Cutter with ABS® Connection, ϰ = 90° / 80°




| Ø D min-max | Basic body Order No. | ABS Ø d | L | L1 | Holder ① Order No. | Insert seating ② ϰ=90° Order No. appropriate insert | Insert seating ③ ϰ=80° Order No. appropriate insert | Insert seating ④ ϰ=90° Order No. appropriate insert | Holder ⑤ ϰ=90° Order No. appropriate insert | Holder ⑥ ϰ=80° Order No. appropriate insert |
|---|---|---|---|---|---|---|---|---|---|---|
| 24 - 32 | G01 70551 0,11 | 25 | 45 | 6 | G03 70011 0,01 | D54 60510 0,002 W29 10... | D54 60610 0,002 W29 10... | | G03 70330 0,012 W29 18... | G03 80310 0,012 W29 18... |
| | G01 71071 0,21 | 32 | 70 | 7 | | | | | | |
| 30 - 41 | G01 70561 0,114 | 25 | 50 | – | G03 70021 0,016 | D54 60520 0,002 W29 18... | D54 60620 0,002 W29 18... | | G03 70141 0,017 W29 24... | G03 80021 0,018 W29 24... |
| | G01 71131 0,293 | 32 | 85 | 7,5 | | | | | | |
| 39 - 53 | G01 71021 0,286 | 32 | 60 | – | G03 70031 0,035 | D54 60030 0,004 W29 24... | D54 60130 0,004 W29 24... | | G03 70230 0,039 W29 24... | G03 80090 0,038 W29 24... |
| | G01 71621 0,676 | 40 | 120 | 8 | | | | | | |
| 51 - 71 | G01 71521 0,44 | 40 | 60 | – | G03 70041 0,067 | D54 60040 0,008 W29 34... | D54 60140 0,008 W29 34... | D54 60540 0,008 W29 24... | G03 70240 0,077 W29 34... | G03 80100 0,076 W29 34... |
| | G01 72121 1,238 | 50 | 135 | 10 | | | | | | |
| 64 - 91 | G01 72021 0,824 | 50 | 70 | – | G03 70061 0,128 | D54 60050 0,014 W29 42... | D54 60150 0,014 W29 42... | D54 60550 0,017 W29 24... | G03 70250 0,145 W29 42... | G03 80110 0,143 W29 42... |
| | G01 72621 2,25 | 63 | 155 | 13 | | | | | | |
| 83 - 124 | G01 72521 1,351 | 63 | 70 | – | G03 70071 0,247 | D54 60060 0,026 W29 50... | D54 60160 0,026 W29 50... | D54 60560 0,033 W29 24... | G03 70260 0,277 W29 50... | G03 80120 0,272 W29 50... |
| | G01 73121 3,805 | 80 | 155 | 16,5 | | | | | | |
| 109 - 167 | G01 73031 3,055 | 80 | 90 | – | G03 70081 0,486 | D54 60060 0,026 W29 50... | D54 60160 0,026 W29 50... | D54 60560 0,033 W29 24... | | |
| | G01 73041 6,21 | 80 | 175 | – | | | | | | |
| 139 - 215 | G01 73561 6,47 | 100 | 125 | – | G03 70091 1,082 | D54 60070 0,049 W29 58... | D54 60170 0,049 W29 58... | D54 60570 0,062 W29 24... | | |
| | G01 73571 13,25 | 100 | 240 | – | | | | | | |



Patent applied for inside and outside Germany (ABS)

WOEX

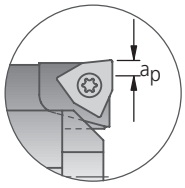


# KOMET TwinKom® G01

## Twin Cutter with ABS® Connection

| through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |  80° |  |
| ● | ● | ● | ● | ● | ● | ● | ● | | ● |

● very good ◐ good ○ possible: see technical notes, page 192 ✕ not possible




**Note!**
For optimum cutting in the $D_{min}$ area the cutting depth $a_p$ should be reduced.

**Supply includes basic body:**
Clamping plate with adjusting screw and clamping screw.
**Supply includes insert seating/holder:** with clamping screw.

Please order inserts and accessories separately.

**Order example:**

| | |
|---|---|
| Basic body short | G01 70551 |
| Holder 2× | G03 70011 |
| Insert seating 90° 2× | D54 60510 |
| Insert 2× | W29 10010.048425 |

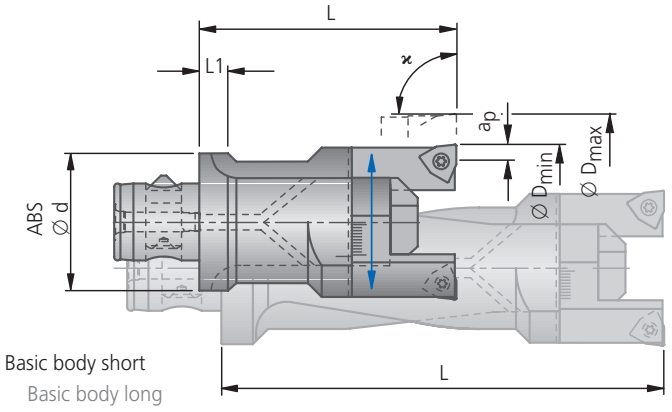
| Basic recommendation | | | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|
| Insert  -00 -01  -11 | | | for workpiece material | max. cutting depth | Clamping screw  | Screwdriver  |
| appropriate insert | Order No. ▽▽ size | ISO-Code | P M K N S H | $a_p$ | Order No. Article | Order No. Article |
| W29 10... | **W29 10010.048425**<br>**W29 10010.047930**<br>**W29 10010.0462**<br>**W29 10110.0477** | WOEX 030204-01 BK8425<br>WOEX 030204-01 BK7930<br>WOEX 030204-01 BK62<br>WOEX 030204-11 BK77 | ● ● ● ● ● | 1,5<br>1,0<br>1,5<br>2,0 | **N00 56041**<br>S/M2×4,3-6IP<br>0,62 Nm | **L05 00810**<br>6IP |
| W29 18... | **W29 18010.048425**<br>**W29 18010.047930**<br>**W29 18010.0462**<br>**W29 18110.0477** | WOEX 040304-01 BK8425<br>WOEX 040304-01 BK7930<br>WOEX 040304-01 BK62<br>WOEX 040304-11 BK77 | ● ● ● ● ● | 2,5<br>1,5<br>3,0<br>3,0 | **N00 57553**<br>S/M2,2×5,5-6IP<br>1,01 Nm | **L05 00810**<br>6IP |
| W29 24... | **W29 24010.048425**<br>**W29 24010.047930**<br>**W29 24010.0461**<br>**W29 24110.0477** | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK61<br>WOEX 05T304-11 BK77 | ● ● ● ● ● | 4,5<br>3,5<br>5,0<br>5,0 | for insert seating D54: **N00 57571** S/M2,5×6,3-8IP 1,28 Nm<br>for holder G03: **N00 57511** S/M2,5×7,2-8IP 1,28 Nm | **L05 00830**<br>8IP |
| W29 34... | **W29 34010.048425**<br>**W29 34010.047930**<br>**W29 34010.0461**<br>**W29 34110.0477** | WOEX 06T304-01 BK8425<br>WOEX 06T304-01 BK7930<br>WOEX 06T304-01 BK61<br>WOEX 06T304-11 BK77 | ● ● ● ● ● | 6,0<br>4,0<br>6,0<br>6,0 | for insert seating D54: **N00 57611** S/M3,5×6,6-10IP 2,8 Nm<br>for holder G03: **N00 57521** S/M3,5×7,3-10IP 2,8 Nm | **L05 00850**<br>10IP |
| W29 42... | **W29 42010.048425**<br>**W29 42010.047930**<br>**W29 42010.0461**<br>**W29 42110.0477** | WOEX 080404-01 BK8425<br>WOEX 080404-01 BK7930<br>WOEX 080404-01 BK61<br>WOEX 080404-11 BK77 | ● ● ● ● ● | 7,5<br>6,0<br>7,5<br>7,5 | **N00 57531**<br>S/M4,5×9-15IP<br>6,25 Nm | **L05 00860**<br>15IP |
| W29 50... | **W29 50010.088425**<br>**W29 50010.047930**<br>**W29 50010.0861**<br>**W29 50110.0477** | WOEX 100508-01 BK8425<br>WOEX 100504-01 BK7930<br>WOEX 100508-01 BK61<br>WOEX 100504-11 BK77 | ● ● ● ● ● | 9,0<br>9,0<br>9,0<br>9,0 | **N00 57531**<br>S/M4,5×9-15IP<br>6,25 Nm | **L05 00860**<br>15IP |
| W29 58... | **W29 58010.088425**<br>**W29 58010.087930**<br>**W29 58010.0861**<br>**W29 58000.0821** | WOEX 120608-01 BK8425<br>WOEX 120608-01 BK7930<br>WOEX 120608-01 BK61<br>WOEX 120608-00 K10 | ● ● ● ● ● | 9,0<br>9,0<br>9,0<br>9,0 | **N00 57541**<br>S/M5,5×11-20IP<br>6,25 Nm | **L05 00870**<br>20IP |

Guideline values for roughing: page 184 / alternative inserts: page 185.

# KOMET TwinKom® G01 Ø 24 – 215 mm

## Twin Cutter with ABS® Connection, ϰ = 90°

without axial adjustment




| Ø D min-max | Basic body Order No. | ABS Ø d | L | L1 | Holder ϰ=90° Order No. | Basic recommendation Insert -00 -01 -11 Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | max. cutting depth ap | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 - 32 | G01 70551 0,11 | 25 | 50 | 6 | G03 70410 0,014 | W29 18010.048425<br>W29 18010.047930<br>W29 18010.0462<br>W29 18110.0477 | WOEX 040304-01 BK8425<br>WOEX 040304-01 BK7930<br>WOEX 040304-01 BK62<br>WOEX 040304-11 BK77 | ● ● ● ● ● | 2,5<br>1,5<br>3,0<br>3,0 | N00 57553<br>S/M2,2×5,5-6IP<br>1,01 Nm | L05 00810<br>6IP |
| | G01 71071 0,21 | 32 | 75 | 7 | | | | | | | |
| 30 - 41 | G01 70561 0,114 | 25 | 58 | – | G03 70420 0,024 | W29 24010.048425<br>W29 24010.047930<br>W29 24010.0461<br>W29 24110.0477 | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK61<br>WOEX 05T304-11 BK77 | ● ● ● ● ● | 4,5<br>3,5<br>5,0<br>5,0 | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| | G01 71131 0,293 | 32 | 93 | 7,5 | | | | | | | |
| 39 - 53 | G01 71021 0,286 | 32 | 68 | – | G03 70430 0,048 | W29 24010.048425<br>W29 24010.047930<br>W29 24010.0461<br>W29 24110.0477 | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK61<br>WOEX 05T304-11 BK77 | ● ● ● ● ● | 4,5<br>3,5<br>5,0<br>5,0 | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| | G01 71621 0,676 | 40 | 128 | 8 | | | | | | | |
| 51 - 71 | G01 71521 0,44 | 40 | 70 | – | G03 70440 0,095 | W29 34010.048425<br>W29 34010.047930<br>W29 34010.0461<br>W29 34110.0477 | WOEX 06T304-01 BK8425<br>WOEX 06T304-01 BK7930<br>WOEX 06T304-01 BK61<br>WOEX 06T304-11 BK77 | ● ● ● ● ● | 6,0<br>4,0<br>6,0<br>6,0 | N00 57521<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |
| | G01 72121 1,238 | 50 | 145 | 10 | | | | | | | |
| 64 - 91 | G01 72021 0,824 | 50 | 85 | – | G03 70460 0,185 | W29 42010.048425<br>W29 42010.047930<br>W29 42010.0461<br>W29 42110.0477 | WOEX 080404-01 BK8425<br>WOEX 080404-01 BK7930<br>WOEX 080404-01 BK61<br>WOEX 080404-11 BK77 | ● ● ● ● ● | 7,5<br>6,0<br>7,5<br>7,5 | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP |
| | G01 72621 2,25 | 63 | 170 | 13 | | | | | | | |
| 83 - 124 | G01 72521 1,351 | 63 | 90 | – | G03 70470 0,36 | W29 50010.088425<br>W29 50010.047930<br>W29 50010.0861<br>W29 50110.0477 | WOEX 100508-01 BK8425<br>WOEX 100504-01 BK7930<br>WOEX 100508-01 BK61<br>WOEX 100504-11 BK77 | ● ● ● ● ● | 9,0<br>9,0<br>9,0<br>9,0 | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP |
| | G01 73121 3,805 | 80 | 175 | 16,5 | | | | | | | |
| 109 - 167 | G01 73031 3,055 | 80 | 110 | – | G03 70480 0,622 | W29 50010.088425<br>W29 50010.047930<br>W29 50010.0861<br>W29 50110.0477 | WOEX 100508-01 BK8425<br>WOEX 100504-01 BK7930<br>WOEX 100508-01 BK61<br>WOEX 100504-11 BK77 | ● ● ● ● ● | 9,0<br>9,0<br>9,0<br>9,0 | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP |
| | G01 73041 6,21 | 80 | 195 | – | | | | | | | |
| 139 - 215 | G01 73561 6,47 | 100 | 150 | – | G03 70490 1,34 | W29 58010.088425<br>W29 58010.087930<br>W29 58010.0861<br>W29 58000.0821 | WOEX 120608-01 BK8425<br>WOEX 120608-01 BK7930<br>WOEX 120608-01 BK61<br>WOEX 120608-00 K10 | ● ● ● ● ● | 9,0<br>9,0<br>9,0<br>9,0 | N00 57541<br>S/M5,5×11-20IP<br>6,25 Nm | L05 00870<br>20IP |
| | G01 73571 13,25 | 100 | 265 | – | | | | | | | |



Patent applied for inside and outside Germany (ABS)

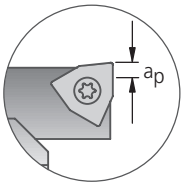



# KOMET TwinKom® G01

## Twin Cutter with ABS® Connection

| through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ✕ | ● | ✕ | ● |

● very good ◐ good ○ possible: see technical notes, page 192 ✕ not possible

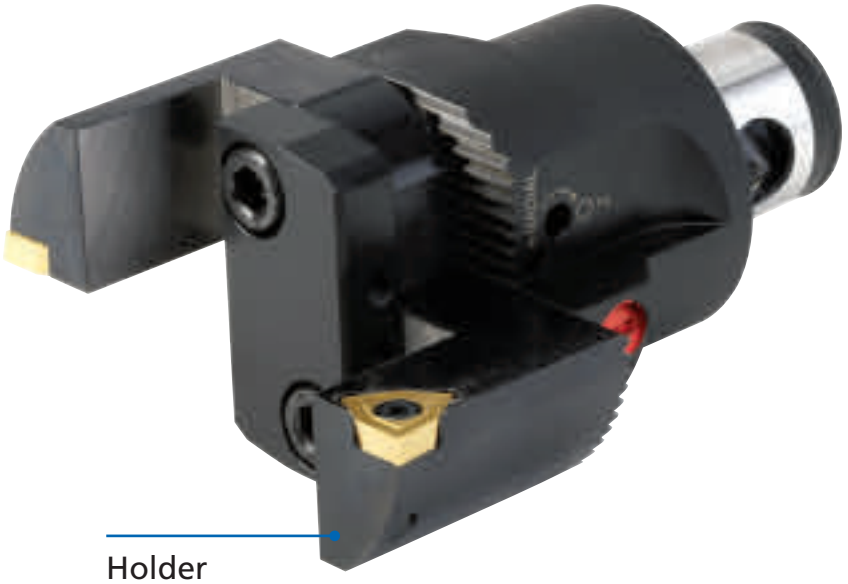



**Note!**
For optimum cutting in the $D_{min}$ area the cutting depth $a_p$ should be reduced.

**Supply includes basic body:**
Clamping plate with adjusting screw and clamping screw.
**Supply includes holder:** with clamping screw.
Please order inserts and accessories separately.

**Order example:**

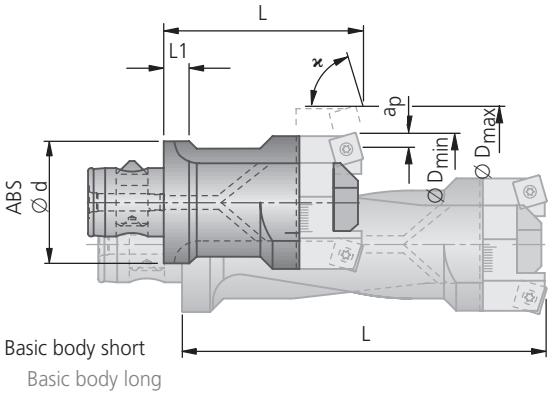
| | |
|---|---|
| Basic body short | G01 70551 |
| Holder 2× | G03 70410 |
| Insert 2× | W29 18110.0477 |



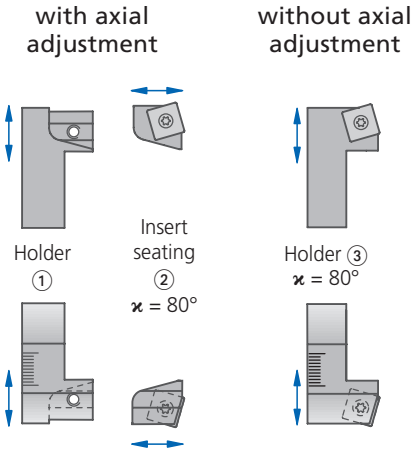
Holder
specifically for blind bore!

# KOMET TwinKom® G01 Ø 24 – 215 mm

## Twin Cutter with ABS® Connection, ϰ = 80°




Basic body short
Basic body long




| Ø D min-max | Basic body Order No. | ABS Ø d | L | L1 | Holder ① Order No. | Insert seating ② ϰ=80° Order No. appropriate insert | Holder ③ ϰ=80° Order No. appropriate insert |
|---|---|---|---|---|---|---|---|
| 24 - 32 | G01 70551 0,11 | 25 | 45 | 6 | G03 70011 0,01 | D54 60710 0,002 W83 13... | G03 80030 0,010 W83 18... |
| | G01 71071 0,21 | 32 | 70 | 7 | | | |
| 30 - 41 | G01 70561 0,114 | 25 | 50 | – | G03 70021 0,016 | D54 60720 0,002 W83 13... | G03 80040 0,017 W83 23... |
| | G01 71131 0,293 | 32 | 85 | 7,5 | | | |
| 39 - 53 | G01 71021 0,286 | 32 | 60 | – | G03 70031 0,035 | D54 60730 0,004 W83 18... | G03 80050 0,036 W83 32... |
| | G01 71621 0,676 | 40 | 120 | 8 | | | |
| 51 - 71 | G01 71521 0,44 | 40 | 60 | – | G03 70041 0,067 | D54 60740 0,008 W83 23... | G03 80060 0,072 W83 32... |
| | G01 72121 1,238 | 50 | 135 | 10 | | | |
| 64 - 91 | G01 72021 0,824 | 50 | 70 | – | G03 70061 0,128 | D54 60750 0,016 W83 32... | G03 80070 0,136 W83 44... |
| | G01 72621 2,25 | 63 | 155 | 13 | | | |
| 83 - 124 | G01 72521 1,351 | 63 | 70 | – | G03 70071 0,247 | D54 60760 0,024 W83 44... | G03 80080 0,268 W83 44... |
| | G01 73121 3,805 | 80 | 155 | 16,5 | | | |
| 109 - 167 | G01 73031 3,055 | 80 | 90 | – | G03 70081 0,486 | D54 60760 0,024 W83 44... | |
| | G01 73041 6,21 | 80 | 175 | – | | | |
| 139 - 215 | G01 73561 6,47 | 100 | 125 | – | G03 70091 1,082 | D54 60770 0,055 W83 44... | |
| | G01 73571 13,25 | 100 | 240 | – | | | |



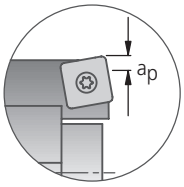
Patent applied for inside and outside Germany (ABS)

SOEX



| through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|
| ● | ✕ | ● | ● | ● | ● | ● | ● | 80° | ● |

● very good ◐ good ○ possible: see technical notes, page 192 ✕ not possible




**Note!**
For optimum cutting in the $D_{min}$ area the cutting depth $a_p$ should be reduced.

**Supply includes basic body:**
Clamping plate with adjusting screw and clamping screw.
**Supply includes insert seating/holder:** with clamping screw.

Please order inserts and accessories separately.

**Order example:**

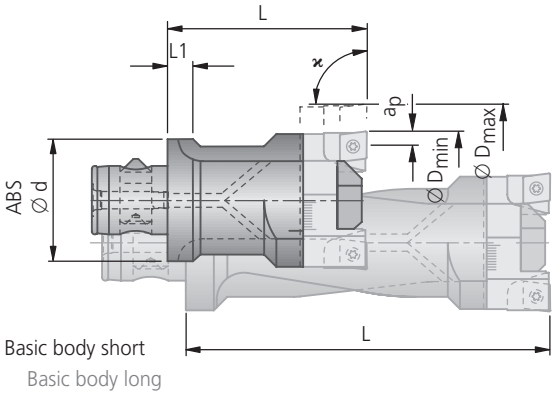
| | |
|---|---|
| Basic body short | G01 70551 |
| Holder 2× | G03 70011 |
| Insert seating 80° 2× | D54 60710 |
| Insert 2× | W83 13010.048425 |

| Basic recommendation | | | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|
| Insert | | | for workpiece material | max. cutting depth | Clamping screw | Screwdriver |
| appropriate insert | Order No. ▽▽ size | ISO-Code | P M K N S H | $a_p$ | Order No. Article | Order No. Article |
| ◎ W83 13... | **W83 13010.048425**<br>**W83 13000.0179**<br>**W83 13000.0161**<br>**W83 13010.048425** | SOEX 050204-01 BK8425<br>SOEX 050204-01 BK79<br>SOEX 050204-01 BK61<br>SOEX 050204-01 BK8425 | ● ● ● ● | 2,5<br>1,5<br>3,0<br>3,0 | **N00 56041**<br>S/M2×4,3-6IP<br>0,62 Nm | **L05 00810**<br>6IP |
| ◎ W83 18... | **W83 18010.068425**<br>**W83 18000.0979**<br>**W83 18000.0961**<br>**W83 18010.068425** | SOEX 060306-01 BK8425<br>SOEX 060306-01 BK79<br>SOEX 060306-01 BK61<br>SOEX 060306-01 BK8425 | ● ● ● ● | 2,5<br>1,5<br>3,0<br>3,0 | **N00 57553**<br>S/M2,2×5,5-6IP<br>1,01 Nm | **L05 00810**<br>6IP |
| ◎ W83 23... | **W83 23010.088425**<br>**W83 23000.0179**<br>**W83 23000.0161**<br>**W83 23010.088425** | SOEX 07T308-01 BK8425<br>SOEX 07T308-01 BK79<br>SOEX 07T308-01 BK61<br>SOEX 07T308-01 BK8425 | ● ● ● ● | 4,5<br>3,5<br>5,0<br>5,0 | **N00 57571**<br>S/M2,5×6,3-8IP<br>1,28 Nm | **L05 00830**<br>8IP |
| ◎ W83 32... | **W83 32010.088425**<br>**W83 32000.1579**<br>**W83 32000.1561**<br>**W83 32010.088425** | SOEX 090408-01 BK8425<br>SOEX 090408-01 BK79<br>SOEX 090408-01 BK61<br>SOEX 090408-01 BK8425 | ● ● ● ● | Ø 39-53<br>4,5<br>3,5<br>5,0<br>5,0 | Ø 51-71<br>6,0<br>4,0<br>6,0<br>6,0 | **N00 57261**<br>S3575-15IP<br>2,8 Nm | **L05 00860**<br>15IP |
| ◎ W83 44... | **W83 44010.088425**<br>**W83 44000.1879**<br>**W83 44000.1861**<br>**W83 44010.088425** | SOEX 120508-01 BK8425<br>SOEX 120508-01 BK79<br>SOEX 120508-01 BK61<br>SOEX 120508-01 BK8425 | ● ● ● ● | Ø 64-91<br>7,5<br>6,0<br>7,5<br>7,5 | Ø 83-124<br>9,0<br>9,0<br>9,0<br>9,0 | **N00 57301**<br>S45100-20IP<br>6,25 Nm | **L05 00870**<br>20IP |

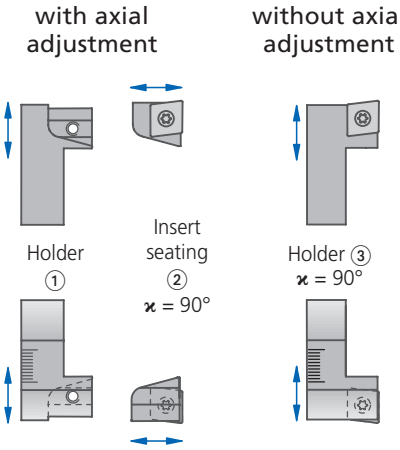
Guideline values for roughing: page 186 / alternative inserts: page 187.

# KOMET TwinKom® G01 Ø 24 – 215 mm

## Twin Cutter with ABS® Connection, ϰ = 90°




Basic body short
Basic body long

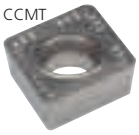



| Ø D min-max | Basic body Order No. | ABS Ø d | L | L1 | Holder ① Order No. | Insert seating ② ϰ=90° Order No. appropriate insert | Holder ③ ϰ=90° Order No. appropriate insert |
|---|---|---|---|---|---|---|---|
| 24 - 32 | G01 70551 0,11 | 25 | 45 | 6 | | | G03 70150 0,011 C85 18... |
| | G01 71071 0,21 | 32 | 70 | 7 | | | |
| 30 - 41 | G01 70561 0,114 | 25 | 50 | – | | | G03 70160 0,018 C85 18... |
| | G01 71131 0,293 | 32 | 85 | 7,5 | | | |
| 39 - 53 | G01 71021 0,286 | 32 | 60 | – | G03 70031 0,035 | D54 60430 0,005 C85 18... | G03 70170 0,036 C85 32... |
| | G01 71621 0,676 | 40 | 120 | 8 | | | |
| 51 - 71 | G01 71521 0,44 | 40 | 60 | – | G03 70041 0,067 | D54 60440 0,008 C85 32... | G03 70180 0,073 C85 32... |
| | G01 72121 1,238 | 50 | 135 | 10 | | | |
| 64 - 91 | G01 72021 0,824 | 50 | 70 | – | G03 70061 0,128 | D54 60450 0,016 C85 32... | G03 70190 0,138 C85 44... |
| | G01 72621 2,25 | 63 | 155 | 13 | | | |
| 83 - 124 | G01 72521 1,351 | 63 | 70 | – | G03 70071 0,247 | D54 60460 0,024 C85 44... | G03 70200 0,268 C85 44... |
| | G01 73121 3,805 | 80 | 155 | 16,5 | | | |
| 109 - 167 | G01 73031 3,055 | 80 | 90 | – | G03 70081 0,486 | D54 60460 0,024 C85 44... | |
| | G01 73041 6,21 | 80 | 175 | – | | | |
| 139 - 215 | G01 73561 6,47 | 100 | 125 | – | G03 70091 1,082 | D54 60470 0,055 C85 44... | |
| | G01 73571 13,25 | 100 | 240 | – | | | |



Patent applied for inside and outside Germany (ABS)

CCMT

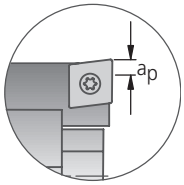


# KOMET TwinKom® G01

## Twin Cutter with ABS® Connection

| through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |  80° |  |
| ● | ● | ● | ● | ● | ● | ● | ● | | ● |

● very good ◐ good ○ possible: see technical notes, page 192 ✕ not possible




**Note!**
For optimum cutting in the $D_{min}$ area the cutting depth $a_p$ should be reduced.

**Supply includes basic body:**
Clamping plate with adjusting screw and clamping screw.
**Supply includes insert seating/holder:** with clamping screw.
Please order inserts and accessories separately.

**Order example:**

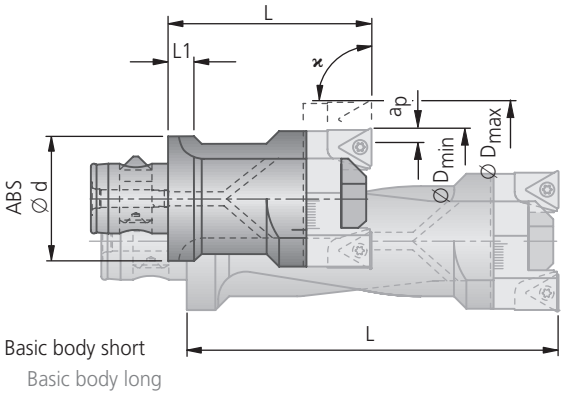
| | |
|---|---|
| Basic body short | G01 71021 |
| Holder 2× | G03 70031 |
| Insert seating 90° 2× | D54 60430 |
| Insert 2× | C85 18010.047525 |

| Basic recommendation | | | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|
| Insert  -05 | | | for workpiece material | max. cutting depth | Clamping screw  | Screwdriver  |
| appropriate insert | Order No. ▽▽ size | ISO-Code | P M K N S H | $a_p$ | Order No. Article | Order No. Article |
| C85 18... | **C85 18010.047525**<br>**C85 18010.047525**<br>**C85 18050.047610**<br>**C85 18120.0423** | CCMT 060204-01 BK7520<br>CCMT 060204-01 BK7520<br>CCMT 060204-05 BK7610<br>CCGT 060204-12 K10 | ●<br>●<br>●<br>● | 1,0<br>0,7<br>1,5<br>1,5 | **N00 57221**<br>S2553-7IP<br>0,9 Nm | **L05 00820**<br>7IP |
| C85 32... | **C85 32010.047525**<br>**C85 32010.047525**<br>**C85 32050.047610**<br>**C85 32120.0423** | CCMT 09T304-01 BK7520<br>CCMT 09T304-01 BK7520<br>CCMT 09T304-05 BK7610<br>CCGT 09T304-12 K10 | ●<br>●<br>●<br>● | 1,5<br>1,0<br>2,0<br>2,0 | **N00 57261**<br>S3575-15IP<br>2,8 Nm | **L05 00860**<br>15IP |
| C85 44... | **C85 44010.047525**<br>**C85 44010.047525**<br>**C85 44050.047610**<br>**C85 44120.0423** | CCMT 120404-01 BK7520<br>CCMT 120404-01 BK7520<br>CCMT 120404-05 BK7610<br>CCGT 120404-12 K10 | ●<br>●<br>●<br>● | 2,5<br>2,0<br>3,0<br>3,0 | **N00 57301**<br>S45100-20IP<br>6,25 Nm | **L05 00870**<br>20IP |

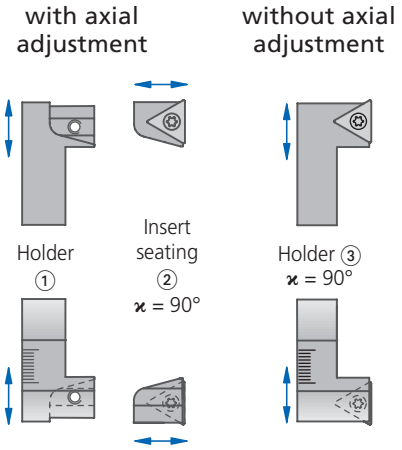
Guideline values for roughing: page 190.

# KOMET TwinKom® G01 Ø 24 – 215 mm

## Twin Cutter with ABS® Connection, ϰ = 90°




Basic body short
Basic body long




| Ø D min-max | Basic body Order No. | ABS Ø d | L | L1 | Holder ① Order No. | Insert seating ② ϰ=90° Order No. appropriate insert | Insert seating ② ϰ=90° Order No. appropriate insert | Holder ③ ϰ=90° Order No. appropriate insert |
|---|---|---|---|---|---|---|---|---|
| 24 - 32 | G01 70551 0,11 | 25 | 45 | 6 | | | | G03 70210 0,012 W57 04... W30 04... |
| | G01 71071 0,21 | 32 | 70 | 7 | | | | |
| 30 - 41 | G01 70561 0,114 | 25 | 50 | – | | | | G03 70220 0,018 W57 14... W30 14... |
| | G01 71131 0,293 | 32 | 85 | 7,5 | | | | |
| 39 - 53 | G01 71021 0,286 | 32 | 60 | – | G03 70031 0,035 | D54 60330 0,005 W57 14... W30 14... | | |
| | G01 71621 0,676 | 40 | 120 | 8 | | | | |
| 51 - 71 | G01 71521 0,44 | 40 | 60 | – | G03 70041 0,067 | D54 60340 0,008 W57 26... W30 26... | | |
| | G01 72121 1,238 | 50 | 135 | 10 | | | | |
| 64 - 91 | G01 72021 0,824 | 50 | 70 | – | G03 70061 0,128 | D54 60350 0,016 W57 26... W30 26... | | |
| | G01 72621 2,25 | 63 | 155 | 13 | | | | |
| 83 - 124 | G01 72521 1,351 | 63 | 70 | – | G03 70071 0,247 | D54 60360 0,032 W57 26... W30 26... | | |
| | G01 73121 3,805 | 80 | 155 | 16,5 | | | | |
| 109 - 167 | G01 73031 3,055 | 80 | 90 | – | G03 70081 0,486 | D54 60360 0,032 W57 26... W30 26... | | |
| | G01 73041 6,21 | 80 | 175 | – | | | | |
| 139 - 215 | G01 73561 6,47 | 100 | 125 | – | G03 70091 1,082 | D54 60380 0,06 W57 26... W30 26... | D54 60370 0,056 W30 44... | |
| | G01 73571 13,25 | 100 | 240 | – | | | | |



Patent applied for inside and outside Germany (ABS)

TOGX

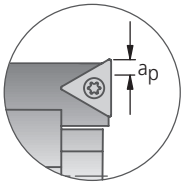


# KOMET TwinKom® G01

## Twin Cutter with ABS® Connection

| through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ● | ● | 80° | ● |

● very good ◐ good ○ possible: see technical notes, page 192 ✕ not possible




**Note!**
For optimum cutting in the $D_{min}$ area the cutting depth $a_p$ should be reduced.

**Supply includes basic body:**
Clamping plate with adjusting screw and clamping screw.
**Supply includes insert seating/holder:** with clamping screw.
Please order inserts and accessories separately.

**Order example:**

| | |
|---|---|
| Basic body short | G01 71021 |
| Holder 2× | G03 70031 |
| Insert seating 90° 2× | D54 60330 |
| Insert 2× | W57 14140.028430 |

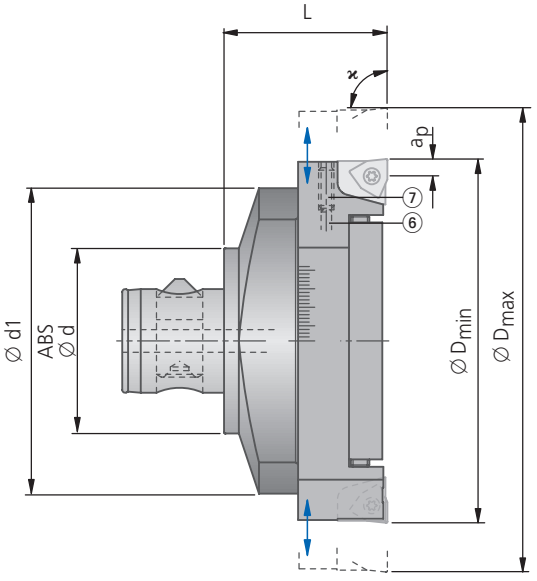
| Basic recommendation | | | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|
| Insert W30 -12 -14 | | | for workpiece material | max. cutting depth | Clamping screw | Screwdriver |
| appropriate insert | Order No. ▽▽ size | ISO-Code | P M K N S H | $a_p$ | Order No. Article | Order No. Article |
| ▽ W57 04...<br>▽ W30 04... | **W57 04140.028430**<br>**W30 04060.037615**<br>**W57 04120.0223** | TOGX 06T102EN-14 BK8430<br>TOHX 06T103EL-G06 BK7615<br>TOGX 06T102FN-12 K10 | ● ●<br>●<br>● ● | 0,15<br>0,1<br>0,4 | **N00 56031**<br>S/M2×4,9-6IP<br>0,62 Nm | **L05 00810**<br>6IP |
| ▽ W57 14...<br>▽ W30 14... | **W57 14140.028430**<br>**W30 14060.047615**<br>**W57 14120.0423** | TOGX 090202EN-14 BK8430<br>TOHX 090204EL-G06 BK7615<br>TOGX 090204FN-12 K10 | ● ●<br>●<br>● ● | 0,4<br>0,3<br>0,5 | **N00 57221**<br>S2553-7IP<br>0,9 Nm | **L05 00820**<br>7IP |
| ▽ W57 26...<br>▽ W30 26... | **W57 26140.028430**<br>**W30 26060.047615**<br>**W57 26120.0423** | TOGX 140302EN-14 BK8430<br>TOHX 140304EL-G06 BK7615<br>TOGX 140304FN-12 K10 | ● ●<br>●<br>● ● | 0,6<br>0,6<br>1,0 | **N00 56201**<br>S/M3,5×6,2-10IP<br>2,8 Nm | **L05 00850**<br>10IP |
| ▽ W30 44... | **W30 44060.088425**<br>**W30 44600.087615** | TOHX 22T308EL-G06 BK8425<br>TOHX 22T308EN BK7615 | ● ●<br>● | 1,0<br>0,8 | **N00 56401**<br>S/M5×9,4-20IP<br>6,25 Nm | **L05 00870**<br>20IP |

Guideline values for roughing: page 188 / alternative inserts: page 189.

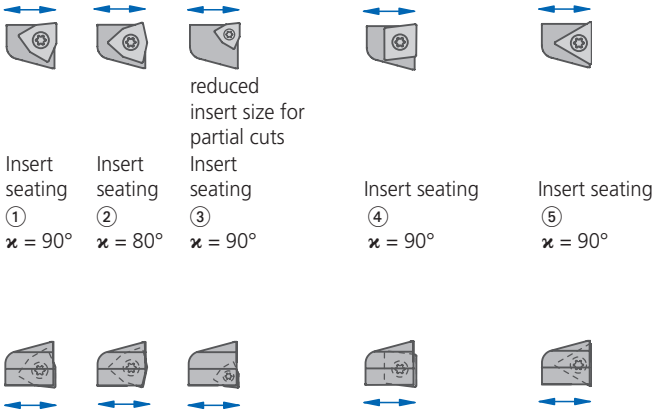
# KOMET TwinKom® G01 Ø 196 – 401 mm

## Twin Cutter with ABS® Connection, ϰ = 90° / 80°

(ABS-VD)




with axial adjustment




| Ø D min-max | Twin Cutter Tool (basic body + pair of holders) Order No. | ABS Ø d | Ø d1 | L | Assembly parts Holder Order No. | Accessories Insert seating ① ϰ=90° Order No. appropriate insert | Insert seating ② ϰ=80° Order No. appropriate insert | Insert seating ③ ϰ=90° Order No. appropriate insert | Insert seating ④ ϰ=90° Order No. appropriate insert | Insert seating ⑤ ϰ=90° Order No. appropriate insert | Assembly parts Axial adjustment pin ⑥ Order No. | Threaded pin ⑦ DIN913 Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 196–271 | G01 63531 9,15 | 100 | 165 | 88 | G03 10281 1,335 | D54 60070 0,049 W29 58... | D54 60170 0,049 W29 58... | D54 60570 0,062 W29 24... | D54 60470 0,055 C85 44... | D54 60370 0,056 W30 44... | G03 10281.13 | 55051 05020 M5×20 |
| 261–335 | G01 63541 11,04 | 100 | 230 | 88 | G03 10291 1,733 | | | | | | | |
| 326–401 | G01 63551 13,94 | 100 | 295 | 88 | G03 10301 1,983 | | | | | | | |

**Features:**

- The 90° design has radially arranged cutters and can therefore be operated with the same cutting edge overhang with double feed rate (feed distribution).
- The 80° design offers greater cutting widths through arrow-shaped cutter arrangement and particularly good tool guidance. Connection, excluding extensions, where possible only directly onto taper shank or spindle adaptor flange.
- The tool has internal coolant supply to each cutter.



Patent applied for inside and outside Germany (ABS)



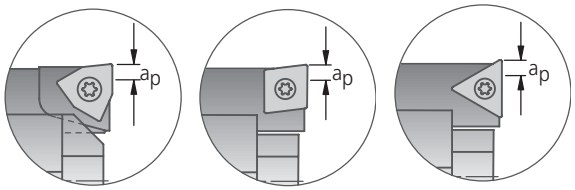

# KOMET TwinKom® G01

## Twin Cutter with ABS® Connection



| through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ● | ● | 80° | ● |

● very good ◐ good ○ possible: see technical notes, page 192 ✕ not possible




**Supply includes twin cutter tool:**
Basic body, clamping plate, adjusting screw and clamping screw, holder with axial adjustment pin and threaded pin.
**Supply includes insert seating:** with clamping screw.
Please order inserts and accessories separately.

**Note!**
For optimum cutting in the $D_{min}$ area the cutting depth $a_p$ should be reduced.

**Order example:**

| | |
|---|---|
| Twin cutter tool | G01 63531 |
| Insert seating 90° 2× | D54 60070 |
| Insert 2× | W29 58010.088425 |

| Basic recommendation | | | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|
| Insert -00 -01 -11 | | | for workpiece material | max. cutting depth | Clamping screw | Screwdriver |
| appropriate insert | Order No. ▽▽ size | ISO-Code | P M K N S H | $a_p$ | Order No. Article | Order No. Article |
| ▽ W29 24... | **W29 24010.048425** | WOEX 05T304-01 BK8425 | ● ○ ● ● ● | 4,5 | **N00 57511** S/M2,5×7,2-8IP 1,28 Nm | **L05 00830** 8IP |
| | **W29 24010.047930** | WOEX 05T304-01 BK7930 | | 3,5 | | |
| | **W29 24010.0461** | WOEX 05T304-01 BK61 | | 5,0 | | |
| | **W29 24110.0477** | WOEX 05T304-11 BK77 | | 5,0 | | |
| ▽ W29 58... | **W29 58010.088425** | WOEX 120608-01 BK8425 | ● ○ ● ● ● | 9,0 | **N00 57541** S/M5,5×11-20IP 6,25 Nm | **L05 00870** 20IP |
| | **W29 58010.087930** | WOEX 120608-01 BK7930 | | 9,0 | | |
| | **W29 58010.0861** | WOEX 120608-01 BK61 | | 9,0 | | |
| | **W29 58000.0821** | WOEX 120608-00 K10 | | 9,0 | | |

| Basic recommendation | | | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|
| Insert -05 | | | for workpiece material | max. cutting depth | Clamping screw | Screwdriver |
| appropriate insert | Order No. ▽▽ size | ISO-Code | P M K N S H | $a_p$ | Order No. Article | Order No. Article |
| ◎ C85 44... | **C85 44010.047525** | CCMT 120404-01 BK7520 | ● ○ ● ● ● | 2,5 | **N00 57301** S45100-20IP 6,25 Nm | **L05 00870** 20IP |
| | **C85 44010.047525** | CCMT 120404-01 BK7520 | | 2,0 | | |
| | **C85 44050.047610** | CCMT 120404-05 BK7610 | | 3,0 | | |
| | **C85 44120.0423** | CCGT 120404-12 K10 | | 3,0 | | |

| Basic recommendation | | | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|
| Insert W30 -12 -14 | | | for workpiece material | max. cutting depth | Clamping screw | Screwdriver |
| appropriate insert | Order No. ▽▽ size | ISO-Code | P M K N S H | $a_p$ | Order No. Article | Order No. Article |
| ▽ W30 44... | **W30 44060.088425** | TOHX22T308EL-G06 BK8425 | ● ○ ● ○ ○ | 1,0 | **N00 56401** S/M5×9,4-20IP 6,25 Nm | **L05 00870** 20IP |
| | **W30 44600.087615** | TOHX 22T308EN BK7615 | | 0,8 | | |

Guideline values for roughing: pages 184 - 190 / alternative inserts: pages 185 - 189.

# KOMET TwinKom® G01 / G04

## Technical Notes






| Guideline values for roughing | | | | | | $v_c$ | Max. feed $f_z$ (mm/tooth) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 24 – 32 | Ø 30 – 41 | Ø 39 – 53 | Ø 51 – 71 | Ø 64 – 91 | Ø 83 – 124 | Ø 109 – 167 | Ø 139 – 215 | Ø 196 – 401 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 200 | 0,10 | 0,12 | 0,15 | 0,20 | 0,25 | 0,30 | 0,30 | 0,30 | 0,30 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 200 | 0,10 | 0,12 | 0,15 | 0,20 | 0,25 | 0,30 | 0,30 | 0,30 | 0,30 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 180 | 0,10 | 0,12 | 0,15 | 0,20 | 0,25 | 0,30 | 0,30 | 0,30 | 0,30 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 140 | 0,10 | 0,12 | 0,15 | 0,20 | 0,25 | 0,30 | 0,30 | 0,30 | 0,30 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 120 | 0,06 | 0,10 | 0,12 | 0,15 | 0,20 | 0,20 | 0,25 | 0,25 | 0,25 |
| P | 4.1 | | | HSS | | – | – | – | – | – | – | – | – | – | – |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,05 | 0,08 | 0,10 | 0,12 | 0,12 | 0,15 | 0,15 | 0,20 | 0,20 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 50 | 0,06 | 0,08 | 0,10 | 0,12 | 0,12 | 0,15 | 0,15 | 0,20 | 0,20 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 120 | 0,07 | 0,09 | 0,12 | 0,12 | 0,15 | 0,20 | 0,20 | 0,20 | 0,20 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 120 | 0,07 | 0,09 | 0,12 | 0,12 | 0,15 | 0,20 | 0,20 | 0,20 | 0,20 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 90 | 0,05 | 0,07 | 0,10 | 0,10 | 0,12 | 0,15 | 0,15 | 0,15 | 0,15 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 180 | 0,12 | 0,15 | 0,25 | 0,25 | 0,30 | 0,35 | 0,35 | 0,35 | 0,35 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 140 | 0,12 | 0,15 | 0,25 | 0,25 | 0,30 | 0,35 | 0,35 | 0,35 | 0,35 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 140 | 0,12 | 0,15 | 0,25 | 0,25 | 0,30 | 0,35 | 0,35 | 0,35 | 0,35 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 120 | 0,10 | 0,12 | 0,15 | 0,20 | 0,25 | 0,30 | 0,30 | 0,35 | 0,35 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 100 | 0,10 | 0,12 | 0,15 | 0,20 | 0,25 | 0,30 | 0,30 | 0,35 | 0,35 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 100 | 0,10 | 0,12 | 0,15 | 0,20 | 0,25 | 0,30 | 0,30 | 0,35 | 0,35 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 90 | 0,12 | 0,15 | 0,25 | 0,30 | 0,30 | 0,35 | 0,35 | 0,35 | 0,35 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 250 | 0,12 | 0,15 | 0,25 | 0,25 | 0,30 | 0,35 | 0,35 | 0,35 | 0,35 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 250 | 0,12 | 0,15 | 0,25 | 0,25 | 0,30 | 0,35 | 0,35 | 0,35 | 0,35 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 250 | 0,12 | 0,15 | 0,25 | 0,25 | 0,30 | 0,35 | 0,35 | 0,35 | 0,35 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 250 | 0,12 | 0,15 | 0,25 | 0,25 | 0,30 | 0,35 | 0,35 | 0,35 | 0,35 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 200 | 0,12 | 0,15 | 0,25 | 0,25 | 0,30 | 0,35 | 0,35 | 0,35 | 0,35 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | – | – | – | – | – | – | – | – | – | – |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | – | – | – | – | – | – | – | – | – | – |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

## Alternative Inserts

| | appropriate insert | Insert -02 -03 -13 -15 W01 | $a_p$ | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|---|---|
| for better chip control | W29 10... | | < 0,8 | W29 10150.0484 | WOGX030204-15 BK84 | |
| | | | 0,8-2,5 | W29 10030.048425 | WOEX030204-03 BK8425 | |
| | | | 0,8-2,5 | W29 10130.048425 | WOEX030204-13 BK8425 | |
| | | | 0,8-1,5 | W29 10130.0479 | WOEX030204-13 BK79 | |
| | | | ...1,5 | W01 10120.0421 | WOHX030204FL-G12 K10 | |
| | W29 18... | | < 0,8 | W29 18150.0484 | WOGX040304-15 BK84 | |
| | | | 0,8-2,5 | W29 18030.048425 | WOEX040304-03 BK8425 | |
| | | | 0,8-2,5 | W29 18130.048425 | WOEX040304-13 BK8425 | |
| | | | 0,8-1,5 | W29 18130.0479 | WOEX040304-13 BK79 | |
| | | | ...1,5 | W01 18120.0421 | WOHX040304FL-G12 K10 | |
| | W29 24... | | <1,5 | W29 24150.0484 | WOGX05T304-15 BK84 | |
| | | | 1,0-4,5 | W29 24030.048425 | WOEX05T304-03 BK8425 | |
| | | | 1,0-4,5 | W29 24020.0464 | WOEX05T304-02 BK64 | |
| | | | 1,5-4,5 | W29 24130.048425 | WOEX05T304-13 BK8425 | |
| | | | 1,0-3,5 | W29 24130.0479 | WOEX05T304-13 BK79 | |
| | | | ...5,0 | W01 24120.0421 | WOHX05T304FL-G12 K10 | |
| | W29 34... | | <1,5 | W29 34150.0484 | WOGX06T304-15 BK84 | |
| | | | 1,0-6,0 | W29 34030.048425 | WOEX06T304-03 BK8425 | |
| | | | 1,0-6,0 | W29 34020.0464 | WOEX06T304-02 BK64 | |
| | | | 2,5-6,0 | W29 34130.048425 | WOEX06T304-13 BK8425 | |
| | | | 1,5-4,0 | W29 34130.0479 | WOEX06T304-13 BK79 | |
| | | | ...6,0 | W01 34120.0421 | WOHX06T304FL-G12 K10 | |
| | W29 42... | | <1,5 | W29 42150.0484 | WOGX080404-15 BK84 | |
| | | | 1,0-6,0 | W29 42030.048425 | WOEX080404-03 BK8425 | |
| | | | 1,0-6,0 | W29 42020.0464 | WOEX080404-02 BK64 | |
| | | | 2,5-6,0 | W29 42130.048425 | WOEX080404-13 BK8425 | |
| | | | 1,5-4,0 | W29 42130.0479 | WOEX080404-13 BK79 | |
| | | | ...6,0 | W01 42120.0421 | WOHX080404FL-G12 K10 | |
| | W29 50... | | 2,5-9,0 | W29 50030.048425 | WOEX100504-03 BK8425 | |
| | | | 2,5-9,0 | W29 50020.0464 | WOEX100504-02 BK64 | |
| | | | 2,5-9,0 | W29 50130.048425 | WOEX100504-13 BK8425 | |
| | | | 2,5-9,0 | W29 50130.0479 | WOEX100504-13 BK79 | |
| | | | ...7,5 | W01 50120.0421 | WOHX100504FL-G12 K10 | |
| | W29 58... | | 3,0-9,0 | W29 58030.088425 | WOEX120608-03 BK8425 | |
| | | | 3,0-9,0 | W29 58020.0864 | WOEX120608-02 BK64 | |
| | | | 3,0-9,0 | W29 58130.0879 | WOEX120608-13 BK79 | |
| | | ⚠ For cutting depths $a_p$ < 3.0 mm use smaller cartridge D54 60170 | | | | |
| for greater strength | W29 10... | | | W29 10010.047930 | WOEX030204-01 BK7930 | |
| | | | | W29 10010.0404 | WOEX030204-01 P40 | |
| | | | | W29 10010.0421 | WOEX030204-01 K10 | |
| | | | | W29 10110.0421 | WOEX030204-11 K10 | |
| | | | | W01 10120.0421 | WOHX030204FL-G12 K21 | |
| | W29 18... | | | W29 18010.047930 | WOEX040304-01 BK7930 | |
| | | | | W29 18010.0404 | WOEX040304-01 P40 | |
| | | | | W29 18010.0421 | WOEX040304-01 K10 | |
| | | | | W29 18110.0421 | WOEX040304-11 K10 | |
| | | | | W01 18120.0421 | WOHX040304FL-G12 K21 | |
| | W29 24... | | | W29 24010.047930 | WOEX05T304-01 BK7930 | |
| | | | | W29 24010.0404 | WOEX05T304-01 P40 | |
| | | | | W29 24010.0421 | WOEX05T304-01 K10 | |
| | | | | W29 24110.0421 | WOEX05T304-11 K10 | |
| | | | | W01 24120.0421 | WOHX05T304FL-G12 K21 | |
| | W29 34... | | | W29 34010.047930 | WOEX06T304-01 BK7930 | |
| | | | | W29 34010.0404 | WOEX06T304-01 P40 | |
| | | | | W29 34010.0421 | WOEX06T304-01 K10 | |
| | | | | W29 34110.0421 | WOEX06T304-11 K10 | |
| | | | | W01 34120.0421 | WOHX06T304FL-G12 K21 | |
| | W29 42... | | | W29 42010.047930 | WOEX080404-01 BK7930 | |
| | | | | W29 42010.0404 | WOEX080404-01 P40 | |
| | | | | W29 42010.0421 | WOEX080404-01 K10 | |
| | | | | W29 42110.0421 | WOEX080404-11 K10 | |
| | | | | W01 42120.0421 | WOHX080404FL-G12 K21 | |
| | W29 50... | | | W29 50010.047930 | WOEX100504-01 BK7930 | |
| | | | | W29 50010.0404 | WOEX100504-01 P40 | |
| | | | | W29 50010.0421 | WOEX100504-01 K10 | |
| | | | | W29 50110.0421 | WOEX100504-11 K10 | |
| | | | | W01 50120.0421 | WOHX100504FL-G12 K21 | |
| | W29 58 | | | W29 58010.087930 | WOEX120608-01 BK7930 | |
| | | | | W29 58010.0804 | WOEX120608-01 P40 | |
| | | | | W29 58010.0821 | WOEX120608-01 K10 | |

## Alternative Inserts

| | appropriate insert | Insert -01 -02 -11 -13 -15 | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|---|
| for higher cutting speed | W29 10... | | W29 10130.047325 | WOEX030204-13 BK7325 | |
| | | | W29 10150.0473 | WOGX030204-15 BK73 | |
| | | | W29 10010.0472 | WOEX030204-01 BK72 | |
| | | | W01 10060.0461 | WOHX030204EL-G06 BK61 | |
| | | | W29 10110.0450 | WOEX030204-11 BK50 | |
| | W29 18... | | W29 18130.047325 | WOEX040304-13 BK7325 | |
| | | | W29 18150.0473 | WOGX040304-15 BK73 | |
| | | | W29 18010.0472 | WOEX040304-01 BK72 | |
| | | | W01 18060.0461 | WOHX040304EL-G06 BK61 | |
| | | | W29 18110.0450 | WOEX040304-11 BK50 | |
| | W29 24... | | W29 24130.047325 | WOEX05T304-13 BK7325 | |
| | | | W29 24150.0473 | WOGX05T304-15 BK73 | |
| | | | W29 24010.0472 | WOEX05T304-01 BK72 | |
| | | | W29 24010.046115 | WOEX05T304-01 BK6115 | |
| | | | W29 24020.0460 | WOEX05T304-02 BK60 | |
| | | | W01 24940.0457 | WOGX05T304F CBN57 | |
| | | | W01 24600.0845 | WOHX05T308TN SK45 | |
| | | | W01 24940.0455 | WOGX05T304F PKD55 | |
| | | | W29 24110.0450 | WOEX05T304-11 BK50 | |
| | W29 34... | | W29 34130.047325 | WOEX06T304-13 BK7325 | |
| | | | W29 34150.0473 | WOGX06T304-15 BK73 | |
| | | | W29 34010.0472 | WOEX06T304-01 BK72 | |
| | | | W29 34010.046115 | WOEX06T304-01 BK6115 | |
| | | | W29 34020.0460 | WOEX06T304-02 BK60 | |
| | | | W01 34940.0457 | WOGX06T304F CBN57 | |
| | | | W01 34940.0455 | WOGX06T304F PKD55 | |
| | | | W29 34110.0450 | WOEX06T304-11 BK50 | |
| | W29 42... | | W29 42130.047325 | WOEX080404-13 BK7325 | |
| | | | W29 42150.0473 | WOGX080404-15 BK73 | |
| | | | W29 42010.0472 | WOEX080404-01 BK72 | |
| | | | W29 42010.046115 | WOEX080404-01 BK6115 | |
| | | | W01 42940.0457 | WOGX080404F CBN57 | |
| | | | W01 42940.0455 | WOGX080404F PKD55 | |
| | | | W29 42110.0450 | WOEX080404-11 BK50 | |
| | W29 50... | | W29 50130.047325 | WOEX100504-13 BK7325 | |
| | | | W29 50010.0472 | WOEX100504-01 BK72 | |
| | | | W29 50010.046115 | WOEX100504-01 BK6115 | |
| | | | W29 50110.0450 | WOEX100504-11 BK50 | |
| | W29 58... | | W29 58130.0879 | WOEX120608-13 BK79 | |
| | | | W29 58010.0872 | WOEX120608-01 BK72 | |
| for better surface finish | W29 18... | | W29 18160.0484 | WOGX040304-16 BK84 | |
| | | | W29 18160.0473 | WOGX040304-16 BK73 | |
| | | | W29 18160.0460 | WOGX040304-16 BK60 | |
| | W29 24... | | W29 24160.0484 | WOGX05T304-16 BK84 | |
| | | | W29 24160.0473 | WOGX05T304-16 BK73 | |
| | | | W29 24160.0460 | WOGX05T304-16 BK60 | |
| | W29 34... | | W29 34160.0484 | WOGX06T304-16 BK84 | |
| | | | W29 34160.0473 | WOGX06T304-16 BK73 | |
| | | | W29 34160.0460 | WOGX06T304-16 BK60 | |

# KOMET TwinKom® G01

## Technical Notes






| Guideline values for roughing | | | | | | $v_c$ | Max. feed $f_z$ (mm/tooth) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 24 – 32 | Ø 30 – 41 | Ø 39 – 53 | Ø 51 – 71 | Ø 64 – 91 | Ø 83 – 124 | Ø 109 – 167 | Ø 139 – 215 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 200 | 0,12 | 0,14 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,40 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 200 | 0,12 | 0,14 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,40 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 180 | 0,12 | 0,14 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,40 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 140 | 0,12 | 0,14 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,40 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 120 | 0,10 | 0,12 | 0,15 | 0,20 | 0,25 | 0,25 | 0,30 | 0,30 |
| P | 4.1 | | | HSS | | – | – | – | – | – | – | – | – | – |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | – | – | – | – | – | – | – | – | – |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | – | – | – | – | – | – | – | – | – |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 120 | 0,10 | 0,12 | 0,15 | 0,20 | 0,25 | 0,25 | 0,30 | 0,30 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 120 | 0,10 | 0,12 | 0,15 | 0,20 | 0,25 | 0,25 | 0,30 | 0,30 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 90 | 0,10 | 0,12 | 0,15 | 0,20 | 0,25 | 0,25 | 0,30 | 0,30 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 180 | 0,15 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,50 | 0,50 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 140 | 0,15 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,50 | 0,50 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 140 | 0,15 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,50 | 0,50 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic/ perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 120 | 0,15 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,50 | 0,50 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 100 | 0,12 | 0,15 | 0,20 | 0,20 | 0,25 | 0,30 | 0,40 | 0,40 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 100 | 0,12 | 0,15 | 0,20 | 0,20 | 0,25 | 0,30 | 0,40 | 0,40 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 90 | 0,15 | 0,20 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,40 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 250 | 0,15 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,50 | 0,50 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 250 | 0,15 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,50 | 0,50 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 250 | 0,15 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,50 | 0,50 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 250 | 0,15 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,50 | 0,50 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 200 | 0,15 | 0,20 | 0,25 | 0,30 | 0,35 | 0,40 | 0,50 | 0,50 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | – | – | – | – | – | – | – | – | – |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | – | – | – | – | – | – | – | – | – |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

## Alternative Inserts

| | | Insert -01 -13 -21 Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| for better chip control | W83 13... | **W83 13130.048425** | SOEX 050204-13 BK8425 | |
| | | **W83 13210.042730** | SOEX 050204-21 BK2730 | |
| | | **W83 13000.0279** | SOEX 050204-13 BK79 | |
| | | **W83 13210.047710** | SOEX 050204-21 BK7710 | |
| | W83 18... | **W83 18130.068425** | SOEX 060306-13 BK8425 | |
| | | **W83 18210.062730** | SOEX 060306-21 BK2730 | |
| | | **W83 18000.1079** | SOEX 060306-13 BK79 | |
| | | **W83 18210.067710** | SOEX 060306-21 BK7710 | |
| | W83 23... | **W83 23130.088425** | SOEX 07T308-13 BK8425 | |
| | | **W83 23210.082730** | SOEX 07T308-21 BK2730 | |
| | | **W83 23000.0279** | SOEX 07T308-13 BK79 | |
| | | **W83 23210.087710** | SOEX 07T308-21 BK7710 | |
| | W83 32... | **W83 32130.088425** | SOEX 090408-13 BK8425 | |
| | | **W83 32210.082730** | SOEX 090408-21 BK2730 | |
| | | **W83 32000.1779** | SOEX 090408-13 BK79 | |
| | | **W83 32210.087710** | SOEX 090408-21 BK7710 | |
| | W83 44... | **W83 44130.088425** | SOEX 120508-13 BK8425 | |
| | | **W83 44210.082730** | SOEX 120508-21 BK2730 | |
| | | **W83 44000.1979** | SOEX 120508-13 BK79 | |
| | | **W83 44210.087710** | SOEX 120508-21 BK7710 | |

## Alternative Inserts

| | | Insert -01 -13 -21 Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| for higher cutting speed | W83 13... | W83 13010.046420 | SOEX 050204-01 BK6420 | |
| | | W83 13000.0174 | SOEX 050204-01 BK74 | |
| | | W83 13000.016115 | SOEX 050204-01 BK6115 | |
| | W83 18... | W83 18010.066420 | SOEX 060306-01 BK6420 | |
| | | W83 18000.0974 | SOEX 060306-01 BK74 | |
| | | W83 18000.096115 | SOEX 060306-01 BK6115 | |
| | W83 23... | W83 23010.086420 | SOEX 07T308-01 BK6420 | |
| | | W83 23000.0174 | SOEX 07T308-01 BK74 | |
| | | W83 23000.016115 | SOEX 07T308-01 BK6115 | |
| | W83 32... | W83 32010.086420 | SOEX 090408-01 BK6420 | |
| | | W83 32000.1574 | SOEX 090408-01 BK74 | |
| | | W83 32000.156115 | SOEX 090408-01 BK6115 | |
| | W83 44... | W83 44010.086420 | SOEX 120508-01 BK6420 | |
| | | W83 44000.1874 | SOEX 120508-01 BK74 | |
| | | W83 44000.186115 | SOEX 120508-01 BK6115 | |
| for greater strength | W83 13... | **W83 13000.0179** | SOEX 050204-01 BK79 | |
| | | **W83 13010.046420** | SOEX 050204-01 BK6420 | |
| | W83 18... | **W83 18000.0979** | SOEX 060306-01 BK79 | |
| | | **W83 18010.066420** | SOEX 060306-01 BK6420 | |
| | W83 23... | **W83 23000.0179** | SOEX 07T308-01 BK79 | |
| | | **W83 23010.086420** | SOEX 07T308-01 BK6420 | |
| | W83 32... | **W83 32000.1579** | SOEX 090408-01 BK79 | |
| | | **W83 32010.086420** | SOEX 090408-01 BK6420 | |
| | W83 44... | **W83 44000.1879** | SOEX 120508-01 BK79 | |
| | | **W83 44010.086420** | SOEX 120508-01 BK6420 | |

# KOMET TwinKom® G01

## Technical Notes






| Guideline values for roughing | | | | | | $v_c$ | Max. feed $f_z$ (mm/tooth) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 24 – 32 | Ø 30 – 41 | Ø 39 – 53 | Ø 51 – 71 | Ø 64 – 91 | Ø 83 – 124 | Ø 109 – 167 | Ø 139 – 215 | Ø 196 – 401 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 200 | 0,06 | 0,10 | 0,10 | 0,15 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 200 | 0,06 | 0,10 | 0,10 | 0,15 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 180 | 0,07 | 0,10 | 0,10 | 0,15 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 140 | 0,07 | 0,10 | 0,10 | 0,12 | 0,12 | 0,12 | 0,12 | 0,15 | 0,15 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 120 | 0,05 | 0,08 | 0,08 | 0,08 | 0,08 | 0,08 | 0,08 | 0,15 | 0,15 |
| P | 4.1 | | | HSS | | 90 | 0,04 | 0,04 | 0,04 | 0,08 | 0,08 | 0,08 | 0,08 | 0,15 | 0,15 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | – | – | – | – | – | – | – | – | – | – |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | – | – | – | – | – | – | – | – | – | – |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 120 | 0,06 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,15 | 0,15 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 120 | 0,06 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 | 0,15 | 0,15 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 90 | 0,05 | 0,06 | 0,06 | 0,08 | 0,08 | 0,08 | 0,08 | 0,15 | 0,15 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 180 | 0,10 | 0,15 | 0,15 | 0,20 | 0,20 | 0,20 | 0,20 | 0,25 | 0,25 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 140 | 0,10 | 0,15 | 0,15 | 0,20 | 0,20 | 0,20 | 0,20 | 0,25 | 0,25 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 140 | 0,07 | 0,15 | 0,15 | 0,20 | 0,20 | 0,20 | 0,20 | 0,25 | 0,25 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic/ perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 120 | 0,07 | 0,10 | 0,10 | 0,15 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 100 | 0,07 | 0,10 | 0,10 | 0,15 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 100 | 0,07 | 0,10 | 0,10 | 0,15 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 90 | 0,08 | 0,10 | 0,10 | 0,15 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 250 | 0,12 | 0,15 | 0,15 | 0,25 | 0,25 | 0,25 | 0,25 | 0,30 | 0,30 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 250 | 0,12 | 0,15 | 0,15 | 0,25 | 0,25 | 0,25 | 0,25 | 0,30 | 0,30 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 250 | 0,10 | 0,15 | 0,15 | 0,25 | 0,25 | 0,25 | 0,25 | 0,30 | 0,30 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 250 | 0,10 | 0,15 | 0,15 | 0,25 | 0,25 | 0,25 | 0,25 | 0,30 | 0,30 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 200 | 0,10 | 0,15 | 0,15 | 0,25 | 0,25 | 0,25 | 0,25 | 0,30 | 0,30 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | – | – | – | – | – | – | – | – | – | – |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | – | – | – | – | – | – | – | – | – | – |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

## Alternative Inserts

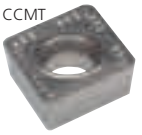
| | | Insert (W30..12 / W57..12) Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| for better chip control | W57 04 / W30 04 | **W30 04120.3232** | TOHX 06T102EL-US12 CK32 | ◐◑ |
| | | **W30 04120.3060** | TOHX 06T100EL-G12 BK60 | ◐◑ |
| | | **W57 04120.0223** | TOGX 06T102FN-12 K10 | ◐◐ |
| | W57 14 / W30 14 | **W30 14120.3232** | TOHX 090202EL-US12 CK32 | ◐◑ |
| | | **W30 14120.3060** | TOHX 090200EL-G12 BK60 | ◐◑ |
| | | **W57 14120.0423** | TOGX 090204FN-12 K10 | ◐◐ |
| | W57 26 / W30 26 | **W30 26120.3232** | TOHX 140302EL-US12 CK32 | ◐◑ |
| | | **W57 26120.0423** | TOGX 140304FN-12 K10 | ◐◐ |
| | W30 44... | – | | |

## Alternative Inserts

| | | Insert (W57..12 / W57..14 / W30..12 / W30..99) Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| for higher cutting speed | W57 04 / W30 04 | W57 04140.023210 | TOGX 06T102EN-14 CK3210 | ◐◑ |
| | | W57 04140.0260 | TOGX 06T102EN-14 BK60 | ◐◑ |
| | | W30 04990.0357 | TOGX 06T103TN CBN57 | ◐ |
| | | W30 04990.0355 | TOGX 06T103FN PKD55 | ◐ |
| | W57 14 / W30 14 | W30 14120.3232 | TOHX 090202EL-US12 CK32 | ◐◑ |
| | | W30 14120.3060 | TOHX 090200EL-G12 BK60 | ◐◑ |
| | | W57 14120.0423 | TOGX 090204FN-12 K10 | ◐◐ |
| | W57 26 / W30 26 | W30 26120.3232 | TOHX 140302EL-US12 CK32 | ◐◑ |
| | | W57 26120.0423 | TOGX 140304FN-12 K10 | ◐◐ |
| | W30 44... | W30 44600.0821 | TOHX 22T308 EN K10 | ◐ |
| for greater strength | W57 04 / W30 04 | **W30 04120.3160** | TOHX 06T102EL-UF12 BK60 | ◐◑ |
| | | **W30 04990.0357** | TOGX 06T103TN CBN57 | ◐ |
| | | **W30 04990.0355** | TOGX 06T103FN PKD55 | ◐ |
| | | **W30 04990.0240** | TOGX 06T103TN CBN40 | ◑ |
| | W57 14 / W30 14 | **W30 14120.3160** | TOHX 090202EL-UF12 BK60 | ◐◑ |
| | | **W30 14120.3060** | TOHX 090200EL-G12 BK60 | ◐◑ |
| | | **W57 14120.0423** | TOGX 090204FN-12 K10 | ◐◐ |
| | | **W30 14990.0440** | TOGX 090204TN CBN40 | ◑ |
| | W57 26 / W30 26 | **W30 26120.3160** | TOHX140302EL-UF12 BK60 | ◐◑ |
| | | **W57 26120.0423** | TOGX140304FN-12 K10 | ◐◐ |
| | | **W30 26990.0440** | TOGX140304TN CBN40 | ◑ |
| | W30 44... | – | | |

# KOMET TwinKom® G01

## Technical Notes

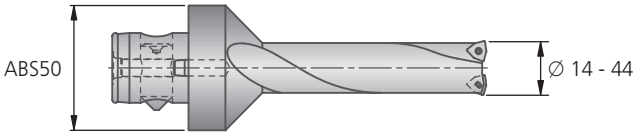



| Guideline values for roughing | | | | | | $v_c$ | Max. feed $f_z$ (mm/tooth) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 24 – 32 | Ø 30 – 41 | Ø 39 – 53 | Ø 51 – 71 | Ø 64 – 91 | Ø 83 – 124 | Ø 109 – 167 | Ø 139 – 215 | Ø 196 – 401 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 200 | 0,08 | 0,08 | 0,08 | 0,10 | 0,10 | 0,15 | 0,15 | 0,15 | 0,15 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 200 | 0,08 | 0,08 | 0,08 | 0,10 | 0,10 | 0,15 | 0,15 | 0,15 | 0,15 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 180 | 0,08 | 0,08 | 0,08 | 0,10 | 0,10 | 0,15 | 0,15 | 0,15 | 0,15 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 140 | 0,07 | 0,07 | 0,07 | 0,08 | 0,08 | 0,12 | 0,12 | 0,12 | 0,12 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 120 | 0,07 | 0,07 | 0,07 | 0,08 | 0,08 | 0,10 | 0,10 | 0,10 | 0,10 |
| P | 4.1 | | | HSS | | 90 | 0,05 | 0,05 | 0,05 | 0,06 | 0,06 | 0,10 | 0,10 | 0,10 | 0,10 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | – | – | – | – | – | – | – | – | – | – |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | – | – | – | – | – | – | – | – | – | – |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 120 | 0,07 | 0,07 | 0,07 | 0,08 | 0,08 | 0,12 | 0,12 | 0,12 | 0,12 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 120 | 0,06 | 0,06 | 0,06 | 0,07 | 0,07 | 0,12 | 0,12 | 0,12 | 0,12 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 90 | 0,05 | 0,05 | 0,05 | 0,06 | 0,06 | 0,10 | 0,10 | 0,10 | 0,10 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 180 | 0,10 | 0,10 | 0,10 | 0,15 | 0,15 | 0,25 | 0,25 | 0,25 | 0,25 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 140 | 0,10 | 0,10 | 0,10 | 0,15 | 0,15 | 0,25 | 0,25 | 0,25 | 0,25 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 140 | 0,10 | 0,10 | 0,10 | 0,15 | 0,15 | 0,25 | 0,25 | 0,25 | 0,25 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 120 | 0,10 | 0,10 | 0,10 | 0,15 | 0,15 | 0,25 | 0,25 | 0,25 | 0,25 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 100 | 0,07 | 0,07 | 0,07 | 0,10 | 0,10 | 0,20 | 0,20 | 0,20 | 0,20 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 100 | 0,08 | 0,08 | 0,08 | 0,10 | 0,10 | 0,20 | 0,20 | 0,20 | 0,20 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 90 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 | 0,20 | 0,20 | 0,20 | 0,20 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 250 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 | 0,30 | 0,30 | 0,30 | 0,30 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 250 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 | 0,30 | 0,30 | 0,30 | 0,30 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 250 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 | 0,30 | 0,30 | 0,30 | 0,30 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 250 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 | 0,30 | 0,30 | 0,30 | 0,30 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 200 | 0,15 | 0,15 | 0,15 | 0,20 | 0,20 | 0,30 | 0,30 | 0,30 | 0,30 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | – | – | – | – | – | – | – | – | – | – |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | – | – | – | – | – | – | – | – | – | – |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

**Easy Special™ tool**

Diameter range from 14-44 mm
(also intermediate sizes)
for boring depths 2×D, 3×D and 4×D
in ABS 50
see chapter 4




**Special tools set standards**

Special tools with KOMET's comprehensive knowledge and experience for economic cutting.

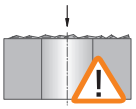
**The advantages of our Easy Special™ tools are obvious:**

- High tech tools from planning to productive use
- Shortest delivery times - available within 3 weeks
- Parameters set for different tool models
- Optimum production tolerances
- Fixed prices at standard price level

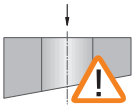
**In short: time costs money.**

## Technical Informations

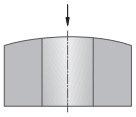


1. 

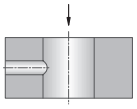
**Starting on uneven surfaces (cast surfaces)**
- subject to the starting angle, the feed must be reduced when starting the bore. Rule of thumb: 3° = 30%; 10° = 40%; 25° = 60%
- use tough insert
- use stable corner radius

2. 

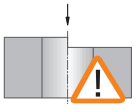
**Angled bore exit**
- from wear cut is interrupted reduce feed rate up to 50%
- use tough insert
- use stable corner radius

3. 

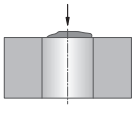
**Starting on cambered surfaces**
- no problems
- reduce feed rate if necessary

4. 

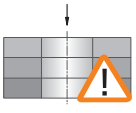
**Roughing through a cross bore**
- reduce feed rate 50% if necessary
- watch for chip jamming around tool
- use tough insert
- use stable corner radius

5. 

**Starting on an edge**
- reduce feed rate by 50%
- use tough insert
- use stable corner radius

6. 

**Starting on a welded seam**
- reduce feed rate
- use max. 3×D tools

7. 

**Roughing through stacked plates**
- use holder with 80° approach angle
- good workpiece clamping required
- max. gap = 1 mm

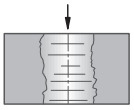






Long chips
- not optimum geometry

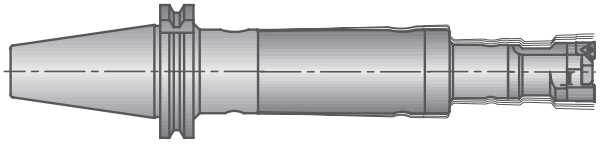
→ select correct cutting depth
→ select correct cutting values



Bad surface finish
- feed rate too high → improve cutting parameters: increase cutting speed, reduce feed
- long chips



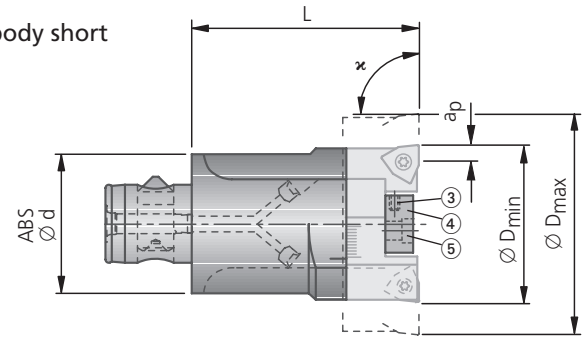
Vibrations
- feed rate too high
- cutting speed too high
- geometry too obtuse
- check axial / radial setting
- check tool assembly
- if required, use a damping element adaptor



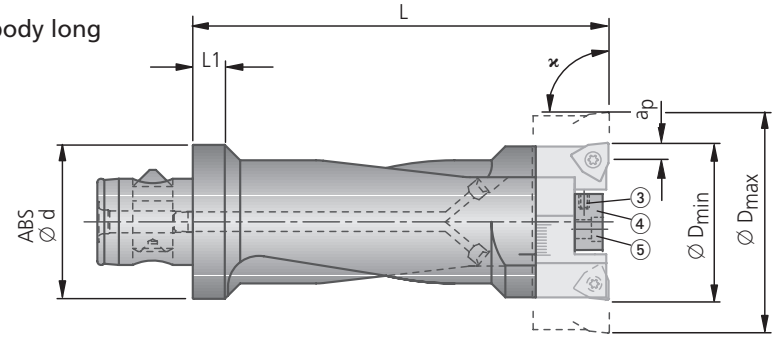
# KOMET TwinKom® G04 — Ø 30 – 204 mm

## Twin Cutter with ABS® Connection, ϰ = 90° / 80°

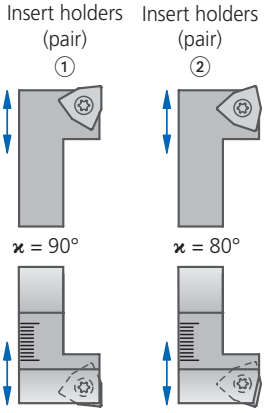
Basic body short




Basic body long




without axial adjustment




| Ø D min-max | Basic body Order No. | ABS Ø d | L | L1 | Pair of insert holders ① ϰ=90° Order No. appropriate insert | Pair of insert holders ② ϰ=80° Order No. appropriate insert | Assembly parts: Adjusting screw ③ DIN912 Order No. Article | Assembly parts: Clamping plate ④ Order No. | Assembly parts: Clamping screw ⑤ DIN912 Order No. article |
|---|---|---|---|---|---|---|---|---|---|
| 30 - 41 | G04 00500 0,13 | 25 | 50 | – | G03 60510 0,035 W29 24... | G03 50510 0,035 W29 24... | 55051 03010 M3×10 | G04 01000.12 | 55011 04020 M4×20 |
| | G04 01000 0,287 | 32 | 85 | 7,5 | | | | | |
| 39 - 51 | G04 01010 0,287 | 32 | 60 | – | G03 60520 0,078 W29 34... | G03 50520 0,078 W29 34... | 55051 04010 M4×10 | G04 01500.12 | 55011 05025 M5×25 |
| | G04 01500 0,664 | 40 | 120 | 8,5 | | | | | |
| 49 - 71 | G04 01510 0,428 | 40 | 60 | – | G03 60530 0,154 W29 34... | G03 50530 0,154 W29 34... | 55051 04016 M4×16 | G04 01510.12 | 55011 06025 M6×25 |
| | G04 02000 1,224 | 50 | 135 | 10,5 | | | | | |
| 64 - 91 | G04 02010 0,81 | 50 | 70 | – | G03 60540 0,29 W29 42... | G03 50540 0,29 W29 42... | 55051 05025 M5×25 | G04 02010.12 | 55011 08030 M8×30 |
| | G04 02020 2,225 | 50 | 135 | – | | | | | |
| 83 - 121 | G04 02500 1,337 | 63 | 70 | – | G03 60550 0,554 W29 50... | G03 50550 0,554 W29 50... | 55051 08035 M8×35 | G04 02500.12 | 55011 10035 M10×35 |
| | G04 02510 3,795 | 63 | 155 | – | | | | | |
| 109 - 157 | G04 03000 3,035 | 80 | 90 | – | G03 60560 1,024 W29 50... | G03 50560 1,01 W29 50... | 55051 08055 M8×55 | G04 03000.12 | 55011 12045 M12×45 |
| | G04 03010 6,05 | 80 | 175 | – | | | | | |
| 139 - 204 | G04 03500 6,22 | 100 | 125 | – | G03 60570 2,262 W29 58... | G03 50570 2,252 W29 58... | 55051 10080 M10×80 | G04 03500.12 | 55011 16055 M16×55 |



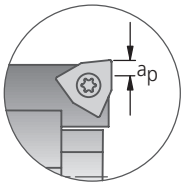
Patent applied for inside and outside Germany (ABS)

WOEX



| through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |  |  |
| ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ● |

● very good ◐ good ○ possible ✕ not possible




**Note!**
For optimum cutting in the $D_{min}$ area the cutting depth $a_p$ should be reduced.

**Supply includes basic body:**
Clamping plate with adjusting screw and clamping screw.
**Supply includes pair of insert holders:** with clamping screw.
Please order inserts and accessories separately.

**Order example:**

| | |
|---|---|
| Basic body short | G04 00500 |
| Pair of insert holders 90° | G03 60510 |
| Insert 2× | W29 24010.048425 |

| Basic recommendation | | | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|
| Insert  -00 -01  -11 | | | for workpiece material | max. cutting depth | Clamping screw  | Screwdriver  |
| appropriate insert | Order No. ▽▽ size | ISO-Code | P M K N S H | $a_p$ | Order No. Article | Order No. Article |
| W29 24... | **W29 24010.048425**<br>**W29 24010.047930**<br>**W29 24010.0461**<br>**W29 24110.0477** | WOEX 05T304-01 BK8425<br>WOEX 05T304-01 BK7930<br>WOEX 05T304-01 BK61<br>WOEX 05T304-11 BK77 |  | 4,5<br>3,5<br>5,0<br>5,0 | **N00 57511**<br>S/M2,5×7,2-8IP<br>1,28 Nm | **L05 00830**<br>8IP |
| W29 34... | **W29 34010.048425**<br>**W29 34010.047930**<br>**W29 34010.0461**<br>**W29 34110.0477** | WOEX 06T304-01 BK8425<br>WOEX 06T304-01 BK7930<br>WOEX 06T304-01 BK61<br>WOEX 06T304-11 BK77 |  | 6,0<br>4,0<br>6,0<br>6,0 | **N00 57521**<br>S/M3,5×7,3-10IP<br>2,8 Nm | **L05 00850**<br>10IP |
| W29 42... | **W29 42010.048425**<br>**W29 42010.047930**<br>**W29 42010.0461**<br>**W29 42110.0477** | WOEX 080404-01 BK8425<br>WOEX 080404-01 BK7930<br>WOEX 080404-01 BK61<br>WOEX 080404-11 BK77 |  | 7,5<br>6,0<br>7,5<br>7,5 | **N00 57531**<br>S/M4,5×9-15IP<br>6,25 Nm | **L05 00860**<br>15IP |
| W29 50... | **W29 50010.088425**<br>**W29 50010.047930**<br>**W29 50010.0861**<br>**W29 50110.0477** | WOEX 100508-01 BK8425<br>WOEX 100504-01 BK7930<br>WOEX 100508-01 BK61<br>WOEX 100504-11 BK77 |  | 9,0<br>9,0<br>9,0<br>9,0 | **N00 57531**<br>S/M4,5×9-15IP<br>6,25 Nm | **L05 00860**<br>15IP |
| W29 58... | **W29 58010.088425**<br>**W29 58010.087930**<br>**W29 58010.0861**<br>**W29 58000.0821** | WOEX 120608-01 BK8425<br>WOEX 120608-01 BK7930<br>WOEX 120608-01 BK61<br>WOEX 120608-00 K10 |  | 9,0<br>9,0<br>9,0<br>9,0 | **N00 57541**<br>S/M5,5×11-20IP<br>6,25 Nm | **L05 00870**<br>20IP |

Guideline values for roughing: page 184 / alternative inserts: page 185.

# KOMET TwinKom ®

## Ø > 206 mm

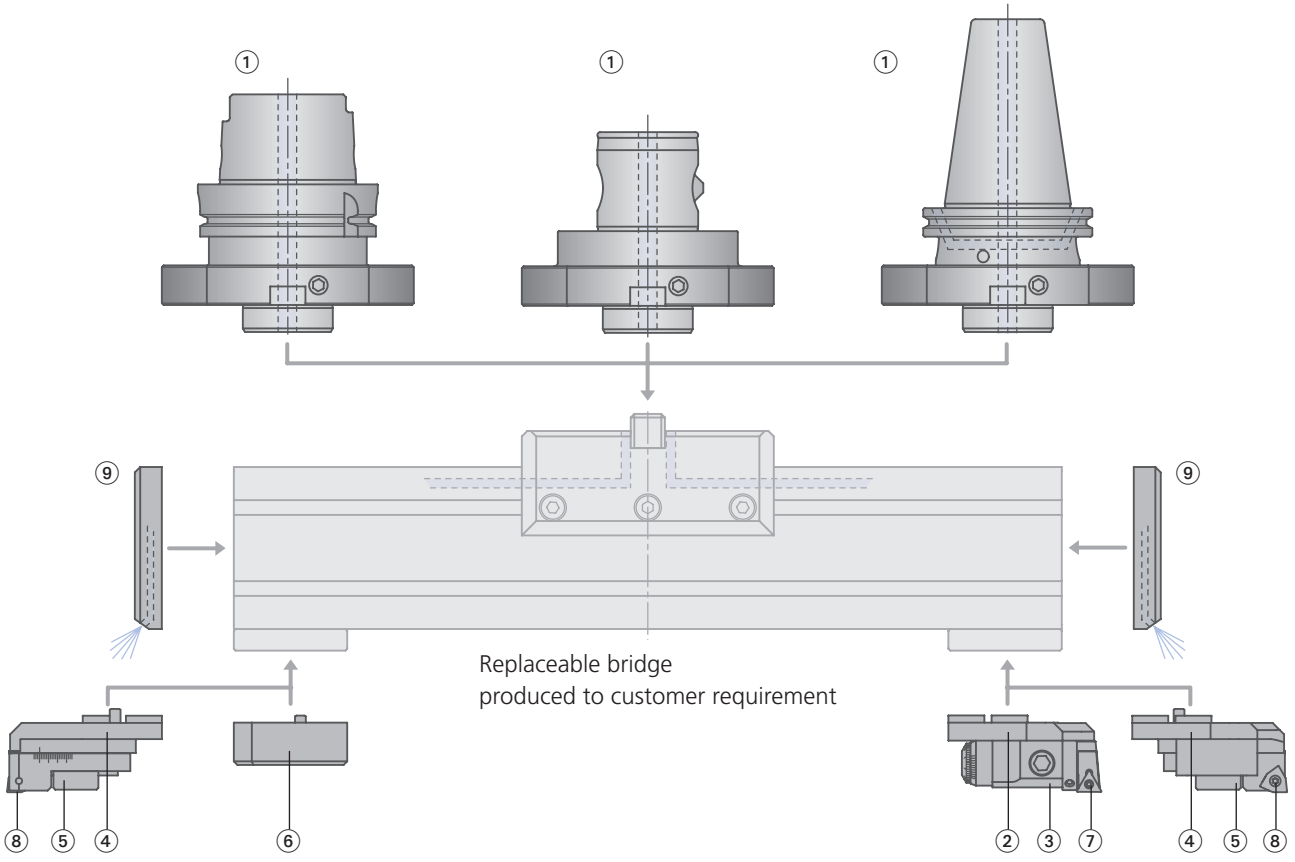
## Lightweight Twin Cutter

| through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ✕ | ✕ | ✕ | ● |

● very good ◐ good ○ possible ✕ not possible

## Modular design

- The tool consists of lightweight replaceable bridge to specific length and elements for fine boring or roughing (see accessories)
- Adjustment range relates to 70 mm diameter.




**Replaceable bridge Ø 206 - 1050 mm: produced to customer requirement**

**Adaptor ①**

| Article | Order No. |
|---|---|
| HSK-A100 | A06 53880 |
| ABS 100 | A20 50080 |
| ABS 100 (ABS rotated 90°) | A20 50180 |
| ISO50 DIN 69871 AD/B | A05 25300 |

**Cover plate ⑨**

| Article | Order No. |
|---|---|
| Cover plate with internal coolant | G05 00010 |

**Fine machining ②+③+⑥+⑦**

| | Article | Order No. |
|---|---|---|
| ② | Holding plate | G05 10010 |
| ③ | Micro-adj. cartridge FF25 | M30 20051 |
| ⑥ | Balancing weight | G05 10040 |
| ⑦ | Insert | W57 26.. / W30 26.. |

**Roughing ④+⑤+⑧**

| | Article | Order No. |
|---|---|---|
| ④ | Holding plate | G05 20010 |
| ⑤ | Roughing cartridge | G05 20020 |
| ⑧ | Insert | W29 42.. |

For further details on inserts see chapter 7



Patent applied for inside and outside Germany (ABS), Patented design (Lightweight Twin Cutter Tool)

# Ø 400 – 2000 mm

# KOMET® Twin Cutter with ABS® Connection

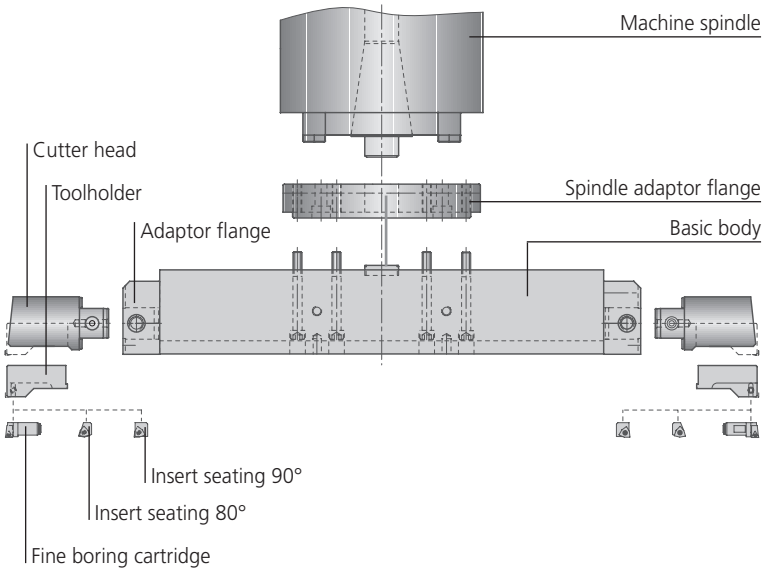
| through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ● |

● very good ◐ good ○ possible ✕ not possible

The adjustable twin cutter roughing tools are a modular design for the 400 to 2000 mm diameter range. Twin cutter roughing tools provide a modular tooling system based on the ABS® system for roughing and for fine boring.

**The principal features are:**

- up to 2000 mm diameter with only one ABS-N100 connection
- complete range can be covered with a small selection of elements, such as spindle adaptor flange, basic body, adaptor flange and cutter head
- high rigidity with large surface contact area
- high cutting performance; adjusting pins and key slots between adaptor and tool transfer high torques
- accuracy of tooling system means that a micro-adjustable seating can also be used
- economic cutting with modular design system for tooling components
- available on request



# KOMET® PreciKom

# Ø 32 – 61,99 mm

## Insert Technology
## for Roughing and Finishing in One Step

| through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ◐ | ◐ | ● | ✕ | ● | ✕ | ● |

● very good ◐ good ○ possible ✕ not possible

The challenge which must be met by tools enabling roughing and finishing in a single process is to achieve the required roundness and concentricity, taking account of the high cutting performance and the associated forces. For this reason, such tools are normally fitted with guide pads; however, these can lead to problems during machining.

The newly developed roughing/finishing tools are based on an innovation in indexable insert technology, which makes it possible not only to bore, but to finish as well using economical, multi-bladed indexable inserts. Thanks to an innovative cutting head geometry with support land, previously commonplace guide rails are a thing of the past.

Due to the innovative fine adjustment of indexable inserts, it is possible to easily adjust every single indexable insert with µm accuracy.

The tools are specially manufactured for each application, with four to six cutting edges on a main body and for diameter ratios up to 3×D. With various cutting tool material/coating variants, they can also be ideally adapted to customer requirements for specific materials. For example, in GGG50 the new machine tools work to cutting depths from three to four millimetres ($a_p$) whereby, bore tolerances to IT8 are possible.




**BENEFITS for you:**

- Two processes in one – roughing and finishing
- Uses economical inserts with four edges
- Interchangeability of the cutting heads reduces tool costs
- Precise adjustment with µm accuracy, thanks to the newly developed fine adjustment system for indexable inserts
- Maximum precision

| Basic recommendation | | | | Assembly parts | | Accessories | |
|---|---|---|---|---|---|---|---|
| Insert | | for workpiece material | | Clamping screw | Wedge | Torque key | Replaceable blade |
| Ø D | Order No. enter carbide code (P M K) | ● BK 6110 | ● BK 2710 | Order No. Article | Order No. | Order No. Article | Order No. |
| 32 – 34,99 | H80 32000.01.... | 6110 | 2710 | N00 57251 S3076-8IP 2,25 Nm | L02 31990 | L05 03311 8IP 2,25 Nm | L05 00730 |
| 35 – 37,49 | H80 35000.01.... | | | | | | |
| 37,5 – 39,99 | H80 37500.01.... | | | | | | |
| 40 – 41,99 | H80 40000.01.... | | | | | | |
| 42 – 43,99 | H80 42000.01.... | 6110 | 2710 | N00 57411 S40101-15IP 4,3 Nm | L02 32000 | L05 00961 15IP 4,3 Nm | L05 00760 |
| 44 – 45,99 | H80 44000.01.... | | | | | | |
| 46 – 47,99 | H80 46000.01.... | | | | | | |
| 48 – 49,99 | H80 48000.01.... | | | | | | |
| 50 – 51,99 | H80 50000.01.... | | | | | | |
| 52 – 53,99 | H80 52000.01.... | | | | | | |
| 54 – 55,99 | H80 54000.01.... | | | | | | |
| 56 – 57,99 | H80 56000.01.... | | | | | | |
| 58 – 59,99 | H80 58000.01.... | | | | | | |
| 60 – 61,99 | H80 60000.01.... | | | | | | |

**Supply includes:** Torque key without replaceable blade.

Patented design (PreciKom WSP-Verstellung)

# Inquiry Fax to +49 7143 373233

KOMET® PreciKom

## Design your own tool!

Unique: Indexable insert technology for roughing and finishing in one step!
The tools are specially manufactured for each application, with four to six cutting edges on a basic body and for length/ diameter ratios up to 3×D.
We check you specifications for technical feasibility and you receive a prompt reply.

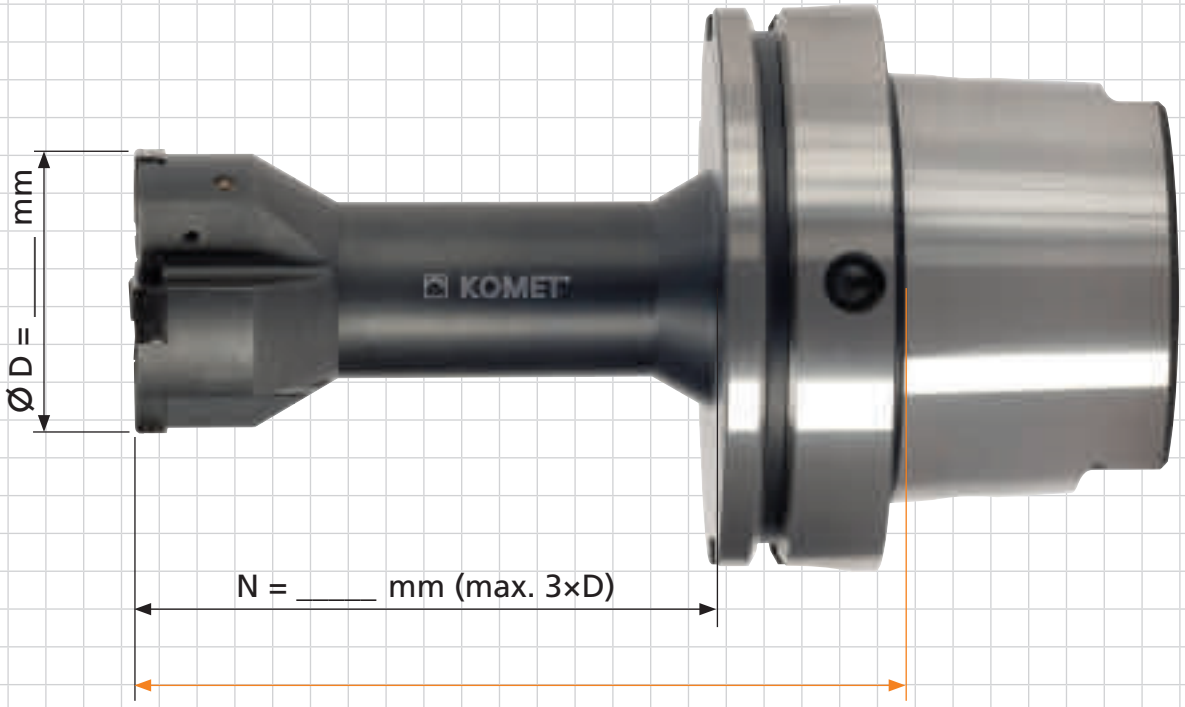
Company: Contact:

Department: E-Mail:

Telephone: Customer-No.:

Fax: Distributor:

Date:




Material to be machined:

Machining method ☐ through hole ☐ blind hole

Length of bore:

Interrupted cut ☐ yes ☐ no

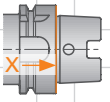
Tolerance:

Required surface:

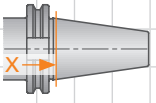
Allowance in Ø:

Required cutting material ☐ BK6110 ☐ BK2710

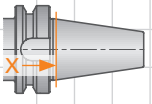
Holder / Adaptor (Type and size)




☐ HSK _____
DIN 69893 A




☐ SK _____
DIN 69871 AD/B




☐ SK _____
JIS B 6339 AD/B
(MAS 403 BT)

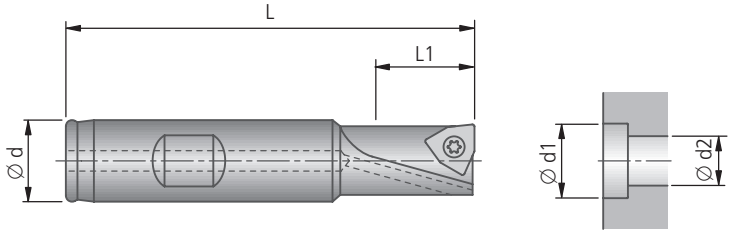
other adaptors on request

| through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ✕ | ● | ✕ | ✕ |

● very good ◐ good ○ possible ✕ not possible

## Countersinking Tool Ø 10 - 20 mm

- central coolant supply from counterbore size F10 10040
- shank design to DIN 1835/B T1 A and B
- for producing 90° counterbores to DIN 974 T1 for cap head screws



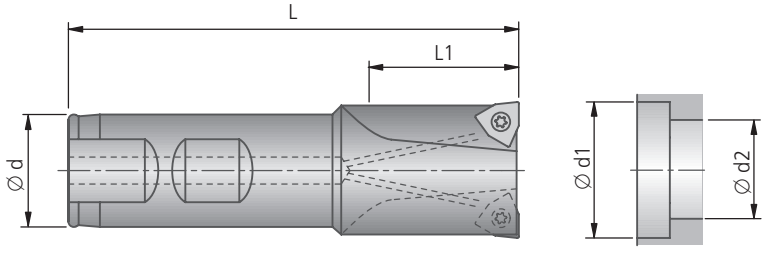

y = number of inserts = 1
z = effective number of teeth for calculating $v_f$ = 1

Supply includes: Countersinking tool with clamping screw.
Please order inserts and accessories separately.

| Ød1 | Order No. Article | Rough bore Ø Ød2 min | Ød | L | L1 max | countersink depth kg | Basic recommendation: Insert Order No. ▽▽ size | Insert ISO-Code | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | **F10 10021** KWZ-M5K1 | 5,3 | 16 | 80 | 10 | 0,09 | **W29 10010.048425** **W29 10010.0421** | WOEX 030204-01 BK8425 WOEX 030204-01 K10 | ● ● ● ● ● ○ | **N00 56041** S/M2×4,3-6IP 0,62 Nm | **L05 00810** 6IP |
| 11 | **F10 10031** KWZ-M6K1 | 6,4 | 16 | 80 | 11 | 0,10 | | | | | |
| 15 | **F10 10040** KWZ-M8K1 | 8,4 | 16 | 80 | 15 | 0,10 | **W29 24010.048425** **W29 24010.0421** | WOEX 05T304-01 BK8425 WOEX 05T304-01 K10 | ● ● ● ● ● ○ | **N00 55581** M2,5×4,5-8IP 1,28 Nm | **L05 00830** 8IP |
| 18 | **F10 10050** KWZ-M10K1 | 10,4 | 16 | 80 | 18 | 0,11 | **W29 24010.048425** **W29 24010.0421** | WOEX 05T304-01 BK8425 WOEX 05T304-01 K10 | ● ● ● ● ● ○ | **N00 57511** S/M2,5×7,2-8IP 1,28 Nm | **L05 00830** 8IP |
| 20 | **F10 10060** KWZ-M12K1 | 13 | 25 | 100 | 20 | 0,28 | | | | | |

## Countersinking Tool Ø 24 - 48 mm

- central coolant supply
- shank design to DIN 1835/B T1 A and B
- for producing 90° counterbores to DIN 974 T1 for cap head screws




y = number of inserts = 2
z = effective number of teeth for calculating $v_f$ = 2

Supply includes: Countersinking tool with clamping screw.
Please order inserts and accessories separately.

| Ød1 | Order No. Article | Rough bore Ø Ød2 min | Ød | L | L1 max | countersink depth kg | Basic recommendation: Insert Order No. ▽▽ size | Insert ISO-Code | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | **F10 11070** KWZ-M14K2 | 15 | 25 | 100 | 24 | 0,29 | **W29 24010.048425** **W29 24010.0421** | WOEX 05T304-01 BK8425 WOEX 05T304-01 K10 | ● ● ● ● ● ○ | **N00 57511** S/M2,5×7,2-8IP 1,28 Nm | **L05 00830** 8IP |
| 26 | **F10 11080** KWZ-M16K2 | 17 | 25 | 100 | 26 | 0,31 | | | | | |
| 30 | **F10 11090** KWZ-M18K2 | 19 | 25 | 100 | 30 | 0,34 | **W29 34010.048425** **W29 34010.0421** | WOEX 06T304-01 BK8425 WOEX 06T304-01 K10 | ● ● ● ● ● ○ | **N00 57521** S/M3,5×7,3-10IP 2,8 Nm | **L05 00850** 10IP |
| 33 | **F10 11100** KWZ-M20K2 | 21 | 25 | 100 | 33 | 0,36 | **W29 42010.048425** **W29 42010.0421** | WOEX 080404-01 BK8425 WOEX 080404-01 K10 | ● ● ● ● ● ○ | **N00 57531** S/M4,5×9-15IP 6,25 Nm | **L05 00860** 15IP |
| 36 | **F10 11110** KWZ-M22K2 | 21 | 25 | 100 | 36 | 0,39 | | | | | |
| 40 | **F10 11120** KWZ-M24K2 | 25 | 25 | 100 | 40 | 0,45 | | | | | |
| 48 | **F10 11130** KWZ-M30K2 | 28 | 32 | 120 | 48 | 0,85 | **W29 50010.048425** **W29 50010.0421** | WOEX 100504-01 BK8425 WOEX 100504-01 K10 | ● ● ● ● ● ○ | **N00 57531** S/M4,5×9-15IP 6,25 Nm | **L05 00860** 15IP |

| Guideline values for countersinking | | | | | | $v_c$ | Max. f (mm/rev) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 10 – 15 | Ø 18 – 20 | Ø 24 – 30 | Ø 33 – 48 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 180-240 | 0,06-0,12 | 0,12-0,20 | 0,15-0,25 | 0,20-0,30 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 180-240 | 0,06-0,12 | 0,12-0,20 | 0,25-0,40 | 0,25-0,40 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 160 | 0,06-0,12 | 0,20 | 0,20-0,30 | 0,20-0,40 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 140 | 0,06-0,10 | 0,18 | 0,20-0,35 | 0,25-0,40 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 120 | 0,04-0,08 | 0,15 | 0,20-0,30 | 0,20-0,35 |
| P | 4.1 | | | HSS | | – | – | – | – | – |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 30 | 0,05 | 0,10 | 0,12 | 0,15 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,05 | 0,10 | 0,12 | 0,15 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 120 | 0,08 | 0,15 | 0,16 | 0,18 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 120 | 0,08 | 0,15 | 0,16 | 0,18 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 100 | 0,05 | 0,10 | 0,10 | 0,12 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 160 | 0,15 | 0,30 | 0,40 | 0,60 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 140 | 0,15 | 0,25 | 0,30 | 0,40 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 140 | 0,15 | 0,25 | 0,30 | 0,35 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 120 | 0,12 | 0,20 | 0,25 | 0,35 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 120 | 0,10 | 0,18 | 0,25 | 0,30 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 120 | 0,10 | 0,18 | 0,20 | 0,30 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 100 | 0,10 | 0,15 | 0,20 | 0,25 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,05 | 0,10 | 0,12 | 0,15 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 300 | 0,05 | 0,10 | 0,12 | 0,15 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 300 | 0,05 | 0,12 | 0,15 | 0,20 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 250 | 0,06 | 0,16 | 0,20 | 0,25 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 200 | 0,10 | 0,20 | 0,25 | 0,30 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 50 | 0,05 | 0,10 | 0,15 | 0,20 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 50 | 0,05 | 0,10 | 0,15 | 0,20 |

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | Insert -01 -03 -11 / for workpiece material P M K N S H |
|---|---|---|---|---|
| for better chip control | 10 – 11 | W29 10030.046425<br>W29 10110.0477 | WOEX 030204-03 BK6425<br>WOEX 030204-11 BK77 | |
| | 15 – 26 | W29 24030.046425<br>W29 24110.0477 | WOEX 05T304-03 BK6425<br>WOEX 05T304-11 BK77 | |
| | 30 | W29 34030.046425<br>W29 34110.0477 | WOEX 06T304-03 BK6425<br>WOEX 06T304-11 BK77 | |
| | 33 – 40 | W29 42030.046425<br>W29 42110.0477 | WOEX 080404-03 BK6425<br>WOEX 080404-11 BK77 | |
| | 48 | W29 50030.046425<br>W29 50110.0477 | WOEX 100504-03 BK6425<br>WOEX 100504-11 BK77 | |
| for higher cutting speed | 10 – 11 | – | | |
| | 15 – 26 | W29 24010.0460<br>W29 24010.0461 | WOEX 05T304-01 BK60<br>WOEX 05T304-01 BK61 | |
| | 30 | W29 34010.0460<br>W29 34010.0461 | WOEX 06T304-01 BK60<br>WOEX 06T304-01 BK61 | |
| | 33 – 40 | W29 42010.0460<br>W29 42010.0461 | WOEX 080404-01 BK60<br>WOEX 080404-01 BK61 | |
| | 48 | W29 50010.0460<br>W29 50010.0461 | WOEX 100504-01 BK60<br>WOEX 100504-01 BK61 | |
| for greater strength | 10 – 11 | W29 10010.047930 | WOEX 05T304-01 BK7930 | |
| | 15 – 26 | W29 24010.047930 | WOEX 05T304-01 BK7930 | |
| | 30 | W29 34010.047930 | WOEX 06T304-01 BK7930 | |
| | 33 – 40 | W29 42010.047930 | WOEX 080404-01 BK7930 | |
| | 48 | W29 50010.047930 | WOEX 100504-01 BK7930 | |

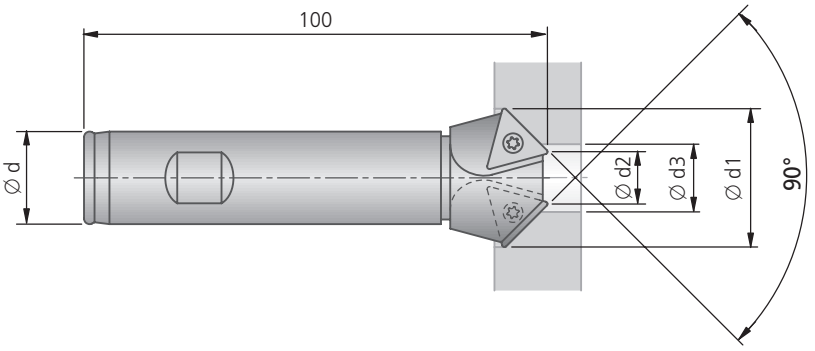
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

**Important: See chapter 8 for more application details and safety notes!**

| shank design to DIN 1835/B | for producing the 90° and 60° countersinks to DIN 74, page 1, Form A, fine | for milling of trapezoidal slots | for circular milling on machining centres | for chamfering on machining centres |
|---|---|---|---|---|

## Countersinking Tool 90° Ø 19,0 - 37,0 mm

**Supply includes:**
Countersinking tool with clamping screw. Please order inserts and accessories separately.

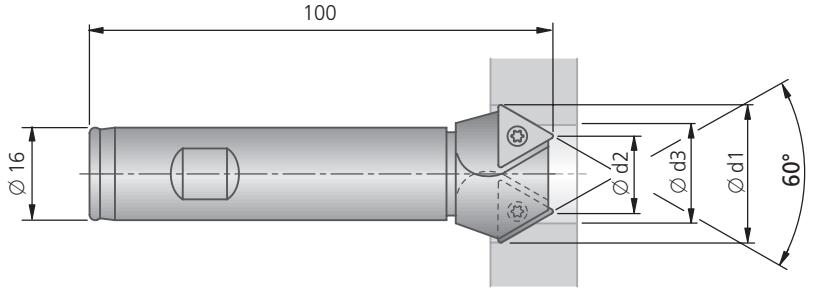



y = number of inserts
z = effective number of teeth for calculating $v_f$

| Ød1 | Ød2 | Order No. Article | Rough bore Ø Ød3 min | Ød | y | z | kg | Basic recommendation: Insert Order No. ▽▽ size | Insert ISO-Code | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | 7 | **F10 00051** KWS-M10 | 9,5 | 16 | 2 | 2 | | **W30 14660.338425** | TOHX 090204EN-U8.77 BK8425 | ● ● | **N00 56111** S/M2,6×6,2-8IP 1,28 Nm | **L05 00830** 8IP |
| 23 | 11 | **F10 00061** KWS-M12 | 12 | 16 | 2 | 2 | | **W30 14660.3321** | TOHX 090204EN-U8.77 K10 | ● ● ● ○ | | |
| 26 | 11 | **F10 00071** KWS-M14 | 12 | 16 | 2 | 1 | | **W30 14720.048425** | TOHX 090204EN-G10 BK8425 | ● ● | **N00 56111** S/M2,6×6,2-8IP 1,28 Nm | **L05 00830** 8IP |
| | | | | | | | | **W30 14720.0421** | TOHX 090204FN-G12 K10 | ● ● ● ○ | | |
| 30 | 12 | **F10 00081** KWS-M16 | 13 | 20 | 2 | 2 | | **W30 26720.0560** | TOHX 140305EN-G12 BK60 | ● ● | **N00 56211** S/M2,6×7,3-10IP 2,8 Nm | **L05 00850** 10IP |
| 34 | 16 | **F10 00091** KWS-M18 | 17 | 20 | 2 | 2 | | **W30 26720.0521** | TOHX 140305FN-G12 K10 | ● ● ● ○ | | |
| 37 | 19 | **F10 00101** KWS-M20 | 20 | 20 | 2 | 2 | | | | | | |

## Countersinking Tool 60° Ø 16,5 - 25,5 mm

**Supply includes:**
Countersinking tool with clamping screw. Please order inserts and accessories separately.




y = number of inserts
z = effective number of teeth for calculating $v_f$

| Ød1 | Ød2 | Order No. Article | Rough bore Ø Ød3 min | y | z | kg | Basic recommendation: Insert Order No. ▽▽ size | Insert ISO-Code | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16,5 | 8,1 | **F10 00350** KWS-M10/12-60 | 8,5 | 1 | 1 | 0,14 | | | | | |
| 20 | 11,6 | **F10 00370** KWS-M14-60 | 12 | 2 | 2 | 0,14 | **W30 14660.338425** | TOHX 090204EN-U8.77 BK8425 | ● ● | **N00 56111** S/M2,6×6,2-8IP 1,28 Nm | **L05 00830** 8IP |
| 22 | 13,6 | **F10 00380** KWS-M16-60 | 14 | 2 | 2 | 0,15 | **W30 14660.3321** | TOHX 090204EN-U8.77 K10 | ● ● ● ○ | | |
| 23,5 | 15,1 | **F10 00390** KWS-M18-60 | 15,5 | 2 | 2 | 0,15 | **W30 14720.048425** | TOHX 090204EN-G10 BK8425 | ● ● | **N00 56111** S/M2,6×6,2-8IP 1,28 Nm | **L05 00830** 8IP |
| 25,5 | 17,1 | **F10 00400** KWS-M20-60 | 17,5 | 2 | 2 | 0,16 | **W30 14720.0421** | TOHX 090204FN-G12 K10 | ● ● ● ○ | | |

| Guideline values for countersinking | | | | | | | $v_C$ | Max. f (mm/rev) |
|---|---|---|---|---|---|---|---|---|
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_C$ (m/min) | Ø 16,5 – 37 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 250 | 0,16 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 200 | 0,20 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 250 | 0,30 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 150 | 0,20 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 120 | 0,15 |
| P | 4.1 | | | HSS | | 100 | 0,18 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,12 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 100 | 0,20 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 160 | 0,15 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 120 | 0,15 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 100 | 0,15 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 150 | 0,40 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 120 | 0,30 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 120 | 0,30 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 100 | 0,30 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 100 | 0,20 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 80 | 0,20 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 50 | 0,20 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 250 | 0,30 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 250 | 0,20 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 250 | 0,20 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 150 | 0,30 |
| N | 14.0 | | 100 | cast alum.alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 120 | 0,25 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 50 | 0,15 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 25 | 0,10 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

**Important: See chapter 8 for more application details and safety notes!**

# KOMET® – Fine Boring

Modern batch production is characterised by the shortest machining times and the highest quality requirements.

To meet these demands, highly developed tools need to be used with the latest cutting materials and efficient coatings.



The KOMET GROUP offer excellent tools solutions for the fine boring area.



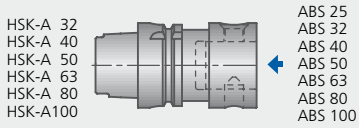
# Index


| | Page |
|---|---|
| Programme Summary | 206 – 207 |
| Tool selection | 208 – 209 |
| Insert geometry selection | 210 – 211 |
| MicroKom® *hi.flex* Micro-adjustable head | 212 – 225 |
| MicroKom® *BluFlex™* Micro-adjustable head | 226 – 237 |
| MicroKom® Micro-adjustable head M04 | 238 – 247 |
| MicroKom® Micro-adjustable head M02 | 248 – 251 |
| Balancing Ring | 252 – 253 |
| **UniTurn® / Boring bars** | |
| with cylindrical shank | |
| Boring bar ∅ 0,5 – 9,0 mm | 255 |
| Boring bar B001 / B003 ∅ 5,6 – 24 mm | 256 |
| Low-vibration boring bar ∅ 5,6 – 26 mm | 258 |
| UniTurn® Copying tool ∅ 3 – 8 mm | 261 |
| UniTurn® Boring tool ∅ 3 – 8 mm | 262 |
| UniTurn® Boring tool with CBN ∅ 2,7 – 7,5 mm | 263 |
| with ABS® connection | |
| Boring bar B002 ∅ 8 – 28 mm | 264 |
| Boring bar G10 ∅ 11,9 – 30 mm | 266 |
| Boring bar B300 ∅ 28 – 44 mm | 268 |
| MicroKom® Boring bar M10 | 270 – 271 |
| MicroKom® Micro-adjustable head FZ / FF | 272 – 281 |
| MicroKom® Micro-adjustable head M03Speed | 282 – 293 |
| TwinKom® Twin cutter tool | 294 – 297 |
| KomTronic® Mechatronic tools | 298 – 299 |

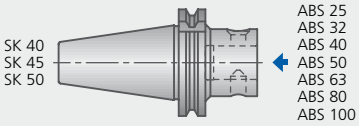
# Programme Summary – Fine Boring

## 5 Adaptors

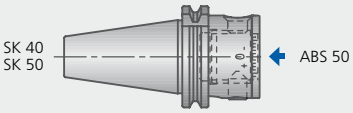
**HSK-A Adaptors**
with ABS® connection
▸ 400



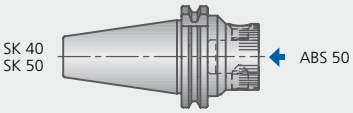

**Taper shanks DIN 69871**
with ABS® connection
▸ 430



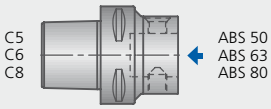

Eccentric adjusting device with ABS® connection
▸ 434




Torsional dampener with ABS® connection
▸ 435



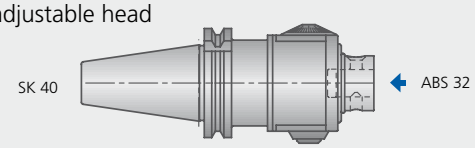

**PSC Adaptors ISO 26623**
PSC interface with ABS® connection
▸ 460



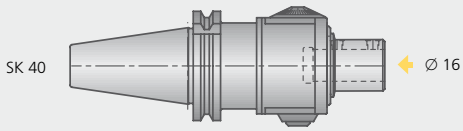

## 3 Fine Boring Tools

**MicroKom® M02**
Micro-adjustable head

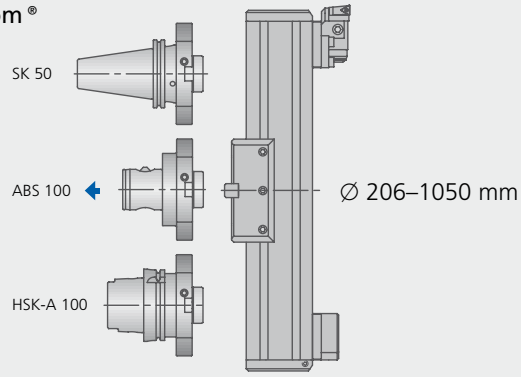
▸ 251




▸ 250



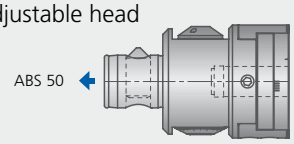

**TwinKom®**
▸ 297



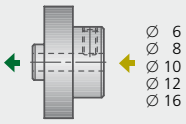

## 3 Fine Boring Tools

**MicroKom® *hi.flex***
Micro-adjustable head

▸ 217

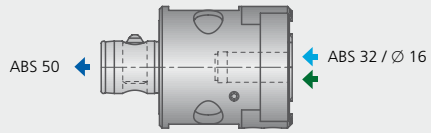



▸ 224 Adaptor



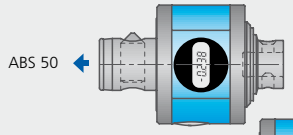

**MicroKom® *BluFlex™***

▸ 230

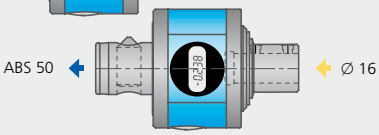



**MicroKom® M04**
Micro-adjustable head

▸ 241

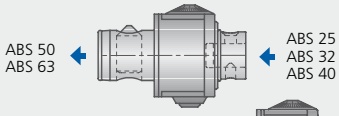



▸ 240

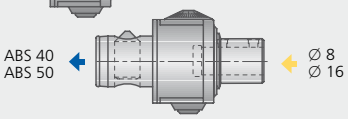



**MicroKom® M02**
Micro-adjustable head

▸ 249

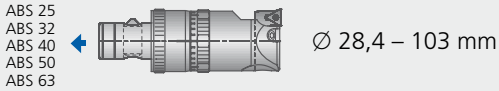



▸ 248

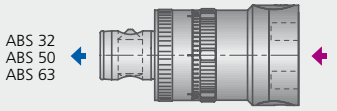



**MicroKom® M03Speed**
Micro-adjustable head

▸ 284

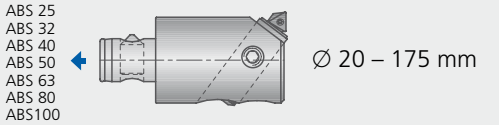



▸ 288

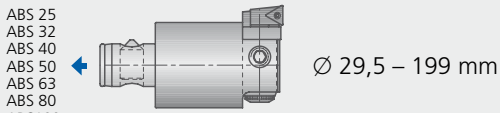



Micro-adjustable head

▸ 272

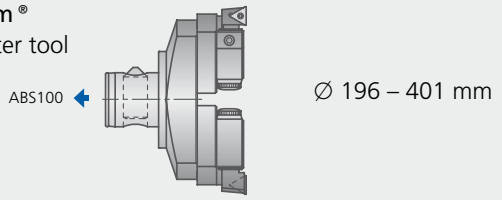



▸ 278




**TwinKom®**
Twin cutter tool

▸ 294






Further adaptors see chapter 5.

## 3 Fine Boring Tools

**MicroKom® *hi.flex***

Boring bar
▸ 218 / 232 — Ø 6 – 25 mm

Serrated body + Insert holder
▸ 219 / 233 — Ø 25 – 63 mm

Insert holder
▸ 220 / 234 — Ø 63 – 93 mm

Bridge + Insert holder
▸ 221 / 235 — Ø 90 – 215 mm

Mounting bridge for external machining
▸ 225 — Ø 5 – 70 mm

Adaptor
▸ 242
ABS 32

Replaceable bridge
Ø 38 – 63 mm
▸ 243 + 288

▸ 242
ABS 32
Ø 62 – 103 mm
▸ 243 + 288

Ø 100 – 206 mm
▸ 290

**UniTurn® Adaptor**

▸ 260 — ABS 32 — Ø 4, Ø 8

▸ 260 — Ø 16 — Ø 4, Ø 8

**Adaptor**

▸ 254 — ABS 32 — Ø 4, Ø 6, Ø 8

▸ 254 — Ø 16 — Ø 4, Ø 6, Ø 8, Ø 10, Ø 12

**Boring bars**

| | | | |
|---|---|---|---|
| ▸ 255 | Ø 4 | | Ø 0,5 – 2,0 mm |
| ▸ 255 | Ø 8 | | Ø 3,0 – 9,0 mm |
| ▸ 258 | Ø 6 | | Ø 5,6 mm<br>Ø 6,9 mm |
| ▸ 256 | Ø 8 | | Ø 5,6 – 12 mm |
| ▸ 256 | Ø 16 | | Ø 8 – 24 mm |
| ▸ 258 | Ø 8<br>Ø 10 | | Ø 9 mm<br>Ø 11 mm |
| ▸ 258 | Ø 12 | | Ø 13 – 17 mm |
| ▸ 258 | Ø 16 | | Ø 17 – 26 mm |
| ▸ 264 | ABS 25<br>ABS 32<br>ABS 40 | | Ø 8 – 28 mm |
| ▸ 266 | ABS 32 | | Ø 11,9 – 30 mm |
| ▸ 268 | ABS 32 | | Ø 28 – 44 mm |

**MicroKom® Boring bar**

▸ 270 — Ø 16 — Ø 15,9 – 26 mm

**UniTurn®**

Copying tool
▸ 261 — Ø 4, Ø 8 — Ø 3 – 8 mm

Boring tool
▸ 262 — Ø 4, Ø 8 — Ø 3 – 8 mm

with CBN
▸ 263 — Ø 8 — Ø 2,7 – 7,5 mm

**Key**

- ABS® connection
- ABS® connection
- Cylindrical connection
- MicroKom® *hi.flex* / MicroKom® *Bluflex™*
- MicroKom® M03Speed connection
- Adaptor connection
- UniTurn® connection

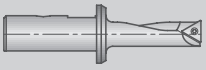
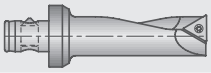
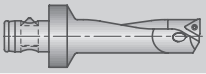
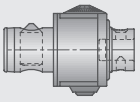
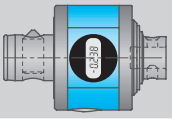
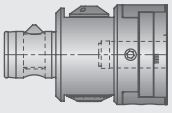
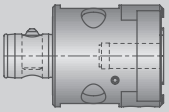
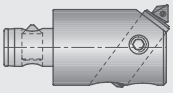
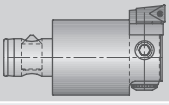
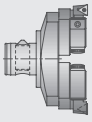
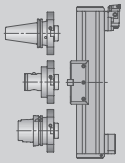
# KOMET® Tool Selection

## Help Table for Fine Boring

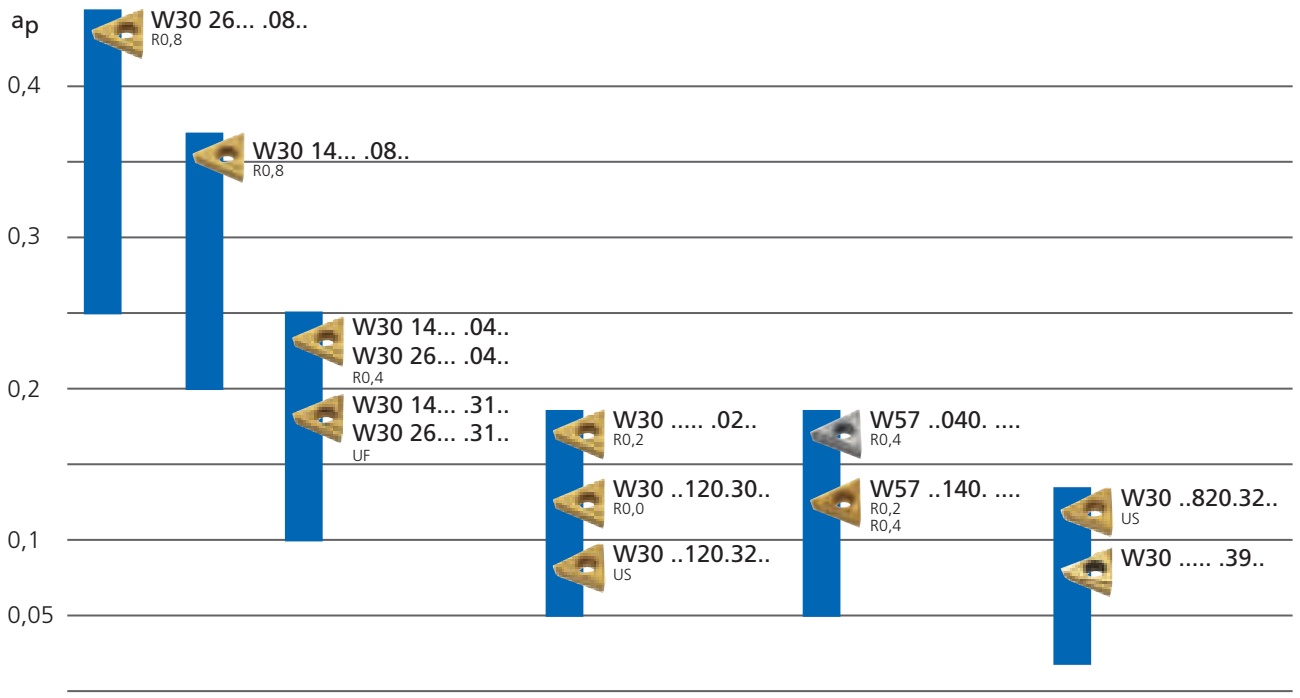
| Ø (mm) | L / D | Machining | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Length/diameter ratio | through hole | blind hole | angled start and drilling out, interrupted cut | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
| 0,5 – 9,0 | > 3,5×D | ● | ● | ◐ | ◐ | | | | ● |
| 3,0 – 8,0 | > 3,5×D | ● | ● | ◐ | ◐ | | | | ● |
| 4,0 – 8,0 | 3×D | ● | ● | ◐ | ◐ | | ● | ● | ● |
| 5,6 – 24,0 | 3,5×D | ● | ● | ◐ | ◐ | | ● | ● | |
| 7,9 – 44,0 | 3,5×D | ● | ● | ◐ | ◐ | | ● | ● | |
| 11,9 – 30,0 | 3,5×D | ● | ● | ◐ | ◐ | | ● | ● | |
| 15,9 – 26,0 | 3×D | ● | ● | ◐ | ◐ | | ● | ● | |
| 5,6 – 26,0 | > 3,5×D | ● | ● | ◐ | ◐ | | ○ | ○ | ● |
| 0,5 – 103,0 | 3 – 6×D | ● | ● | ◐ | ◐ | | ● | ● | |
| 0,5 – 103,0 | 3 – 6×D | ● | ● | ◐ | ◐ | ● | ◐ | ◐ | |
| 6,0 – 215,0 | 3,5×D | ● | ● | ◐ | ◐ | | ◐ | ◐ | |
| 6,0 – 215,0 | 3,5×D | ● | ● | ◐ | ◐ | | ◐ | ◐ | |
| 24,8 – 206,0 | > 3,5×D | ● | ● | ◐ | ◐ | ● | ● | ● | ● |
| 28,0 – 44,0 | 3,5×D | ● | ● | ◐ | ◐ | | ● | ● | ● |
| 20,0 – 175,0 | > 3,5×D | ● | ● | ◐ | ◐ | | ● | ● | ● |
| 29,5 – 199,0 | > 3,5×D | ● | ● | ◐ | ◐ | | ● | ● | ● |
| 196,0 – 401,0 | 3,5×D | ● | ● | ◐ | ◐ | | ● | ● | |
| > 206,0 | > 3,5×D | ● | ● | ◐ | ◐ | | | | |



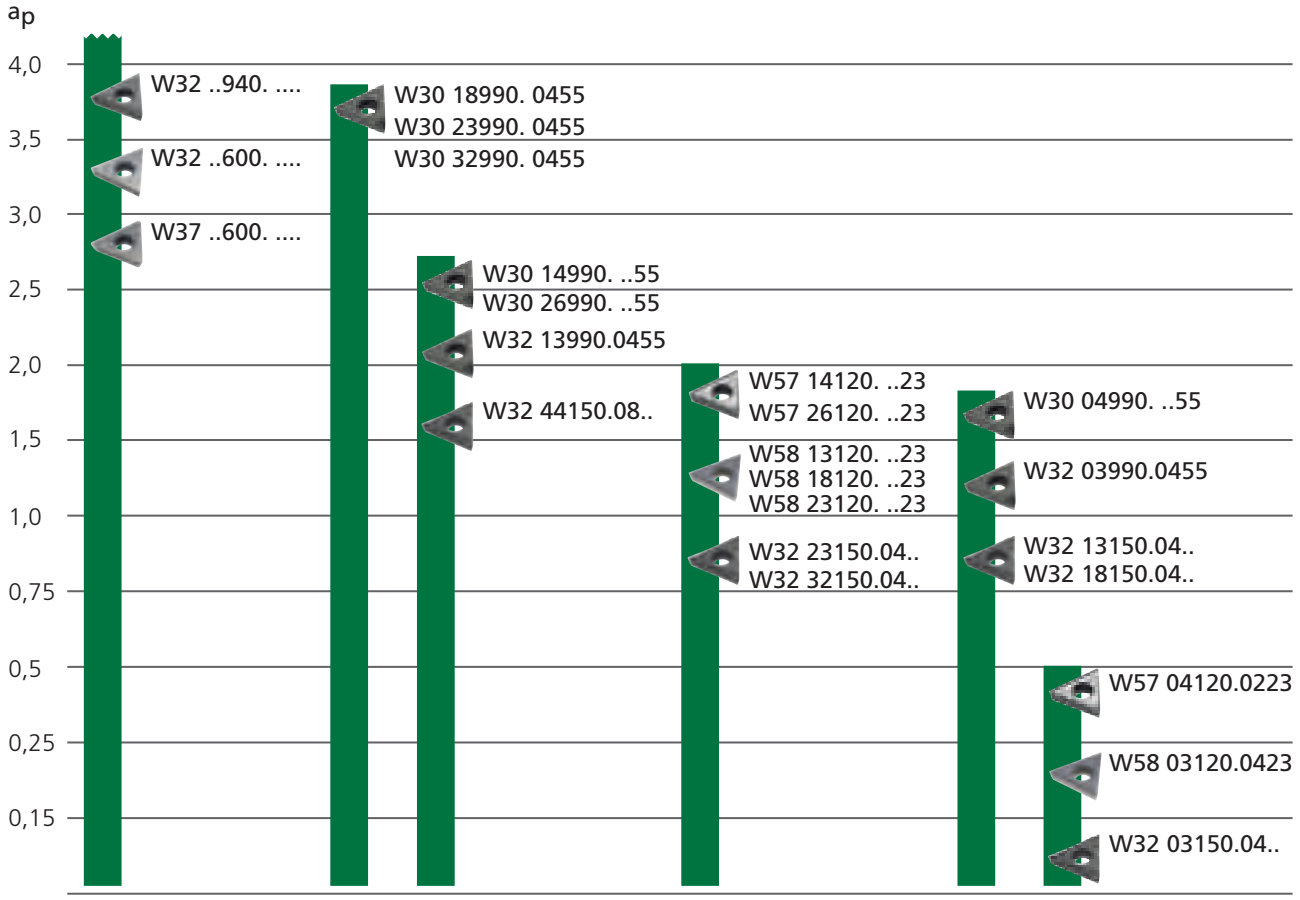
● very good ◐ good ○ possible: see technical notes

| Coolant | | | | IT area | Tool | | Page |
|---|---|---|---|---|---|---|---|
| Emulsion | | MQL | | | | | |
| internal | external | internal | external | | | | |
| | ◐ | | | subject to mounting in micro-adjustable head |  | Boring bar | ▸ 255 |
| ● | ● | | | subject to mounting in micro-adjustable head |  | **UniTurn®** | ▸ 261 – 262 |
| | ● | ◐ | ○ | subject to mounting in micro-adjustable head |  | **UniTurn®** with CBN | ▸ 263 |
| ● | ● | ◐ | ○ | subject to mounting in micro-adjustable head |  | Boring bar | ▸ 256 – 257 |
| ● | ● | ◐ | ○ | subject to mounting in micro-adjustable head |  | Boring bar | ▸ 264 – 265 |
| ● | ● | ◐ | ○ | subject to mounting in micro-adjustable head |  | Boring bar | ▸ 266 – 267 |
| ● | ● | ◐ | ○ | IT 7 |  | **MicroKom® M10** Boring bar | ▸ 270 – 271 |
| ● | ● | ◐ | ○ | subject to mounting in micro-adjustable head |  | Low-vibration boring bar | ▸ 258 – 259 |
| ● | ● | ● | ● | < IT 7 |  | **MicroKom® M02** Micro-adjustable head | ▸ 248 – 251 |
| ● | ● | ● | ● | < IT 7 |  | **MicroKom® M04** Micro-adjustable head | ▸ 238 – 247 |
| ● | ● | | | > IT 7 |  | **MicroKom® *hi.flex*** Micro-adjustable head | ▸ 212 – 225 |
| ● | ● | ● | ● | |  | **MicroKom® *BluFlex™*** Micro-adjustable head | ▸ 226 – 237 |
| ● | ● | ● | ● | < IT 7 |  | **MicroKom® M03Speed** Micro-adjustable head | ▸ 282 – 293 |
| ● | ● | ● | ● | > IT 7 |  | Micro-adjustable head | ▸ 268 – 269 |
| ● | ● | ● | ● | > IT 7 |  | Micro-adjustable head (FZ) | ▸ 272 – 278 |
| ● | ● | ● | ● | > IT 7 |  | Micro-adjustable head (FF) | ▸ 279 – 281 |
| ● | ● | ● | ● | < IT 7 |  | **TwinKom® G01** Twin cutter tool | ▸ 294 – 295 |
| ● | ● | ● | ● | < IT 7 |  | **TwinKom®** Lightweight twin cutter tool | ▸ 296 – 297 |

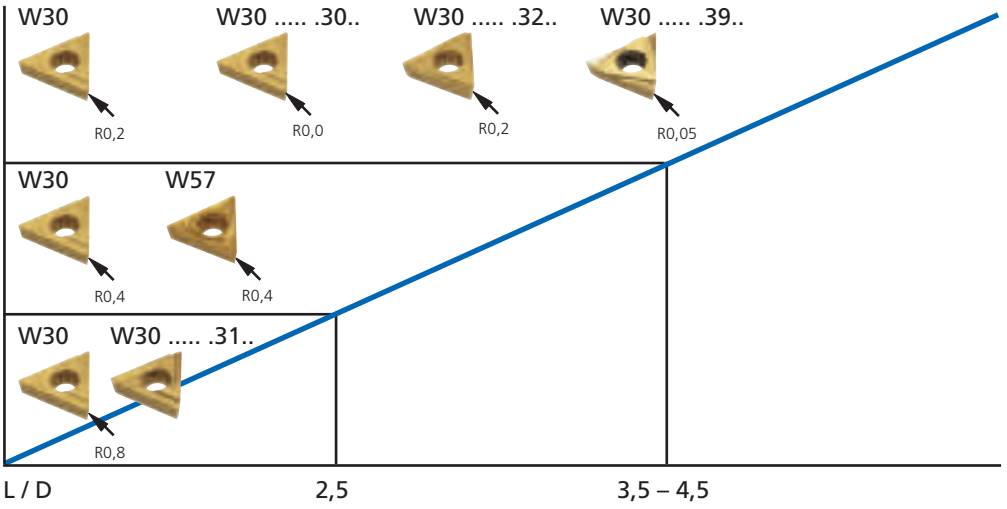
## subject to cutting depth $a_p$ in the radius – machining steel

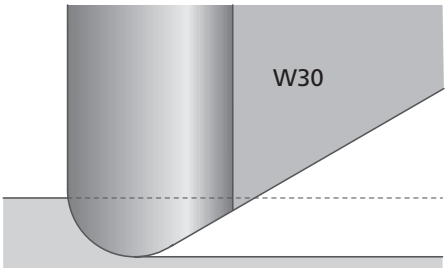



## subject to cutting depth $a_p$ in the radius – machining aluminium



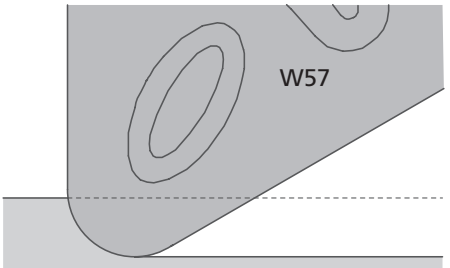
## subject to length:diameter ratio L/D



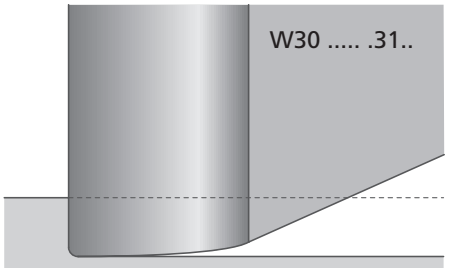

- universal insert

surface structure produced



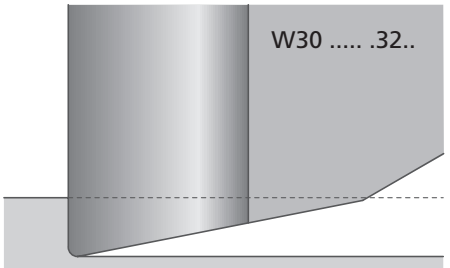

- for good chip control
- for R.H. and L.H. cutting direction

surface structure produced




- very good surface quality at high feed rates
- subject to stable conditions (max. 2×D)
- for interrupted cut

surface structure produced




- for large cut outs
- for good chip control

surface structure produced

# KOMET MicroKom® *hi.flex*

Fine Adjustment System for Diameters 0,5 to 215 mm



With the new MicroKom® *hi.flex* system KOMET has extended the range of products for MicroKom® micro adjustable heads. The system is particularly notable for high flexibility and covers diameter ranges from 6 to 215 mm fully with just one adjustable head, various boring bars and intelligently designed adaptor solutions.

The adjustable head offers an adjustment accuracy of 0.01 mm per graduation on an easy-to-read disc scale and 0.002 mm from a vernier, with an adjustment path of up to 5 mm. The system is balanced in zero position and provides an internal coolant supply directly onto the cutting edge for all diameter ranges.

The standard set includes four boring bars for diameters 6 to 25 mm. According to the individual combination, a serrated body, a bridge and two different holders for inserts provide for diameters up to 215 mm.

The MicroKom® *hi.flex* is compatible with existing ABS® and cylindrical shank fine boring components. The set can be extended with established boring tools and UniTurn® products, for which the turning range starts at 0.5 mm. Variable overhang lengths and a single key for clamping, adjusting and mounting bridges and insert holders illustrate how easy the new system is to handle.

KOMET

## KOMET MicroKom® *hi.flex*


| | Page |
|---|---|
| **Fine Boring Set** | |
| Micro-adjustable head with ABS® connection | 217 |
| Boring bar ∅ 6 - 25 mm | 218 |
| Serrated body ∅ 25 - 63 mm | 219 |
| Insert holder ∅ 63 - 93 mm | 220 |
| Bridge / iInsert holder ∅ 90 - 215 mm | 221 |
| Mounting bridge for external machining | 225 |
| **Technical Notes** | 222 |
| Guideline values for fine boring | |
| **Alternative Inserts** | 223 |
| **Adaptor** | |
| MicroKom® *hi.flex* Adaptor | 224 |
| ABS® Adaptor | 254 |
| UniTurn® Adaptor | 260 |
| **Boring Bar with Cylindrical Shank** | |
| ∅ 0,5 - 9,0 mm | 255 |
| ∅ 5,6 - 24 mm | 256 |
| ∅ 5,6 - 26 mm, low-vibration | 258 |
| **Boring Bar with ABS® Connection** | |
| ∅ 8 - 28 mm | 264 |
| ∅ 11,9 - 30 mm | 266 |
| ∅ 28 - 44 mm | 268 |

# KOMET MicroKom® *hi.flex*

## Variation Options



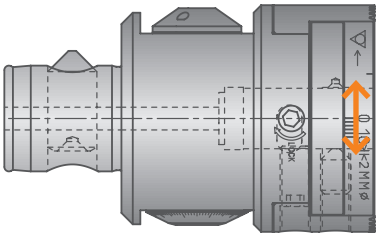
Adaptor
Boring bar
Ø 0,5 – 2 mm

UniTurn® Adaptor
Copying tool
Ø 3 – 8 mm
Boring tool
Ø 3 – 8 mm

Adaptor
Boring bar
Ø 3 – 9 mm
Boring bar, low-vibration
Ø 5,6 – 26 mm

Boring bar
Ø 6 – 8 mm
Ø 8 – 12 mm
Ø 12 – 18 mm
Ø 18 – 25 mm

Micro-adjustable head

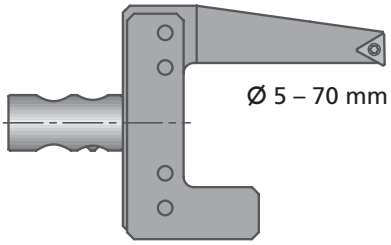


Serrated body + Insert holder
Ø 25 – 44 mm
Ø 44 – 63 mm

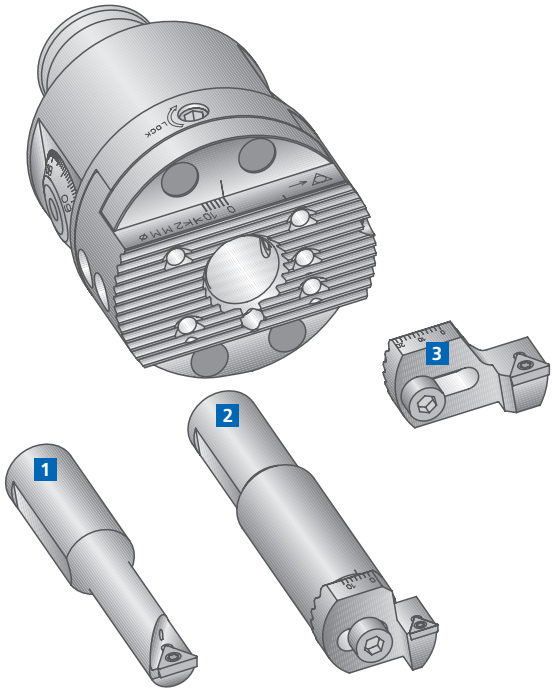
Insert holder
Ø 63 – 93 mm

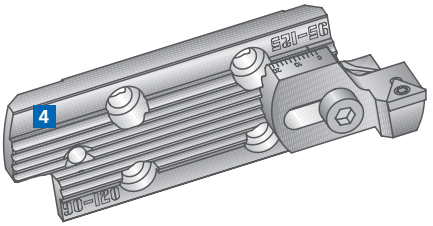
Bridge + Insert holder
Ø 90 – 120 mm
Ø 95 – 125 mm
Ø 120 – 150 mm
Ø 125 – 155 mm
Ø 150 – 180 mm
Ø 155 – 185 mm
Ø 180 – 210 mm
Ø 185 – 215 mm

Mounting bridge for external machining



Ø 5 – 70 mm




Fine adjustment system
for diameters 6 to 215 mm:

**1** **Ø 6 – 25 mm**
achievable with 4 different boring bars

**2** **Ø 25 – 63 mm**
achievable with serrated body and
2 different insert holders

**3** **Ø 63 – 93 mm**
achievable with insert holder

**4** **Ø 90 – 215 mm**
achievable with bridge and insert holder



Adaptor with cylindrical tool holder

Mounting bridge for external machining up to 70 mm

# KOMET MicroKom® *hi.flex*

## Fine Boring Set

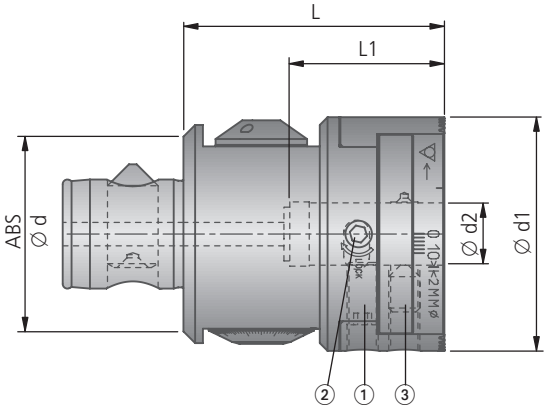



### Fine boring set Ø 6 – 125 mm
### Order No. M05 00010

| Contents of case | | | |
|---|---|---|---|
| | Order No. | Qty. | Article |
| ① | M05 01000 | 1 | Micro-adjustable head |
| ② | M05 20101 | 1 | Insert holder Ø 25-44 |
| ③ | M05 20151 | 1 | Insert holder Ø 44-125 |
| ④ | M05 80101 | 1 | Bridge |
| ⑤ | M05 90100 | 1 | Serrated body |
| ⑥ | M05 90501 | 1 | Packing piece |
| ⑦ | B05 20100 | 1 | Boring bar Ø 6-8 |
| ⑧ | B05 20120 | 1 | Boring bar Ø 8-12 |
| ⑨ | B05 20160 | 1 | Boring bar Ø 12-18 |
| ⑩ | B05 20220 | 1 | Boring bar Ø 18-25 |
| ⑪ | 18050 10040 | 1 | Allen key SW4 |
| ⑫ | L05 01110 | 1 | Flag key 5IP |
| | L05 01120 | 1 | Flag key 6IP |
| | L05 01240 | 1 | Flag key 8IP |
| | 55011 05016 | 5 | Cylindrical screw M5×16 |
| ⑬ | W57 04140.0260 | 4 | Insert BK60 |
| | W57 14140.0460 | 4 | Insert BK60 |
| | W00 04120.0164 | 2 | Insert BK64 |

## Micro-adjustable Head with ABS® Connection

| machine adaptor | coolant central | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
| ABS® | | | | Cylindrical shank / ABS® |




| Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | Adjust-ment S | L | L1 | kg | Assembly parts: Clamping screw ① DIN913 Order No. Article | Assembly parts: Clamping screw ② DIN913 Order No. Article | Assembly parts: Gripper screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ABS50/16 | **M05 01000** | **50** | 60 | **ABS32** Ø 16 | 5 | 67 | 39,7 | 1,225 | **55051 08120** M8×1×20 | **55051 08008** M8×8 | **N00 02061** ABS32-F1 |

**The micro-adjustable drilling head is balanced in the zero position.**
Adjustment must be in line with cutting parameters and spindle speed.

## Features :

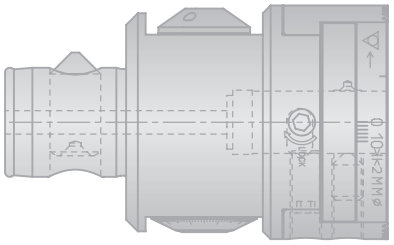
- Diameter range 0.5-215 mm with existing KOMET standard tools
- Large adjustment range from -0.5 to +10 mm on dia.
- easy to use
- Adjustment per graduation = 0.01 mm Ø
- Adjustment accuracy 0.002 mm Ø with vernier
- Easy-to-read disc scale
- Use of existing ABS32 tools possible
- Internal coolant supply over whole range
- ABS32 spindle connection and 16 mm cylindrical shank
- Can be adapted for any machine tool with standard tool adaptors
- Head diameter: 60 mm

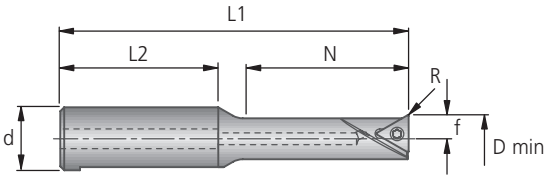
# KOMET MicroKom® *hi.flex* Ø 6 – 25 mm

## Boring Bar with Cylindrical Shank, $\varkappa$ = 90°, R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ◐ | ◐ | ✕ |

● very good ◐ good ○ possible ✕ not possible






| Ø D min | Order No. | Ød | L1 | L2 | N | f | R | kg | Basic recommendation: Insert Order No. ▽▽ size | Insert ISO-Code | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | **B05 20100** | 16 | 71,7 | 40 | 21 | 3 | 0,1 | 0,06 | **W00 04120.018440**<br>**W00 04120.012710**<br>**W00 04120.0121** | WOHX 02T001EL-G12 BK8440<br>WOHX 02T001EL-G12 BK2710<br>WOHX02T001FL-G12 K10 | ● ◐ ● ○ ● ● | **N00 56011**<br>S/M1,5×2,9-5IP<br>0,38 Nm | **L05 00800**<br>5IP |
| 8 | **B05 20120** | 16 | 77,4 | 40 | 28 | 4 | 0,2 | 0,07 | **W57 04140.0260**<br>**W30 04060.036110**<br>**W57 04120.0223**<br>**W30 04990.0240** | TOGX 06T102EN-14 BK60<br>TOHX 06T103EL-G06 BK6110<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | ● ◐ ● ● <52 HRC ○ | **N00 56021**<br>S/M2×3,8-6IP<br>0,62 Nm | **L05 00810**<br>6IP |
| 12 | **B05 20160** | 16 | 88,2 | 40 | 42 | 6 | 0,2 | 0,08 | **W57 14140.0460**<br>**W30 14060.046110** | TOGX 090204EN-14 BK60<br>TOHX 090204EL-G06 BK6110 | ● ◐ ● ● <52 HRC ○ | **N00 56101**<br>S/M2,6×5,2-8IP<br>1,28 Nm | **L05 00830**<br>8IP |
| 18 | **B05 20220** | 16 | 100 | 40 | 60 | 9 | 0,2 | 0,14 | **W57 14120.0423**<br>**W30 14990.0440** | TOGX 090204FN-12 K10<br>TOGX 090204TN CBN40 | | | |

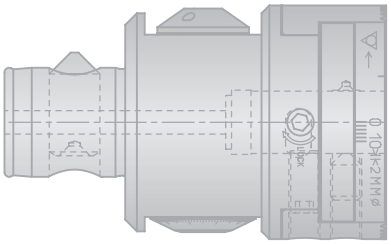
**Supply includes:**
Boring bar with with assembly parts. Please order inserts and accessories separately.

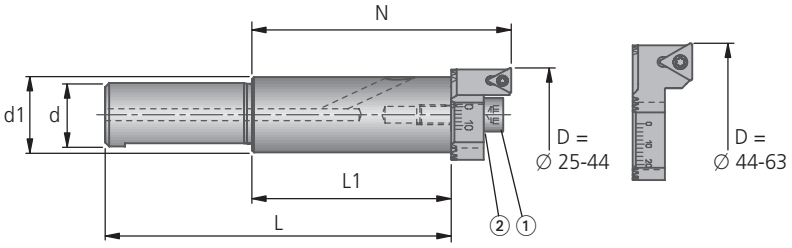


Patent applied for inside and outside Germany (ABS)

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ◐ | ◐ | ✕ |

● very good ◐ good ○ possible ✕ not possible






| Serrated body | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Location screw ① | Cup spring ② |
| Order No. | d | d1 | N | L | L1 | kg | Order No. Article | Order No. Article |
| M05 90100 | 16 | 19 | 65 | 88,5 | 51,5 | 0,163 | 55011 05016 M5×16 ISO4762 | 56771 10053 A12,5 Ø 6,2×0,35 |

**Supply includes serrated body:** Serrated body with assembly parts.

| Ø D | 3,5×D | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|
| | | | Insert -12 -14 W30 | | for workpiece material | Clamping screw | Screwdriver |
| | Order No. | kg | Order No. ▽▽ size | ISO-Code | P M K N S H | Order No. Article | Order No. Article |
| 25 – 44 | M05 20101 | 0,019 | W57 04140.0260<br>W30 04060.037615<br>W57 04120.0223 | TOGX 06T102EN-14 BK60<br>TOHX 06T103EL-G06 BK7615<br>TOGX 06T102FN-12 K10 | ● ● ● ● | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP |
| 44 – 63 | M05 20151 | 0,026 | W57 14140.0460<br>W30 14060.047615<br>W57 14120.0423 | TOGX 090204EN-14 BK60<br>TOHX 090204EL-G06 BK7615<br>TOGX 090204FN-12 K10 | ● ● ● ● | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |

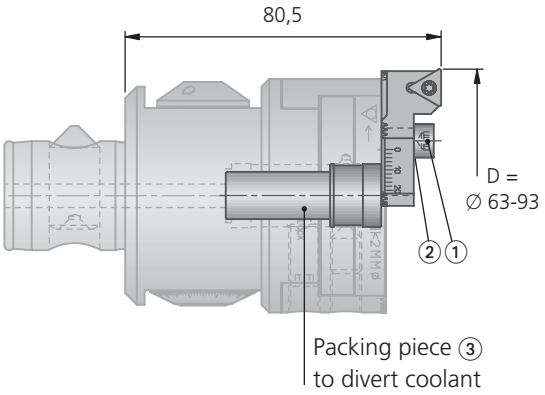
**Supply includes insert holder:**
Insert holder with assembly parts. Please order inserts and accessories separately.

Guideline values for fine boring and alternative inserts: Pages 222 – 223.

## Insert Holder

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ◐ | ◐ | ✕ |

● very good ◐ good ○ possible ✕ not possible




| Ø D | 3,5×D Order No. | kg | Basic recommendation: Insert -12 / -14 / W30 Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|
| 63 – 93 | **M05 20151** | 0,026 | **W57 14140.0460**<br>**W30 14060.047615**<br>**W57 14120.0423** | TOGX 090204EN-14 BK60<br>TOHX 090204EL-G06 BK7615<br>TOGX 090204FN-12 K10 | ● ● ● ● | **N00 56111**<br>S/M2,6×6,2-8IP<br>1,28 Nm | **L05 00830**<br>8IP |

**Supply includes insert holder:**
Insert holder with clamping screw.

Please order inserts and accessories separately.

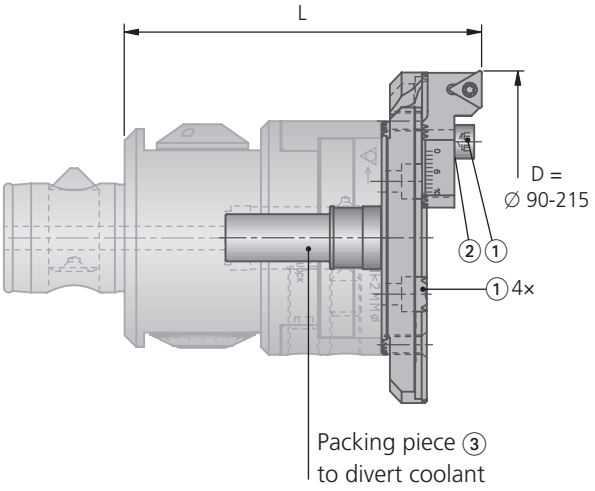
| Accessories | | |
|---|---|---|
| ① Location screw<br>Order No.<br>Article | ② Cup spring<br>Order No. | ③ Packing piece<br>Order No. |
| **55011 05016**<br>M5×16 ISO 4762 | **56771 10053** | **M05 90501** |



Patent applied for inside and outside Germany (ABS)

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ◐ | ◐ | ✕ |

● very good ◐ good ○ possible ✕ not possible




| Ø D | L | Bridge Order No. | Bridge kg | Insert holder Order No. | Basic recommendation: Insert Order No. ▽▽ size | Basic recommendation: ISO-Code | for workpiece material | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| 90-125 | 94,62 | **M05 80101** | 0,147 | **M05 20151** 0,026 | **W57 14140.0460** | TOGX 090204EN-14 BK60 | P M K N S H | **N00 56111** S/M2,6×6,2-8IP 1,28 Nm | **L05 00830** 8IP |
| 120-155 | 96,62 | **M05 80200** | 0,107 | | **W30 14060.047615** | TOHX 090204EL-G06 BK7615 | | | |
| 150-185 | 98,62 | **M05 80300** | 0,152 | | **W57 14120.0423** | TOGX 090204FN-12 K10 | | | |
| 180-215 | 101,62 | **M05 80400** | 0,229 | | | | | | |

**Supply includes insert holder:**
Insert holder with clamping screw.

Please order inserts and accessories separately.

| Accessories | | |
|---|---|---|
| ① Location screw<br>Order No.<br>Article | ② Cup spring<br>Order No. | ③ Packing piece<br>Order No. |
| **55011 05016**<br>M5×16 ISO 4762 | **56771 10053** | **M05 90501** |

Guideline values for fine boring and alternative inserts: Pages 222 – 223.

## Technical Notes

| Guideline values for fine boring | | | | | | $v_c$ | f (mm/rev) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | max. feed > 3,5×D | | | | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 6 – 7,9 | Ø 8 – 11,9 | Ø 12 – 25 | Ø 25 – 44 | Ø 44 – 93 | Ø 90 – 215 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,04 | 0,07 | 0,10 | 0,08 | 0,10 | 0,10 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,04 | 0,06 | 0,12 | 0,08 | 0,12 | 0,12 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,04 | 0,07 | 0,12 | 0,10 | 0,15 | 0,15 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 240 | 0,03 | 0,06 | 0,10 | 0,08 | 0,10 | 0,10 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 200 | 0,03 | 0,05 | 0,10 | 0,06 | 0,10 | 0,10 |
| P | 4.1 | | | HSS | | 120 | 0,02 | 0,04 | 0,08 | 0,06 | 0,08 | 0,08 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,01 | 0,04 | 0,08 | 0,06 | 0,08 | 0,08 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,01 | 0,04 | 0,08 | 0,06 | 0,08 | 0,08 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 200 | 0,01 | 0,05 | 0,10 | 0,08 | 0,10 | 0,10 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 180 | 0,01 | 0,05 | 0,10 | 0,06 | 0,10 | 0,10 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 120 | 0,01 | 0,04 | 0,08 | 0,06 | 0,10 | 0,10 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 240 | 0,05 | 0,10 | 0,15 | 0,15 | 0,20 | 0,20 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 200 | 0,05 | 0,10 | 0,15 | 0,15 | 0,20 | 0,20 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,04 | 0,08 | 0,15 | 0,10 | 0,15 | 0,15 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 180 | 0,04 | 0,08 | 0,15 | 0,10 | 0,15 | 0,15 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 160 | 0,04 | 0,08 | 0,15 | 0,10 | 0,15 | 0,15 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,03 | 0,07 | 0,12 | 0,10 | 0,15 | 0,15 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,03 | 0,10 | 0,15 | 0,10 | 0,15 | 0,15 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 400 | 0,02 | 0,04 | 0,08 | 0,10 | 0,15 | 0,15 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 300 | 0,05 | 0,08 | 0,15 | 0,10 | 0,15 | 0,15 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 500 | 0,02 | 0,06 | 0,10 | 0,08 | 0,12 | 0,12 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 350 | 0,05 | 0,08 | 0,12 | 0,10 | 0,15 | 0,15 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 300 | 0,05 | 0,08 | 0,12 | 0,10 | 0,15 | 0,15 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | – | 0,05 | 0,08 | 0,08 | 0,08 | 0,08 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 60 | – | 0,05 | 0,08 | 0,06 | 0,08 | 0,08 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



Important: See chapter 8 for more application details and safety notes!

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| | | Insert .32.. .39.. | | |
| for better chip control | 6 – 7,9 | – | | |
| | 8 – 11,9 | W30 04120.3232<br>W30 04120.3977 | TOHX 06T102EL-US12 CK32<br>TOHX 06T1ZZEL-39G12 BK77 | ◐◑ ◐ |
| | 12 – 25 | W30 14120.3232<br>W30 14120.3977 | TOHX 090202EL-US12 CK32<br>TOHX 0902ZZEL-39G12 BK77 | ◐◑ ◐ |
| | 25 – 44 | W30 26120.3232<br>W30 26120.3977 | TOHX 140304-US12 CK32<br>TOHX 1403ZZEL-39G12 BK77 | ◐◑ ◐ |
| | 44 – 215 | W30 14120.3232<br>W30 14120.3977 | TOHX 090202EL-US12 CK32<br>TOHX 0902ZZEL-39G12 BK77 | ◐◑ ◐ |

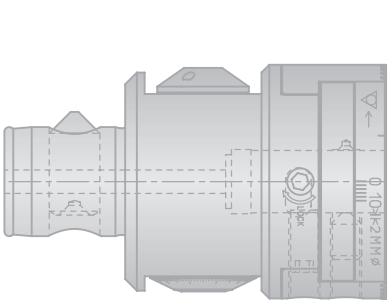
## Alternative Inserts

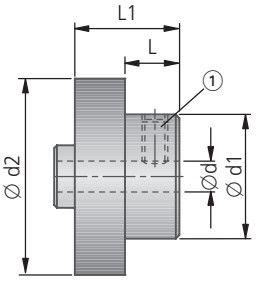
| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| | | Insert W30 W57 PKD CBN W30 .32.. .39.. | | |
| for higher cutting speed | 6 – 7,9 | – | | |
| | 8 – 11,9 | W57 04140.023210<br>W30 04120.0238<br>W30 04990.0257<br>W30 04990.0255 | TOGX 06T102EN-14 CK3210<br>TOHX 06T102EL-G12 CK38<br>TOGX 06T102TN CBN57<br>TOGX 06T102FN PKD55 | ◐◑ ◐◑ only GG25 ◐ |
| | 12 – 25 | W57 14140.043210<br>W30 14120.0238<br>W30 14990.0457<br>W30 14990.0455 | TOGX 090204EN-14 CK3210<br>TOHX 090202EL-G12 CK38<br>TOGX 090204TN CBN57<br>TOGX 090204FN PKD55 | ◐◑ ◐◑ only GG25 ◐ |
| | 25 – 44 | W57 26140.043210<br>W30 26120.0438<br>W30 26990.0457<br>W30 26990.0455 | TOGX 140304EN-14 CK3210<br>TOHX 140304EL-G12 CK38<br>TOGX 140304TN CBN57<br>TOGX 140304FN PKD55 | ◐◑ ◐◑ only GG25 ◐ |
| | 44 – 215 | W57 14140.043210<br>W30 14120.0238<br>W30 14990.0457<br>W30 14990.0455 | TOGX 090204EN-14 CK3210<br>TOHX 090202EL-G12 CK38<br>TOGX 090204TN CBN57<br>TOGX 090204FN PKD55 | ◐◑ ◐◑ only GG25 ◐ |
| for greater strength | 6 – 7,9 | – | | |
| | 8 – 1,9 | W57 04140.023210<br>W30 04060.036110<br>W30 04200.0321<br>W30 04990.0255 | TOGX 06T102EN-14 CK3210<br>TOHX 06T103EL-G06 BK6110<br>TOHX 06T103FL-G20 K10<br>TOGX 06T102FN PKD55 | ◐◑ ◐ ◐ ◐◑ ◐ |
| | 12 – 25 | W57 14140.043210<br>W30 14060.046110<br>W30 14200.0421<br>W30 04990.0255 | TOGX 090204EN-14 CK3210<br>TOHX 090204EL-G06 BK6110<br>TOHX 090204FL-G20 K10<br>TOGX 090204FN PKD55 | ◐◑ ◐ ◐ ◐◑ ◐ |
| | 25 – 44 | W57 26140.043210<br>W30 26060.046110<br>W30 26200.0521<br>W30 26990.0455 | TOGX 140304EN-14 CK3210<br>TOHX 140304EL-G06 BK6110<br>TOHX 140305FL-G20 K10<br>TOGX 140304FN PKD55 | ◐◑ ◐ ◐ ◐◑ ◐ |
| | 44 – 215 | W57 14140.043210<br>W30 14060.046110<br>W30 14200.0421<br>W30 04990.0255 | TOGX 090204EN-14 CK3210<br>TOHX 090204EL-G06 BK6110<br>TOHX 090204FL-G20 K10<br>TOGX 090204FN PKD55 | ◐◑ ◐ ◐ ◐◑ ◐ |

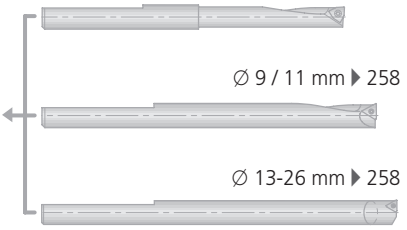
# KOMET MicroKom® *hi.flex*

## Adaptor

- with cylindrical tool holder
- for clamping vibration dampened fine boring bars





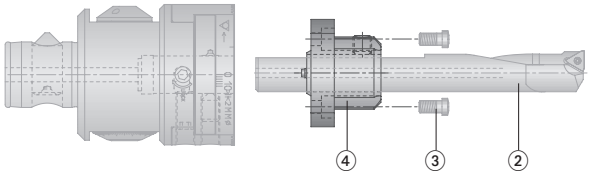






| Order No. | Ø d | Ø d1 | Ø d2 | L | L1 | kg | Assembly parts: Clamping screw ① DIN913 – Article | Assembly parts: Clamping screw ① DIN913 – Order No. |
|---|---|---|---|---|---|---|---|---|
| **M05 90200** | 6 | 31 | – | 16 | – | 0,112 | M8×10 | **55051 08010** |
| **M05 90210** | 8 | 31 | – | 16 | – | 0,107 | M8×10 | **55051 08010** |
| **M05 90220** | 10 | 31 | 46 | 15 | 25 | 0,155 | M8×10 | **55051 08010** |
| **M05 90230** | 12 | 31 | 46 | 15 | 25 | 0,147 | M8×10 | **55051 08010** |
| **M05 90240** | 16 | 31 | 46 | 20 | 30 | 0,146 | M8×8 | **55051 08008** |

**Supply includes:** Adaptor complete.

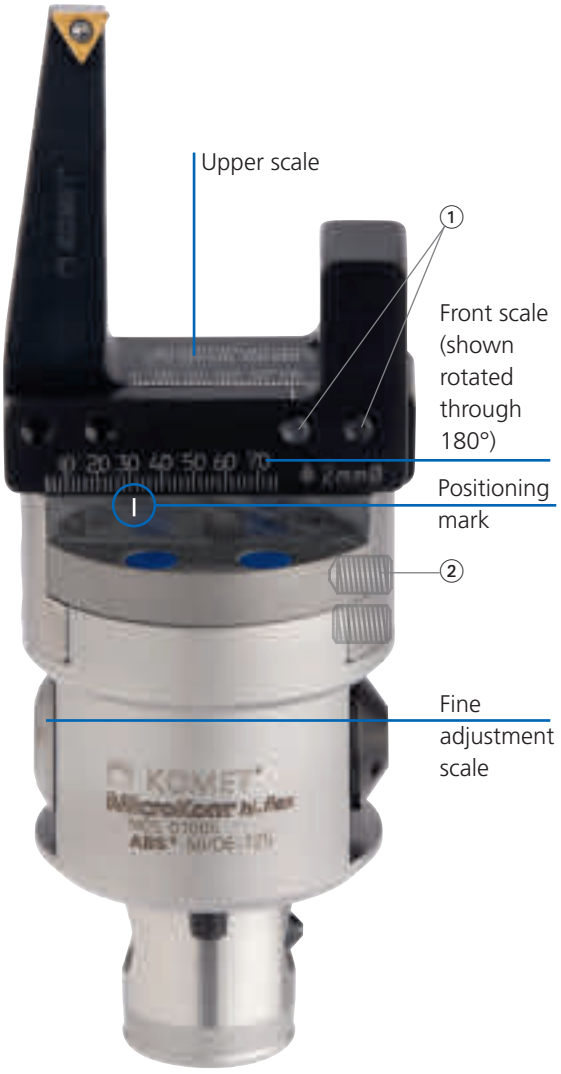
Instruction for adaptor M05 90240




**Please note:**
Before tightening the holding screw ③, centre the adaptor ④ with shank Ø for the boring bar ② on the micro-adjustable head.

# Mounting Bridge for External Machining Ø 5 – 70 mm





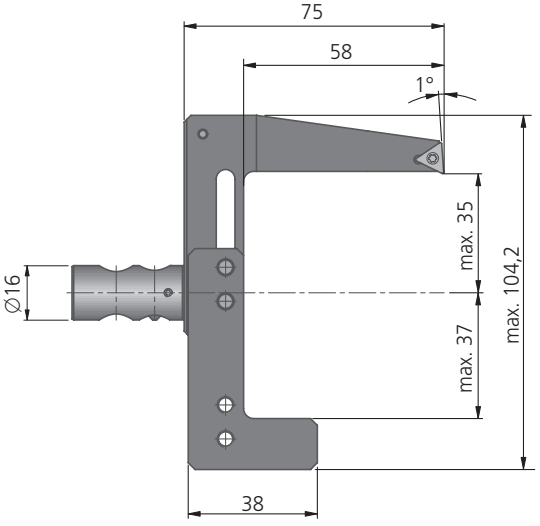

## Setting the diameter

- Position the mounting bridge on the micro-adjustable head.
- Set the coarse position on the upper scale, tighten screw ①. **Important note: check position of screw ① for required Ø range!**

**Ø 5 – 34 mm** **Ø 33 – 44 mm** **Ø 43 – 70 mm**



- Align the front scale for the mounting bridge with the positioning mark on the adjustable head, tighten the pull stud ②.
- Carry out fine adjustment on the setting device using the scale on the micro-adjustable head.




| Ø D | Order No. | Basic recommendation | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|---|
| | | Insert -12 -14 W30 | | for workpiece material | Cylindrical screw ① | Clamping screw | Screwdriver |
| | | Order No. ▽▽ size | ISO-Code | P M K N S H | Order No. Article | Order No. Article | Order No. Article |
| 5 – 70 | M05 90300 0,377 | W57 14140.0460<br>W30 14060.047615<br>W57 14120.0423 | TOGX 090204EN-14 BK60<br>TOHX 090204EL-G06 BK7615<br>TOGX 090204FN-12 K10 | ● ● ● ● | 55011 05030 M5×30 | N00 56101 S/M2,6×5,2-8IP 1,28 Nm | L05 00830 8IP |

**Supply includes:** Mounting bridge with assembly parts.
Please order inserts and accessories separately.

# KOMET MicroKom® *BluFlex™*

Precision Boring System with Bluetooth® Technology



Modern wireless networking is one of the benefits with which the new MicroKom® *BluFlex™* fine adjustment head is equipped. Bluetooth® technology is developed for wirelessly networking devices over short distances. This technology has become standard for small mobile devices.

The introduction of Bluetooth® technology in the MicroKom® *BluFlex™* tool system means that the display has been disconnected from the tool head, thereby making it easier and more convenient to read off the data. When adjusting the tool system, the user can move the display to suit the conditions on site, so that it is in his field of view. A specially designed adjustment key with integral Bluetooth® interface is part of the system.

With integral part balancing, the MicroKom® *BluFlex™* can reach a rotational speed of up to 20,000 rpm.

The modular ABS® interface makes adjustment easier on both the spindle side and tool side.

BENEFITS for you:

- Higher speeds thanks to integral part balancing
- Universal ABS® interface
- External display makes reading off easier, thanks to the enlarged values
- The display and adjustment key can be used for any head
- As conventional batteries are used, this makes it easier to replace them
- The slide can be clamped in place

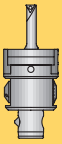
Bluetooth® technology is a Bluetooth SIG, Inc. brand name

Patent applied

## KOMET MicroKom® *BluFlex™*

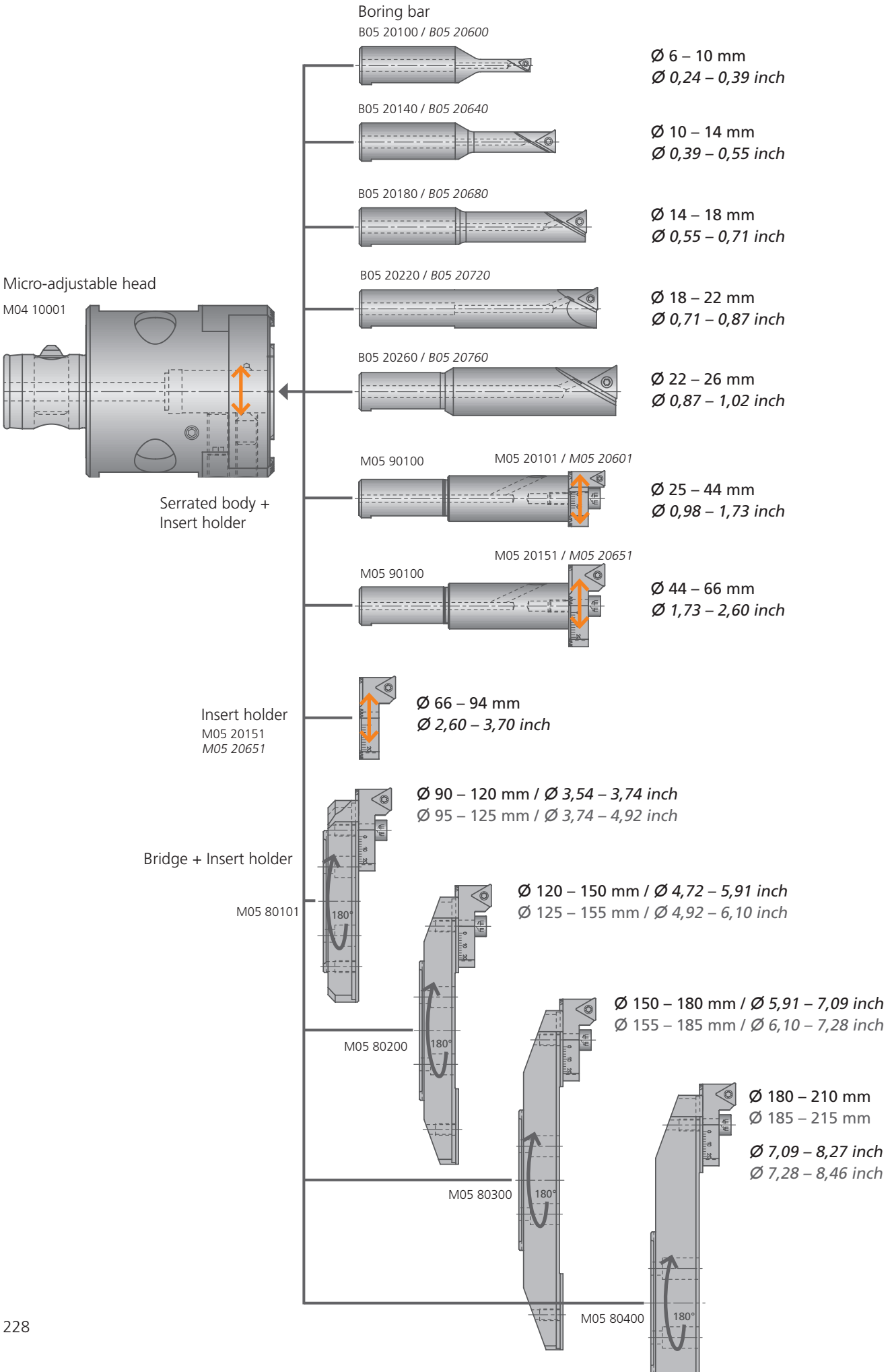

| | Page |
|---|---|
| **Precision Boring System** | |
| Micro-adjustable head with ABS® connection | 230 |
| Boring bar ∅ 6 - 26 mm | 232 |
| Serrated body ∅ 25 - 66 mm | 233 |
| Insert holder ∅ 66 - 94 mm | 234 |
| Bridge / iInsert holder ∅ 90 - 215 mm | 235 |
| **Technical Notes** | 236 |
| Guideline values for fine boring | |
| **Alternative Inserts** | 237 |



# KOMET MicroKom® *BluFlex™*

## Variation Options

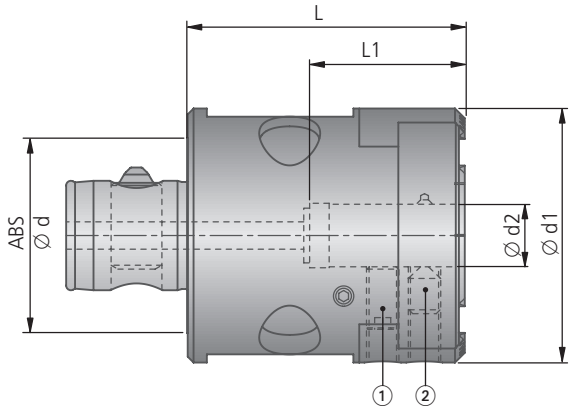



KOMET
M05 80400
Ø 180-215
KOMET
MicroKom BluFlex
M04 10000

# KOMET MicroKom® *BluFlex™*

## Micro-adjustable Head with ABS® Connection

| machine adaptor | coolant central | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
| ABS® | | | | Cylindrical shank / ABS® |




| Article | Order No. | ABS ∅ d | ∅ d1 | ∅ d2 | Adjustment S | L | L1 | kg | Assembly parts: Clamping screw ① DIN913 Order No. Article | Assembly parts: Gripper screw ② Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|
| ABS50/6-215 | M04 10001 | 50 | 65 | ABS32 ∅ 16 | 2,3 | 71 | 39,7 | 1,45 | 55051 08120 M8×1×20 | N00 02062 ABS32-F1.1 |

Adjustment must be in line with cutting parameters and spindle speed.

## Display unit




| Display unit | Assembly parts: Rubber sleeve with clip ④ |
|---|---|
| Order No. | Order No. |
| E51 00000 | E51 00010 |

## Adjustment key




| Adjustment key | Assembly parts: Sleeve ⑤ |
|---|---|
| Order No. | Order No. |
| E52 00000 | E52 00000.13 |



Patent applied for inside and outside Germany (ABS and MicroKom BluFlex)



**Order No. M04 10010**
Components:
1× Micro-adjustable head
1× Display unit
1× Adjustment key
1× Operating Instructions

**Features:**

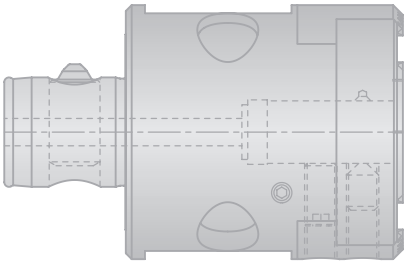
- Diameter range 0.5-215 mm with existing KOMET standard tools
- Adjustment range from -0.4 to +4,6 mm (-0,0157 to 0,181") on dia.
- Easy to use
- Use of existing ABS 32 tools possible
- Internal coolant supply over whole range
- ABS 32 spindle connection and 16 mm cylindrical shank
- Can be adapted for any machine tool with standard tool adaptors
- Head diameter: 65 mm
- MQL-compatible
- Maximum spindle speed 20.000 $min^{-1}$
- Slider - can be clamped
- Display resolution 0,002 mm (0,0001") in the diameter
- Display in mm or inches
- Can be switched between differential and absolute mode
- Energy saving function, automatically switches off after 30 seconds

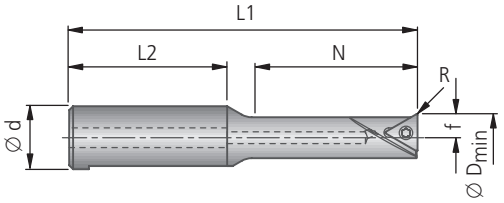
# KOMET MicroKom® *BluFlex™* Ø 6 – 26 mm

## Boring Bar with Cylindrical Shank, $\varkappa$ = 90°, R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ◐ | ◐ | ✕ |

● very good ◐ good ○ possible ✕ not possible






| Ø D mm *inch* | Order No. | 3,5×D Ød | L1 | L2 | N | f | R | kg | Basic recommendation: Insert Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | **B05 20100** | 16 | 71,7 | 40 | 21 | 3 | 0,1 | 0,06 | **W00 04120.018440** | WOHX 02T001EL-G12 BK8440 | ● ● ● ● ○ | **N00 56011** S/M1,5×2,9-5IP 0,38 Nm | **L05 00800** 5IP |
| *0,24* | ***B05 20600*** | | | | *0,83* | | | | **W00 04120.012710** **W00 04120.0121** | WOHX 02T001EL-G12 BK2710 WOHX02T001FL-G12 K10 | | | |
| 10 | **B05 20140** | 16 | 81,8 | 40 | 34 | 5 | 0,2 | 0,08 | **W57 14140.0460** **W30 14060.046110** **W57 14120.0423** **W30 14990.0440** | TOGX 090204EN-14 BK60 TOHX 090204EL-G06 BK6110 TOGX 090204FN-12 K10 TOGX 090204TN CBN40 | ● ● ● ● ○ <52 HRC | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP |
| *0,39* | ***B05 20640*** | | | | *1,34* | | | | | | | | |
| 14 | **B05 20180** | 16 | 94,4 | 40 | 50 | 7 | 0,2 | 0,10 | | | | | |
| *0,55* | ***B05 20680*** | | | | *1,97* | | | | | | | | |
| 18 | **B05 20220** | 16 | 100 | 40 | 60 | 9 | 0,2 | 0,14 | | | | | |
| *0,71* | ***B05 20720*** | | | | *2,36* | | | | | | | | |
| 22 | **B05 20260** | 16 | 108 | 36 | 68,5 | 11 | 0,2 | 0,21 | **W57 26140.0460** **W30 26060.046110** **W57 26120.0423** **W30 26990.0440** | TOGX 140304EN-14 BK60 TOHX 140304EL-G06 BK6110 TOGX 140304FN-12 K10 TOGX 140304TN CBN40 | ● ● ● ● ○ <52 HRC | **N00 56211** S/M3,5×7,3-10IP 2,8 Nm | **L05 00850** 10IP |
| *0,87* | ***B05 20760*** | | | | *2,68* | | | | | | | | |

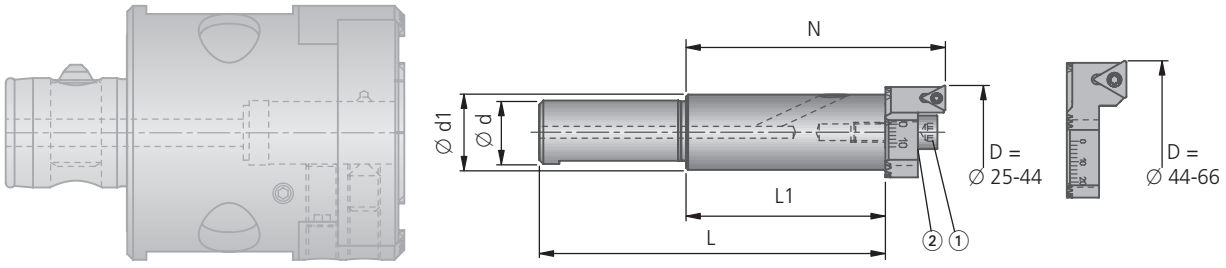
**Supply includes:**
Boring bar with with assembly parts. Please order inserts and accessories separately.



Patent applied for inside and outside Germany (ABS and BluFlex)

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ◐ | ◐ | ✕ |

● very good ◐ good ○ possible ✕ not possible




| Serrated body | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Location screw ① | Cup spring ② |
| Order No. | d | d1 | N | L | L1 | kg | Order No. Article | Order No. Article |
| M05 90100 | 16 | 19 | 65 | 88,5 | 51,5 | 0,163 | **55011 05016** M5×16 ISO4762 | **56771 10053** A12,5 Ø 6,2×0,35 |

**Supply includes serrated body:** Serrated body with assembly parts.

| Ø D mm *inch* | 3,5×D Order No. | kg | Basic recommendation Insert Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|
| 25 – 44 | M05 20101 | 0,019 | **W57 04140.0260** -12 | TOGX 06T102EN-14 BK60 | ● ● ● ● | **N00 56031** S/M2×4,9-6IP 0,62 Nm | **L05 00810** 6IP |
| *0,98 – 1,73* | *M05 20601* | | **W30 04060.037615** -14 | TOHX 06T103EL-G06 BK7615 | | | |
| | | | **W57 04120.0223** W30 | TOGX 06T102FN-12 K10 | | | |
| 44 – 66 | M05 20151 | 0,026 | **W57 14140.0460** -12 | TOGX 090204EN-14 BK60 | ● ● ● ● | **N00 56111** S/M2,6×6,2-8IP 1,28 Nm | **L05 00830** 8IP |
| *1,73 – 2,60* | *M05 20651* | | **W30 14060.047615** -14 | TOHX 090204EL-G06 BK7615 | | | |
| | | | **W57 14120.0423** W30 | TOGX 090204FN-12 K10 | | | |

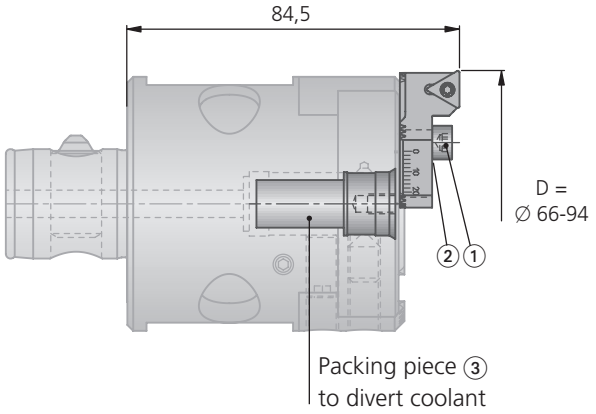
**Supply includes insert holder:**
Insert holder with assembly parts. Please order inserts and accessories separately.

Guideline values for fine boring and alternative inserts: Pages 236-237.

## Insert Holder

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ◐ | ◐ | ✕ |

● very good ◐ good ○ possible ✕ not possible




| Ø D mm *inch* | 3,5×D Order No. | kg | Basic recommendation: Insert -12 / -14 / W30 Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|
| 66 – 94 | M05 20151 | 0,026 | **W57 14140.0460** | TOGX 090204EN-14 BK60 | ● ● ● ● | **N00 56111** S/M2,6×6,2-8IP 1,28 Nm | **L05 00830** 8IP |
| *2,60 – 3,70* | *M05 20651* | | **W30 14060.047615** | TOHX 090204EL-G06 BK7615 | | | |
| | | | **W57 14120.0423** | TOGX 090204FN-12 K10 | | | |

**Supply includes insert holder:**
Insert holder with clamping screw.

Please order inserts and accessories separately.

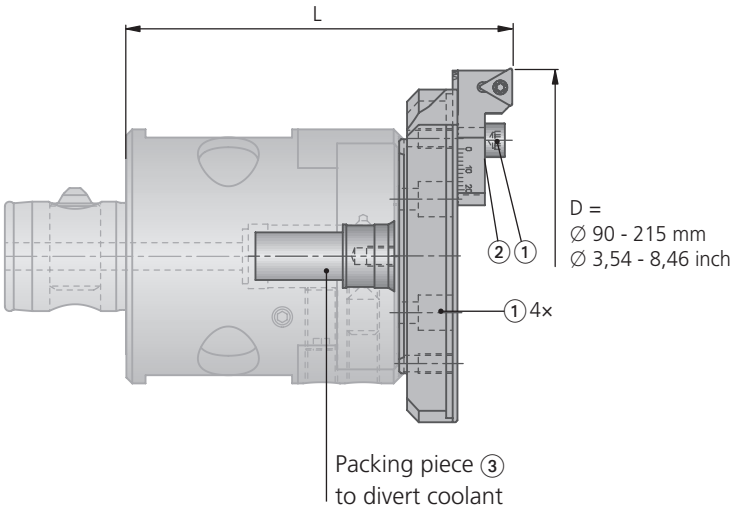
| Accessories | | |
|---|---|---|
| ① Location screw<br>**Order No.**<br>Article | ② Cup spring<br>**Order No.** | ③ Packing piece<br>**Order No.** |
| **55011 05016**<br>M5×16 ISO 4762 | **56771 10053** | **M05 90501** |



Patent applied for inside and outside Germany (ABS and BluFlex)

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ◐ | ◐ | ✕ |

● very good ◐ good ○ possible ✕ not possible




| Ø D mm *inch* | L | Bridge Order No. | kg | Insert holder Order No. mm *inch* | Basic recommendation: Insert Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| 90 -125 *3,54-4,92* | 98,72 | **M05 80101** | 0,147 | **M05 20151** *M05 20651* 0,026 | **W57 14140.0460** **W30 14060.047615** **W57 14120.0423** | TOGX 090204EN-14 BK60 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10 | ● ● ● ● | **N00 56111** S/M2,6×6,2-8IP 1,28 Nm | **L05 00830** 8IP |
| 120-155 *4,72-6,10* | 100,72 | **M05 80200** | 0,107 | | | | | | |
| 150-185 *5,91-7,28* | 102,72 | **M05 80300** | 0,152 | | | | | | |
| 180-215 *7,09-8,46* | 105,72 | **M05 80400** | 0,229 | | | | | | |

**Supply includes insert holder:**
Insert holder with clamping screw.

Please order inserts and accessories separately.

| Accessories | | |
|---|---|---|
| ① Location screw Order No. Article | ② Cup spring Order No. | ③ Packing piece Order No. |
| **55011 05016** M5×16 ISO 4762 | **56771 10053** | **M05 90501** |

Guideline values for fine boring and alternative inserts: Pages 236-237.

## Technical Notes

| Guideline values for fine boring | | | | | | $v_c$ | f (mm/rev) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | max. feed > 3,5×D | | | | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code / DIN | Cutting speed $v_c$ (m/min) | Ø 6 – 7,9 | Ø 8 – 11,9 | Ø 12 – 25 | Ø 25 – 44 | Ø 44 – 94 | Ø 90 – 215 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,04 | 0,07 | 0,10 | 0,08 | 0,10 | 0,10 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,04 | 0,06 | 0,12 | 0,08 | 0,12 | 0,12 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,04 | 0,07 | 0,12 | 0,10 | 0,15 | 0,15 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 240 | 0,03 | 0,06 | 0,10 | 0,08 | 0,10 | 0,10 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 200 | 0,03 | 0,05 | 0,10 | 0,06 | 0,10 | 0,10 |
| P | 4.1 | | | HSS | | 120 | 0,02 | 0,04 | 0,08 | 0,06 | 0,08 | 0,08 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,01 | 0,04 | 0,08 | 0,06 | 0,08 | 0,08 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,01 | 0,04 | 0,08 | 0,06 | 0,08 | 0,08 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 200 | 0,01 | 0,05 | 0,10 | 0,08 | 0,10 | 0,10 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 180 | 0,01 | 0,05 | 0,10 | 0,06 | 0,10 | 0,10 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 120 | 0,01 | 0,04 | 0,08 | 0,06 | 0,10 | 0,10 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 240 | 0,05 | 0,10 | 0,15 | 0,15 | 0,20 | 0,20 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 200 | 0,05 | 0,10 | 0,15 | 0,15 | 0,20 | 0,20 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,04 | 0,08 | 0,15 | 0,10 | 0,15 | 0,15 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 180 | 0,04 | 0,08 | 0,15 | 0,10 | 0,15 | 0,15 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 160 | 0,04 | 0,08 | 0,15 | 0,10 | 0,15 | 0,15 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,03 | 0,07 | 0,12 | 0,10 | 0,15 | 0,15 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,03 | 0,10 | 0,15 | 0,10 | 0,15 | 0,15 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 400 | 0,02 | 0,04 | 0,08 | 0,10 | 0,15 | 0,15 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 300 | 0,05 | 0,08 | 0,15 | 0,10 | 0,15 | 0,15 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 500 | 0,02 | 0,06 | 0,10 | 0,08 | 0,12 | 0,12 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 350 | 0,05 | 0,08 | 0,12 | 0,10 | 0,15 | 0,15 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 300 | 0,05 | 0,08 | 0,12 | 0,10 | 0,15 | 0,15 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | – | 0,05 | 0,08 | 0,08 | 0,08 | 0,08 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 60 | – | 0,05 | 0,08 | 0,06 | 0,08 | 0,08 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| | | Insert .32.. .39.. | | |
| for better chip control | 6 – 7,9 | – | | |
| | 8 – 9,9 | W30 04120.3232<br>W30 04120.3977 | TOHX 06T102EL-US12 CK32<br>TOHX 06T1ZZEL-39G12 BK77 | |
| | 10 – 18 | W30 14120.3232<br>W30 14120.3977 | TOHX 090202EL-US12 CK32<br>TOHX 0902ZZEL-39G12 BK77 | |
| | 22 | W30 26120.3232<br>W30 26120.3977 | TOHX 140304-US12 CK32<br>TOHX 1403ZZEL-39G12 BK77 | |
| | 44 – 215 | W30 14120.3232<br>W30 14120.3977 | TOHX 090202EL-US12 CK32<br>TOHX 0902ZZEL-39G12 BK77 | |

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| | | Insert W30 W57 PKD CBN W30 .32.. .39.. | | |
| for higher cutting speed | 6 – 7,9 | – | | |
| | 8 – 9,9 | W57 04140.023210<br>W30 04120.0238<br>W30 04990.0257<br>W30 04990.0255 | TOGX 06T102EN-14 CK3210<br>TOHX 06T102EL-G12 CK38<br>TOGX 06T102TN CBN57<br>TOGX 06T102FN PKD55 | only GG25 |
| | 10 – 18 | W57 14140.043210<br>W30 14120.0238<br>W30 14990.0457<br>W30 14990.0455 | TOGX 090204EN-14 CK3210<br>TOHX 090202EL-G12 CK38<br>TOGX 090204TN CBN57<br>TOGX 090204FN PKD55 | only GG25 |
| | 22 | W57 26140.043210<br>W30 26120.0438<br>W30 26990.0457<br>W30 26990.0455 | TOGX 140304EN-14 CK3210<br>TOHX 140304EL-G12 CK38<br>TOGX 140304TN CBN57<br>TOGX 140304FN PKD55 | only GG25 |
| | 44 – 215 | W57 14140.043210<br>W30 14120.0238<br>W30 14990.0457<br>W30 14990.0455 | TOGX 090204EN-14 CK3210<br>TOHX 090202EL-G12 CK38<br>TOGX 090204TN CBN57<br>TOGX 090204FN PKD55 | only GG25 |
| for greater strength | 6 – 7,9 | – | | |
| | 8 – 9,9 | W57 04140.023210<br>W30 04060.036110<br>W30 04200.0321<br>W30 04990.0255 | TOGX 06T102EN-14 CK3210<br>TOHX 06T103EL-G06 BK6110<br>TOHX 06T103FL-G20 K10<br>TOGX 06T102FN PKD55 | |
| | 10 – 18 | W57 14140.043210<br>W30 14060.046110<br>W30 14200.0421<br>W30 04990.0255 | TOGX 090204EN-14 CK3210<br>TOHX 090204EL-G06 BK6110<br>TOHX 090204FL-G20 K10<br>TOGX 090204FN PKD55 | |
| | 22 | W57 26140.043210<br>W30 26060.046110<br>W30 26200.0521<br>W30 26990.0455 | TOGX 140304EN-14 CK3210<br>TOHX 140304EL-G06 BK6110<br>TOHX 140305FL-G20 K10<br>TOGX 140304FN PKD55 | |
| | 44 – 215 | W57 14140.043210<br>W30 14060.046110<br>W30 14200.0421<br>W30 04990.0255 | TOGX 090204EN-14 CK3210<br>TOHX 090204EL-G06 BK6110<br>TOHX 090204FL-G20 K10<br>TOGX 090204FN PKD55 | |

# KOMET MicroKom® M04

## Micro-adjustable Head with Direct Measuring System and Digital Display

Sturdy – Accurate – Easy to use

With the KOMET MicroKom® M04 micro-adjustable head, slide adjustment is still recorded directly by means of an electronic measurement system. The measurement result is evaluated by a microprocessor and displayed on an LCD display with a resolution of 1 µm. This reduces errors in adjustment and read-off to a minimum.

- Sturdy design
  By using new technology we have been able to make the new M04 even sturdier. With its water and dustproof design (IP67), it is not affected by either chips or coolant.
- Direct measurement = accurate measurement
  Even with the most highly accurate translation of adjustment sequences, other micro-adjustable drilling heads only show the adjustment value indirectly.
  Our M040 micro-adjustable head works directly in conjunction with the actual measurement process, making the operation considerably easier for the operator.
- Easy to use
  The head has been made even easier to use, switching from absolute to differential dimensions with only two keys and also allowing the differential to be set to zero. Concentricity or balanced position can be easily located again in the Absolute mode without need for a setting device.
- Extended setting range
  The adjustment value has been increased to 5 mm in the diameter.
- Replaceable bridges
  In conjunction with the new replaceable bridges it is possible to machine bores up to 103 mm. These replaceable bridges are in lightweight metal with hard surface coating and integral balancing.







Can be adapted for any machine tool with ABS® standard tool adaptors

Operating keys

Battery compartment

Digital display with position display energy saving function:
Display automatically switches off after 30 seconds

ABS® 32 on tool side or 16 mm cylindrical shank connection

BENEFITS for you:

- Large adjustment range from -0.4 to +4.6 mm on dia.
- Easy to use with only 2 keys
- Waterproof and dustproof (IP67 standard)
- Direct measuring system on slide
- Display resolution 0.001 mm in the diameter
- Display in mm or inches
- Can be switched between differential and absolute mode
- Easy to read LCD display
- Energy saving function, i.e. M04 automatically switches off after 30 seconds
- Central coolant supply up to 50 bar
- ABS® 32 spindle connection – 16 mm cylindrical shank
- Can be adapted for any machine tool with standard tool adaptors
- Maximum spindle speed: 12,500 $min^{-1}$ (in central slide position)
- Head diameter: 70 mm

Adjustment is carried out manually with an hexagonal key; this allows the slide to be adjusted extremely accurately. One turn of the key equals to a diameter change of 70 µm.

## KOMET MicroKom® M04


| | Page |
|---|---|
| **Micro-adjustable head with ABS® connection** | |
| with cylindrical tool holder | 240 |
| with ABS® connection | 241 |
| with replaceable bridge | 243 |
| **Set in case** | 246 |


## KOMET MicroKom® M02


| | Page |
|---|---|
| **Micro-adjustable head with ABS® connection** | |
| with cylindrical tool holder | 248 |
| with ABS® connection | 249 |
| **Micro-adjustable head with taper shank** | |
| with cylindrical tool holder | 250 |
| with ABS® connection | 251 |


**BENEFITS for you:**

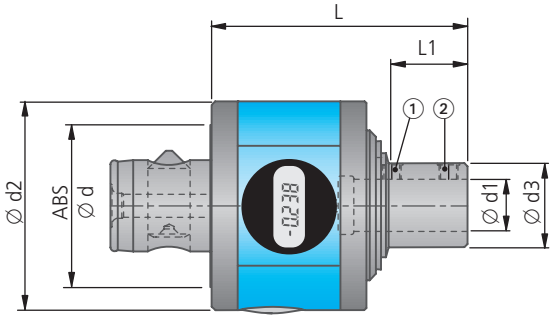
- Large adjustment range from 4 mm on diameter
- The fine adjustment increments are 0.002 mm in the diameter above vernier
- The micro-adjustable drilling head is balanced in the zero position
- ABS® on tool side or cylindrical shank connection



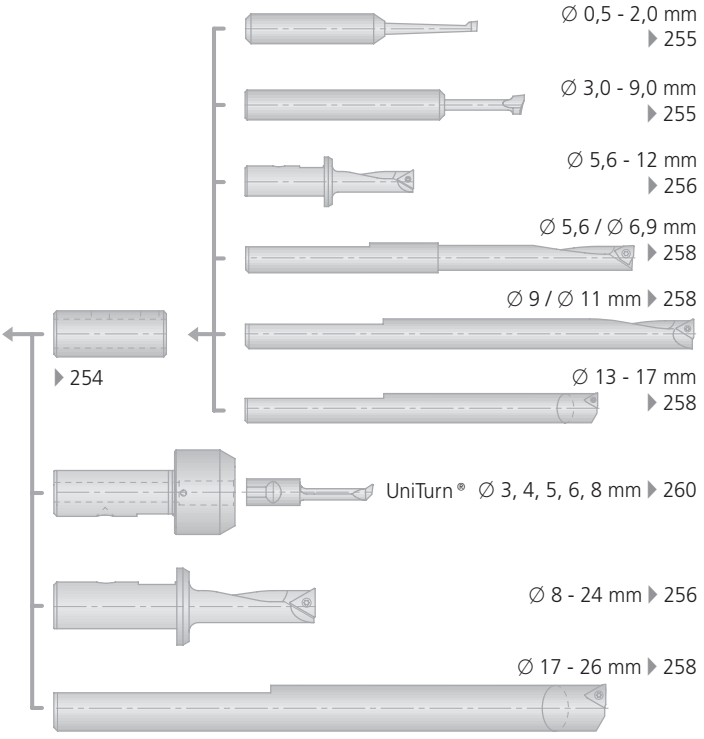
# KOMET MicroKom® M04

## Micro-adjustable Head with ABS® Connection

| machine adaptor | balancing note (chapter 8) | coolant central up to 50 bar | adjustable | rotating tool | tool holder |
|---|---|---|---|---|---|
| ABS® | pre-balanced Q6,3 12.500 min⁻¹ | | | | Cylindrical shank |




Display panel shown at 90° angle




| Order No. | ABS Ø d | Ø d1 | Ø d2 | Ø d3 | Adjustment | L | L1 | kg |
|---|---|---|---|---|---|---|---|---|
| M04 00201 | 50 | 16 | 70 | 26 | 2,5 | 82 | 25 | 1,1 |

| Assembly parts | | | | | | |
|---|---|---|---|---|---|---|
| Battery<br>Order No. | Battery spring<br>Order No. | O-ring<br>Order No. | Positioning pin<br>Order No. | Battery cover<br>Order No. | Clamping screw ①<br>DIN914<br>Order No.<br>Article | Clamping screw ②<br>similar DIN916<br>Order No.<br>Article |
| 75000 12150 | 52710 00053 | 52914 01615 | N00 05480 | M04 00150.11 | N00 70900<br>M6×8 | N00 70190<br>M6×6 |

**Note: The micro-adjustable drilling head is balanced in the zero position.**

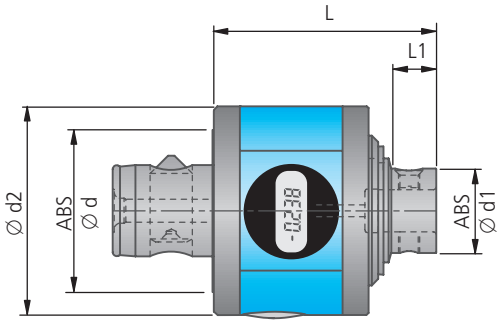
When setting the M04 00201, the balancing ring (page 252) may be used for higher spindle speeds or surface requirements.



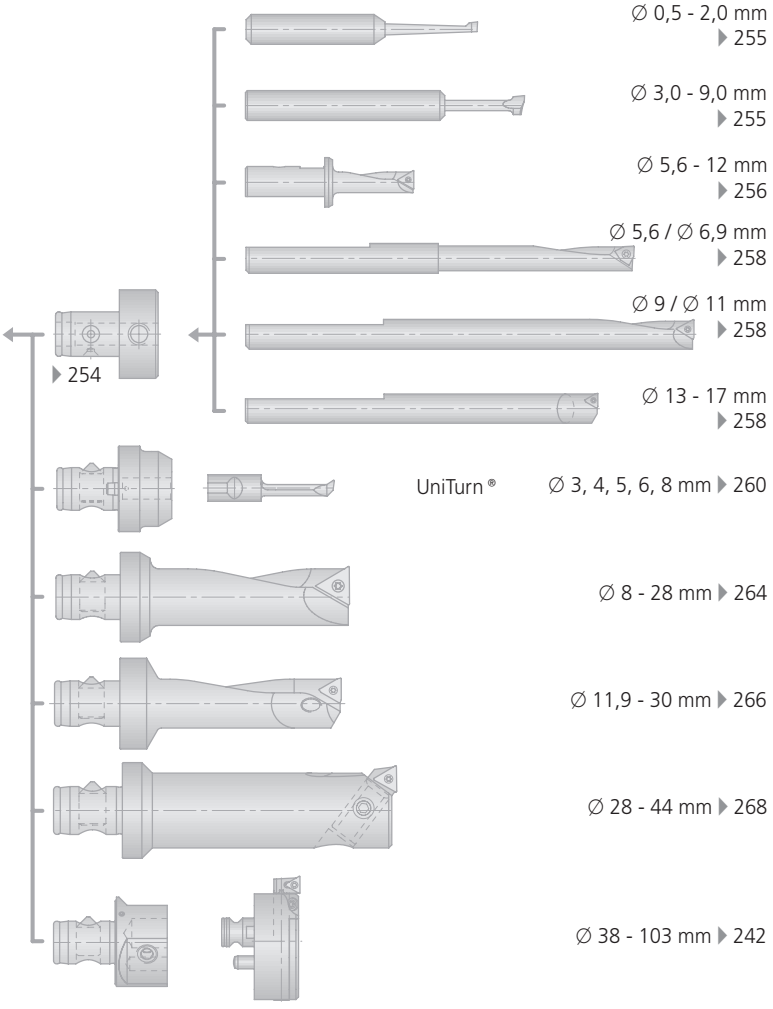
Patent applied for inside and outside Germany (ABS)

# Micro-adjustable Head with ABS® Connection

| machine adaptor | balancing note (chapter 8) | coolant central up to 50 bar | adjustable | rotating tool | tool holder |
|---|---|---|---|---|---|
| ABS® | pre-balanced Q6,3 12.500 min⁻¹ | | | | ABS® |




Display panel shown at 90° angle




| Order No. | ABS Ø d | ABS Ø d1 | Ø d2 | L | L1 | kg | Assembly parts: Battery Order No. | Battery spring Order No. | O-ring Order No. | Positioning pin Order No. | Battery cover Order No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M04 00151 | 50 | 32 | 70 | 69 | 13,5 | 1,19 | 75000 12150 | 52710 00053 | 52914 01615 | N00 05480 | M04 00150.11 |

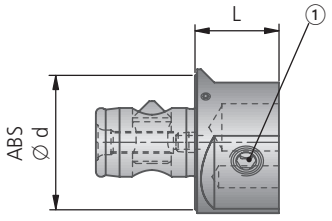
The micro-adjustable drilling head is balanced in the zero position.

# KOMET MicroKom® M04

## Intermediate Adaptor with ABS® Connection

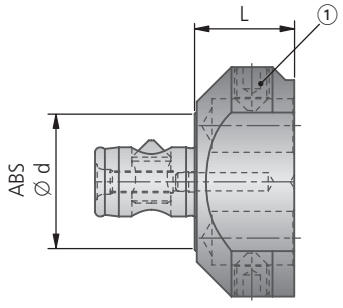


### for Ø 38 – 63 mm




| Order No. | ABS Ø d | L | kg | Assembly parts Clamping screw ① Order No. |
|---|---|---|---|---|
| M04 01310 | 32 | 19,5 | 0,135 | M03 20090.15 |

### for Ø 62 – 103 mm



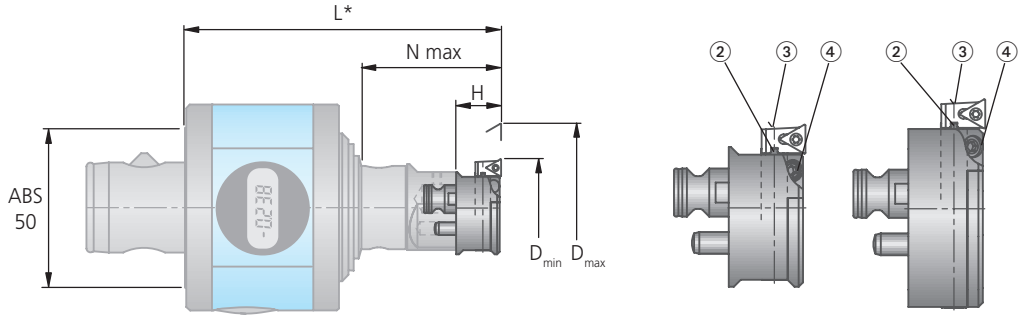

| Order No. | ABS Ø d | L | kg | Assembly parts Clamping screw ① Order No. |
|---|---|---|---|---|
| M04 01320 | 32 | 23 | 0,286 | M03 20090.15 |

**Supply includes:**
Intermediate adaptor with clamping screw ① for replaceable bridge



Patent applied for inside and outside Germany (ABS)

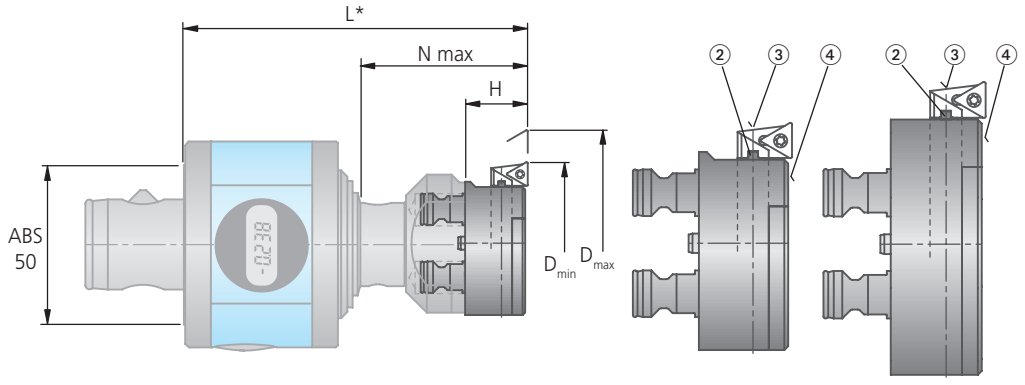
## for Ø 38 – 63 mm




* For 'L' dimension see insert holder table on following page

| Ø D min - max | Order No. | H | N max | kg | Assembly parts: Holder ② Order No. | Location screw ③ for insert holder Article | Location screw ③ for insert holder Order No. | Clamping screw ④ for holder Order No. |
|---|---|---|---|---|---|---|---|---|
| 38 - 51 | **M03 20180** | 17,5 | 50 | 0,06 | **M03 20180.16** | S/M3,5×7,3-10IP | **N00 56211** | **55051 04008** |
| 50 - 63 | **M03 20190** | 17,5 | 50 | 0,08 | **M03 20180.16** | S/M3,5×7,3-10IP | **N00 56211** | **55051 04008** |

## for Ø 62 – 103 mm




* For 'L' dimension see insert holder table on following page

| Ø D min - max | Order No. | H | N max | kg | Assembly parts: Holder ② Order No. | Location screw ③ for insert holder Article | Location screw ③ for insert holder Order No. | Clamping screw ④ for holder Order No. |
|---|---|---|---|---|---|---|---|---|
| 62 - 83 | **M03 20150** | 24 | 60 | 0,20 | **M03 20150.16** | S/M3,5×7,3-10IP | **N00 56211** | **55051 04008** |
| 82 - 103 | **M03 20160** | 24 | 60 | 0,24 | **M03 20150.16** | S/M3,5×7,3-10IP | **N00 56211** | **55051 04008** |

**Supply includes:**
Replaceable bridge with location screw ③, holder ② and clamping screw ④. Insert holder – please order as extra

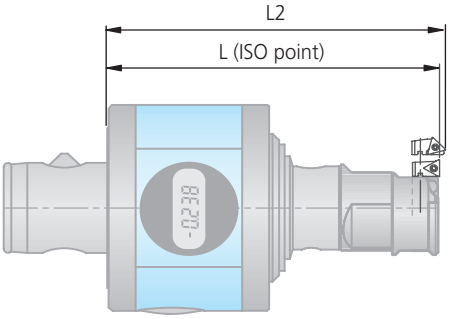
**Note:** Use replaceable bridges with intermediate adaptor (see page 242)
These replaceable bridges can also be used on the KOMET MicroKom® M03Speed micro-adjustable head (see page 288)

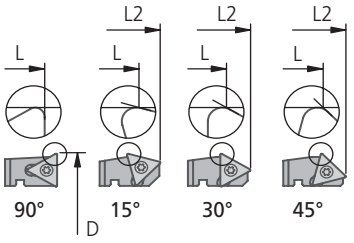
# KOMET MicroKom® M04 Ø 38,0 – 103,0 mm

## Insert Holder for Replaceable Bridge

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3×D | ● | ● | ◐ | ◐ | ● | ◐ | ◐ | ✕ |

● very good ◐ good ○ possible ✕ not possible




Insert holder forwards

| Micro-adjustable head | Insert holder forwards ➡ | | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ØD | Order No. | ϰ | L | L2 | kg | Insert -12 -14 W30 Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Clamping screw Order No. Article | Screwdriver Order No. Article |
| M04 00151 | 38 – 63 | **M03 10033** | 90° | 106 | 106 | 0,002 | **W57 04140.0260**<br>**W30 04060.037615**<br>**W57 04120.0223** | TOGX 06T102EN-14 BK60<br>TOHX 06T103EL-G06 BK7615<br>TOGX 06T102FN-12 K10 | ● ● ● ● | **N00 56031**<br>S/M2×4,9-6IP<br>0,62 Nm | **L05 00810**<br>6IP |
| | | **M03 11120** | 15° | 101,5 | 107,7 | 0,002 | | | | | |
| | | **M03 11220** | 30° | 102,5 | 108 | 0,002 | | | | | |
| | | **M03 11320** | 45° | 103,5 | 108 | 0,002 | | | | | |
| | 62 – 103 | **M03 10043** | 90° | 116 | 116 | 0,005 | **W57 14140.0460**<br>**W30 14060.047615**<br>**W57 14120.0423** | TOGX 090204EN-14 BK60<br>TOHX 090204EL-G06 BK7615<br>TOGX 090204FN-12 K10 | ● ● ● ● | **N00 56101**<br>S/M2,6×5,2-8IP<br>1,28 Nm | **L05 00830**<br>8IP |
| | | **M03 11130** | 15° | 109,5 | 117,9 | 0,005 | | | | | |
| | | **M03 11230** | 30° | 110,5 | 118 | 0,005 | | | | | |
| | | **M03 11330** | 45° | 112,8 | 118,9 | 0,005 | | | | | |

**Supply includes insert holder:**
Insert holder with assembly parts. Please order inserts and accessories separately.

Further inserts and approach angles available on request.



Patent applied for inside and outside Germany (ABS)

## Guideline values for fine boring

| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | $v_c$ Cutting speed $v_c$ (m/min) | f (mm/rev) max. feed 3×D Ø 38 – 63 | f (mm/rev) max. feed 3×D Ø 62 – 103 |
|---|---|---|---|---|---|---|---|---|
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,08 | 0,10 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,08 | 0,12 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,10 | 0,15 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 240 | 0,08 | 0,10 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 200 | 0,06 | 0,10 |
| P | 4.1 | | | HSS | | 120 | 0,06 | 0,08 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,06 | 0,08 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,06 | 0,08 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 200 | 0,08 | 0,10 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 180 | 0,06 | 0,10 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 120 | 0,06 | 0,10 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 240 | 0,15 | 0,20 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 200 | 0,15 | 0,20 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,10 | 0,15 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 180 | 0,10 | 0,15 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 160 | 0,10 | 0,15 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,10 | 0,15 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,10 | 0,15 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,10 | 0,15 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 270 | 0,10 | 0,15 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 500 | 0,08 | 0,12 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 350 | 0,10 | 0,15 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,10 | 0,15 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 120 | 0,08 | 0,08 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 90 | 0,06 | 0,08 |

## Alternative Inserts

| | ØD | Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| for better chip control | 38 – 63 | W30 04120.3232 | TOHX 06T102EL-US12 CK32 | |
| | | W30 04120.3060 | TOHX 06T100EL-G12 BK60 | |
| | | W57 04120.0223 | TOGX 06T102FN-12 K10 | |
| | 62 – 103 | W30 14120.3232 | TOHX 090202EL-US12 CK32 | |
| | | W30 14120.3060 | TOHX 090200EL-G12 BK60 | |
| | | W57 14120.0423 | TOGX 090204FN-12 K10 | |
| for higher cutting speed | 38 – 63 | W57 04140.023210 | TOGX06T102EN-14 CK3210 | |
| | | W57 04140.0260 | TOGX06T102EN-14 BK60 | |
| | | W30 04990.0357 | TOGX06T103TN CBN57 | |
| | | W30 04990.0355 | TOGX06T103FN PKD55 | |
| | 62 – 103 | W30 14120.3232 | TOHX 090202EL-US12 CK32 | |
| | | W30 14120.3060 | TOHX 090200EL-G12 BK60 | |
| | | W57 14120.0423 | TOGX 090204FN-12 K10 | |
| for better surface finish | 38 – 63 | W30 04120.3160 | TOHX 06T102EL-UF12 BK60 | |
| | | W30 04990.0357 | TOGX 06T103TN CBN57 | |
| | | W30 04990.0355 | TOGX 06T103FN PKD55 | |
| | | W30 04990.0240 | TOGX 06T103TN CBN40 | |
| | 62 – 103 | W30 14120.3160 | TOHX 090202EL-UF12 BK60 | |
| | | W30 14120.3060 | TOHX 090200EL-G12 BK60 | |
| | | W57 14120.0423 | TOGX 090204FN-12 K10 | |
| | | W30 14990.0440 | TOGX 090204TN CBN40 | |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

**Important: See chapter 8 for more application details and safety notes!**

# KOMET MicroKom® M04

## Set in Case

### A Ø 8 mm - Ø 44 mm

Set in case complete
Order No. M04 01230




| | Qty. | Article | Order No. |
|---|---|---|---|
| ① | 1 | Micro-adjustable head M040 | M04 00151 |
| ② | 1 | Boring bar ABS32 Ø 7,9-12,9 | B00 25610 |
| ③ | 1 | Boring bar ABS32 Ø 11,9-16,9 | B00 25630 |
| ④ | 1 | Boring bar ABS32 Ø 15,9-20,9 | B00 25650 |
| ⑤ | 1 | Boring bar ABS32 Ø 19,9-24,9 | B00 25671 |
| ⑥ | 1 | Boring bar ABS32 Ø 23,9-28,9 | B00 25691 |
| ⑦ | 1 | Boring bar ABS32 Ø 27,9-44,0 | B30 02020 |
| ⑧ | 5 | Insert BK8430 | W57 04140.028430 |
| | 5 | Insert BK8430 | W57 14140.028430 |
| ⑨ | 1 optional | Adaptor DIN 69871 ISO40AD/B-ABS50 | A50 55150 |
| | | Adaptor DIN 69871 ISO50AD/B-ABS50 | A50 55350 |
| | | Adaptor HSK-A63 ABS50 | A06 30150 |
| ⑩ | 1 | Hexagonal wrench SW4 | 18591 10040 |

### B Ø 38 mm - Ø 103 mm

Set in case complete
Order No. M04 01240




| | Qty. | Article | Order No. |
|---|---|---|---|
| ① | 1 | Micro-adjustable head M040 | M04 00151 |
| ② | 1 | Adaptor ABS32 Ø 38-63 | M04 01310 |
| ③ | 1 | Adaptor ABS32 Ø 62-103 | M04 01320 |
| ④ | 1 | Replaceable bridge Ø 38-51 | M03 20180 |
| ⑤ | 1 | Replaceable bridge Ø 50-63 | M03 20190 |
| ⑥ | 1 | Replaceable bridge Ø 62-83 | M03 20150 |
| ⑦ | 1 | Replaceable bridge Ø 82-103 | M03 20160 |
| ⑧ | 2 | Insert holder 90° forwards | M03 10033 |
| ⑨ | 2 | Insert holder 90° forwards | M03 10043 |
| ⑩ | 5 | Insert BK8430 | W57 04140.028430 |
| | 5 | Insert BK8430 | W57 14140.028430 |
| ⑪ | 1 optional | Adaptor DIN 69871 ISO40AD/B-ABS50 | A50 55150 |
| | | Adaptor DIN 69871 ISO50AD/B-ABS50 | A50 55350 |
| | | Adaptor HSK-A63 ABS50 | A06 30150 |
| ⑫ | 1 | Hexagonal wrench SW4 | 18591 10040 |

Supply includes the case with foam lining and 5 inserts for each size



Patent applied for inside and outside Germany (ABS)

## Variation Options

The possible combinations can be supplied in various additional options. Please ask our representative.



### B1

**Basic set**
**for machining**
**Ø 38 - 63 mm**
Set in case
Order No. M04 01241



| Qty. | Article | Order No. |
|---|---|---|
| 1 | Micro-adjustable head M040 | M04 00151 |
| 1 | Adaptor ABS32 ∅ 38-63 | M04 01310 |
| 1 | Replaceable bridge ∅ 38-51 | M03 20180 |
| 1 | Replaceable bridge ∅ 50-63 | M03 20190 |
| 2 | Insert holder 90° forwards | M03 10033 |
| 1 optional | Adaptor DIN 69871 ISO40AD/B-ABS50 | A50 55150 |
| | Adaptor DIN 69871 ISO50AD/B-ABS50 | A50 55350 |
| | Adaptor HSK-A63 ABS50 | A06 30150 |

### B2

**Basic set**
**for machining**
**Ø 62 - 103 mm**
Set in case
Order No. M04 01242



| Qty. | Article | Order No. |
|---|---|---|
| 1 | Micro-adjustable head M040 | M04 00151 |
| 1 | Adaptor ABS32 ∅ 62-103 | M04 01320 |
| 1 | Replaceable bridge ∅ 62-83 | M03 20150 |
| 1 | Replaceable bridge ∅ 82-103 | M03 20160 |
| 2 | Insert holder 90° forwards | M03 10043 |
| 1 optional | Adaptor DIN 69871 ISO40AD/B-ABS50 | A50 55150 |
| | Adaptor DIN 69871 ISO50AD/B-ABS50 | A50 55350 |
| | Adaptor HSK-A63 ABS50 | A06 30150 |

### B3

**Extension set**
**for machining**
**Ø 38 - 63 mm**
Set in case
Order No. M04 01243



| Qty. | Article | Order No. |
|---|---|---|
| 1 | Adaptor ABS32 ∅ 38-63 | M04 01310 |
| 1 | Replaceable bridge ∅ 38-51 | M03 20180 |
| 1 | Replaceable bridge ∅ 50-63 | M03 20190 |
| 2 | Insert holder 90° forwards | M03 10033 |

### B4

**Extension set**
**for machining**
**Ø 62 - 103 mm**
Set in case
Order No. M04 01244



| Qty. | Article | Order No. |
|---|---|---|
| 1 | Adaptor ABS32 ∅ 62-103 | M04 01320 |
| 1 | Replaceable bridge ∅ 62-83 | M03 20150 |
| 1 | Replaceable bridge ∅ 82-103 | M03 20160 |
| 2 | Insert holder 90° forwards | M03 10043 |

### B5

**Extension set**
**for machining**
**Ø 38 - 103 mm**
Set in case
Order No. M04 01245



| Qty. | Article | Order No. |
|---|---|---|
| 1 | Adaptor ABS32 ∅ 38-63 | M04 01310 |
| 1 | Adaptor ABS32 ∅ 62-103 | M04 01320 |
| 1 | Replaceable bridge ∅ 38-51 | M03 20180 |
| 1 | Replaceable bridge ∅ 50-63 | M03 20190 |
| 1 | Replaceable bridge ∅ 62-83 | M03 20150 |
| 1 | Replaceable bridge ∅ 82-103 | M03 20160 |
| 2 | Insert holder 90° forwards | M03 10033 |
| 2 | Insert holder 90° forwards | M03 10043 |

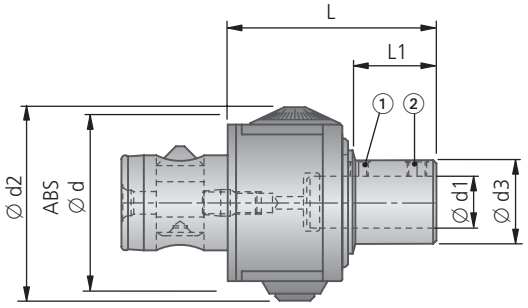
# KOMET MicroKom® M02

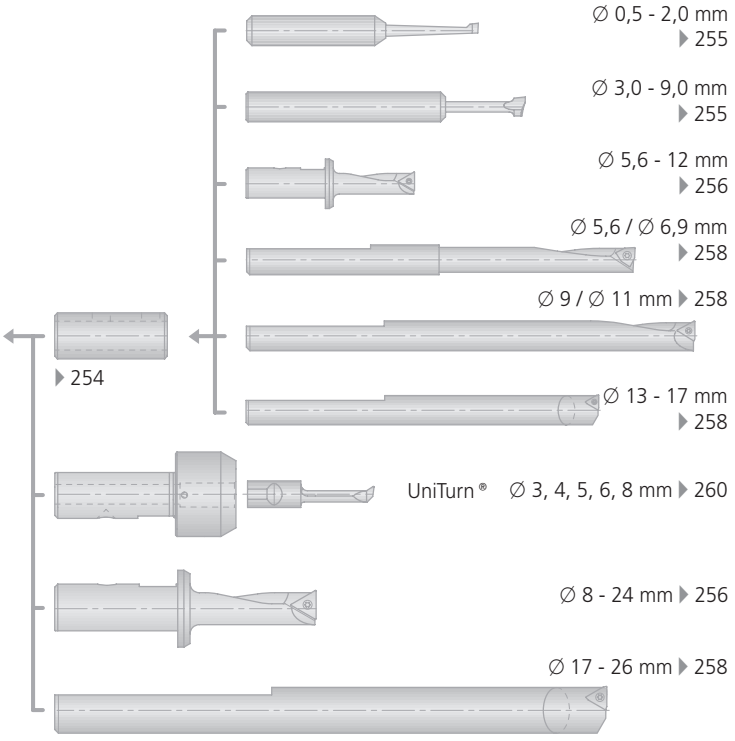
## Micro-adjustable Head with ABS® Connection

| machine adaptor | coolant central | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
| ABS® | | | | Cylindrical shank |

(ABS-KFK)

■ the fine adjustment increments are 0.002 mm in the ∅ above vernier




**Drilling range:**

$D_{min}$ = D
$D_{max}$ = D1 (2 × S)

| Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | Ø d3 | Adjust-ment | L | L1 | kg | Assembly parts: Clamping screw ① DIN 914 Order No. Article | Assembly parts: Clamping screw ② DIN 913 DIN 916 Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ABS40KFK8 | **M02 01100** | 40 | 8 | 40 | 16 | 1 | 52 | 15 | 1,00 | **55052 05006** M5×6 | **55051 05005** M5×5 |
| ABS50KFK1-16 | **M02 01201** | 50 | 16 | 70 | 26 | 4 | 75 | 27 | 1,26 | **N00 70900** M6×8 | **N00 70190** M6×6 |

**The micro-adjustable drilling head is balanced in the zero position.**

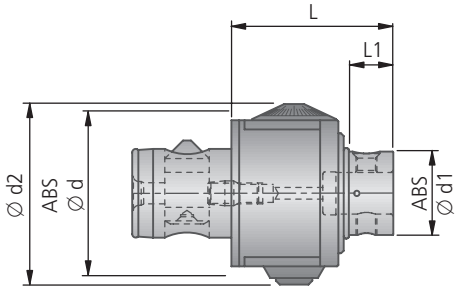
**Note:**
When setting the M02 01201, the balancing ring (page 252) may be used for higher spindle speeds or surface requirements.

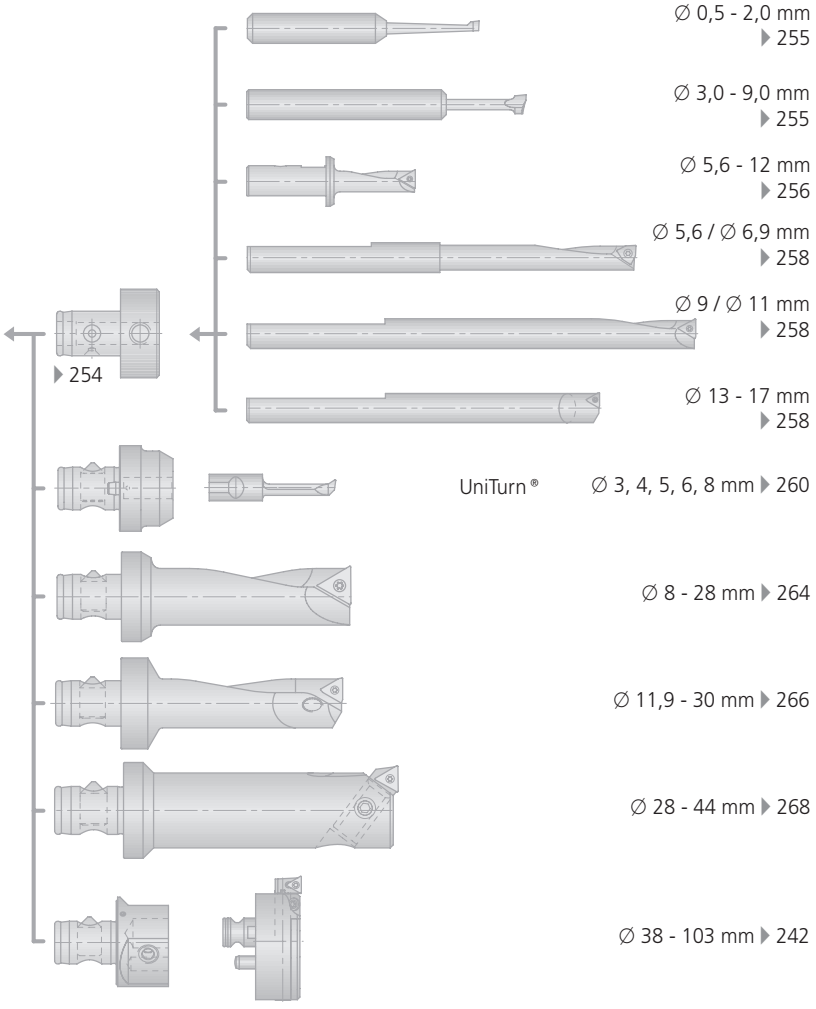
# Micro-adjustable Head with ABS® Connection

| machine adaptor | coolant central | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
| ABS® | | | | ABS® |

(ABS-KFK)

■ the fine adjustment increments are 0.002 mm in the Ø above vernier




**Drilling range:**

$D_{min}$ = D

$D_{max}$ = D1 (2 × S)

| Article | Order No. | ABS Ø d | ABS Ø d1 | Ø d2 | Adjustment | L | L1 | kg |
|---|---|---|---|---|---|---|---|---|
| ABS50/25KFK0-F | M02 00000[1)2)] | 50 | 25 | 56 | 3 | 55 | 11,5 | 0,84 |
| ABS50/32KFK1-F | M02 00201[2)] | 50 | 32 | 70 | 4 | 62 | 17 | 1,26 |
| ABS63/32KFK1-F | M02 00211 | 63 | 32 | 70 | 4 | 62 | 17 | 1,37 |
| ABS63/40KFK2-F | M02 00401 | 63 | 40 | 98 | 6 | 67 | 17 | 2,61 |

**The micro-adjustable drilling head is balanced in the zero position.**

**Note:**

[1)] A sealing disc cannot be used in the ABS® hole for micro-adjustable head M02 00000

[2)] When adjusting the M02 00000 / M02 00201, the balancing ring (page 252) can be used for higher spindle speeds or surface.

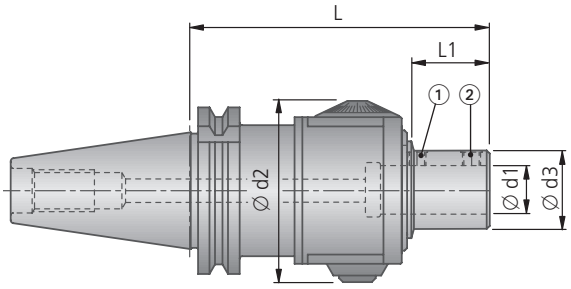
# KOMET MicroKom® M02

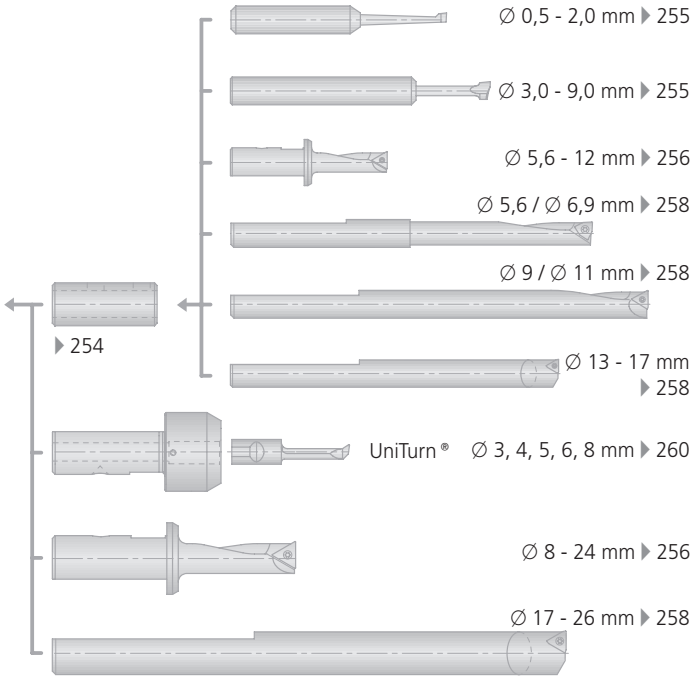
## Micro-adjustable Head with Taper Shank

| machine adaptor | coolant central | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
| DIN 69871 AD | | | | Cylindrical shank |

(KFK)

■ the fine adjustment increments are 0.002 mm in the ∅ above vernier




**Drilling range:**

$D_{min}$ = D
$D_{max}$ = D1 (2 × S)

| Article | Order No. | ISO | Ø d1 | Ø d2 | Ø d3 | Adjust-ment | L | L1 | kg | Assembly parts: Clamping screw ① DIN 914 Order No. Article | Assembly parts: Clamping screw ② similar DIN 916 Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KFK1-ISO40-D16 | **M02 02360** | 40 | 16 | 70 | 26 | 4 | 108 | 27 | 2,08 | **N00 70900** M6×8 | **N00 70190** M6×6 |

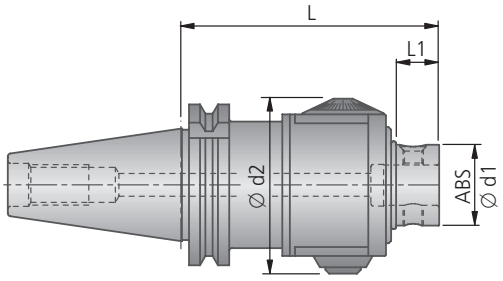
The micro-adjustable drilling head is balanced in the zero position.

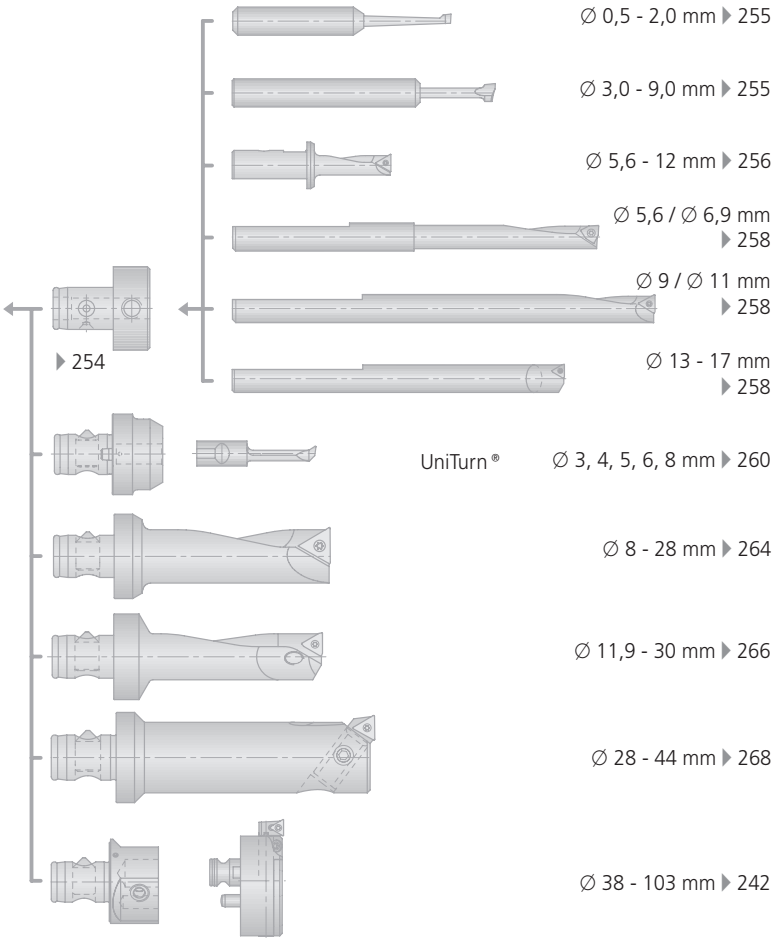
# Micro-adjustable Head with Taper Shank

| machine adaptor | coolant central | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
| DIN 69871 AD | | | | ABS® |

(KFK)

■ the fine adjustment increments are 0.002 mm in the Ø above vernier



▶ 254

Ø 0,5 - 2,0 mm ▶ 255

Ø 3,0 - 9,0 mm ▶ 255

Ø 5,6 - 12 mm ▶ 256

Ø 5,6 / Ø 6,9 mm ▶ 258

Ø 9 / Ø 11 mm ▶ 258

Ø 13 - 17 mm ▶ 258

UniTurn® Ø 3, 4, 5, 6, 8 mm ▶ 260

Ø 8 - 28 mm ▶ 264

Ø 11,9 - 30 mm ▶ 266

Ø 28 - 44 mm ▶ 268

Ø 38 - 103 mm ▶ 242

**Drilling range:**

$D_{min}$ = D

$D_{max}$ = D1 (2 × S)

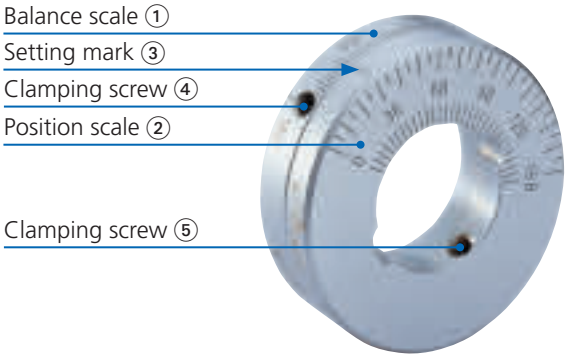
| Article | Order No. | ISO | ABS Ø d1 | Ø d2 | Adjustment | L | L1 | kg |
|---|---|---|---|---|---|---|---|---|
| KFK1-ISO40-ABS | **M02 02260** | 40 | 32 | 70 | 4 | 95 | 17 | 2,17 |

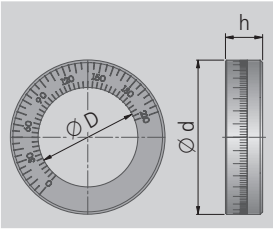
The micro-adjustable drilling head is balanced in the zero position.

# KOMET® Balancing Ring

**Precision balancing on standard tools**
At high speeds a loss of balance or imbalance produces a negative effect on machining results, particularly on tools for finish machining.

Standard precision balancing is particularly difficult to carry out on tools with adjustment in the diameter as the balance ratios shift with the change in machining diameter.




| Order No. | Ød | ØD | h | kg |
|---|---|---|---|---|
| L01 15010 | 50 | 32 | 12 | 0,09 |
| L01 15030 | 44 | 26 | 17 | 0,09 |
| L01 15050 | 52 | 32 | 25 | 0,17 |
| L01 15060 | 55 | 26 | 16 | 0,16 |

**What is imbalance ?**
By imbalance we mean an uneven distribution of weight with reference to the axis of rotation. The larger the weight, the greater the imbalance and the further this occurs beyond the radius of the tool. The formula for this is as follows:

**Imbalance = Imbalanced weight (g) × Radius (mm)**
Normally gmm is used as a unit of measurement.

During rotation the imbalance has an extremely negative effect as a result of the force of the imbalance (centrifugal force). This force is calculated as follows:

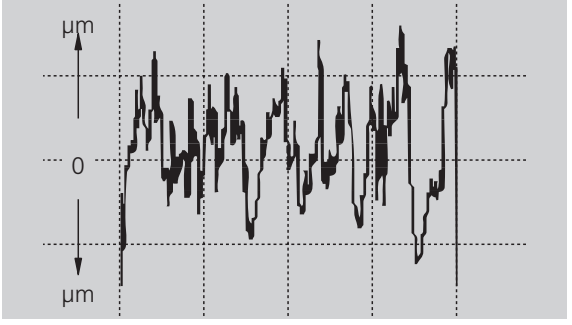
**Centrifugal force (N) = Imbalanced weight (kg) × Radius (m) × Angular velocity² (1/sec)²**

The balancing ring which can be fitted to all KOMET MicroKom® M02 and M04 micro-adjustable heads provides an extremely simple „Do It Yourself" method of balancing tools over their full adjustment range.

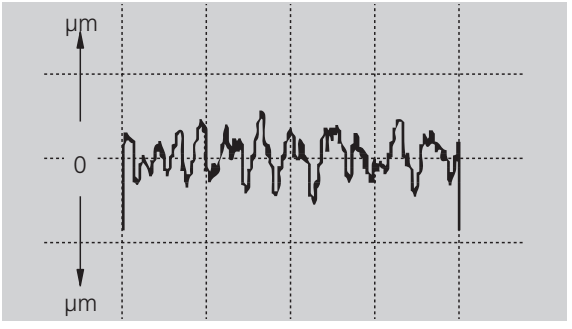
The values given in the table are only recommendations which will produce an improvement in any imbalance which occurs. Where there are particular requirements with regard to balance, adjustments should be carried out on a balancing machine.

**For exact adjustment value, please see Operating Instruction for Balancing Ring.**

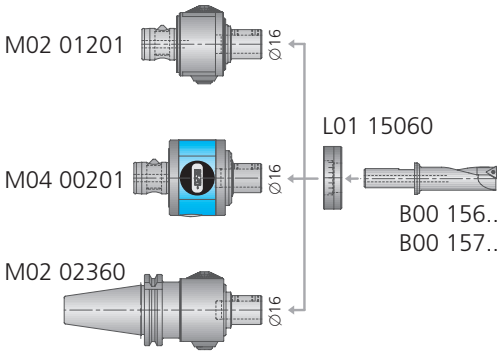
Surface profile measured without balancing ring

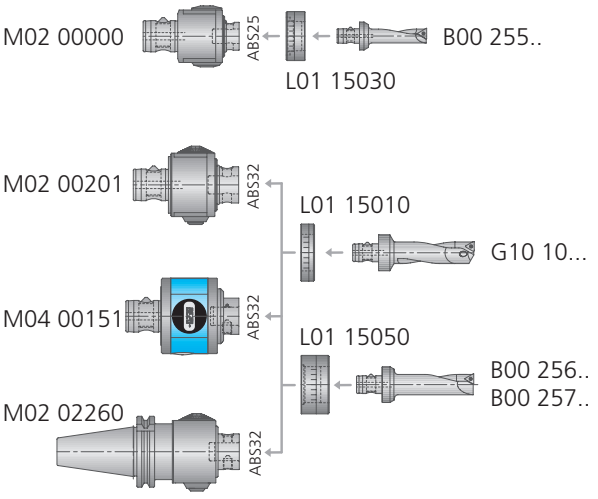


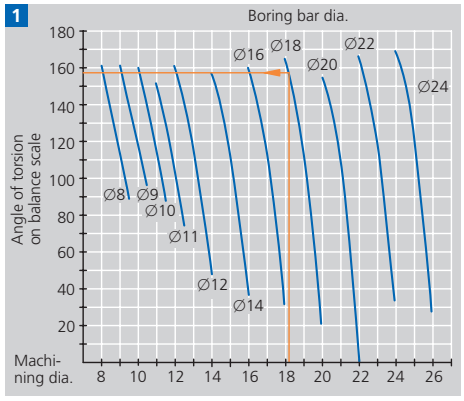

Surface profile measured with balancing ring

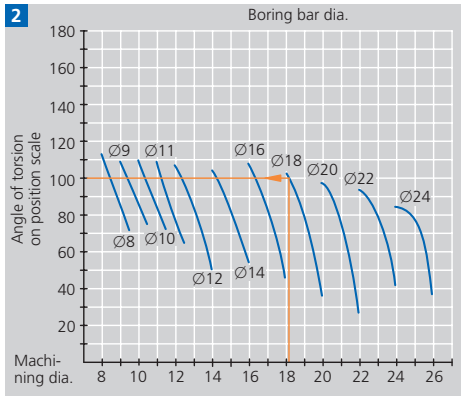


**Balancing ring**
with micro-adjustable head in conjunction with boring bar

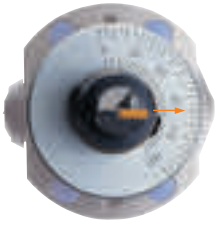



**Setting example for Ø 18.2 mm:**
Micro-adjustable head M02 01201
Boring bar B00 15660 ∅ 18 mm



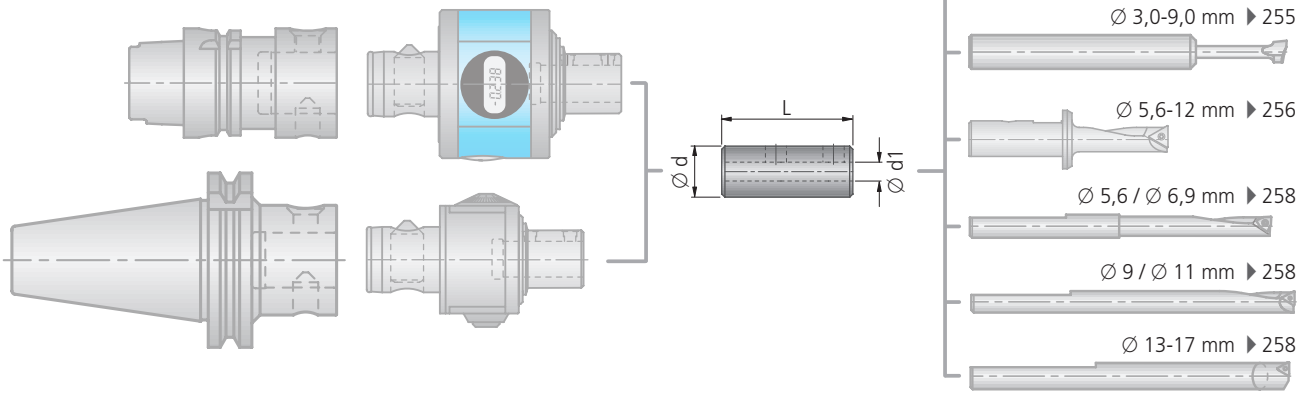
**First setting operation: Angle of torsion between rings**

- Determine the machining diameter from table 1 (in this case 18.2 mm ∅).
- Trace a vertical line upwards until this crosses the contour line for the boring bar to be used.
- At the intersect point, trace a horizontal line and read off the torsion angle required (in this case 158°).
- Set the value determined to the setting mark ③ on the balancing scale ①.
- Clamp the two rings together with the clamping screw ④.

**Second setting operation:**
**Position of balacing ring in relation to the cutting edge**

- Locate machining diameter 18.2 mm in table 2.
- Trace a vertical line to the contour line for the 18 mm diameter boring bar.
- At the intersect point, trace a horizontal line and read off the torsion angle (in this case 100°).
- Fit the ring on the micro-adjustable head.
- Position the ring according to the torsion angle which has been determined. For this the cutting edge or centre of the tool should be aligned with the appropriate graduation for 100°.
- Using the clamping screw ⑤, clamp the balancing ring to the tool. Only when using inserts W30…W32 will the setting values allow optimum balance to be achieved.

## Adaptor
with cylindrical connection

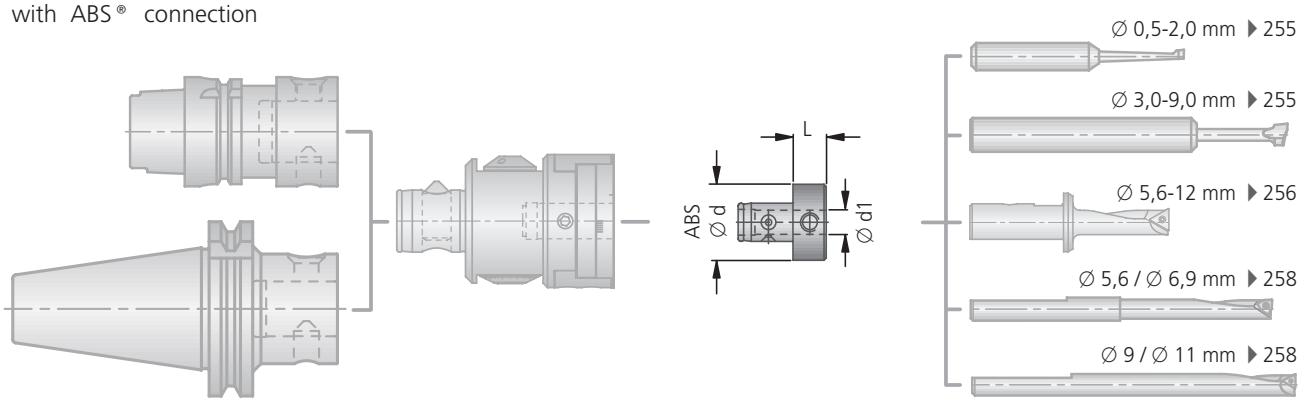



| Order No. | Ø d | Ø d1 | L | kg | Assembly parts: Clamping screw ① DIN 914 – Article | Clamping screw ① DIN 914 – Order No. | Clamping screw ② DIN 913 – Article | Clamping screw ② DIN 913 – Order No. |
|---|---|---|---|---|---|---|---|---|
| **L01 10300** | 4 | 8 | 20 | 0,006 | | – | | – |
| **L01 10100** | 4 | 16 | 41 | 0,057 | M6×12 | **55052 06012** | M6×10 | **55051 06010** |
| **L01 10110** | 6 | 16 | 41 | 0,057 | M6×12 | **55052 06012** | M6×10 | **55051 06010** |
| **L01 10120** | 8 | 16 | 41 | 0,046 | M6×12 | **55052 06012** | M6×10 | **55051 06010** |
| **L01 10130** | 10 | 16 | 41 | 0,037 | M6×10 | **55052 06010** | M6×8 | **55051 06008** |
| **L01 10140** | 12 | 16 | 41 | 0,027 | M6×10 | **55052 06010** | M6×8 | **55051 06008** |

**Note:** To use reducing element L01 10100 - L01 10140 in micro-adjustable head M02 / M04, use the clamping screws ① and ②. Please order clamping screws separately.

**Supply includes:** Adaptor without clamping screws.

## Adaptor
with ABS® connection




| Order No. | ABS Ø d | Ø d1 | L | kg |
|---|---|---|---|---|
| **L01 10421** | 32 | 4 | 14 | 0,12 |
| **L01 10431** | 32 | 6 | 14 | 0,12 |
| **L01 10441** | 32 | 8 | 14 | 0,12 |

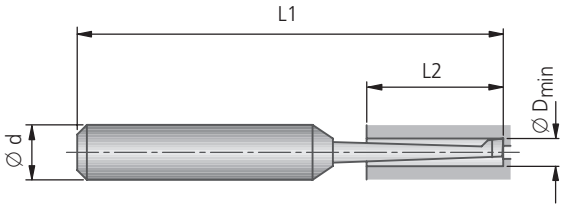


Patent applied for inside and outside Germany (ABS)

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ✕ | ✕ | ✕ | ● |

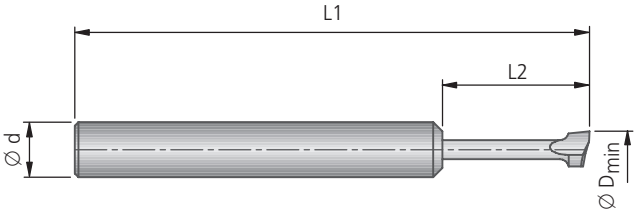
● very good ◐ good ○ possible ✕ not possible

## with Cylindrical Shank
form F




| Ø D min | Article | Order No. | Ø d | L1 | L2 | kg | Basic recommendation: Quality | Basic recommendation: for workpiece material |
|---|---|---|---|---|---|---|---|---|
| 0,5 | 5K-F-K10 | H15 11100.21 | 4 | 25 | 3 | 0,004 | K10 | ◐ ● ● ● |
| 0,8 | 8K-F-K10 | H15 11110.21 | 4 | 25 | 4 | 0,004 | | |
| 1,0 | 10K-F-K10 | H15 11120.21 | 4 | 25 | 4 | 0,004 | | |
| 1,2 | 12K-F-K10 | H15 11130.21 | 4 | 25 | 6 | 0,004 | | |
| 1,5 | 15K-F-K10 | H15 11140.21 | 4 | 28 | 7 | 0,004 | | |
| 1,7 | 17K-F-K10 | H15 11150.21 | 4 | 28 | 7 | 0,004 | | |
| 2,0 | 20K-F-K10 | H15 11160.21 | 4 | 30 | 9 | 0,005 | | |

## with Cylindrical Shank
form F



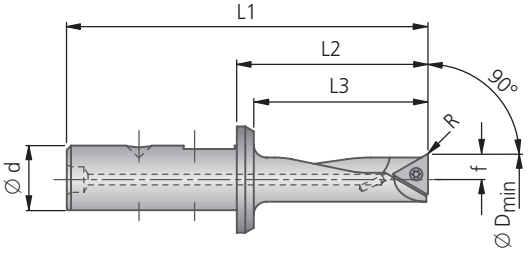

| Ø D min | Article | Order No. | Ø d | L1 | L2 | kg | Basic recommendation: Quality | Basic recommendation: for workpiece material |
|---|---|---|---|---|---|---|---|---|
| 3,0 | B01F-P20 | H15 21110.02 | 8 | 60 | 16 | 0,017 | P20 | ● ● |
| | B01F-K10 | H15 21110.21 | 8 | 60 | 16 | 0,017 | K10 | ◐ ● ● ● |
| 5,0 | B02F-P20 | H15 21120.02 | 8 | 60 | 19 | 0,018 | P20 | ● ● |
| | B02F-K10 | H15 21120.21 | 8 | 60 | 19 | 0,018 | K10 | ◐ ● ● ● |
| 7,0 | B03F-P20 | H15 21130.02 | 8 | 65 | 26 | 0,019 | P20 | ● ● |
| | B03F-K10 | H15 21130.21 | 8 | 65 | 26 | 0,019 | K10 | ◐ ● ● ● |
| 9,0 | B04F-P20 | H15 21140.02 | 8 | 70 | 45 | 0,026 | P20 | ● ● |
| | B04F-K10 | H15 21140.21 | 8 | 70 | 45 | 0,026 | K10 | ◐ ● ● ● |

# KOMET® Boring Bar B001 / B003 — Ø 5,6 – 24 mm

## with Cylindrical Shank, $\varkappa$ = 90°, R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ● | ● | ✕ |

● very good ◐ good ○ possible ✕ not possible




| ØD min | 3,5×D Order No. | Ød | L1 | L2 | L3 | f | R | kg | Basic recommendation: Insert Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,6 | B00 37010 | 8 | 48 | 26 | 22 | 2,75 | 0,1 | 0,04 | W00 04120.0164 | WOHX 02T001EL-G12 BK64 | ● ● ● ● ● | N00 56011 S/M1,8×2,9-5IP 0,38 Nm | L05 00800 5IP |
| 6,5 | B00 37020 | 8 | 52 | 30 | 26 | 3,20 | 0,1 | 0,03 | W00 04120.0121 | WOHX 02T001FL-G12 K10 | | | |
| 8 | B00 15510 | 8 | 57 | 35 | 28 | 3,95 | 0,2 | 0,02 | W57 04140.028430 | TOGX 06T102EN-14 BK8430 | ● ● ● ● ● <52 HRC | N00 56021 S/M2×3,8-6IP 0,62 Nm | L05 00810 6IP |
| | B00 15610 | 16 | 75 | 35 | 30 | 3,95 | 0,2 | 0,08 | W30 04060.036110 | TOHX 06T103EL-G06 BK6110 | | | |
| 10 | B00 15620 | 16 | 80 | 40 | 35 | 4,95 | 0,2 | 0,08 | W57 04120.0223 | TOGX 06T102FN-12 K10 | | | |
| | | | | | | | | | W30 04990.0240 | TOGX 06T102TN CBN40 | | | |
| 11 | B00 15710 | 16 | 85 | 45 | 40 | 5,45 | 0,2 | 0,09 | | | | | |
| 12 | B00 15530 | 8 | 67 | 45 | 38 | 5,95 | 0,2 | 0,04 | | | | | |
| | B00 15630 | 16 | 85 | 45 | 40 | 5,95 | 0,2 | 0,09 | | | | | |
| 14 | B00 15640 | 16 | 90 | 50 | 45 | 6,95 | 0,2 | 0,11 | | | | | |
| 16 | B00 15650 | 16 | 95 | 55 | 50 | 7,95 | 0,2 | 0,17 | W57 14140.048430 | TOGX 090204EN-14 BK8430 | ● ● ● ● ● <52 HRC | N00 56101 S/M2,6×5,2-8IP 1,28 Nm | L05 00830 8IP |
| 18 | B00 15661 | 16 | 100 | 60 | 55 | 8,95 | 0,2 | 0,14 | W30 14060.046110 | TOHX 090204EL-G06 BK6110 | | | |
| 19 | B00 15751 | 16 | 105 | 65 | 60 | 9,45 | 0,2 | 0,16 | W57 14120.0423 | TOGX 090204FN-12 K10 | | | |
| 20 | B00 15671 | 16 | 105 | 65 | 60 | 9,90 | 0,2 | 0,22 | W30 14990.0440 | TOGX 090204TN CBN40 | | | |
| 22 | B00 15681 | 16 | 105 | 65 | 60 | 10,9 | 0,2 | 0,19 | | | | | |
| 24 | B00 15691 | 16 | 105 | 65 | 60 | 11,9 | 0,2 | 0,21 | | | | | |

Further diameters on request.

**Supply includes:**
Boring bar with clamping screw. Please order inserts and accessories separately.

| Guideline values for fine boring | | | | | | $v_c$ | f (mm/rev) | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | max. feed 3,5×D | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 5,6 – 6,5 | Ø 8 – 10 | Ø 11 – 24 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,04 | 0,07 | 0,10 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,04 | 0,06 | 0,12 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,04 | 0,07 | 0,12 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 240 | 0,03 | 0,06 | 0,10 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 200 | 0,03 | 0,05 | 0,10 |
| P | 4.1 | | | HSS | | 120 | 0,02 | 0,04 | 0,08 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,01 | 0,04 | 0,08 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,01 | 0,04 | 0,08 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 200 | 0,01 | 0,05 | 0,10 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 180 | 0,01 | 0,05 | 0,10 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 120 | 0,01 | 0,04 | 0,08 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 240 | 0,05 | 0,10 | 0,15 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 200 | 0,05 | 0,10 | 0,15 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,04 | 0,08 | 0,15 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 180 | 0,04 | 0,08 | 0,15 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 160 | 0,04 | 0,08 | 0,15 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,03 | 0,07 | 0,12 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,03 | 0,10 | 0,15 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 400 | 0,02 | 0,04 | 0,08 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 300 | 0,05 | 0,08 | 0,15 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 500 | 0,02 | 0,06 | 0,10 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 350 | 0,05 | 0,08 | 0,12 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 300 | 0,05 | 0,08 | 0,12 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | – | 0,05 | 0,08 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 60 | – | 0,05 | 0,08 |

| Alternative Inserts | | | | | |
|---|---|---|---|---|---|
| | | Insert | | | for workpiece material |
| | |  W30 W57 PKD CBN W30 .32.. .39.. | | | P M K N S H |
| | ØD | Order No. ▽▽ size | ISO-Code | | |
| for better chip control | 5,6 – 6,5 | – | | | |
| | 8 – 10 | **W30 04120.3232** | TOHX 06T102EL-US12 CK32 | | |
| | | **W30 04120.3977** | TOHX 06T1ZZEL-39G12 BK77 | | |
| | 11 – 24 | **W30 14120.3232** | TOHX 090202EL-US12 CK32 | | |
| | | **W30 14120.3977** | TOHX 0902ZZEL-39G12 BK77 | | |
| for higher cutting speed | 5,6 – 6,5 | – | | | |
| | 8 – 10 | **W57 04140.023210** | TOGX 06T102EN-14 CK3210 | | |
| | | **W30 04120.0238** | TOHX 06T102EL-G12 CK38 | | |
| | | **W30 04990.0257** | TOGX 06T102TN CBN57 | only GG25 | |
| | | **W30 04990.0255** | TOGX 06T102FN PKD55 | | |
| | 11 – 24 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | | |
| | | **W30 14120.0238** | TOHX 090202EL-G12 CK38 | | |
| | | **W30 14990.0457** | TOGX 090204TN CBN57 | only GG25 | |
| | | **W30 14990.0455** | TOGX 090204FN PKD55 | | |
| for better surface finish | 5,6 – 6,5 | – | | | |
| | 8 – 10 | **W57 04140.023210** | TOGX 06T102EN-14 CK3210 | | |
| | | **W30 04060.036110** | TOHX 06T103EL-G06 BK6110 | | |
| | | **W30 04200.0321** | TOHX 06T103FL-G20 K10 | | |
| | | **W30 04990.0255** | TOGX 06T102FN PKD55 | | |
| | 11 – 24 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | | |
| | | **W30 14060.046110** | TOHX 090204EL-G06 BK6110 | | |
| | | **W30 14200.0421** | TOHX 090204FL-G20 K10 | | |
| | | **W30 04990.0255** | TOGX 090204FN PKD55 | | |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

**Important: See chapter 8 for more application details and safety notes!**

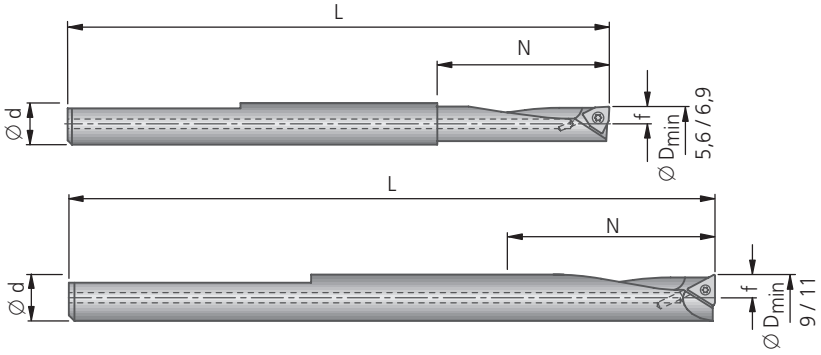
# KOMET® Low-vibration Boring Bar

## with Cylindrical Shank

# Ø 5,6 – 26 mm

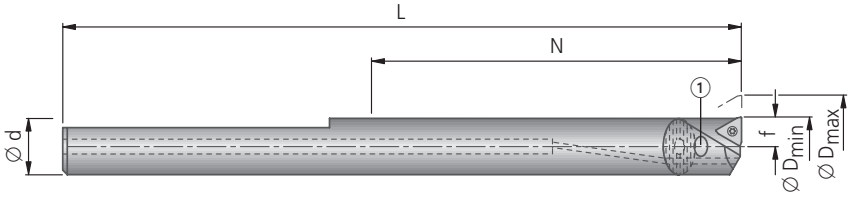
| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ✕ | ○ | ○ | ● |

● very good ◐ good ○ possible ✕ not possible




| | 3,5×D | | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Insert | | for workpiece material | Clamping screw | Screwdriver |
| ØD min | Order No. *carbide version | Ød | L | N max | f | kg | Order No. ▽▽ size | ISO-Code | P M K N S H | Order No. Article | Order No. Article |
| 5,6 | **B00 30280** | 6 | 65 | 22 | 2,8 | | **W00 04120.0164** | WOHX 02T001EL-G12 BK64 | ● ● ● ● ● | **N00 56011** S/M1,8×2,9-5IP 0,38 Nm | **L05 00800** 5IP |
| 6,9 | **B00 30290*** | 6 | 80 | 36 | 3,45 | | **W00 04120.0121** | WOHX 02T001FL-G12 K10 | | | |
| 9 | **B00 00680*** | 8 | 90 | 24 | 4,45 | | **W57 04140.028430** **W30 04060.036110** | TOGX 06T102EN-14 BK8430 TOHX 06T103EL-G06 BK6110 | ● ● ● ● ● <52 HRC | **N00 56031** S/M2×4,9-6IP 0,62 Nm | **L05 00810** 6IP |
| 11 | **B00 00690*** | 10 | 95 | 50 | 5,45 | | **W57 04120.0223** **W30 04990.0240** | TOGX 06T102FN-12 K10 TOGX 06T102TN CBN40 | | | |

**Supply includes:** Boring bar with clamping screw. Please order inserts and accessories separately.




| | Turning head | | | | | Adaptor | Assembly parts | Accessories | Basic recommendation | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Location screw ① | Screwdriver for ① | Insert | for workpiece material | Clamping screw | Screwdriver |
| ØD | Order No. | Ød | L | N max | f | Order No. | Order No. | Order No. Article | Order No. ISO-Code ▽▽ size | P M K N S H | Order No. Article | Order No. Article |
| 13-15 | **G10 12621** 0,02 | 12 | 120 | 75 | 6,45 | **G10 12060** 0,14 | **G10 10111.15** | Tx10 | **W57 14140.048430** TOGX 090204EN-14 BK8430 | ● ● ● ● ● <52 HRC | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP |
| 15-17 | **G10 12841** 0,02 | 12 | 120 | 75 | 8,45 | **G10 12060** 0,14 | **G10 10111.15** | Tx10 | **W30 14060.046110** TOHX 090204EL-G06 BK6110 | | | |
| 17-19 | **G10 12711** 0,02 | 16 | 140 | 100 | 8,45 | **G10 12070** 0,30 | **G10 10131.15** | 18050 00025 Tx25 | **W57 14120.0423** TOGX 090204FN-12 K10 | | | |
| 19-22 | **G10 12861** 0,02 | 16 | 140 | 100 | 9,45 | **G10 12070** 0,30 | **G10 10131.15** | 18050 00025 Tx25 | **W30 14990.0440** TOGX 090204TN CBN40 | | | |
| 22-26 | **G10 12731** 0,02 | 16 | 140 | 100 | 10,95 | **G10 12080** 0,30 | **G10 10131.15** | 18050 00025 Tx25 | | | | |

**Supply turning head includes:** with clamping screw. Please order inserts and accessories separately.
**Supply adaptor includes:** with location screw.

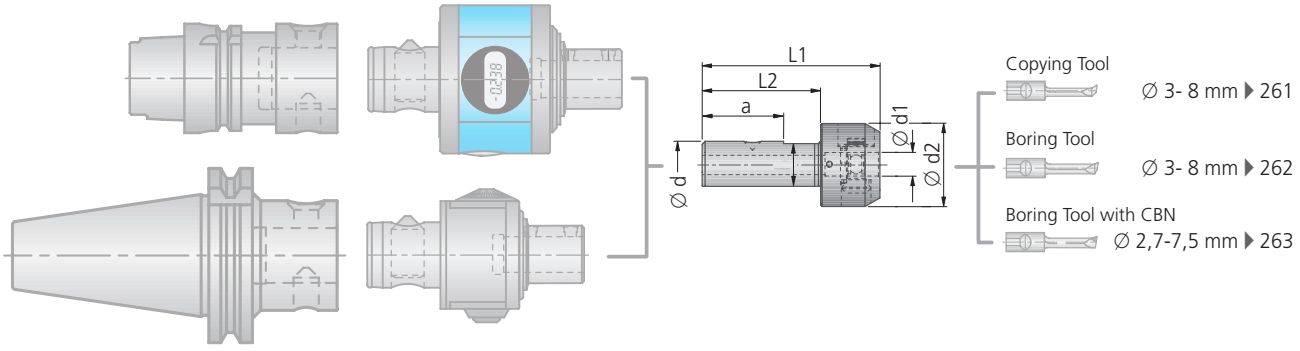
| Guideline values for fine boring | | | | | | $v_c$ | f (mm/rev) | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | max. feed 3,5×D | | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 5,6 – 6,9 | Ø 9 – 11 | Ø 13 – 26 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 120 | 0,04 | 0,07 | 0,10 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 150 | 0,04 | 0,06 | 0,12 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 150 | 0,04 | 0,07 | 0,12 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 90 | 0,03 | 0,06 | 0,10 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 90 | 0,03 | 0,05 | 0,10 |
| P | 4.1 | | | HSS | | 70 | 0,02 | 0,04 | 0,08 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 30 | 0,01 | 0,04 | 0,08 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 20 | 0,01 | 0,04 | 0,08 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 70 | 0,01 | 0,05 | 0,10 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 70 | 0,01 | 0,05 | 0,10 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 70 | 0,01 | 0,04 | 0,08 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 180 | 0,05 | 0,10 | 0,15 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 160 | 0,05 | 0,10 | 0,15 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 160 | 0,04 | 0,08 | 0,15 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 140 | 0,04 | 0,08 | 0,15 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 120 | 0,04 | 0,08 | 0,15 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 120 | 0,03 | 0,07 | 0,12 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 100 | 0,03 | 0,10 | 0,15 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 250 | 0,02 | 0,04 | 0,08 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 250 | 0,05 | 0,08 | 0,15 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 400 | 0,02 | 0,06 | 0,10 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 270 | 0,05 | 0,08 | 0,12 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 200 | 0,05 | 0,08 | 0,12 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 120 | – | 0,05 | 0,08 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 90 | – | 0,05 | 0,08 |

| Alternative Inserts | | | | | |
|---|---|---|---|---|---|
| | | Insert | | | for workpiece material |
| | |  W30 W57 PKD CBN W30 .32.. .39.. | | | P M K N S H |
| | ØD | Order No. ▽▽ size | ISO-Code | | |
| for better chip control | 5,6 – 6,9 | – | | | |
| | 9 – 11 | **W30 04120.3232** | TOHX 06T102EL-US12 CK32 | | |
| | | **W30 04120.3977** | TOHX 06T1ZZEL-39G12 BK77 | | |
| | 13 – 26 | **W30 14120.3232** | TOHX 090202EL-US12 CK32 | | |
| | | **W30 14120.3977** | TOHX 0902ZZEL-39G12 BK77 | | |
| for higher cutting speed | 5,6 – 6,9 | – | | | |
| | 9 – 11 | **W57 04140.023210** | TOGX 06T102EN-14 CK3210 | | |
| | | **W30 04120.0238** | TOHX 06T102EL-G12 CK38 | | |
| | | **W30 04990.0257** | TOGX 06T102TN CBN57 | only GG25 | |
| | | **W30 04990.0255** | TOGX 06T102FN PKD55 | | |
| | 13 – 26 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | | |
| | | **W30 14120.0238** | TOHX 090202EL-G12 CK38 | | |
| | | **W30 14990.0457** | TOGX 090204TN CBN57 | only GG25 | |
| | | **W30 14990.0455** | TOGX 090204FN PKD55 | | |
| for better surface finish | 5,6 – 6,9 | – | | | |
| | 9 – 11 | **W57 04140.023210** | TOGX 06T102EN-14 CK3210 | | |
| | | **W30 04060.036110** | TOHX 06T103EL-G06 BK6110 | | |
| | | **W30 04200.0321** | TOHX 06T103FL-G20 K10 | | |
| | | **W30 04990.0255** | TOGX 06T102FN PKD55 | | |
| | 13 – 26 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | | |
| | | **W30 14060.046110** | TOHX 090204EL-G06 BK6110 | | |
| | | **W30 14200.0421** | TOHX 090204FL-G20 K10 | | |
| | | **W30 04990.0255** | TOGX 090204FN PKD55 | | |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

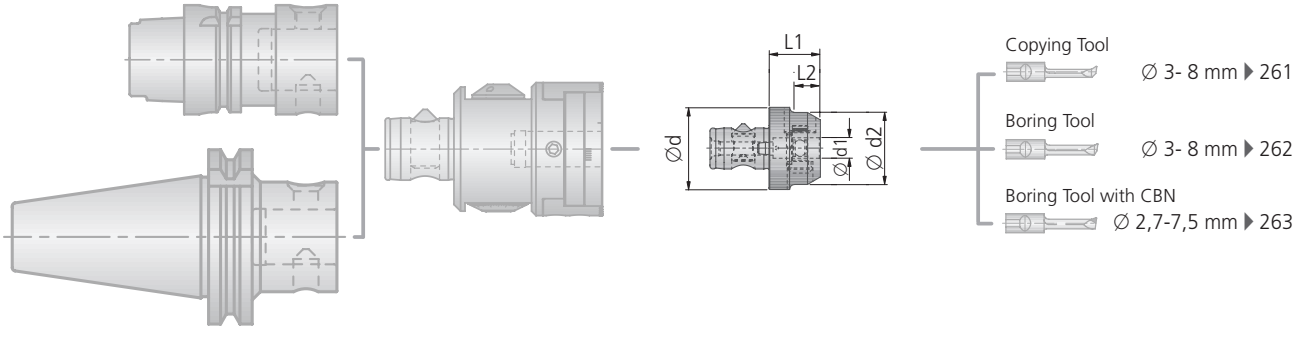
**Important: See chapter 8 for more application details and safety notes!**

## Adaptor
with cylindrical connection




| Order No. | Ø $d_{g6}$ | Ø d1 | Ø d2 | L1 | L2 | a | b | kg |
|---|---|---|---|---|---|---|---|---|
| H50 21640 | 16 | 4 | 28 | 60 | 40 | 27,5 | 14,4 | 0,15 |
| H50 21680 | 16 | 8 | 28 | 60 | 40 | 27,5 | 14,4 | 0,13 |

## Adaptor
with ABS® connection




| Order No. | ABS Ø d | Ø d1 | Ø d2 | L1 | L2 | kg |
|---|---|---|---|---|---|---|
| H50 23240 | 32 | 4 | 28 | 20 | 12 | 0,15 |
| H50 23280 | 32 | 8 | 28 | 20 | 12 | 0,12 |

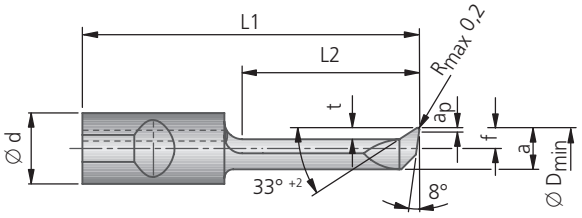


Patent applied for inside and outside Germany (ABS)

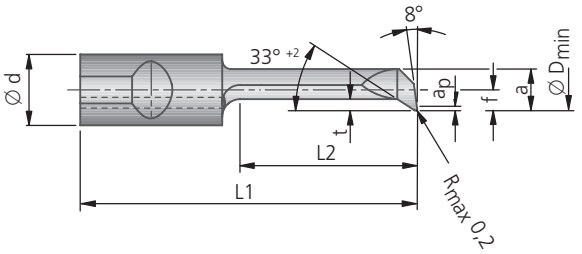
| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ✕ | ✕ | ✕ | ● |

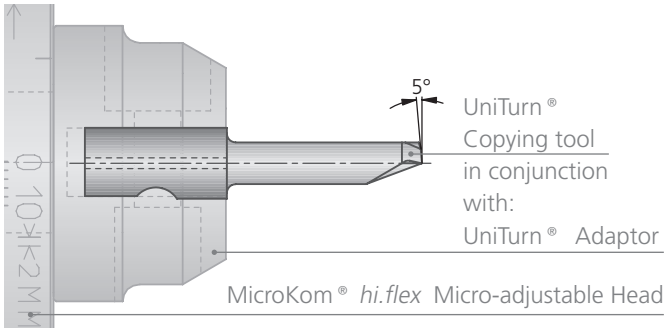
● very good ◐ good ○ possible ✕ not possible

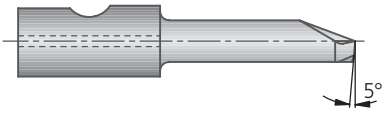
R.H. cutting form




L.H. cutting form




| Ø D min | Cutting form R.H. Order No. | Cutting form L.H. Order No. | $a_p$ max | t max | f | a | Ø d | L1 | L2 | kg | Basic recommendation Quality | for workpiece material P M K N S H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | H51 32100.0182 | H51 31100.0182 | 0,2 | 0,7 | 1,25 | 2,7 | 4 | 28 | 10 | 0,0032 | BK82 | ● ◐ ● ◐ |
| | H51 32150.0182 | H51 31150.0182 | 0,2 | 0,7 | 1,25 | 2,7 | 4 | 33 | 15 | 0,0035 | | |
| | H51 32200.0182 | H51 31200.0182 | 0,2 | 0,7 | 1,25 | 2,7 | 4 | 38 | 20 | 0,0037 | | |
| 4 | H51 42100.0182 | H51 41100.0182 | 0,3 | 0,8 | 1,75 | 3,7 | 4 | 28 | 10 | 0,0038 | BK82 | ● ◐ ● ◐ |
| | H51 42150.0182 | H51 41150.0182 | 0,3 | 0,8 | 1,75 | 3,7 | 4 | 33 | 15 | 0,0043 | | |
| | H51 42200.0182 | H51 41200.0182 | 0,3 | 0,8 | 1,75 | 3,7 | 4 | 38 | 20 | 0,0047 | | |
| | H51 42250.0182 | H51 41250.0182 | 0,3 | 0,8 | 1,75 | 3,7 | 4 | 43 | 25 | 0,0052 | | |
| 5 | H51 52100.0282 | H51 51100.0282 | 0,5 | 1,0 | 2,25 | 4,7 | 8 | 28 | 10 | 0,013 | BK82 | ● ◐ ● ◐ |
| | H51 52150.0282 | H51 51150.0282 | 0,5 | 1,0 | 2,25 | 4,7 | 8 | 33 | 15 | 0,013 | | |
| | H51 52200.0282 | H51 51200.0282 | 0,5 | 1,0 | 2,25 | 4,7 | 8 | 38 | 20 | 0,014 | | |
| | H51 52250.0282 | H51 51250.0282 | 0,5 | 1,0 | 2,25 | 4,7 | 8 | 43 | 25 | 0,015 | | |
| | H51 52300.0282 | H51 51300.0282 | 0,5 | 1,0 | 2,25 | 4,7 | 8 | 48 | 30 | 0,016 | | |
| 6 | H51 62150.0282 | H51 61150.0282 | 0,5 | 1,8 | 2,75 | 5,7 | 8 | 33 | 15 | 0,014 | BK82 | ● ◐ ● ◐ |
| | H51 62200.0282 | H51 61200.0282 | 0,5 | 1,8 | 2,75 | 5,7 | 8 | 38 | 20 | 0,015 | | |
| | H51 62250.0282 | H51 61250.0282 | 0,5 | 1,8 | 2,75 | 5,7 | 8 | 43 | 25 | 0,016 | | |
| | H51 62300.0282 | H51 61300.0282 | 0,5 | 1,8 | 2,75 | 5,7 | 8 | 48 | 30 | 0,017 | | |
| | H51 62350.0282 | H51 61350.0282 | 0,5 | 1,8 | 2,75 | 5,7 | 8 | 53 | 35 | 0,018 | | |
| 8 | H51 82150.0282 | H51 81150.0282 | 0,6 | 2,5 | 3,75 | 7,7 | 8 | 33 | 15 | 0,016 | BK82 | ● ◐ ● ◐ |
| | H51 82200.0282 | H51 81200.0282 | 0,6 | 2,5 | 3,75 | 7,7 | 8 | 38 | 20 | 0,018 | | |
| | H51 82250.0282 | H51 81250.0282 | 0,6 | 2,5 | 3,75 | 7,7 | 8 | 43 | 25 | 0,020 | | |
| | H51 82300.0282 | H51 81300.0282 | 0,6 | 2,5 | 3,75 | 7,7 | 8 | 48 | 30 | 0,022 | | |
| | H51 82350.0282 | H51 81350.0282 | 0,6 | 2,5 | 3,75 | 7,7 | 8 | 53 | 35 | 0,023 | | |
| | H51 82400.0282 | H51 81400.0282 | 0,6 | 2,5 | 3,75 | 7,7 | 8 | 58 | 40 | 0,025 | | |

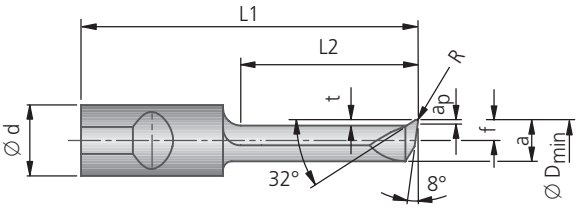
**Please note:**
From $D_{min.}$ 5 mm, copying tools have internal coolant supply; for smaller diameters, coolant is passed over adaptor.

## Boring Tool

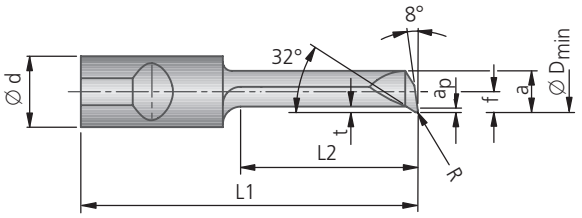
| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ✕ | ✕ | ✕ | ● |

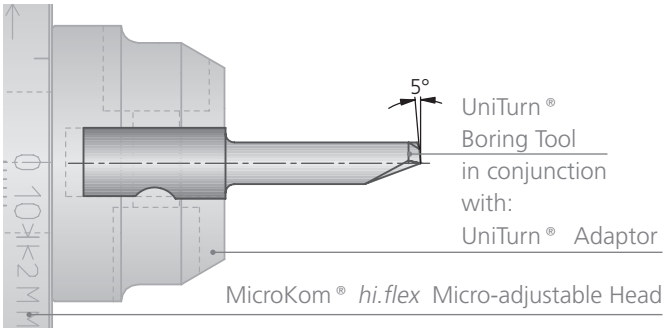
● very good ◐ good ○ possible ✕ not possible

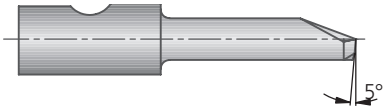
R.H. cutting form




L.H. cutting form




Guideline recommendation: feed f = 0,025-0,1 mm

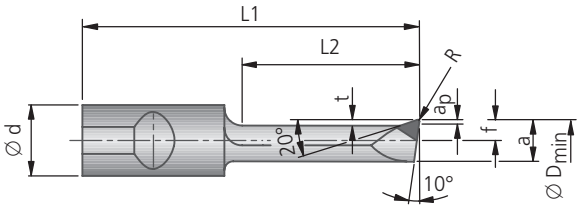
| Ø D min | Cutting form R.H. Order No. | Cutting form L.H. Order No. | $a_p$ max | t max | f | a | Ø d | L1 | L2 | kg | Basic recommendation Quality | for workpiece material P M K N S H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | H55 32100.0182 | H55 31100.0182 | 0,6 | 0,3 | 1,25 | 2,6 | 4 | 28 | 10 | 0,004 | BK82 | ● ◐ ● ● ◐ |
| | H55 32150.0182 | H55 31150.0182 | 0,6 | 0,3 | 1,25 | 2,6 | 4 | 33 | 15 | 0,004 | | |
| 4 | H55 42150.0182 | H55 41150.0182 | 0,8 | 0,3 | 1,75 | 3,6 | 4 | 33 | 15 | 0,005 | BK82 | ● ◐ ● ● ◐ |
| | H55 42200.0182 | H55 41200.0182 | 0,8 | 0,3 | 1,75 | 3,6 | 4 | 38 | 20 | 0,006 | | |
| 5 | H55 52150.0282 | H55 51150.0282 | 1,0 | 0,4 | 1,55 | 4,6 | 8 | 33 | 15 | 0,016 | BK82 | ● ◐ ● ● ◐ |
| | H55 52200.0282 | H55 51200.0282 | 1,0 | 0,4 | 1,55 | 4,6 | 8 | 38 | 20 | 0,018 | | |
| | H55 52250.0282 | H55 51250.0282 | 1,0 | 0,4 | 1,55 | 4,6 | 8 | 43 | 25 | 0,019 | | |
| 6 | H55 62200.0282 | H55 61200.0282 | 1,1 | 0,4 | 1,55 | 5,4 | 8 | 38 | 20 | 0,020 | BK82 | ● ◐ ● ● ◐ |
| | H55 62300.0282 | H55 61300.0282 | 1,1 | 0,4 | 1,55 | 5,4 | 8 | 48 | 30 | 0,023 | | |
| 8 | H55 82200.0282 | H55 81200.0282 | 1,2 | 0,4 | 1,5 | 5,5 | 8 | 38 | 20 | 0,020 | BK82 | ● ◐ ● ● ◐ |
| | H55 82400.0282 | H55 81400.0282 | 1,2 | 0,4 | 1,5 | 5,5 | 8 | 58 | 40 | 0,027 | | |

**Please note:**
From $D_{min.}$ 5 mm, boring tools have internal coolant supply; for smaller diameters, coolant is passed over adaptor.

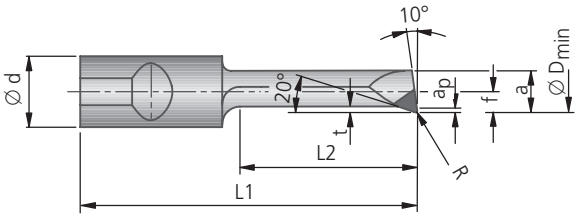
| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ✕ | ● | ● | ● |

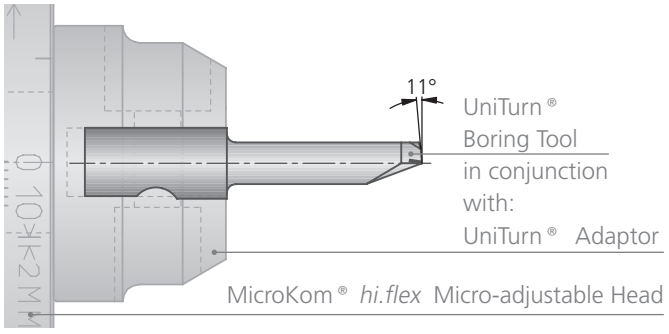
● very good ◐ good ○ possible ✕ not possible

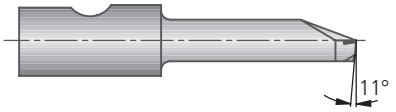
R.H. cutting form




L.H. cutting form




Guideline recommendations: $a_p$ = 0,05-0,07 mm; f = 0,01-0,03 mm; $v_c$ = 70-90 m/min

| Ø D min | Cutting form R.H. Order No. | Cutting form L.H. Order No. | t | f | a | Ø d | L1 | L2 | kg | Basic recommendation Quality | Basic recommendation for workpiece material P M K N S H |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,7 | H56 32100.0140 | H56 31100.0140 | 0,2 | 1,35 | 2,5 | 4 | 27 | 9 | 0,004 | CBN40 | ◐ ≥52 HRC |
| 3,8 | H56 42121.0140 | H56 41121.0140 | 0,2 | 1,9 | 3,6 | 8 | 30 | 12 | 0,015 | CBN40 | ◐ ≥52 HRC |
| 4,8 | H56 52151.0140 | H56 51151.0140 | 0,25 | 2,4 | 4,55 | 8 | 33 | 15 | 0,016 | CBN40 | ◐ ≥52 HRC |
| 5,4 | H56 62201.0140 | H56 61201.0140 | 0,3 | 2,7 | 5,2 | 8 | 38 | 20 | 0,019 | CBN40 | ◐ ≥52 HRC |
| 7,5 | H56 82251.0140 | H56 81251.0140 | 0,5 | 3,8 | 7,3 | 8 | 43 | 25 | 0,024 | CBN40 | ◐ ≥52 HRC |

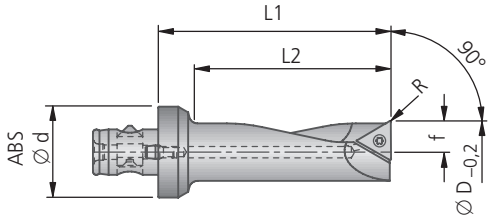
**Please note:**
Boring tools have internal coolant supply.

# KOMET® Boring Bar B002 Ø 8 – 28 mm

## with ABS® Connection, $\varkappa$ = 90°, R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ● | ● | ✕ |

● very good ◐ good ○ possible ✕ not possible




| ØD min | 3,5×D Order No. | ABS Ød | L1 | L2 | f | R | kg | Basic recommendation: Insert Order No. ▽▽ size | Insert ISO-Code | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7,9 | B00 25510 | 25 | 38 | 28 | 3,95 | 0,2 | 0,05 | W57 04140.028430<br>W30 04060.036110<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK8430<br>TOHX 06T103EL-G06 BK6110<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | ● ● ● ● ● ○ <52 HRC | N00 56021<br>S/M2×3,8-6IP<br>0,62 Nm | L05 00810<br>6IP |
| | B00 25610 | 32 | 42 | 28 | 3,95 | 0,2 | 0,10 | | | | | |
| | B00 25810 | 40 | 45 | 28 | 3,95 | 0,2 | 0,18 | | | | | |
| 8,9 | B00 25700 | 32 | 48 | 34 | 4,45 | 0,2 | 0,10 | | | | | |
| 9,9 | B00 25620 | 32 | 48 | 34 | 4,95 | 0,2 | 0,11 | | | | | |
| | B00 25820 | 40 | 51 | 34 | 4,95 | 0,2 | 0,19 | | | | | |
| 10,9 | B00 25710 | 32 | 57 | 43 | 5,45 | 0,2 | 0,11 | W57 14140.048430<br>W30 14060.046110<br>W57 14120.0423<br>W30 14990.0440 | TOGX 090204EN-14 BK8430<br>TOHX 090204EL-G06 BK6110<br>TOGX 090204FN-12 K10<br>TOGX 090204TN CBN40 | ● ● ● ● ● ○ <52 HRC | N00 56101<br>S/M2,6×5,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| 11,9 | B00 25530 | 25 | 53 | 43 | 5,95 | 0,2 | 0,07 | | | | | |
| | B00 25630 | 32 | 57 | 43 | 5,95 | 0,2 | 0,12 | | | | | |
| | B00 25830 | 40 | 60 | 43 | 5,95 | 0,2 | 0,20 | | | | | |
| 13,9 | B00 25540 | 25 | 60 | 50 | 6,95 | 0,2 | 0,08 | | | | | |
| | B00 25640 | 32 | 64 | 50 | 6,95 | 0,2 | 0,14 | | | | | |
| | B00 25840 | 40 | 67 | 50 | 6,95 | 0,2 | 0,22 | | | | | |
| 15,9 | B00 25650 | 32 | 72 | 58 | 7,95 | 0,2 | 0,15 | | | | | |
| | B00 25850 | 40 | 75 | 58 | 7,95 | 0,2 | 0,24 | | | | | |
| 17,9 | B00 25661 | 32 | 72 | 59 | 8,95 | 0,2 | 0,36 | | | | | |
| | B00 25861 | 40 | 75 | 59 | 8,95 | 0,2 | 0,15 | | | | | |
| 19,9 | B00 25671 | 32 | 82 | 70 | 9,9 | 0,2 | 0,21 | | | | | |
| | B00 25871 | 40 | 85 | 70 | 9,9 | 0,2 | 0,30 | | | | | |
| 21,9 | B00 25681 | 32 | 82 | 70 | 10,9 | 0,2 | 0,23 | | | | | |
| 23,9 | B00 25691 | 32 | 82 | 70 | 11,9 | 0,2 | 0,26 | | | | | |
| 27,9 | B00 25911 | 40 | 85 | 70 | 13,9 | 0,2 | 0,42 | | | | | |

Further diameters on request.

**Supply includes:**
Boring bar with clamping screw. Please order inserts and accessories separately.



Patent applied for inside and outside Germany (ABS)

| Guideline values for fine boring | | | | | | $v_c$ | f (mm/rev) | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | max. feed 3,5×D | |
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 7,9 – 9,9 | Ø10,9–27,9 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,07 | 0,10 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,06 | 0,12 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,07 | 0,12 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 240 | 0,06 | 0,10 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 200 | 0,05 | 0,10 |
| P | 4.1 | | | HSS | | 120 | 0,04 | 0,08 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,04 | 0,08 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,04 | 0,08 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 200 | 0,05 | 0,10 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 180 | 0,05 | 0,10 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 120 | 0,04 | 0,08 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 240 | 0,10 | 0,15 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 200 | 0,10 | 0,15 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,08 | 0,15 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 180 | 0,08 | 0,15 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 160 | 0,08 | 0,15 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,07 | 0,12 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,10 | 0,15 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 400 | 0,04 | 0,08 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 300 | 0,08 | 0,15 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 500 | 0,06 | 0,10 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 350 | 0,08 | 0,12 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 300 | 0,08 | 0,12 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | 0,05 | 0,08 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 60 | 0,05 | 0,08 |

## Alternative Inserts

| | ØD | Order No. ▽▽ size | ISO-Code | Insert: W30 | W57 | W30 (PKD CBN) | .32.. | .39.. | for workpiece material: P | M | K | N | S | H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| for better chip control | 7,9 – 9,9 | **W30 04120.3232** | TOHX 06T102EL-US12 CK32 | ◐ | ◑ | | | | | | | | | |
| | | **W30 04120.3977** | TOHX 06T1ZZEL-39G12 BK77 | | | | | ◐ | | | | | | |
| | 10,9 – 27,9 | **W30 14120.3232** | TOHX 090202EL-US12 CK32 | ◐ | ◑ | | | | | | | | | |
| | | **W30 14120.3977** | TOHX 0902ZZEL-39G12 BK77 | | | | | ◐ | | | | | | |
| for higher cutting speed | 7,9 – 9,9 | **W57 04140.023210** | TOGX 06T102EN-14 CK3210 | ◐ | ◑ | | | | | | | | | |
| | | **W30 04120.0238** | TOHX 06T102EL-G12 CK38 | ◐ | ◑ | | | | | | | | | |
| | | **W30 04990.0257** | TOGX 06T102TN CBN57 | | | ◑ | | | | | only GG25 | | | |
| | | **W30 04990.0255** | TOGX 06T102FN PKD55 | | | | | ◐ | | | | | | |
| | 10,9 – 27,9 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | ◐ | ◑ | | | | | | | | | |
| | | **W30 14120.0238** | TOHX 090202EL-G12 CK38 | ◐ | ◑ | | | | | | | | | |
| | | **W30 14990.0457** | TOGX 090204TN CBN57 | | | ◑ | | | | | only GG25 | | | |
| | | **W30 14990.0455** | TOGX 090204FN PKD55 | | | | | ◐ | | | | | | |
| for better surface finish | 7,9 – 9,9 | **W57 04140.023210** | TOGX 06T102EN-14 CK3210 | ◐ | ◑ | | | | | | | | | |
| | | **W30 04060.036110** | TOHX 06T103EL-G06 BK6110 | | | ◑ | | | | | | | | |
| | | **W30 04200.0321** | TOHX 06T103FL-G20 K10 | | | | | ◐ | ◑ | | | | | |
| | | **W30 04990.0255** | TOGX 06T102FN PKD55 | | | | | ◐ | | | | | | |
| | 10,9 – 27,9 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | ◐ | ◑ | | | | | | | | | |
| | | **W30 14060.046110** | TOHX 090204EL-G06 BK6110 | | | ◑ | | | | | | | | |
| | | **W30 14200.0421** | TOHX 090204FL-G20 K10 | | | | | ◐ | ◑ | | | | | |
| | | **W30 04990.0255** | TOGX 090204FN PKD55 | | | | | ◐ | | | | | | |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

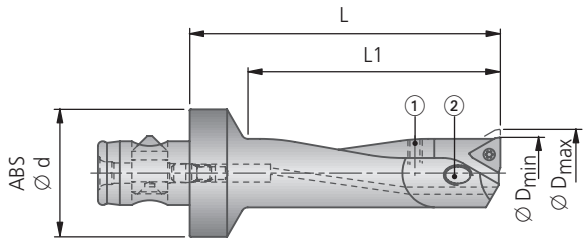
**Important: See chapter 8 for more application details and safety notes!**

# KOMET® Boring Bar G10 Ø 11,9 – 30 mm

## with ABS® Connection

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ● | ● | ✕ |

● very good ◐ good ○ possible ✕ not possible



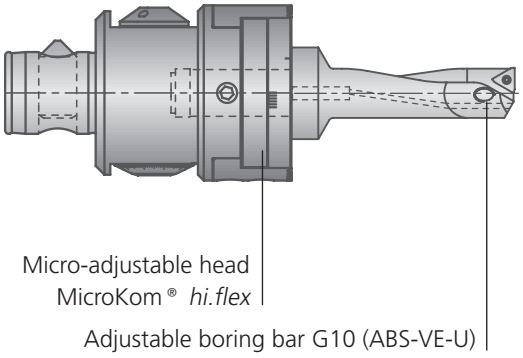

| | 3,5×D | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Insert | | for workpiece material | Clamping screw | Screwdriver |
| ØD min-max | Order No. Article | ABS Ød | L | L1 | kg | Order No. ▽▽ size | ISO-Code | P M K N S H | Order No. Article | Order No. Article |
| 11,9 - 14 | G10 10111 ABS32-VE12U | 32 | 57 | 43,3 | 0,13 | | | | | |
| 13,9 - 16 | G10 10121 ABS32-VE14U | 32 | 64 | 49 | 0,14 | | | | | |
| 15,9 - 18 | G10 10131 ABS32-VE16U | 32 | 71 | 56 | 0,16 | **W57 14140.048430** | TOGX 090204EN-14 BK8430 | | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP |
| 17,9 - 20 | G10 10141 ABS32-VE18U | 32 | 78 | 63 | 0,19 | **W30 14060.046110** | TOHX 090204EL-G06 BK6110 | | | |
| 19,9 - 24 | G10 10151 ABS32-VE20U | 32 | 85 | 70 | 0,23 | **W57 14120.0423** | TOGX 090204FN-12 K10 | | | |
| 23,8 - 30 | G10 10161 ABS32-VE24U | 32 | 99 | 84 | 0,32 | **W30 14990.0440** | TOGX 090204TN CBN40 | | | |

**Note:** When inserts with different centre radii are fitted, the $D_{min}$/$D_{max}$ ranges alter.

**Supply includes:**
Boring bar with assembly parts.
Please order inserts and accessories separately.

The adjustable boring bar G10 (ABS-VE-U) allows coarse adjustment with minimum dimensional deflection by means of precision adjustment with the micro-adjustable head.

For finish machining, the boring bar G10 (ABS-VE-U) is provided with a triangular insert.




| | Assembly parts | | | Accessories |
|---|---|---|---|---|
| | Turning head | Adjusting screw ① | Location screw ② | Screwdriver for ② |
| for | Order No. | Order No. | Order No. | Order No. Article |
| ..VE12 | G10 10611 | N00 70080 | G10 10111.15 | Tx10 |
| ..VE14 | G10 10621 | N00 70080 | G10 10121.15 | Tx20 |
| ..VE16 | G10 10631 | N00 70090 | G10 10131.15 | 18050 00025 Tx25 |
| ..VE18 | G10 10641 | N00 70140 | G10 10141.15 | 18050 00025 Tx25 |
| ..VE20 | G10 10651 | N00 70140 | G10 10151.15 | 18050 00025 Tx25 |
| ..VE24 | G10 10661 | N00 70190 | G10 10161.15 | 18050 00030 Tx30 |



Patent applied for inside and outside Germany (ABS)

| Guideline values for fine boring | | | | | | $v_c$ | f (mm/rev) |
|---|---|---|---|---|---|---|---|
| | Material group | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | max. feed 3,5×D ∅ 11,9 – 30 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,10 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,12 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,12 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 240 | 0,10 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 200 | 0,10 |
| P | 4.1 | | | HSS | | 120 | 0,08 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,08 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,08 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 200 | 0,10 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 180 | 0,10 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 120 | 0,08 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 240 | 0,15 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 200 | 0,15 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,15 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 180 | 0,15 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 160 | 0,15 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,12 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,15 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 400 | 0,08 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 300 | 0,15 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 500 | 0,10 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 350 | 0,12 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 300 | 0,12 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | 0,08 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 60 | 0,08 |

| Alternative Inserts | | | | |
|---|---|---|---|---|
| | ∅D | Insert: W30, W57, PKD CBN W30, .32.., .39.. — Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H |
| for better chip control | 11,9 – 30 | **W30 14120.3232** | TOHX 090202EL-US12 CK32 | |
| | | **W30 14120.3977** | TOHX 0902ZZEL-39G12 BK77 | |
| for higher cutting speed | 11,9 – 30 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | |
| | | **W30 14120.0238** | TOHX 090202EL-G12 CK38 | |
| | | **W30 14990.0457** | TOGX 090204TN CBN57 | only GG25 |
| | | **W30 14990.0455** | TOGX 090204FN PKD55 | |
| for better surface finish | 11,9 – 30 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | |
| | | **W30 14060.046110** | TOHX 090204EL-G06 BK6110 | |
| | | **W30 14200.0421** | TOHX 090204FL-G20 K10 | |
| | | **W30 04990.0255** | TOGX 090204FN PKD55 | |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

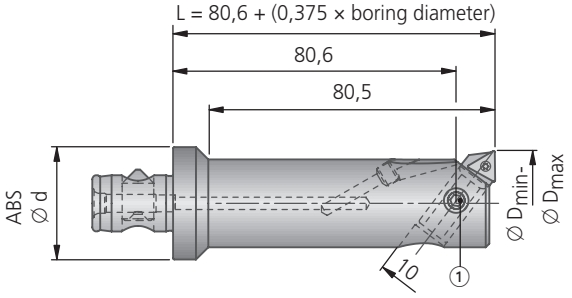
**Important: See chapter 8 for more application details and safety notes!**

# KOMET® Boring Bar B300 Ø 28 – 44 mm

## with ABS® Connection, $\varkappa$ = 90°, R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 52 through hole | HRC > 52 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ○ | ○ | ✕ |

● very good ◐ good ○ possible ✕ not possible




| Ø D min-max | Order No. | ABS Ø d | Basic recommendation: Insert Order No. ISO-Code ▽▽ size | for workpiece material P M K N S H | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Fine boring cartridge Order No. | Clamping screw ① DIN 913 Order No. Article | Hexagonal key Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| 28 - 44 | B30 02020 0,368 | 32 | **W57 14140.048430** TOGX 090204EN-14 BK8430<br>**W30 14060.046110** TOHX 090204EL-G06 BK6110<br>**W57 14120.0423** TOGX 090204FN-12 K10<br>**W30 14990.0440** TOGX 090204TN CBN40 | <52 HRC<br>>52 HRC | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP | D20 10620 0,06 | 55051 06008 M6×8 | 18591 10030 SW3 |

**Supply includes:**
Boring bar with fine boring cartridge and assembly parts.
Please order inserts and accessories separately.



Patent applied for inside and outside Germany (ABS)

| Guideline values for fine boring | | | | | | $v_c$ | f (mm/rev) |
|---|---|---|---|---|---|---|---|
| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | max. feed 3,5×D ∅ 28 – 44 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,10 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,12 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,12 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 240 | 0,10 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 200 | 0,10 |
| P | 4.1 | | | HSS | | 120 | 0,08 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,08 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,08 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 200 | 0,10 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 180 | 0,10 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 120 | 0,08 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 240 | 0,15 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 200 | 0,15 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,15 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 180 | 0,15 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 160 | 0,15 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,12 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,15 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 400 | 0,08 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 300 | 0,15 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 500 | 0,10 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 350 | 0,12 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 300 | 0,12 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 80 | 0,08 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 60 | 0,08 |

| Alternative Inserts | | | | |
|---|---|---|---|---|
| | ∅D | Insert: W30, W57, PKD CBN W30, .32.., .39.. — Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H |
| for better chip control | 28 – 44 | **W30 14120.3232** | TOHX 090202EL-US12 CK32 | |
| | | **W30 14120.3977** | TOHX 0902ZZEL-39G12 BK77 | |
| for higher cutting speed | 28 – 44 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | |
| | | **W30 14120.0238** | TOHX 090202EL-G12 CK38 | |
| | | **W30 14990.0457** | TOGX 090204TN CBN57 | only GG25 |
| | | **W30 14990.0455** | TOGX 090204FN PKD55 | |
| for better surface finish | 28 – 44 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | |
| | | **W30 14060.046110** | TOHX 090204EL-G06 BK6110 | |
| | | **W30 14200.0421** | TOHX 090204FL-G20 K10 | |
| | | **W30 04990.0255** | TOGX 090204FN PKD55 | |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

**Important: See chapter 8 for more application details and safety notes!**

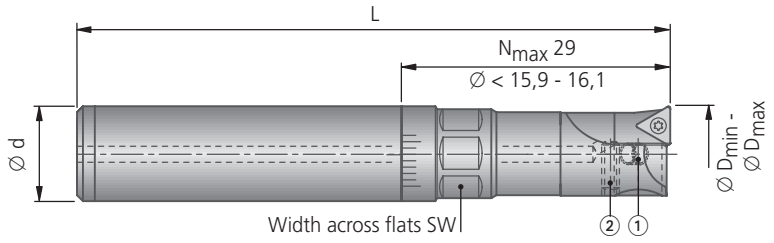
# KOMET MicroKom® Boring Bar M10 — Ø 15,9 – 26 mm

## with Cylindrical Shank

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3×D | ● | ● | ◐ | ◐ | ✕ | ● | ● | ✕ |

● very good ◐ good ○ possible ✕ not possible

- The smallest adjustment steps are 0.02 mm by: per graduation in the diameter.
- For drilling diameter 15.9 – 16.1 mm the max. drilling depth is limited to 29 mm.



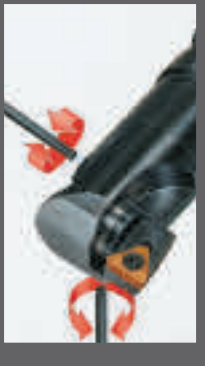

| ØD min-max | 3×D Order No. Article | Ød | L | SW | kg | Basic recommendation Insert Order No. ▽▽ size | ISO-Code | for workpiece material | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|
| 15,9 - 20 | M10 50011 | 16 | 100 | 14 | 0,13 | W57 04140.028430<br>W30 04060.036110<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK8430<br>TOHX 06T103EL-G06 BK6110<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | P M K N S H | N00 56021<br>S/M2×3,8-6IP<br>0,62 Nm | L05 00810<br>6IP |
| 19 - 23 | M10 50021 | 16 | 105 | 14 | 0,20 | | | | | |
| 22 - 26 | M10 50031 | 16 | 110 | 18 | 0,23 | | | | | |

**Supply includes:**
Boring bar with assembly parts.
Please order inserts and accessories separately.

| for | Assembly parts: Insert holder Order No. | Clamping screw ① Order No. | Adjusting screw ② Order No. | Accessories: Hook spanner Order No. |
|---|---|---|---|---|
| M10 50011 | M10 50010.15 | M10 50010.16 | M10 50010.18 | 18589 00014 |
| M10 50021 | M10 50020.15 | M10 50010.16 | M10 50020.18 | 18589 00014 |
| M10 50031 | M10 50030.15 | M10 50010.16 | M10 50030.18 | 18589 00018 |

**BENEFITS for you:**

- Three sizes for drilling diameters from 15.9 to 26 mm
- Internal coolant supply
- Suitable for high spindle speeds
- Cylindrical shank
- Fine adjustment range 0.3 mm in the diameter
- Extensive range of inserts with positive cutter geometry and wear-resistant coatings
- Inserts available with special cutter geometries to produce short, rolled chips for precision machining steel materials which produce long chips





| Guideline values for fine boring | | | | | | | $v_c$ | f (mm/rev) |
|---|---|---|---|---|---|---|---|---|
| | Material group | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | max. feed 3×D ∅ 15,9 – 26 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,07 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,06 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,07 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 240 | 0,06 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 200 | 0,05 |
| P | 4.1 | | | HSS | | 120 | 0,04 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,04 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,04 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 200 | 0,05 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 180 | 0,05 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 120 | 0,04 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 240 | 0,10 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 200 | 0,10 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,08 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 180 | 0,08 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 160 | 0,08 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,07 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,10 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 400 | 0,04 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 300 | 0,08 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 500 | 0,06 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 350 | 0,08 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 300 | 0,08 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 120 | 0,05 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 90 | 0,05 |

| Alternative Inserts | | | | |
|---|---|---|---|---|
| | ∅D | Insert: W30 / W57 / PKD CBN W30 / .32.. / .39.. — Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H |
| for better chip control | 15,9 – 26 | **W30 04120.3232** | TOHX 06T102EL-US12 CK32 | |
| | | **W30 04120.3977** | TOHX 06T1ZZEL-39G12 BK77 | |
| for higher cutting speed | 15,9 – 26 | **W57 04140.023210** | TOGX 06T102EN-14 CK3210 | |
| | | **W30 04120.0238** | TOHX 06T102EL-G12 CK38 | |
| | | **W30 04990.0257** | TOGX 06T102TN CBN57 | only GG25 |
| | | **W30 04990.0255** | TOGX 06T102FN PKD55 | |
| for better surface finish | 15,9 – 26 | **W30 04140.0232** | TOGX 06T102EN-14 CK32 | |
| | | **W30 04060.036110** | TOHX 06T103EL-G06 BK6110 | |
| | | **W30 04200.0321** | TOHX 06T103FL-G20 K10 | |
| | | **W30 04990.0255** | TOGX 06T102FN PKD55 | |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

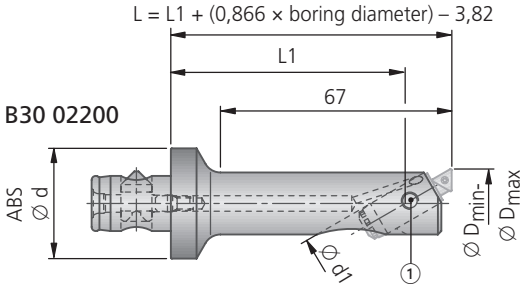
**Important: See chapter 8 for more application details and safety notes!**

# KOMET® Micro-adjustable Head FZ

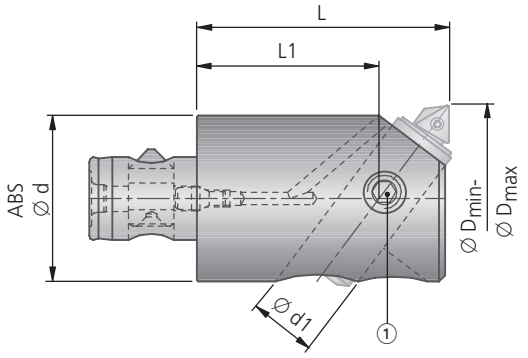
# Ø 20 – 175 mm

## Boring Bar with ABS® connection

(ABS-FZ)




for B30 01220: L = L1 + (0,375 × boring dia.)
L = L1 + (0,866 × boring dia.) – 3,92




| Drilling range[1] | | | Boring bar | | | | | Assembly parts | | Fine Boring Cartridge | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ① Ø D min | ② Ø D max | ③ Ø D max | Order No. Article | ABS Ø d | Ø d1 | L1 | kg | Clamping screw ① DIN 913 Order No. Article | Hexagonal key Order No. Article | complete (Housing + Boring tool) Order No. Article | Housing Order No. Article | Boring tool Order No. Article |
| 20 | 22 | 26 | **B30 02200** ABS32/20-FZ10-5 | 32 | 10 | 68 | 0,19 | 55051 05005 M5×5 | 18591 10025 SW 2,5 | M30 04111 FZ10-20-5 | M30 04011 FZ10-20-5 | M30 54011 U10-Z5-803K |
| 26 | 30 | 33 | **B30 01220** ABS25-FZ10-5 | 25 | 10 | 39,7 | 0,13 | 55051 05005 M5×5 | 18591 10025 SW 2,5 | M30 04121 FZ10-31-5 | M30 00031 FZ10-31-1 | M30 54021 U10-Z5-803 |
| 28 | 34,4 | 38 | **B30 01010** ABS25-FZ10-3 | 25 | 10 | 40 | 0,20 | 55051 06008 M6×8 | 18591 10030 SW 3 | M30 02231 FZ10-28-3 | M30 02031 FZ10-28-3 | M30 52021 U10-Z3-803 |
| 32 | 38,4 | 44 | | | | | | | | M30 02241 FZ10-32-3 | M30 02041 FZ10-32-3 | |
| 36 | 44 | 48 | **B30 02010** ABS32-FZ12-3 | 32 | 12 | 47 | 0,36 | 55051 08010 M8×10 | 18591 10040 SW 4 | M30 02251 FZ12-36-3 | M30 02051 FZ12-36-3 | M30 52031 U12-Z3-803 |
| 40 | 48 | 55 | | | | | | | | M30 02261 FZ12-40-3 | M30 02061 FZ12-40-3 | |
| 45 | 54,6 | 60 | **B30 03010** ABS40-FZ16-3 | 40 | 16 | 44 | 0,55 | 55051 10012 M10×12 | 18591 10050 SW 5 | M30 02271 FZ16-45-3 | M30 02071 FZ16-45-3 | M30 52041 U16-Z3-804 |
| 50 | 59,6 | 68 | | | | | | | | M30 02281 FZ16-50-3 | M30 02081 FZ16-50-3 | |
| 56 | 68 | 78 | **B30 04010** ABS50-FZ20-3 | 50 | 20 | 49,5 | 1,02 | 55051 12016 M12×16 | 18591 10060 SW 6 | M30 02291 FZ20-56-3 | M30 02091 FZ20-56-3 | M30 52051 U20-Z3-804 |
| 64 | 76 | 90 | | | | | | | | M30 02301 FZ20-64-3 | M30 02101 FZ20-64-3 | |
| 72 | 88 | 100 | **B30 05010** ABS63-FZ25-3 | 63 | 25 | 63,5 | 2,06 | 55051 16020 M16×20 | 18591 10080 SW 8 | M30 02311 FZ25-72-3 | M30 02111 FZ25-72-3 | M30 52061 U25-Z3-805 |
| 80 | 96 | 114 | | | | | | | | M30 02321 FZ25-80-3 | M30 02121 FZ25-80-3 | |
| 90 | 114 | 126 | **B30 06010** ABS80-FZ32-3 | 80 | 32 | 77 | 4,06 | 55051 20020 M20×20 | 18591 10100 SW 10 | M30 02331 FZ32-90-3 | M30 02131 FZ32-90-3 | M30 52071 U32-Z3-805 |
| 100 | 124 | 140 | | | | | | | | M30 02341 FZ32-100-3 | M30 02141 FZ32-100-3 | |
| 110 | 134 | 150 | **B30 07010** ABS100-FZ32-3 | 100 | 32 | 84,5 | 7,65 | 55051 20025 M20×25 | 18591 10100 SW 10 | M30 02351 FZ32-110-3 | M30 02151 FZ32-110-3 | M30 52071 U32-Z3-805 |
| 125 | 149 | 175 | | | | | | | | M30 02361 FZ32-125-3 | M30 02161 FZ32-125-3 | |

[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

- fast, accurate setting of tool simply by using adjusting spindle
- central coolant supply onto cutters
- maximum setting accuracy by adjusting tool while clamped



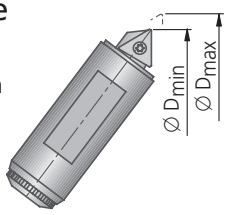
Patent applied for inside and outside Germany (ABS)

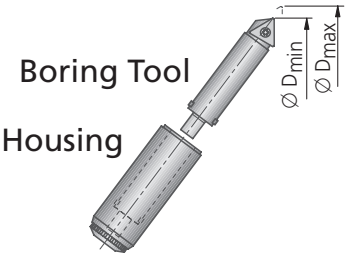
| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 52 through hole | HRC > 52 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ✕ | ● | ● | ● |

● very good ◐ good ○ possible ✕ not possible

## Fine Boring Cartridge complete

- Fine boring cartridge with reduced reverse play < 0.03 mm and radial play < 0.04 mm
- The smallest adjustment increment is 0.002 mm in the ∅ above vernier




| Basic recommendation | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|
| Insert (W30, W57 -12, W57 -14, W30 CBN) Order No. ▽▽ Size | ISO-Code | for workpiece material P M K N S H | Clamping screw Order No. Article | Screwdriver Order No. Article | Locking key Order No. Article |
| W57 04140.028430<br>W30 04060.036110<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK8430<br>TOHX 06T103EL-G06 BK6110<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | <52 HRC, >52 HRC | N00 56021<br>S/M2×3,8-6IP<br>0,62 Nm | L05 00810<br>6IP | L05 01020<br>R2/N1 |
| W57 04140.028430<br>W30 04060.036110<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK8430<br>TOHX 06T103EL-G06 BK6110<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | <52 HRC, >52 HRC | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP | L05 01020<br>R2/N1 |
| W57 04140.028430<br>W30 04060.036110<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK8430<br>TOHX 06T103EL-G06 BK6110<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | <52 HRC, >52 HRC | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP | L05 01030<br>R2a/N1 |
| W57 14140.048430<br>W30 14060.046110<br>W57 14120.0423<br>W30 14990.0440 | TOGX 090204EN-14 BK8430<br>TOHX 090204EL-G06 BK6110<br>TOGX 090204FN-12 K10<br>TOGX 090204TN CBN40 | <52 HRC, >52 HRC | N00 56111<br>S/M2,6×6,2-8IP<br>1,28 Nm | L05 00830<br>8IP | L05 01040<br>N3 |
| W57 14140.048430<br>W30 14060.046110<br>W57 14120.0423<br>W30 14990.0440 | TOGX 090204EN-14 BK8430<br>TOHX 090204EL-G06 BK6110<br>TOGX 090204FN-12 K10<br>TOGX 090204TN CBN40 | <52 HRC, >52 HRC | N00 56111<br>S/M2,6×6,2-8IP<br>1,28 Nm | L05 00830<br>8IP | L05 01050<br>R4/N4 |
| W57 26140.048430<br>W30 26060.046110<br>W57 26120.0423<br>W30 26990.0440 | TOGX 140304EN-14 BK8430<br>TOHX 140304EL-G06 BK6110<br>TOGX 140304FN-12 K10<br>TOGX 140304TN CBN40 | <52 HRC, >52 HRC | N00 56211<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP | L05 01060<br>ZV25 |
| W57 26140.048430<br>W30 26060.046110<br>W57 26120.0423<br>W30 26990.0440 | TOGX 140304EN-14 BK8430<br>TOHX 140304EL-G06 BK6110<br>TOGX 140304FN-12 K10<br>TOGX 140304TN CBN40 | <52 HRC, >52 HRC | N00 56211<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP | L05 01070<br>R5/N5 |
| W57 26140.048430<br>W30 26060.046110<br>W57 26120.0423<br>W30 26990.0440 | TOGX 140304EN-14 BK8430<br>TOHX 140304EL-G06 BK6110<br>TOGX 140304FN-12 K10<br>TOGX 140304TN CBN40 | <52 HRC, >52 HRC | N00 56211<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP | L05 01070<br>R5/N5 |

**Supply boring bar includes:** Boring bar complete with clamping screw and hexagonal key, but does not include cartridge.
**Supply fine boring cartridge complete includes:** Fine boring cartridge with clamping screw.
**Supply housing includes:** Housing without boring tool.
**Supply boring tool includes:** with clamping screw.
Please order inserts and accessories separately.

Guideline values for fine boring and alternative inserts: pages 276.

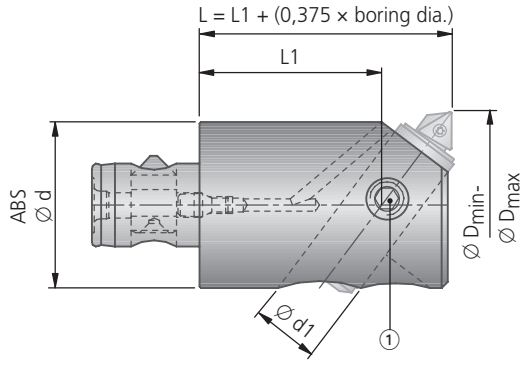
# KOMET® Micro-adjustable Head FZ

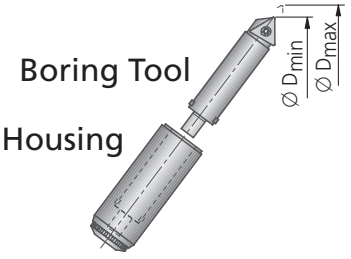
## Ø 28 – 68 mm

## Boring Bar with ABS® connection

(ABS-FZ)

- N for machining aluminium
- Insert tilt of +5° over cutting edge
- The smallest adjustment increment is 0.002 mm in the ∅ above vernier




| Drilling range[1] | | | Boring bar | | | | | Assembly parts | | Fine Boring Cartridge | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Clamping screw ① | Hexagonal key | Housing | Boring tool | |
| ① Ø D min | ② Ø D max | ③ Ø D max | Order No. Article | ABS Ø d | Ø d1 | L1 | kg | DIN 913 Order No. Article | Order No. Article | Order No. Article | Order No. Article | |
| 28 | 34,4 | 38 | B30 01010 ABS25-FZ10-3 | 25 | 10 | 40 | 0,20 | 55051 06008 M6×8 | 18591 10030 SW 3 | M30 02031 FZ10-28-3 | M30 52421 U10-Z3-T06 | |
| 32 | 38,4 | 44 | | | | | | | | M30 02041 FZ10-32-3 | | |
| 36 | 44 | 48 | B30 02010 ABS32-FZ12-3 | 32 | 12 | 47 | 0,36 | 55051 08010 M8×10 | 18591 10040 SW 4 | M30 02051 FZ12-36-3 | M30 52431 U12-Z3-T06 | |
| 40 | 48 | 55 | | | | | | | | M30 02061 FZ12-40-3 | | |
| 45 | 54,6 | 60 | B30 03010 ABS40-FZ16-3 | 40 | 16 | 44 | 0,55 | 55051 10012 M10×12 | 18591 10050 SW 5 | M30 02071 FZ16-45-3 | M30 52441 U16-Z3-T09 | |
| 50 | 59,6 | 68 | | | | | | | | M30 02081 FZ16-50-3 | | |

[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

- fast, accurate setting of tool simply by using adjusting spindle
- central coolant supply onto cutters
- maximum setting accuracy by adjusting tool while clamped



Patent applied for inside and outside Germany (ABS)

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 52 through hole | HRC > 52 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ✕ | ● | ● | ● |

● very good ◐ good ○ possible ✕ not possible

| Basic recommendation | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|
| Insert | | for workpiece material | Clamping screw | Screwdriver | Locking key |
| Order No. ▽▽ Size | ISO-Code | P M K N S H | Order No. Article | Order No. Article | Order No. Article |
| **W58 03120.0423** | TPGX 060104FN-12 K10 | ● | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **L05 01020** R2/N1 |
| **W58 03120.0423** | TPGX 060104FN-12 K10 | ● | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **L05 01030** R2a/N1 |
| **W58 13120.0423** | TPGX 090204FN-12 K10 | ● | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **L05 01040** N3 |

**Supply boring bar includes:** Boring bar complete with clamping screw and hexagonal key, but does not include cartridge.
**Supply housing includes:** Housing without boring tool.
**Supply boring tool includes:** with clamping screw.
Please order inserts and accessories separately.

Guideline values for fine boring and alternative inserts: pages 277.

## Technical Notes

| Guideline values for fine boring | | | | | | | $v_c$ | f (mm/rev) max. feed 3,5×D | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Material group | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | | Cutting speed vc (m/min) | Ø 20 – 48 | Ø 45 – 76 | Ø 72 – 149 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | | 300 | 0,08 | 0,10 | 0,15 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | | 250 | 0,08 | 0,12 | 0,20 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | | 300 | 0,10 | 0,15 | 0,25 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | | 240 | 0,08 | 0,10 | 0,20 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | | 200 | 0,06 | 0,10 | 0,15 |
| P | 4.1 | | | HSS | | | 120 | 0,06 | 0,08 | 0,12 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | | 50 | 0,06 | 0,08 | 0,10 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | | 30 | 0,06 | 0,08 | 0,10 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | | 200 | 0,08 | 0,10 | 0,15 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | | 180 | 0,06 | 0,10 | 0,15 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | | 120 | 0,06 | 0,10 | 0,15 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | | 240 | 0,15 | 0,20 | 0,30 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | | 200 | 0,15 | 0,20 | 0,30 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | | 180 | 0,10 | 0,15 | 0,25 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | | 180 | 0,10 | 0,15 | 0,25 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | | 160 | 0,10 | 0,15 | 0,25 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | | 140 | 0,10 | 0,15 | 0,25 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | | 120 | 0,10 | 0,15 | 0,25 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | | 300 | 0,10 | 0,15 | 0,20 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | | 300 | 0,10 | 0,15 | 0,20 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | | 500 | 0,08 | 0,12 | 0,15 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | | 300 | 0,10 | 0,15 | 0,20 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | | 250 | 0,10 | 0,15 | 0,20 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | | 120 | 0,08 | 0,08 | 0,10 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | | 90 | 0,06 | 0,08 | 0,10 |

| Alternative Inserts | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Insert | | | | | | for workpiece material | | |
| | | W30 | W57 | PKD CBN W30 | .32.. | .39.. | | | | |
| | ØD | Order No. ▽▽ size | | ISO-Code | | | | P | M | K | N | S | H |
| for better chip control | 20 – 48 | W30 04120.3232 | | TOHX 06T102EL-US12 CK32 | | | | ◐ | ◑ | | | | |
| | | W57 04140.023210 | | TOGX 06T102EN-14 CK3210 | | | | ◐ | ◑ | | | | |
| | 45 – 76 | W30 14120.3232 | | TOHX 090202EL-US12 CK32 | | | | ◐ | ◑ | | | | |
| | | W57 14140.023210 | | TOGX 090202EN-14 CK3210 | | | | ◐ | ◑ | | | | |
| | 72 – 149 | W30 26120.3232 | | TOHX 140302EL-US12 CK32 | | | | ◐ | ◑ | | | | |
| | | W57 26140.023210 | | TOGX 140302EN-14 CK3210 | | | | ◐ | ◑ | | | | |
| for higher cutting speed | 20 – 48 | W57 04140.023210 | | TOGX 06T102EN-14 CK3210 | | | | ◐ | | | | | |
| | | W30 04120.0238 | | TOHX 06T102EL-G12 CK38 | | | | ◐ | ◑ | | | | |
| | | W30 04990.0257 | | TOGX 06T102TN CBN57 | | | | | | ◐ | | | |
| | 45 – 76 | W57 14140.043210 | | TOGX 090204EN-14 CK3210 | | | | ◐ | | | | | |
| | | W30 14120.0238 | | TOHX 090202EL-G12 CK38 | | | | ◐ | ◑ | | | | only GG25 |
| | | W30 14990.0457 | | TOGX 090204TN CBN57 | | | | | | ◐ | | | |
| | 72 – 149 | W57 26140.043210 | | TOGX 140304EN-14 CK3210 | | | | ◐ | | | | | |
| | | W30 26120.0238 | | TOHX 140302EL-G12 CK38 | | | | ◐ | ◑ | | | | only GG25 |
| | | W30 26990.0457 | | TOGX 140304TN CBN57 | | | | | | ◐ | | | |
| for better surface finish | 20 – 48 | W30 04120.3130 | | TOHX 06T102EL-UF12 CK30 | | | | ◐ | ◑ | | | | |
| | | W30 04990.0355 | | TOGX 06T103FN PKD55 | | | | | | | ◐ | | |
| | 45 – 76 | W30 14120.3130 | | TOHX 090202EL-UF12 CK30 | | | | ◐ | ◑ | | | | |
| | | W30 14990.0455 | | TOGX 090204FN PKD55 | | | | | | | ◐ | | |
| | 72 – 149 | W30 26120.3130 | | TOHX 140302EL-UF12 CK30 | | | | ◐ | ◑ | | | | |
| | | W30 14990.0455 | | TOGX 140304FN PKD55 | | | | | | | ◐ | | |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



Important: See chapter 8 for more application details and safety notes!

| Guideline values for fine boring | | | | | | | $v_c$ | f (mm/rev) | |
|---|---|---|---|---|---|---|---|---|---|
| | Material group | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | max. feed 3,5×D Ø 28 – 48 | max. feed 3,5×D Ø 45 – 59,6 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | – | – | – |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | – | – | – |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | – | – | – |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | – | – | – |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | – | – | – |
| P | 4.1 | | | HSS | | – | – | – |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | – | – | – |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | – | – | – |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | – | – | – |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | – | – | – |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | – | – | – |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | – | – | – |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | – | – | – |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | – | – | – |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | – | – | – |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | – | – | – |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | – | – | – |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | – | – | – |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 270 | 0,1 | 0,15 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 250 | 0,10 | 0,15 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 400 | 0,08 | 0,12 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,10 | 0,15 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,10 | 0,15 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | – | – | – |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | – | – | – |

| Alternative Inserts | | | | |
|---|---|---|---|---|
| | ØD | Insert (PKD / -P15) Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H |
| for better chip control | 20 – 48 | W32 03150.0421 | TPHX 060104FL-P15 K10 | ◐ |
| for better chip control | 45 – 59,6 | W32 13150.0421 | TPHX 090204FL-P15 K10 | ◐ |
| for higher cutting speed | 20 – 48 | W32 03990.0455<br>W32 03150.0450 | TPHB 060104FN PKD55<br>TPHX 060104FL-P15 BK50 | ◐<br>◐ |
| for higher cutting speed | 45 – 59,6 | W32 13990.0455 | TPHB 090204FN PKD55 | ◐ |
| for better surface finish | 20 – 48 | W32 03990.0455<br>W32 03150.0450 | TPHB 060104FN PKD55<br>TPHX 060104FL-P15 BK50 | ◐<br>◐ |
| for better surface finish | 45 – 59,6 | W32 13990.0455 | TPHB 090204FN PKD55 | ◐ |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

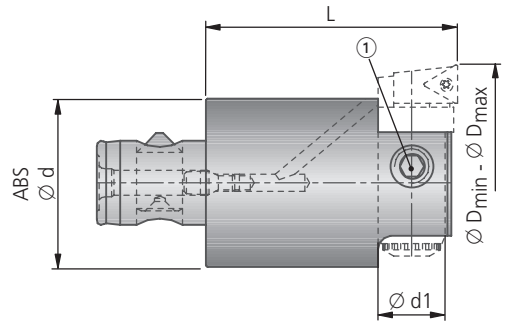
**Important: See chapter 8 for more application details and safety notes!**

# KOMET® Micro-adjustable Head FF

# Ø 29,5 – 199 mm

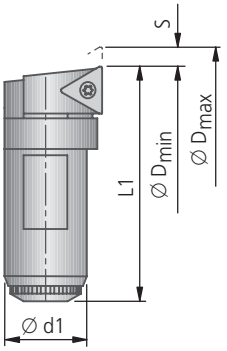
## Boring Bar with ABS® Connection

(ABS-FF)




## Fine Boring Cartridge

- The smallest adjustment increment is 0.002 mm in the ∅ above vernier




| | Boring bar | | | | | Assembly parts | | Fine Boring Cartridge | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø D min - max | Order No. Article | ABS Ø d | Ø d1 | L | kg | Clamping screw ① DIN 913 Order No. Article | Hexagonal key Order No. Article | Order No. Article | Ø d1 | L1 | S | kg |
| 29,5 - 36 | B30 11010 ABS25-FF-29,5 | 25 | 10 | 50 | 0,17 | 55051 06006 M6×6 | 18591 10030 SW 3 | M30 20011 FF10-30 | 10 | 28,5 | 3,5 | 0,06 |
| 35,5 - 42 | B30 11020 ABS25-FF-35,5 | 25 | 10 | 50 | 0,18 | | | | | | | |
| 39 - 45 | B30 12010 ABS32-FF-39 | 32 | 12 | 60 | 0,35 | 55051 08008 M8×8 | 18591 10040 SW 4 | M30 20021 FF12-39 | 12 | 37,5 | 3,5 | 0,03 |
| 44 - 50 | B30 12020 ABS32-FF-44 | 32 | 12 | 60 | 0,35 | 55051 08010 M8×10 | | | | | | |
| 47 - 57 | B30 13010 ABS40-FF-47 | 40 | 16 | 60 | 0,52 | 55051 10010 M10×10 | 18591 10050 SW 5 | M30 20031 FF16-47 | 16 | 45 | 5 | 0,06 |
| 56 - 66 | B30 13020 ABS40-FF-56 | 40 | 16 | 60 | 0,53 | | | | | | | |
| 58 - 71 | B30 14010 ABS50-FF-58 | 50 | 20 | 70 | 0,97 | 55051 12012 M12×12 | 18591 10060 SW 6 | M30 20041 FF20-58 | 20 | 56 | 7 | 0,12 |
| 70 - 83 | B30 14020 ABS50-FF-70 | 50 | 20 | 70 | 1,00 | | | | | | | |
| 79 - 94 | B30 15010 ABS63-FF-79 | 63 | 25 | 70 | 1,58 | 55051 16016 M16×16 | 18591 10080 SW 8 | M30 20051 FF25-79 | 25 | 77,5 | 8 | 0,27 |
| 93 - 108 | B30 15020 ABS63-FF-93 | 63 | 25 | 70 | 1,61 | | | | | | | |
| 100 - 121 | B30 16010 ABS80-FF-100 | 80 | 32 | 90 | 3,33 | 55051 20020 M20×20 | 18591 10100 SW 10 | M30 20061 FF32-100 | 32 | 97 | 11 | 0,55 |
| 120 - 141 | B30 16020 ABS80-FF-120 | 80 | 32 | 90 | 3,37 | | | | | | | |
| 138 - 159 | B30 17010 ABS100-FF-138 | 100 | 32 | 90 | 6,56 | 55051 20030 M20×30 | 18591 10100 SW 10 | M30 20071 FF32-138 | 32 | 131 | 11 | 0,76 |
| 158 - 179 | B30 17020 ABS100-FF-158 | 100 | 32 | 90 | 6,80 | 55051 20020 M20×20 | | | | | | |
| 178 - 199 | B30 17030 ABS100-FF-178 | 100 | 32 | 90 | 6,61 | 55051 20030 M20×30 | | | | | | |

- radial mounting of micro-adjustable cartridge.
- adjustment of cartridge while clamped, providing optimum setting accuracy.
- central coolant supply onto cutting edge.



Patent applied for inside and outside Germany (ABS)

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 52 through hole | HRC > 52 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ✕ | ● | ● | ● |

● very good ◐ good ○ possible ✕ not possible

| Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|
| Insert (W30, W57 -12, W57 -14, W30 CBN) | | for workpiece material | Clamping screw | Screwdriver |
| Order No. ▽▽ Size | ISO-Code | P M K N S H | Order No. Article | Order No. Article |
| W57 04140.028430<br>W30 04060.036110<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK8430<br>TOHX 06T103EL-G06 BK6110<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | | N00 56021<br>S/M2×3,8-6IP<br>0,62 Nm | L05 00810<br>6IP |
| W57 04140.028430<br>W30 04060.036110<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK8430<br>TOHX 06T103EL-G06 BK6110<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | | N00 56021<br>S/M2×3,8-6IP<br>0,62 Nm | L05 00810<br>6IP |
| W57 14140.048430<br>W30 14060.046110<br>W57 14120.0423<br>W30 14990.0440 | TOGX 090204EN-14 BK8430<br>TOHX 090204EL-G06 BK6110<br>TOGX 090204FN-12 K10<br>TOGX 090204TN CBN40 | | N00 56101<br>S/M2,6×5,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| W57 14140.048430<br>W30 14060.046110<br>W57 14120.0423<br>W30 14990.0440 | TOGX 090204EN-14 BK8430<br>TOHX 090204EL-G06 BK6110<br>TOGX 090204FN-12 K10<br>TOGX 090204TN CBN40 | | N00 56111<br>S/M2,6×6,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| W57 26140.048430<br>W30 26060.046110<br>W57 26120.0423<br>W30 26990.0440 | TOGX 140304EN-14 BK8430<br>TOHX 140304EL-G06 BK6110<br>TOGX 140304FN-12 K10<br>TOGX 140304TN CBN40 | | N00 56211<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |
| W57 26140.048430<br>W30 26060.046110<br>W57 26120.0423<br>W30 26990.0440 | TOGX 140304EN-14 BK8430<br>TOHX 140304EL-G06 BK6110<br>TOGX 140304FN-12 K10<br>TOGX 140304TN CBN40 | | N00 56211<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |
| W57 26140.048430<br>W30 26060.046110<br>W57 26120.0423<br>W30 26990.0440 | TOGX 140304EN-14 BK8430<br>TOHX 140304EL-G06 BK6110<br>TOGX 140304FN-12 K10<br>TOGX 140304TN CBN40 | | N00 56211<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |

**Supply boring bar includes:** Boring bar complete with clamping screw and hexagonal key, but does not include cartridge.
**Supply fine boring cartridge includes:** Fine boring cartridge with clamping screw.
Please order inserts and accessories separately.

Guideline values for fine boring and alternative inserts: pages 280-281.

## Technical Notes



| Guideline values for fine boring | | | | | | | $v_c$ | f (mm/rev) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | max. feed 3,5×D | | |
| | Material group | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | Ø 29,5 – 50 | Ø 47 – 83 | Ø 79 – 199 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,08 | 0,10 | 0,15 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,08 | 0,12 | 0,20 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,10 | 0,15 | 0,25 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 240 | 0,08 | 0,10 | 0,20 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 200 | 0,06 | 0,10 | 0,15 |
| P | 4.1 | | | HSS | | 120 | 0,06 | 0,08 | 0,12 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,06 | 0,08 | 0,10 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,06 | 0,08 | 0,10 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 200 | 0,08 | 0,10 | 0,15 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 180 | 0,06 | 0,10 | 0,15 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 120 | 0,06 | 0,10 | 0,15 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 240 | 0,15 | 0,20 | 0,30 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 200 | 0,15 | 0,20 | 0,30 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,10 | 0,15 | 0,25 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 180 | 0,10 | 0,15 | 0,25 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 160 | 0,10 | 0,15 | 0,25 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,10 | 0,15 | 0,25 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,10 | 0,15 | 0,25 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,10 | 0,15 | 0,20 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 300 | 0,10 | 0,15 | 0,20 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 500 | 0,08 | 0,12 | 0,15 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,10 | 0,15 | 0,20 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,10 | 0,15 | 0,20 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 120 | 0,08 | 0,08 | 0,10 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 90 | 0,06 | 0,08 | 0,10 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



**Important: See chapter 8 for more application details and safety notes!**

## Alternative Inserts

| | ØD | Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H |
|---|---|---|---|---|
| | | Insert: W30 W57 PKD CBN W30 .32.. .39.. | | |
| for better chip control | 29,5 – 50 | **W30 04120.3232** | TOHX 06T102EL-US12 CK32 | ◐ ◑ |
| | | **W57 04140.023210** | TOGX 06T102EN-14 CK3210 | ◐ ◑ |
| | 47 – 83 | **W30 14120.3232** | TOHX 090202EL-US12 CK32 | ◐ ◑ |
| | | **W57 14140.023210** | TOGX 090202EN-14 CK3210 | ◐ ◑ |
| | 79 – 199 | **W30 26120.3232** | TOHX 140302EL-US12 CK32 | ◐ ◑ |
| | | **W57 26140.023210** | TOGX 140302EN-14 CK3210 | ◐ ◑ |
| for higher cutting speed | 29,5 – 50 | **W57 04140.023210** | TOGX 06T102EN-14 CK3210 | ◐ |
| | | **W30 04120.0238** | TOHX 06T102EL-G12 CK38 | ◐ ◑ |
| | | **W30 04990.0257** | TOGX 06T102TN CBN57 | ◐ |
| | 47 – 83 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | ◐ |
| | | **W30 14120.0238** | TOHX 090202EL-G12 CK38 | ◐ ◑ only GG25 |
| | | **W30 14990.0457** | TOGX 090204TN CBN57 | ◐ |
| | 79 – 199 | **W57 26140.043210** | TOGX 140304EN-14 CK3210 | ◐ |
| | | **W30 26120.0238** | TOHX 140302EL-G12 CK38 | ◐ ◑ only GG25 |
| | | **W30 26990.0457** | TOGX 140304TN CBN57 | ◐ |
| for better surface finish | 29,5 – 50 | **W30 04120.3130** | TOHX 06T102EL-UF12 CK30 | ◐ ◑ |
| | | **W30 04990.0355** | TOGX 06T103FN PKD55 | ◐ |
| | 47 – 83 | **W30 14120.3130** | TOHX 090202EL-UF12 CK30 | ◐ ◑ |
| | | **W30 14990.0455** | TOGX 090204FN PKD55 | ◐ |
| | 79 – 199 | **W30 26120.3130** | TOHX 140302EL-UF12 CK30 | ◐ ◑ |
| | | **W30 14990.0455** | TOGX 140304FN PKD55 | ◐ |

# KOMET MicroKom® M03Speed

## Micro-adjustable Head for High-precision Fine Adjustment with Balancing

The demands on fine boring tools are primarily increasing improvements to surface finishes and at the same time higher cutting speeds for short machining times.

Fine machining is a demanding bore machining operation. With MicroKom® M03Speed micro-adjustable heads KOMET® has provided a tried and tested tool system which, with its high precision adjustment mechanism, from the rough adjustment for the rotating clamping holder to the graduation collar on the external diameter, allows fine adjustment steps of up to 0.002 millimeters in the diameter.

The fine adjustment for wear compensation or after measurement is then carried out extremely accurately directly on the machine spindle. There is no need for clamping during and after this fine adjustment, which means that the dimension can be perfectly maintained.

Balancing: when the insert position is changed, there is an automatic balancing adjustment by means of a moveable balancing weight which lies diametrically opposite. This is a balancing operation on the adjustment plane for the insert.

This is based on six tool bodies to cover diameters from 24.8 to 206 millimeters. Maximum changeover accuracy is guaranteed with ABS® connections (25, 32, 40, 50 and 63).

Diameters from 38 to 206 are provided for by means of three adaptable and replaceable bridges.

Just like the whole production range, the bridges – which are in a lightweight material with a hard surface coating – allow high machining speeds to be achieved.

Flexibility with replaceable insert holders: the replaceable insert holders are special feature of the new product range.

The user has the facility to carry out forward and reverse machining with one tool with different approach angles. Using a specially designed connection, the changeover is fast, uncomplicated and safe.




### Construction

1 Insert holder with KOMET® geometry
2 Holder
3 Connection insert holder – holder
4 Holding screw insert holder – holder
5 Holding screw holder – micro-adjustable head
6 Adjusting screw for coarse adjustment of insert holder
7 Slide with weight compensation
8 Internal coolant directed onto insert
9 All scales have matt chrome finish
10 High resolution gives easy read-off **without** vernier
11 ABS® connection for maximum changeover accuracy

BENEFITS for you:

- Unique: our micro-adjustable head with automatic balancing in the slide
- Micro-adjustment steps per graduation of 0.002 mm in the diameter
- Geometrically the same as previous M03Speed design – and therefore compatible
- Micro-adjustment without the need for clamping

The modular tool range

- For diameters over 206 millimeters KOMET® offers bridging tools.
- In a modular design, these consist of standard elements and elements adjusted to length to customer specification.

## KOMET MicroKom® M03Speed

Page

**Micro-adjustable head with ABS® connection**

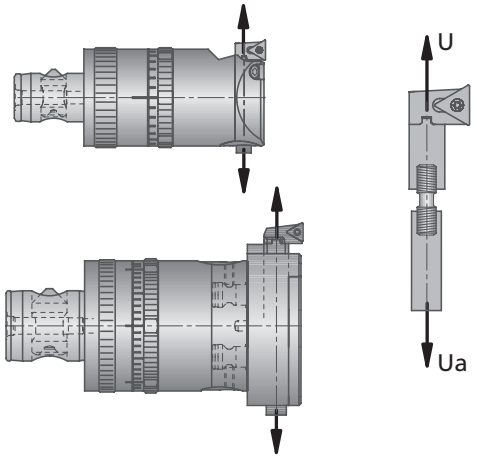
Micro-adjustable head
and insert holder for
∅ 24,8 - 39 mm 284 – 285
∅ 38,0 - 103 mm 286 – 287
Micro-adjustable head / replaceable bridge
and insert holder for
∅ 38,0 - 103 mm 288 – 289
∅ 100 - 206 mm 290 – 291

**Technical notes** 292

Guideline values for fine boring
Alternative inserts

**Set in case** 293

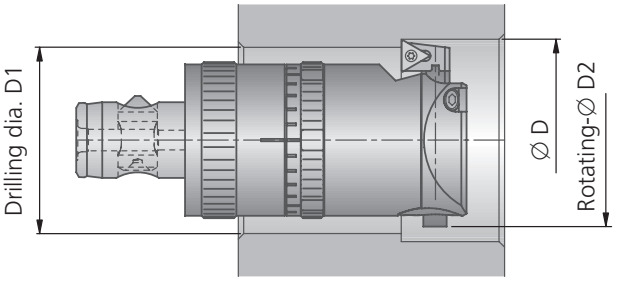
Dynamic weight balance on the slide guarantees optimum balance in any position




Calculation for reverse machining

D1 = Drilling dia.
D2 = Rotating dia.
D = Machining dia. generally

$$D1 = \frac{D2 + D}{2} + 0{,}5$$

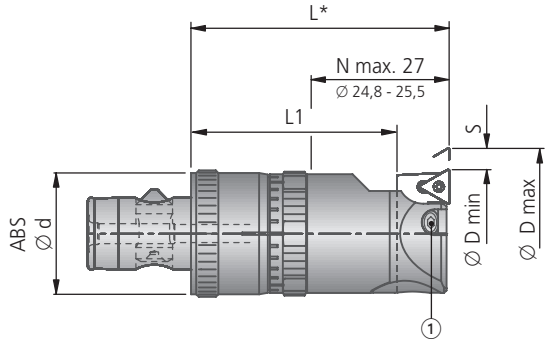


# KOMET MicroKom® M03Speed

# Ø 24,8 – 39,0 mm

## Micro-adjustable Head with ABS® Connection

| machine adaptor | coolant central | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
|   |  |  |  |   |



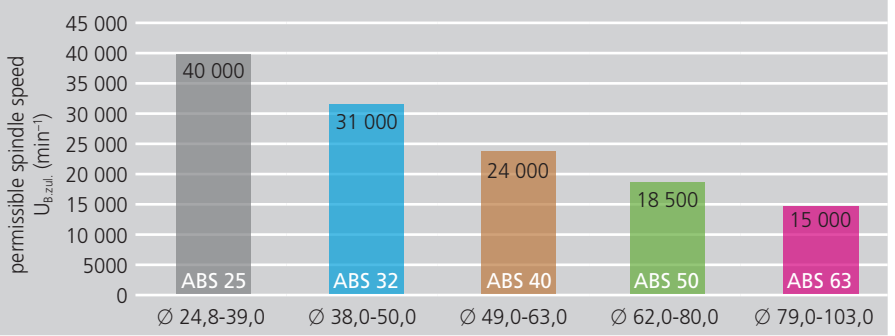

* dimension L see insert holder table on following page.

[1)] **Note:** from 25.5 mm diameters, the effective length N corresponds to tool length L.

| Ø D[1)] min - max | Rotating diameter Ø D2 | Order No. | ABS Ø d | L1 | Coarse adjustment path S | Fine adjustment in diameter | permissible spindle speed min⁻¹ | kg | Assembly parts: Clamping screw ① for holder — Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| 24,8 - 33,0 | 24,5 | **M03 00115** | 25 | 39,9 | 4,5 | 0,25 | 40 000 | 0,15 | **55051 04504** M4×0,5×4 |
| 29,0 - 39,0 | 26,0 | **M03 00515** | 25 | 39,9 | 5,0 | 0,40 | 40 000 | 0,17 | **55051 04504** M4×0,5×4 |

**Supply includes:**
Micro-adjustable drilling head with clamping screw ①. Please order insert holder and insert separately.

**Maximum spindle speed**
when using different ABS® sizes
Ø 24.8 - 103.0 mm
(MicroKom® M03Speed
without replaceable bridges)

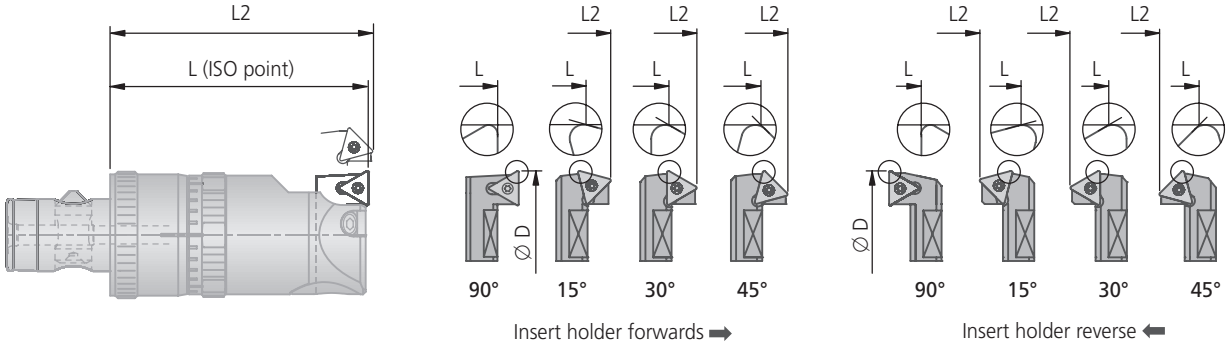





Patent applied for inside and outside Germany (ABS)

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ● | ● | ● | ● |

● very good ◐ good ○ possible ✕ not possible




| Micro-adjustable head | Insert holder forwards | | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ø D | Order No. | ϰ | L | L2 | kg | Insert -12 -14 W30 Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Clamping screw Order No. Article | Screwdriver Order No. Article |
| M03 00115 | 24,8 – 33 | M03 10011 | 90° | 50 | – | 0,004 | W57 04140.0260<br>W30 04060.036110<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK60<br>TOHX 06T103EL-G06 BK6110<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | <52 HRC >52 HRC | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP |
| | | M03 11110 | 15° | 44,4 | 50,3 | 0,004 | | | | | |
| | | M03 11210 | 30° | 45,4 | 50,7 | 0,004 | | | | | |
| | | M03 11310 | 45° | 46,4 | 50,7 | 0,004 | | | | | |
| M03 00515 | 29 – 39 | M03 10021 | 90° | 50 | – | 0,005 | W57 04140.0260<br>W30 04060.036110<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK60<br>TOHX 06T103EL-G06 BK6110<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | <52 HRC >52 HRC | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP |
| | | M03 11100 | 15° | 44,4 | 50,3 | 0,005 | | | | | |
| | | M03 11200 | 30° | 45,4 | 50,7 | 0,005 | | | | | |
| | | M03 11300 | 45° | 46,4 | 50,7 | 0,005 | | | | | |

| Micro-adjustable head | Insert holder reverse | | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ø D | Order No. | ϰ | L | L2 | kg | Insert -12 -14 W30 Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Clamping screw Order No. Article | Screwdriver Order No. Article |
| M03 00115 | 24,8 – 33 | M03 12010 | 90° | 35,8 | – | 0,004 | W57 04140.0260<br>W30 04420.0362<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK60<br>TOHX 06T103ER-G12 BK62<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | <52 HRC >52 HRC | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP |
| | | M03 12110 | 15° | 41,4 | 35,45 | 0,004 | | | | | |
| | | M03 12210 | 30° | 40,4 | 35,1 | 0,004 | | | | | |
| | | M03 12310 | 45° | 39,4 | 35,1 | 0,004 | | | | | |
| M03 00515 | 29 – 39 | M03 12000 | 90° | 35,8 | – | 0,005 | W57 04140.0260<br>W30 04420.0362<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK60<br>TOHX 06T103ER-G12 BK62<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | <52 HRC >52 HRC | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP |
| | | M03 12100 | 15° | 41,4 | 35,4 | 0,005 | | | | | |
| | | M03 12200 | 30° | 40,4 | 35,1 | 0,005 | | | | | |
| | | M03 12300 | 45° | 39,4 | 35,1 | 0,005 | | | | | |

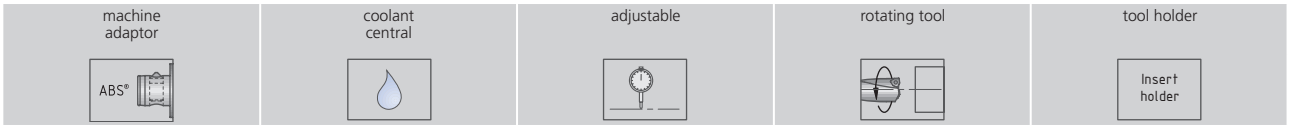
**Supply includes:**
Insert holder with assembly parts. Please order inserts and accessories separately.

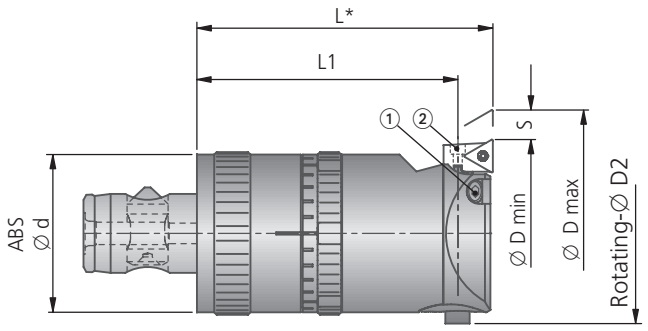
Guideline values for fine boring and alternative inserts: page 292.

# KOMET MicroKom® M03Speed

## Micro-adjustable Head with ABS® Connection

# Ø 38,0 – 103,0 mm



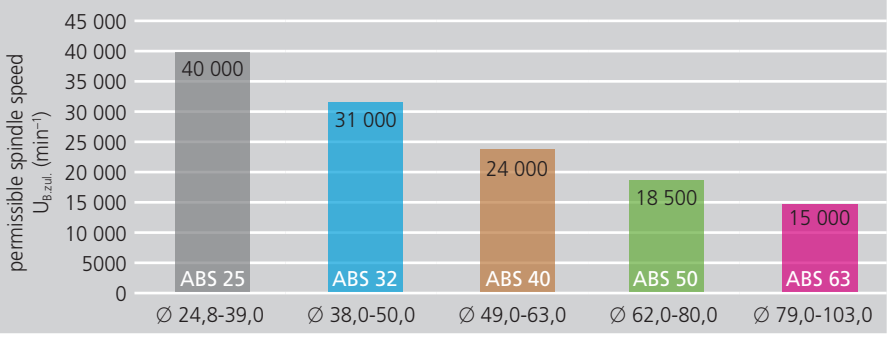




* dimension L see insert holder table on following page.

| Ø D min - max | Rotating diameter Ø D2 | Order No. | ABS Ø d | L1 | Coarse adjustment path S | Fine adjustment in diameter | permissible spindle speed min⁻¹ | kg | Assembly parts: Clamping screw ① for holder Order No. Article | Assembly parts: Holding screw ② Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|
| 38,0 - 42,0 | 33,0 | M03 01025 | 32 | 52,9 | 6,0 | 0,40 | 31 000 | 0,35 | 55051 04504 M4×0,5×4 | N00 56211 S/M3,5×7,3-10IP |
| 42,0 - 50,0 | Ø D – 8 | | | | | | | | | |
| 49,0 - 63,0 | 41,0 | M03 01535 | 40 | 60 | 7,0 | 0,40 | 24 000 | 0,63 | 55051 05506 M5×0,5×6 | N00 56211 S/M3,5×7,3-10IP |
| 62,0 - 80,0 | 51,0 | M03 02045 | 50 | 65 | 9,0 | 0,60 | 18 500 | 1,12 | | |
| 79,0 - 95,0 | 65,0 | M03 02555 | 63 | 66 | 12,0 | 0,60 | 15 000 | 1,91 | 55051 06008 M6×8 | N00 56401 S/M5×9,4-20IP |
| 95,0 - 103,0 | Ø D – 30 | | | | | | | | | |

**Supply includes:**
Micro-adjustable drilling head with clamping screw ① and holder with holding screw ②.
Please order insert holder and insert separately.

**Maximum spindle speed**
when using different ABS® sizes
Ø 24.8 - 103.0 mm
(MicroKom® M03Speed
without replaceable bridges)

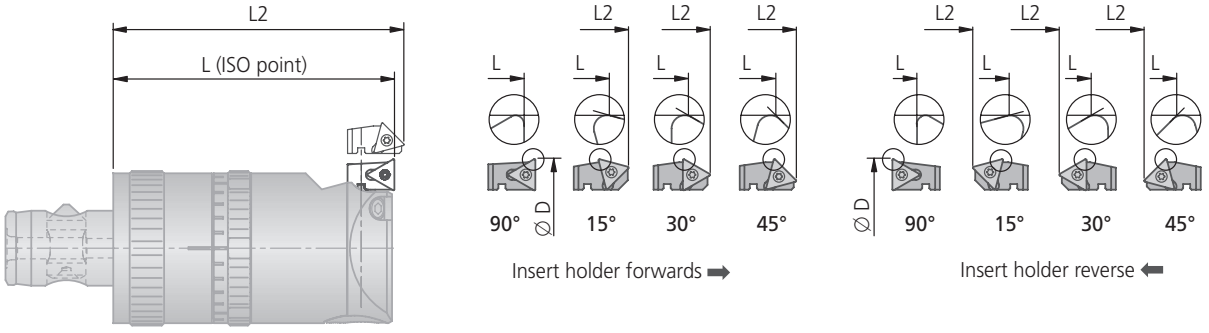





Patent applied for inside and outside Germany (ABS)

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ● | ● | ● | ● |

● very good ◐ good ○ possible ✕ not possible




| Micro-adjustable head | Insert holder forwards ➡ | | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Insert -12 -14 W30 | | for workpiece material | Clamping screw | Screwdriver |
| | Ø D | Order No. | ϰ | L | L2 | kg | Order No. ▽▽ size | ISO-Code | P M K N S H | Order No. Article | Order No. Article |
| M03 01025 ABS 32 | 38 – 50 | M03 10033 | 90° | 60 | – | 0,002 | W57 04140.0260 | TOGX 06T102EN-14 BK60 | | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP |
| | | M03 11120 | 15° | 55,5 | 61,7 | 0,002 | W30 04060.036110 | TOHX 06T103EL-G06 BK6110 | | | |
| | | M03 11220 | 30° | 56,5 | 62 | 0,002 | W57 04120.0223 | TOGX 06T102FN-12 K10 | <52 HRC | | |
| | | M03 11320 | 45° | 57,5 | 62 | 0,002 | W30 04990.0240 | TOGX 06T102TN CBN40 | >52 HRC | | |
| M03 01535 ABS 40 | 49 – 63 | M03 10043 | 90° | 70 | – | 0,005 | | | | | |
| | | – | 15° | | | | | | | | |
| | | M03 11230 | 30° | 64,5 | 72 | 0,005 | | | | | |
| | | M03 11330 | 45° | 66,8 | 72,9 | 0,005 | | | | | |
| M03 02045 ABS 50 | 62 – 80 | M03 10043 | 90° | 75 | – | 0,005 | W57 14140.0460 | TOGX 090204EN-14 BK60 | | N00 56101 S/M2,6×5,2-8IP 1,28 Nm | L05 00830 8IP |
| | | M03 11130 | 15° | 68,5 | 76,9 | 0,005 | W30 14060.046110 | TOHX 090204EL-G06 BK6110 | | | |
| | | M03 11230 | 30° | 69,5 | 77 | 0,005 | W57 14120.0423 | TOGX 090204FN-12 K10 | <52 HRC | | |
| | | M03 11330 | 45° | 71,8 | 77,9 | 0,005 | W30 14990.0440 | TOGX 090204TN CBN40 | >52 HRC | | |
| M03 02555 ABS 63 | 79 – 103 | M03 10063 | 90° | 80 | – | 0,009 | | | | | |
| | | M03 11150 | 15° | 71 | 79,7 | 0,009 | | | | | |
| | | M03 11250 | 30° | 73 | 80,7 | 0,009 | | | | | |
| | | M03 11350 | 45° | 75 | 81,3 | 0,009 | | | | | |

| Micro-adjustable head | Insert holder reverse ⬅ | | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Insert -12 -14 W30 | | for workpiece material | Clamping screw | Screwdriver |
| | Ø D | Order No. | ϰ | L | L2 | kg | Order No. ▽▽ size | ISO-Code | P M K N S H | Order No. Article | Order No. Article |
| M03 01025 ABS 32 | 38 – 50 | M03 12020 | 90° | 45,8 | – | 0,002 | W57 04140.0260 | TOGX 06T102EN-14 BK60 | | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP |
| | | M03 12120 | 15° | 50,4 | 44,2 | 0,002 | W30 04420.0362 | TOHX 06T103ER-G12 BK62 | | | |
| | | M03 12220 | 30° | 49,4 | 43,9 | 0,002 | W57 04120.0223 | TOGX 06T102FN-12 K10 | <52 HRC | | |
| | | M03 12320 | 45° | 48,4 | 43,9 | 0,002 | W30 04990.0240 | TOGX 06T102TN CBN40 | >52 HRC | | |
| M03 01535 ABS 40 | 49 – 63 | M03 12030 | 90° | 50 | – | 0,005 | | | | | |
| | | M03 12130 | 15° | 56,5 | 48,1 | 0,005 | | | | | |
| | | M03 12230 | 30° | 55,5 | 48 | 0,005 | | | | | |
| | | M03 12330 | 45° | 53 | 46,9 | 0,005 | | | | | |
| M03 02045 ABS 50 | 62 – 80 | M03 12030 | 90° | 55 | – | 0,005 | W57 14140.0460 | TOGX 090204EN-14 BK60 | | N00 56101 S/M2,6×5,2-8IP 1,28 Nm | L05 00830 8IP |
| | | M03 12130 | 15° | 61,5 | 53,1 | 0,005 | W30 14420.0462 | TOHX 090204ER-G12 BK62 | | | |
| | | M03 12230 | 30° | 60,5 | 53 | 0,005 | W57 14120.0423 | TOGX 090204FN-12 K10 | <52 HRC | | |
| | | M03 12330 | 45° | 58 | 51,9 | 0,005 | W30 14990.0440 | TOGX 090204TN CBN40 | >52 HRC | | |
| M03 02555 ABS 63 | 79 – 103 | M03 12050 | 90° | 52 | – | 0,009 | | | | | |
| | | M03 12150 | 15° | 61 | 52,6 | 0,009 | | | | | |
| | | M03 12250 | 30° | 59 | 51,5 | 0,009 | | | | | |
| | | M03 12350 | 45° | 57 | 50,9 | 0,009 | | | | | |

**Supply includes:** Insert holder with assembly parts. Please order inserts and accessories separately.

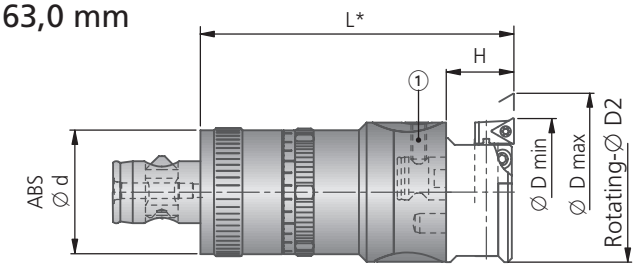
Guideline values for fine boring and alternative inserts: page 292.

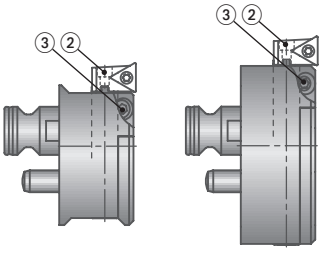
# KOMET MicroKom® M03Speed — Ø 38,0 – 103,0 mm

## Micro-adjustable Head / Replaceable Bridge with ABS® Connection

| machine adaptor | coolant central | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
| ABS® | | | | Insert holder |

### Ø 38,0 – 63,0 mm

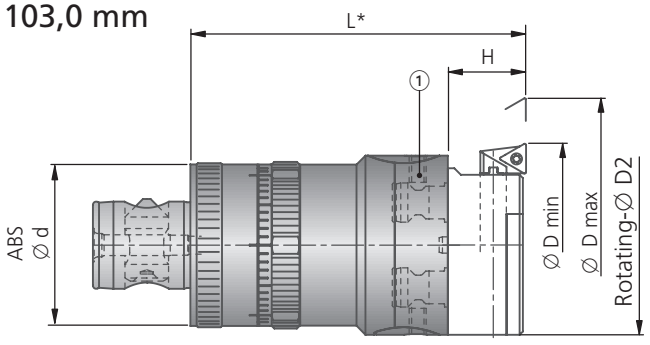


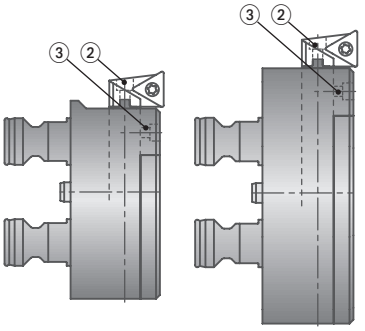




* dimension L see insert holder table on following page.

| Replaceable bridge | | | | | | Assembly parts | | Micro-adjustable head | | | Assembly parts |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Drilling diameter Ø D min - max | Rotating diameter Ø D2 | Order No. | H | permissible spindle speed min⁻¹ | kg | Location screw ② for insert holder Order No. Article | Clamping screw ③ for holder Order No. Article | Order No. | ABS Ø d | kg | Clamping screw ① for replaceable bridge Order No. Article |
| 38,0 - 51,0 | Ø D – 3,2 | M03 20180 | 17,5 | 31 000 | 0,06 | N00 56211 S/M3,5×7,3-10IP | 55051 04008 M4×8 (1,5 Nm) | M03 20170 | 32 | 0,35 | M03 20090.15 M8×10 |
| 50,0 - 63,0 | Ø D – 3,5 | M03 20190 | 17,5 | 24 000 | 0,08 | | | | | | |

### Ø 62,0 – 103,0 mm



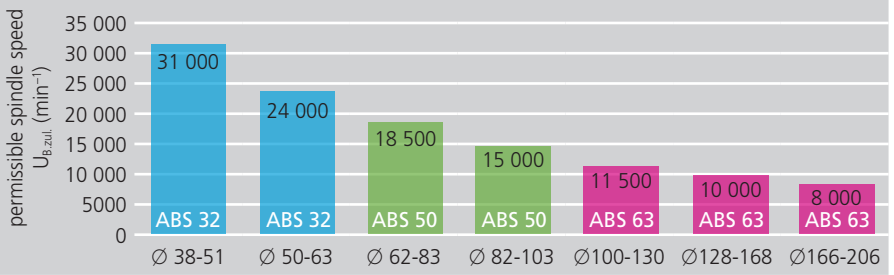




* dimension L see insert holder table on following page.

| Replaceable bridge | | | | | | Assembly parts | | Micro-adjustable head | | | Assembly parts |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø D min - max | Rotating diameter Ø D2 | Order No. | H | permissible spindle speed min⁻¹ | kg | Location screw ② for insert holder Order No. Article | Clamping screw ③ for holder Order No. Article | Order No. | ABS Ø d | kg | Clamping screw ① for replaceable bridge Order No. Article |
| 62,0 - 83,0 | 55 | M03 20150 | 24 | 18 500 | 0,20 | N00 56211 S/M3,5×7,3-10IP | 55051 04008 M4×8 (1,5 Nm) | M03 20140 | 50 | 1,3 | M03 20090.15 M8×10 |
| 82,0 - 103,0 | 71 | M03 20160 | 24 | 15 000 | 0,24 | | | | | | |

**Supply includes micro-adjustable drilling head:**
Micro-adjustable drilling head with clamping screw ①. Please order replaceable bridge separately.
**Supply includes replaceable bridge:**
Replaceable bridge with holding screw ② and clamping screw ③. Please order insert holder separately.

**Maximum spindle speed**
when using different ABS® sizes
Ø 24.8 - 103.0 mm
(MicroKom® M03Speed
with replaceable bridges)

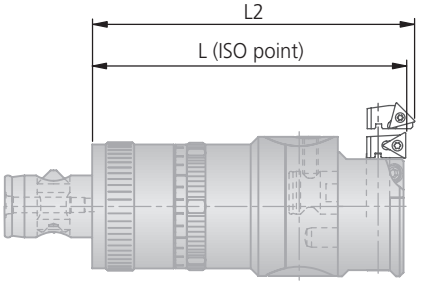


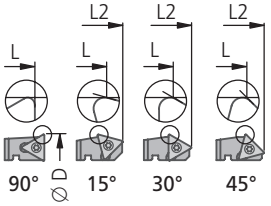


Patent applied for inside and outside Germany (ABS)

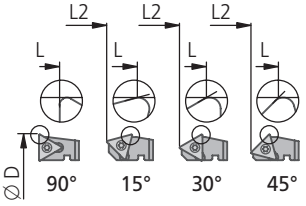
| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ● | ● | ● | ● |

● very good ◐ good ○ possible ✕ not possible




Insert holder forwards ➡




Insert holder reverse ⬅

| Micro-adjustable head | Insert holder forwards ➡ | | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ø D | Order No. | ϰ | L | L2 | kg | Insert -12 -14 W30 Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Clamping screw Order No. Article | Screwdriver Order No. Article |
| M03 20170 ABS 32 | 38 – 63 | M03 10033 | 90° | 81 | – | 0,002 | W57 04140.0260<br>W30 04060.036110<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK60<br>TOHX 06T103EL-G06 BK6110<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | <52 HRC<br>>52 HRC | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP |
| | | M03 11120 | 15° | 76,5 | 82,7 | 0,002 | | | | | |
| | | M03 11220 | 30° | 77,5 | 83 | 0,002 | | | | | |
| | | M03 11320 | 45° | 78,5 | 83 | 0,002 | | | | | |
| M03 20140 ABS 50 | 62 – 103 | M03 10043 | 90° | 103 | – | 0,005 | W57 14140.0460<br>W30 14060.046110<br>W57 14120.0423<br>W30 14990.0440 | TOGX 090204EN-14 BK60<br>TOHX 090204EL-G06 BK6110<br>TOGX 090204FN-12 K10<br>TOGX 090204TN CBN40 | <52 HRC<br>>52 HRC | N00 56101<br>S/M2,6×5,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| | | – | 15° | | | | | | | | |
| | | M03 11230 | 30° | 97,5 | 105 | 0,005 | | | | | |
| | | M03 11330 | 45° | 99,8 | 105,9 | 0,005 | | | | | |

| Micro-adjustable head | Insert holder reverse ⬅ | | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ø D | Order No. | ϰ | L | L2 | kg | Insert -12 -14 W30 Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Clamping screw Order No. Article | Screwdriver Order No. Article |
| M03 20170 ABS 32 | 38 – 63 | M03 12020 | 90° | 66,8 | – | 0,002 | W57 04140.0260<br>W30 04420.0362<br>W57 04120.0223<br>W30 04990.0240 | TOGX 06T102EN-14 BK60<br>TOHX 06T103ER-G12 BK62<br>TOGX 06T102FN-12 K10<br>TOGX 06T102TN CBN40 | <52 HRC<br>>52 HRC | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP |
| | | M03 12120 | 15° | 71,4 | 65,2 | 0,002 | | | | | |
| | | M03 12220 | 30° | 70,4 | 64,9 | 0,002 | | | | | |
| | | M03 12320 | 45° | 69,4 | 64,9 | 0,002 | | | | | |
| M03 20140 ABS 50 | 62 – 103 | M03 12030 | 90° | 83 | – | 0,005 | W57 14140.0460<br>W30 14420.0462<br>W57 14120.0423<br>W30 14990.0440 | TOGX 090204EN-14 BK60<br>TOHX 090204ER-G12 BK62<br>TOGX 090204FN-12 K10<br>TOGX 090204TN CBN40 | <52 HRC<br>>52 HRC | N00 56101<br>S/M2,6×5,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| | | M03 12130 | 15° | 89,5 | 81,1 | 0,005 | | | | | |
| | | M03 12230 | 30° | 88,5 | 81 | 0,005 | | | | | |
| | | M03 12330 | 45° | 86 | 79,9 | 0,005 | | | | | |

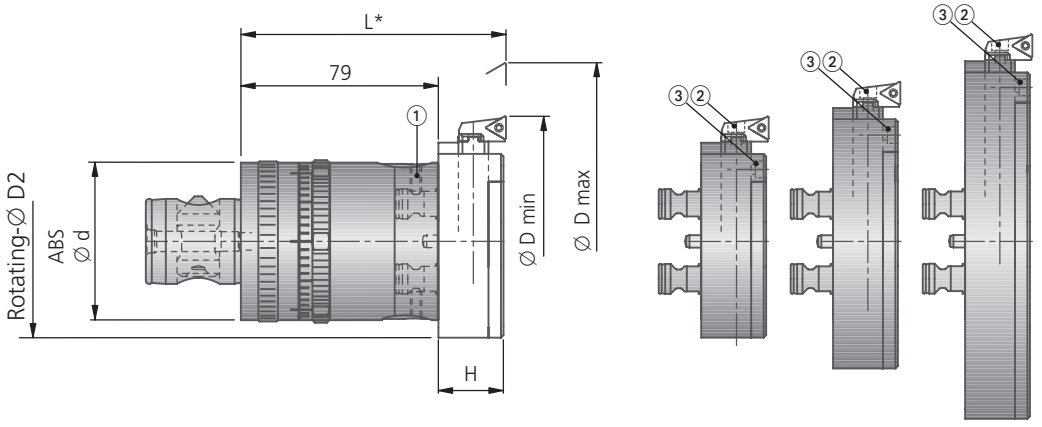
**Supply includes:**
Insert holder with assembly parts. Please order inserts and accessories separately.

Guideline values for fine boring and alternative inserts: page 292.

# KOMET MicroKom® M03Speed Ø 100,0 – 206,0 mm

## Micro-adjustable Head / Replaceable Bridge with ABS® Connection

| machine adaptor | coolant central | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
| ABS® | | | | Insert holder |

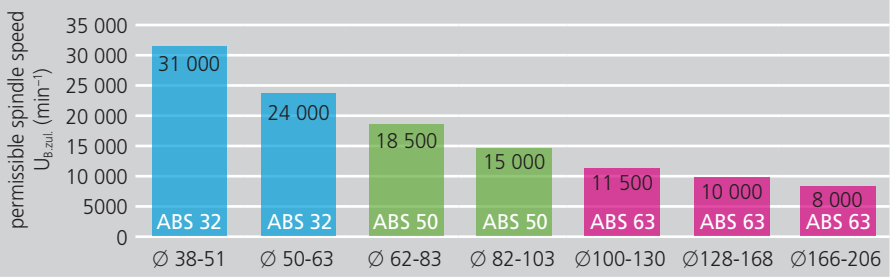



* dimension L see insert holder table on following page.

| Replaceable bridge | | | | | | Assembly parts | | Micro-adjustable head | | | Assembly parts |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø D min - max | Rotating diameter Ø D2 | Order No. | H | permissible spindle speed min⁻¹ | kg | Location screw ② for insert holder Order No. Article | Clamping screw ③ for holder Order No. Article | Order No. | ABS Ø d | kg | Clamping screw ① for replaceable bridge Order No. Article |
| 100 - 130 | 85 | **M03 20100** | 26 | 11 500 | 0,39 | **N00 56401** S/M5×9,4-20IP | **55051 04008** M4×8 (1,5 Nm) | **M03 20090** | 63 | 1,82 | **M03 20090.15** M8×10 |
| 128 - 168 | 109 | **M03 20110** | 26 | 10 000 | 0,49 | | | | | | |
| 166 - 206 | 146 | **M03 20120** | 26 | 8 000 | 0,59 | | | | | | |

**Supply includes micro-adjustable drilling head:**
Micro-adjustable drilling head with clamping screw ①. Please order replaceable bridge separately.
**Supply includes replaceable bridge:**
Replaceable bridge with holding screw ② and clamping screw ③. Please order insert holder separately.

**Maximum spindle speed**
when using different ABS® sizes
Ø 24.8 - 103.0 mm
(MicroKom® M03Speed
with replaceable bridges)

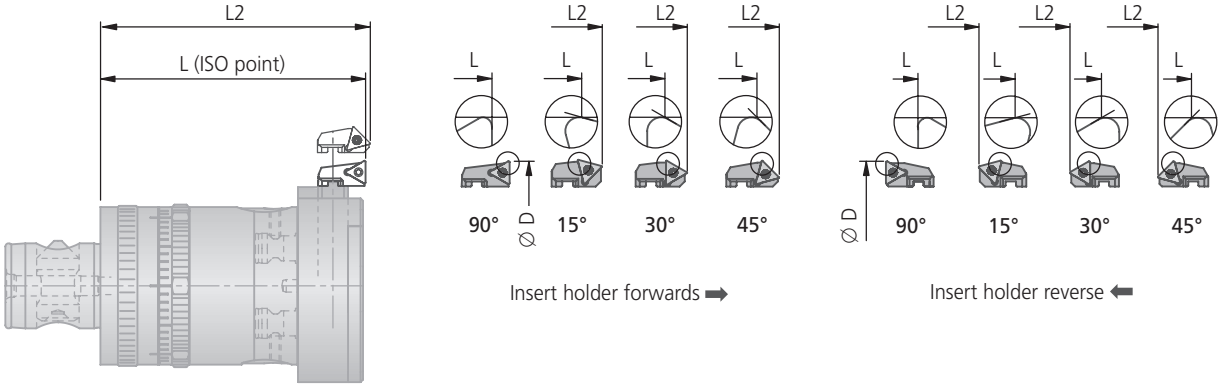




Patent applied for inside and outside Germany (ABS)

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| > 3,5×D | ● | ● | ◐ | ◐ | ● | ● | ● | ● |

● very good ◐ good ○ possible ✕ not possible




| Micro-adjustable head | Insert holder forwards | | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ø D | Order No. | ϰ | L | L2 | kg | Insert -12 / -14 / W30: Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Clamping screw: Order No. Article | Screwdriver: Order No. Article |
| M03 20090 ABS 63 | 100 – 206 | M03 10070 | 90° | 106 | – | 0,01 | W57 14140.0460 | TOGX 090204EN-14 BK60 | ● ● <52 HRC | N00 56101 S/M2,6×5,2-8IP 1,28 Nm | L05 00830 8IP |
| | | M03 11160 | 15° | 97 | 105,9 | 0,01 | W30 14060.046110 | TOHX 090204EL-G06 BK6110 | ● >52 HRC | | |
| | | M03 11260 | 30° | 99 | 107 | 0,01 | W57 14120.0423 | TOGX 090204FN-12 K10 | ● ● <52 HRC | | |
| | | M03 11360 | 45° | 101 | 107,5 | 0,01 | W30 14990.0440 | TOGX 090204TN CBN40 | ● >52 HRC | | |

| Micro-adjustable head | Insert holder reverse | | | | | | Basic recommendation | | | Assembly parts | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ø D | Order No. | ϰ | L | L2 | kg | Insert -12 / -14 / W30: Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Clamping screw: Order No. Article | Screwdriver: Order No. Article |
| M03 20090 ABS 63 | 100 – 206 | M03 12060 | 90° | 80 | – | 0,01 | W57 14140.0460 | TOGX 090204EN-14 BK60 | ● ● <52 HRC | N00 56101 S/M2,6×5,2-8IP 1,28 Nm | L05 00830 8IP |
| | | M03 12160 | 15° | 89 | 80,6 | 0,01 | W30 14420.0462 | TOHX 090204ER-G12 BK62 | ● >52 HRC | | |
| | | M03 12260 | 30° | 87 | 79,5 | 0,01 | W57 14120.0423 | TOGX 090204FN-12 K10 | ● ● <52 HRC | | |
| | | M03 12360 | 45° | 85 | 78,9 | 0,01 | W30 14990.0440 | TOGX 090204TN CBN40 | ● >52 HRC | | |

Supply includes:
Insert holder with assembly parts. Please order inserts and accessories separately.

Guideline values for fine boring and alternative inserts: page 292.

# KOMET MicroKom® M03Speed

## Technical Notes

① without replaceable bridge
② with replaceable bridge

| Guideline values for fine boring | | | | | | | $v_c$ | f (mm/rev) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | max. feed > 3,5×D | |
| | Material group | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | ① Ø 24,8–50 ② Ø 38–63 | ① Ø 49–103 ② Ø 62–206 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,08 | 0,10 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,08 | 0,12 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,10 | 0,15 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 240 | 0,08 | 0,10 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 200 | 0,06 | 0,10 |
| P | 4.1 | | | HSS | | 120 | 0,06 | 0,08 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,06 | 0,08 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,06 | 0,08 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 200 | 0,08 | 0,10 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 180 | 0,06 | 0,10 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 120 | 0,06 | 0,10 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 240 | 0,15 | 0,20 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 200 | 0,15 | 0,20 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,10 | 0,15 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic/ perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 180 | 0,10 | 0,15 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 160 | 0,10 | 0,15 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,10 | 0,15 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,10 | 0,15 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,10 | 0,15 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 270 | 0,10 | 0,15 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 500 | 0,08 | 0,12 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,10 | 0,15 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,10 | 0,15 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 120 | 0,08 | 0,08 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 90 | 0,06 | 0,08 |

## Alternative Inserts

| | ØD | Insert: Order No. ▽▽ Size | ISO-Code | for workpiece material: P M K N S H |
|---|---|---|---|---|
| for better chip control | ① Ø 24,8 – 50 / ② Ø 38 – 63 | **W57 04140.023210** | TOGX 06T102EN-14 CK3210 | ◐ ◑ |
| | | only for insert holder forwards ➡ : | | |
| | | **W30 04120.3232** | TOHX 06T102EL-US12 CK32 | ◐ ◑ |
| | ① Ø 49 – 103 / ② Ø 62 – 206 | **W57 14140.023210** | TOGX 090202EN-14 CK3210 | ◐ ◑ |
| | | only for insert holder forwards ➡ : | | |
| | | **W30 14120.3232** | TOHX 090202EL-US12 CK32 | ◐ ◑ |
| for higher cutting speed | ① Ø 24,8 – 50 / ② Ø 38 – 63 | **W57 04140.023210** | TOGX 06T102EN-14 CK3210 | ◐ |
| | | **W30 04990.0257** | TOGX 06T102TN CBN57 | ◑ only GG25 |
| | | only for insert holder forwards ➡ : | | |
| | | **W30 04120.0238** | TOHX 06T102EL-G12 CK38 | ◐ ◑ |
| | ① Ø 49 – 103 / ② Ø 62 – 206 | **W57 14140.043210** | TOGX 090204EN-14 CK3210 | ◐ |
| | | **W30 14990.0457** | TOGX 090204TN CBN57 | ◑ only GG25 |
| | | only for insert holder forwards ➡ : | | |
| | | **W30 14120.0238** | TOHX 090202EL-G12 CK38 | ◐ ◑ |
| for better surface finish | ① Ø 24,8 – 50 / ② Ø 38 – 63 | **W30 04990.0355** | TOGX 06T103FN PKD55 | ◐ |
| | | only for insert holder forwards ➡ : | | |
| | | **W30 04120.3130** | TOHX 06T102EL-UF12 CK30 | ◐ ◑ |
| | ① Ø 49 – 103 / ② Ø 62 – 206 | **W30 14990.0455** | TOGX 090204FN PKD55 | ◐ |
| | | only for insert holder forwards ➡ : | | |
| | | **W30 14120.3130** | TOHX 090202EL-UF12 CK30 | ◐ ◑ |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.



Important: See chapter 8 for more application details and safety notes!

## A Ø 38 mm - Ø 63 mm, ABS® 32




Set in case complete
Order No. M03 20230

| | Qty. | Article | Order No. |
|---|---|---|---|
| ① | 1 | Replaceable brigde Ø 38-51 | M03 20180 |
| ② | 1 | Replaceable brigde Ø 50-63 | M03 20190 |
| ③ | 1 | Micro-adjustable head ABS32 | M03 20170 |
| ④ | 2 | Insert holder 90° forwards | M03 10033 |
| ⑤ | 1 | Allen key SW 4 | 18591 10040 |

## B Ø 62 mm - Ø 103 mm, ABS® 50




Set in case complete
Order No. M03 20240

| | Qty. | Article | Order No. |
|---|---|---|---|
| ① | 1 | Replaceable brigde Ø 62-83 | M03 20180 |
| ② | 1 | Replaceable brigde Ø 82-103 | M03 20190 |
| ③ | 1 | Micro-adjustable head ABS50 | M03 20170 |
| ④ | 2 | Insert holder 90° forwards | M03 10033 |
| ⑤ | 1 | Allen key SW 4 | 18591 10040 |

## C Ø 100 mm - Ø 206 mm, ABS® 63




Set in case complete
Order No. M03 20130

| | Qty. | Article | Order No. |
|---|---|---|---|
| ① | 1 | Replaceable brigde Ø 100-130 | M03 20100 |
| ② | 1 | Replaceable brigde Ø 128-168 | M03 20110 |
| ③ | 1 | Replaceable brigde Ø 166-206 | M03 20120 |
| ④ | 1 | Micro-adjustable head ABS63 | M03 20090 |
| ⑤ | 3 | Insert holder 90° forwards | M03 10070 |
| ⑥ | 1 | Screwdriver 8IP | L05 00830 |
| ⑦ | 1 | Allen key SW 2 | 18591 10020 |
| | 1 | Allen key SW 3 | 18591 10030 |
| | 1 | Allen key SW 4 | 18591 10040 |

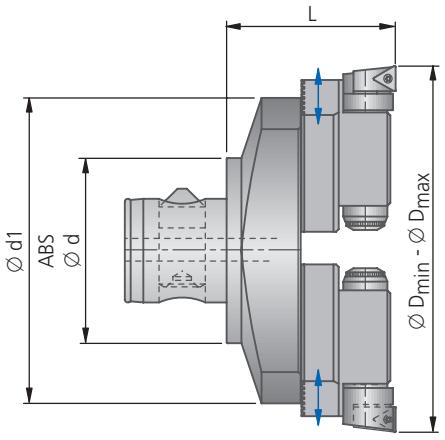
# KOMET TwinKom® G01 Ø 196 – 401 mm

## Twin Cutter with ABS® Connection, $\varkappa$ = 90°

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 3,5×D | ● | ● | ◐ | ◐ | ✕ | ● | ● | ✕ |

● very good ◐ good ○ possible ✕ not possible

(ABS-VDF)




| ØD min-max | 3,5×D Order No. Article | ABS Ød | d1 | L | kg | Basic recommendation Insert Order No. ▽▽ size | ISO-Code | for workpiece material P M K N S H | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|
| 196 - 271 | **G01 23510** ABS100VDF165 | 100 | 165 | 88 | 7,7 | **W57 26140.0460** | TOGX 140304EN-14 BK60 | ● ◐ | **N00 56211** S/M3,5×7,3-10IP 2,8 Nm | **L05 00850** 10IP |
| 261 - 335 | **G01 23520** ABS100VDF230 | 100 | 230 | 88 | 8,8 | **W30 26060.046110** | TOHX 140304EL-G06 BK6110 | ● ● <52 HRC | | |
| 326 - 401 | **G01 23530** ABS100VDF295 | 100 | 295 | 88 | 10,4 | **W57 26120.0423** | TOGX 140304FN-12 K10 | ● ● | | |
| | | | | | | **W30 26990.0440** | TOGX 140304TN CBN40 | ○ | | |

**Supply includes:**
Basic body with pair of toolholder, insert seatings and clamping screws.
Please order inserts and accessories separately.

| for | Assembly parts Pair of toolholders with pair of insert seatings Article | Order No. | Insert seating Order No. |
|---|---|---|---|
| G01 23510 | VDF165-295 | **G01 23600** | **M30 20051** |
| G01 23520 | | | |
| G01 23530 | | | |

**Important features:**

This tool not only halves the fine boring time and also the costs but guarantees good cylindrical shape even for long and large diameter bores. This is because by dividing the feed the contact time between cutter and workpiece is halved and the dimensional stability is guaranteed for the cutters to a better degree than with single cutter tools.



Patent applied for inside and outside Germany (ABS)

| Guideline values for fine boring | | | | | | $v_c$ | f (mm/rev) |
|---|---|---|---|---|---|---|---|
| | Material group | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Cutting speed $v_c$ (m/min) | max. feed 3,5×D ∅ 196 – 401 |
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 300 | 0,15 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 250 | 0,20 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 300 | 0,25 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 240 | 0,20 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 200 | 0,15 |
| P | 4.1 | | | HSS | | 120 | 0,12 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 50 | 0,10 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 30 | 0,10 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 200 | 0,15 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 180 | 0,15 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 120 | 0,15 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 240 | 0,30 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 200 | 0,30 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 180 | 0,25 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic / perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 180 | 0,25 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 160 | 0,25 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 140 | 0,25 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 120 | 0,25 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 300 | 0,08 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 300 | 0,20 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 500 | 0,15 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 300 | 0,20 |
| N | 14.0 | | 100 | cast alum. alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 250 | 0,20 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 120 | 0,10 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 90 | 0,10 |

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

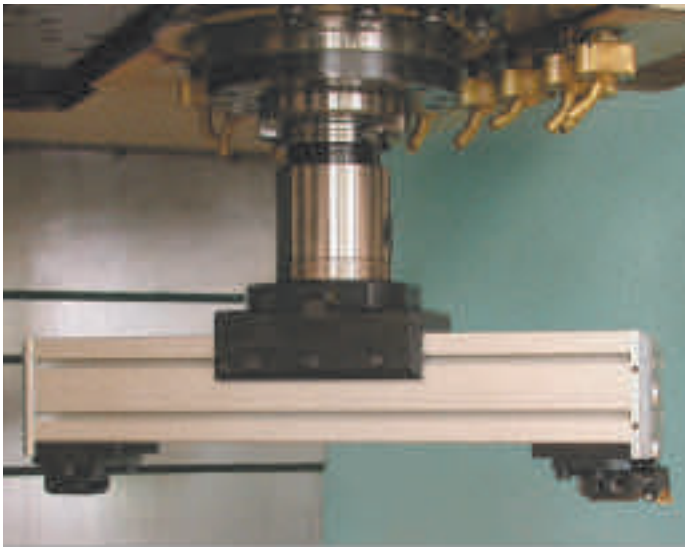
**Important: See chapter 8 for more application details and safety notes!**

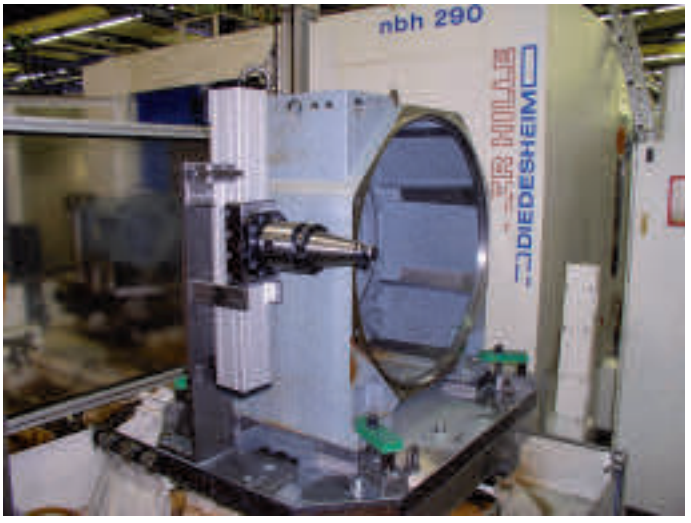
### Machining Example

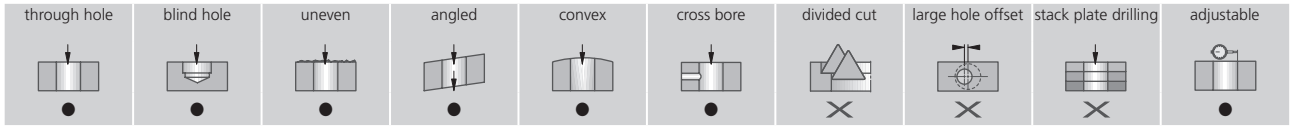
Material: GG25
Drilling dia.: ∅ 575 mm +0,02
$v_C$ = 120 m/min
f = 0,17 mm

### Example of a complete tool for fine boring with single insert Ø 575 mm:

| Article | Order No. |
|---|---|
| 1× Adaptor ISO50 | A05 25300 |
| 1× Replaceable bridge ∅ 575 Special tool | XA ..... |
| 2× Cover plate - internal coolant | G05 00010 |
| 1× Holding plate - micro-adjustable cartridge | G05 10010 |
| 1× Micro-adjustable cartridge | M30 20051 |
| 1× Balancing weight | G05 10040 |



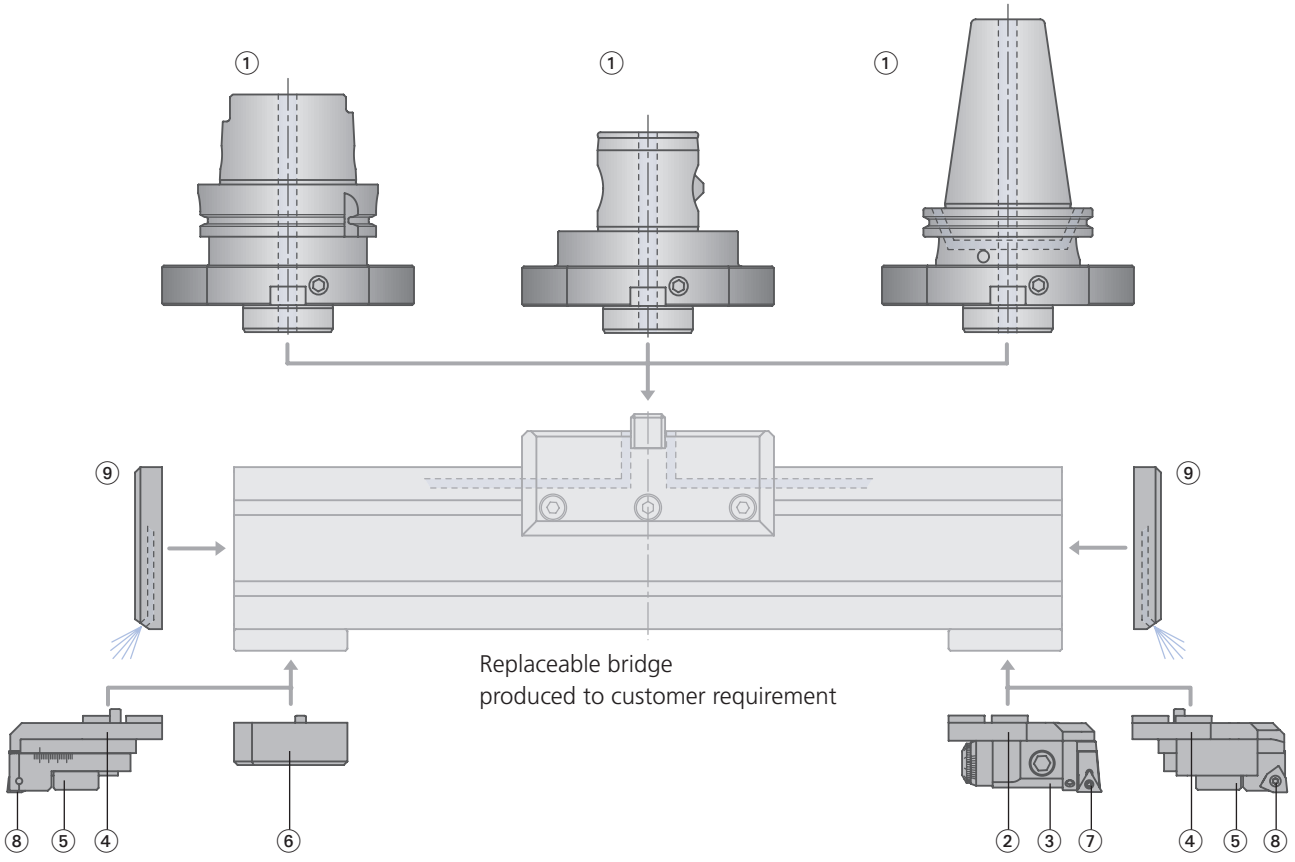





● very good ◐ good ○ possible ✕ not possible

## Modular design

- The tool consists of lightweight replaceable bridge to specific length and elements for fine boring or roughing (see accessories)
- Adjustment range relates to 70 mm diameter.




**Replaceable bridge Ø 206 - 1050 mm: produced to customer requirement**

| Adaptor ① | |
|---|---|
| Article | Order No. |
| HSK-A100 | A06 53880 |
| ABS 100 | A20 50080 |
| ABS 100 (ABS rotated 90°) | A20 50180 |
| ISO50 DIN 69871 AD/B | A05 25300 |

| Cover plate ⑨ | |
|---|---|
| Article | Order No. |
| Cover plate with internal coolant | G05 00010 |

| Fine machining ②+③+⑥+⑦ | | |
|---|---|---|
| | Article | Order No. |
| ② | Holding plate | G05 10010 |
| ③ | Micro-adj. cartridge FF25 | M30 20051 |
| ⑥ | Balancing weight | G05 10040 |
| ⑦ | Insert | W57 26.. / W30 26.. |

| Roughing ④+⑤+⑧ | | |
|---|---|---|
| | Article | Order No. |
| ④ | Holding plate | G05 20010 |
| ⑤ | Roughing cartridge | G05 20020 |
| ⑧ | Insert | W29 42.. |

For further details on inserts see chapter 7

# KOMET KomTronic® u-axis-systems

## The U-axis for Tool Change

UAS-125-Z-12



| UAS-125-Z-12 | | | |
|---|---|---|---|
| Order No. | Article/type | Ø d | L |
| E11 10050 | UAS-125-HSK63-E-Z-12-1a | HSK 63 | 166 |
| E16 10080 | UAS-125-SK40-E-Z-12-1a | SK 40 | 159 |
| E16 10090 | UAS-125-CAT40-E-Z-12-1a | CAT 40 | 159 |
| E16 10100 | UAS-125-BT40-E-Z-12-1a | BT 40 | 166 |

UAS-160-Z-22



| UAS-160-Z-22 | | | |
|---|---|---|---|
| Order No. | Article/type | Ø d | L |
| E21 31010 | UAS-160-HSK100-E-Z-22-1 | HSK 100 | 203,5 |
| E21 33010 | UAS-160-SK50-E-Z-22-1 | SK 50 | 193,5 |
| E21 35010 | UAS-160-CAT50-E-Z-22-1 | CAT 50 | 193,5 |
| E21 37010 | UAS-160-BT50-E-Z-22-1 | BT 50 | 211,5 |

UAS-160-Z-50



| UAS-160-Z-50 | | | |
|---|---|---|---|
| Order No. | Article/type | Ø d | L |
| E21 31020 | UAS-160-HSK100-E-Z-50-1 | HSK 100 | 217,5 |
| E21 33020 | UAS-160-SK50-E-Z-50-1 | SK 50 | 207,5 |
| E21 35020 | UAS-160-CAT50-E-Z-50-1 | CAT 50 | 207,5 |
| E21 37020 | UAS-160-BT50-E-Z-50-1 | BT 50 | 225,5 |

Together with KOMET® front tooling and KOMET® inserts, the KomTronic® tool opens up machining possibilities which until now would have been unthinkable on a machining center.

Using these possibilities for turning, undercutting, chamfering and generation of NC controlled contours, workpieces can be completely machined with high precision and cycle time savings.

komtronic@kometgroup.com






Patent applied for inside and outside Germany (KomTronic)

# KOMET KomTronic® – State of the Art

## U-Axis System – Optional with Linear Encoder

Thanks to their low weight and minimal size and the relatively large adjustment path for the tool, the new generation of KOMET KomTronic® U-axis systems already represents the latest level of development. With a modular system, we are now offering a new supplemental direct encoder. In comparison with the normal indirect encoder, this offers significantly improved repeat accuracy, which also characterises the mechatronic tool systems by KOMET® as state-of-the-art products.

The mechatronic KOMET KomTronic® U-axis systems essentially consist of a compact facing head with single slide that is driven by a servo motor and threaded spindle. The power and data are transmitted contact-fee and inductively to the U axis head via a segment-shaped stator that is fitted to the spindle. This transmission occurs independently from the spindle speed. The mechatronic U-axis systems are therefore automatically exchangeable NC axes. The movement of the steel blade is interpolated with the Z axis. This enables contour machining and longitudinal turning on parts that are not rotationally symmetrical. Through the combined use of customised snap-on tools and optimally selected indexable inserts, it is possible to machine contours in bores as well as external contours. The mechatronic tool systems enable a significant shortening of production times, better surface quality, and improved dimensional accuracy. In addition, fewer different tools are required and there is no need to procure moulding tools.

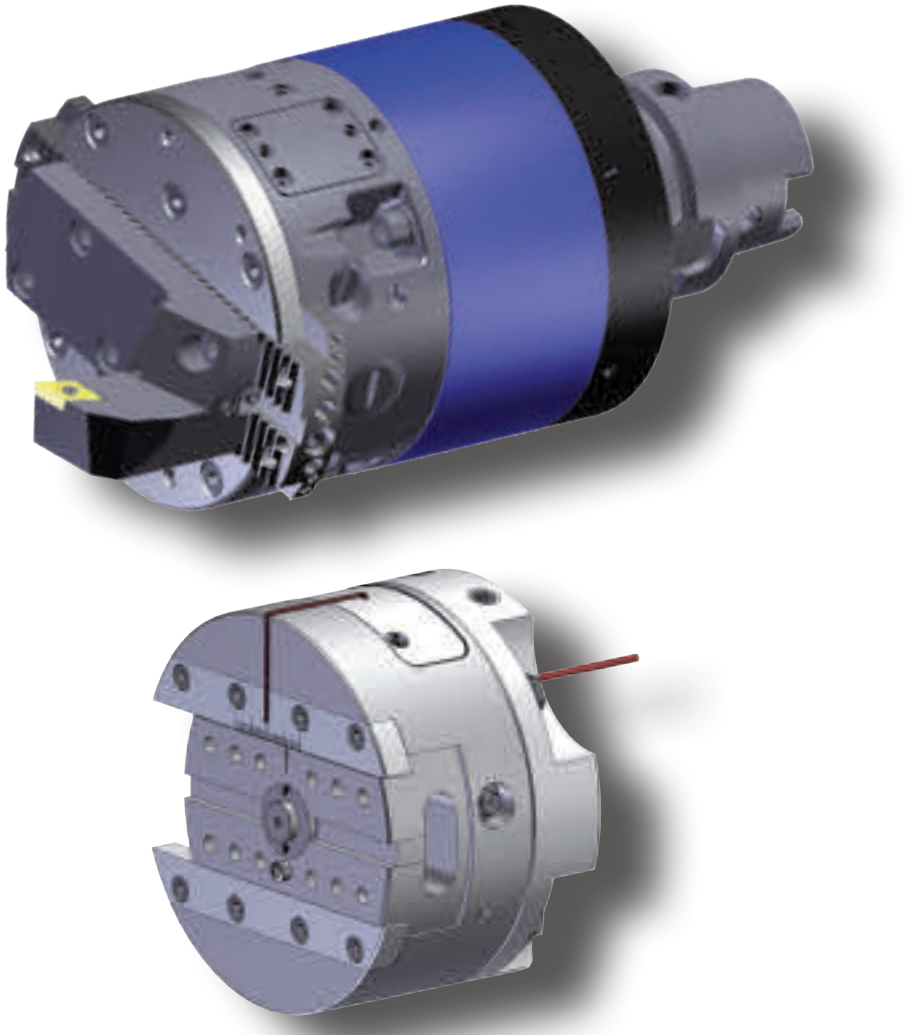
### Flexibility straight from the toolbox

The KomTronic® U-axis systems are mainly based on the technology project KomTronic® HPS (High-Precision Systems) for high-speed machining. Here, the main aim is to increase speed, which requires - among other things - compact designs with lower weights. The UAS-115 from the new KomTronic® generation weighs only 6.4 kilogrammes and enables an impressive stroke of ±11 millimetres with a head diameter of just 115 millimetres.

The adjustment mechanism is integrated into the compact drive unit. The current facing slide module is adapted in line with this. Along the same lines, there are HSK100 versions in addition to the HSK63 variant. The modular system means that these two head sizes enable the realisation of several U-axis variants with different sizes and weights and different radial strokes of 22 or 50 millimetres.

### 1:1 position measurement on slider

Otherwise, the mechatronic tooling systems work with an indirect encoder. The new direct encoder also takes into account interferences to mechanical elements. Thanks to the direct encoder on the slider, the control can be used to react immediately. Although precision was already high, this still constitutes yet another significant improvement in repeat accuracy. The fact that this optional method of position measurement can be chosen by customers on request is another advantage of the consistent modular philosophy, a mindset which is applied to the standard range of KomTronic® U-axis systems. Examined from this point of view, the modular nature of these mechatronic tool systems can also be said to be a state-of-the-art characteristic.



**BENEFITS for you:**

- Direct encoder
- Higher level of positioning accuracy for even more precise machining
- Head diameter 115 mm
- Stroke ±11 mm
- Weight 6.4 kg

Patented design

# KOMET® EasySpecial™ – Special Tools Set Standards

## Design your own tool!

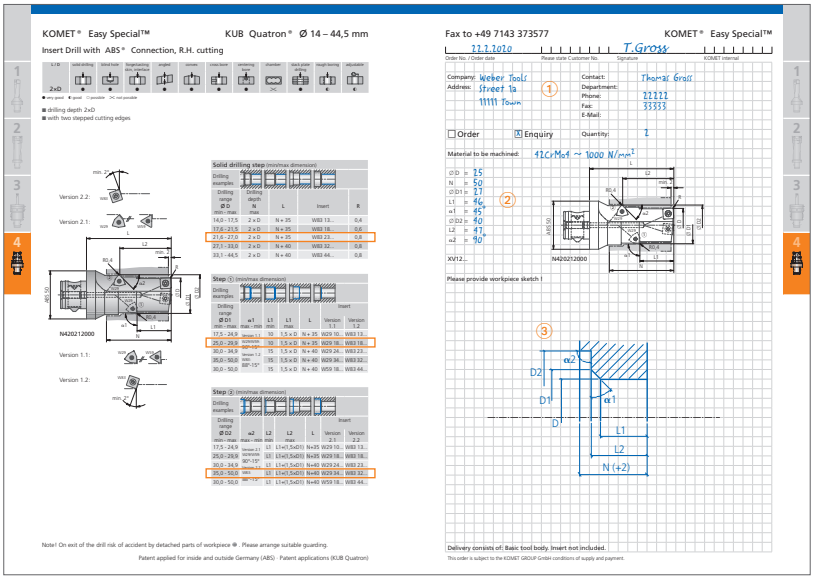
Is there no solution in the standard range?
Are the dimensions not what you require?
Easy Special™ makes it possible for you create your own combination of standard modules in the widest variety of dimensions. Select the basic type, define the effective length and choose the desired adapter for the tool.
We check you specifications for technical feasibility and you receive a prompt reply.



**BENEFITS for you:**

- High tech tools from planning to productive use
- Shortest delivery times - available within 3 weeks
- Parameters set for different tool models
- Optimum production tolerances
- Fixed prices at standard price level

## In short: time costs money

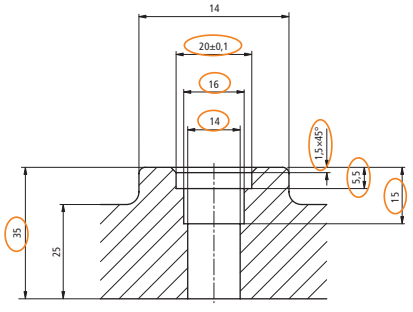

KOMET® Easy Special™ KUB Quatron® Ø 14 – 44,5 mm

Insert Drill with ABS® Connection, R.H. cutting

Fax to +49 7143 373577 KOMET® Easy Special™

Example of a completed fax inquiry

① State sender/contact name
② Enter required dimensions
③ Component sketch or drawing section with dimensions marked



## Possible applications

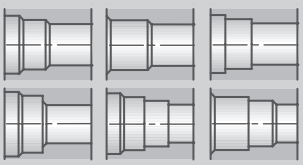
Solid drilling



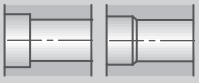
Solid drilling and chamfering



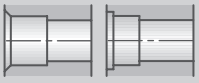
Multistage solid drilling



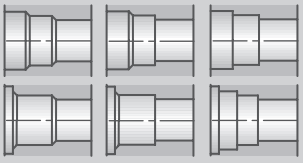
Roughing



Roughing and chamfering



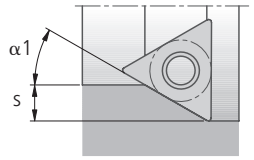
Multistage roughing

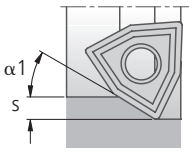


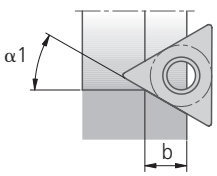
## Index

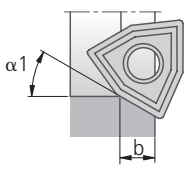

| | Page |
|---|---|
| **Programme summary** | 302 – 303 |
| **Tool selection** | 304 – 305 |
| **Solid drilling Ø 12 – 44,5 mm** | |
| KUB Quatron® | 306 – 308 |
| KUB Trigon® | 318 – 320 |
| KUB® drill | 326 – 328 |
| KUB Trigon® with chamfering insert | 322 – 324 |
| KUB Quatron® with a stepped cutting edge | 310 – 312 |
| KUB® drill with a stepped cutting edge | 330 – 334 |
| KUB Quatron® with 2 stepped cutting edges | 314 – 316 |
| KUB® drill with 2 stepped cutting edges | 336 – 340 |
| KUB® drill with 3 stepped cutting edges | 342 – 344 |
| **Roughing Ø 14 – 50 mm** | |
| TwinKom® Twin cutter | 346 – 352 |
| with chamfering insert | 354 – 356 |
| with a stepped cutting edge | 358 – 360 |
| with two stepped cutting edges | 362 – 368 |
| **Fine boring Ø 8 – 40 mm** | |
| with ABS® connection | |
| Boring bar | 370 + 374 |
| Boring bar with chamfering insert | 378 + 382 |
| with cylindrical shank | |
| Boring bar | 372 + 376 |
| Boring bar with chamfering insert | 380 + 384 |
| **Adaptors** | |
| with HSK-A | 386 |
| with taper shank | 388 |
| with ABS® | 390 |


## Maximum cutting and chamfering widths



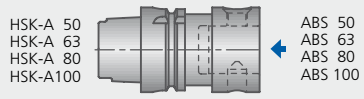

$s_{max}$ = max. cutting width
$b_{max}$ = max. chamfering width

| Insert | α1 90° | α1 75° | | α1 60° | | α1 45° | | α1 30° | | α1 15° | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | s max | b max | s max | b max | s max | b max | s max | b max | s max | b max |
| W29 10... | 3,0 | 2,8 | 0,6 | 2,5 | 1,2 | 2,1 | 1,6 | 1,5 | 2,0 | 0,7 | 2,3 |
| W29 18... | 4,0 | 3,8 | 0,8 | 3,4 | 1,6 | 2,8 | 2,3 | 2,0 | 2,8 | 1,0 | 3,1 |
| W29 24... | 5,0 | 4,8 | 1,1 | 4,3 | 2,1 | 3,5 | 3,0 | 2,5 | 3,7 | 1,2 | 4,1 |
| W29 34... | 6,2 | 5,9 | 1,5 | 5,3 | 2,8 | 4,3 | 4,0 | 3,1 | 4,9 | 1,6 | 5,5 |
| W59 18... | 10,0 | 9,6 | 2,3 | 8,6 | 4,5 | 7,0 | 6,3 | 5,0 | 7,7 | 2,5 | 8,6 |

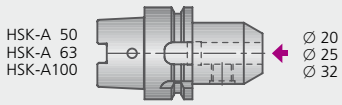
# Programme Summary – Easy Special

## 5 Adaptors

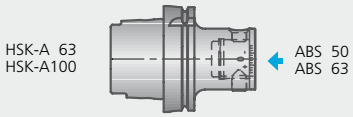
### HSK-A Adaptors
with ABS® connection
▸ 400



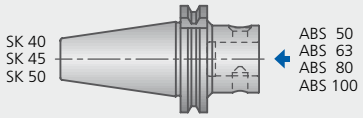

### Adaptor sleeve Weldon
▸ 406



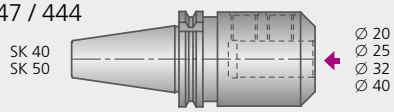

### Eccentric Adjusting Device with ABS® connection
▸ 402



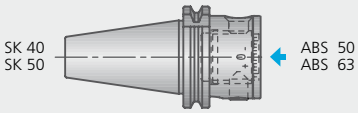

### Taper shanks DIN 69871
with ABS® connection
▸ 430



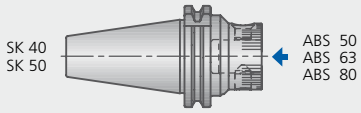

### Adaptor sleeve Weldon / cylindrical shank (combination shank)
▸ 447 / 444



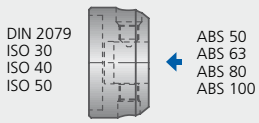

### Eccentric Adjusting Device with ABS® connection
▸ 434



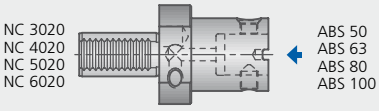

### Torsional dampener with ABS® connection
▸ 435



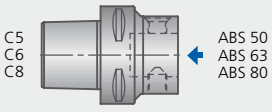

### Spindle adaptor flange
with ABS® connection
▸ 458



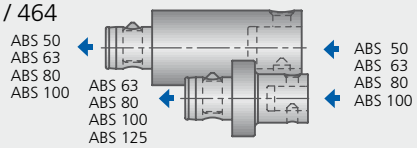

### VDI Adaptor
with ABS® connection
▸ 456



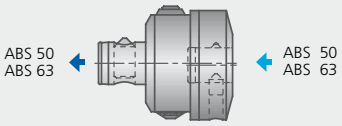

### PSC Adaptors ISO 26623
PSC with ABS® connection
▸ 460



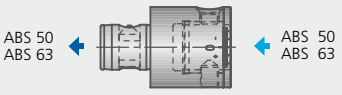

### ABS® Adaptors
Extension / Reducer
▸ 466 / 464



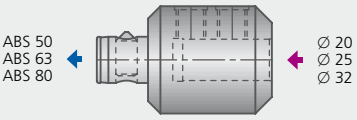

### Adjustment device
▸ 461



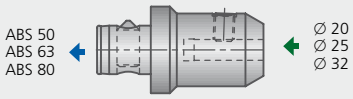

### Eccentric Adjusting Device
▸ 462




### Adaptor sleeve Weldon
▸ 474

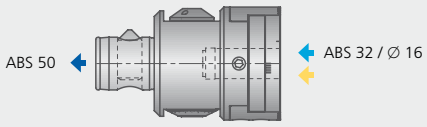



### Adaptor sleeve Whistle Notch
▸ 472

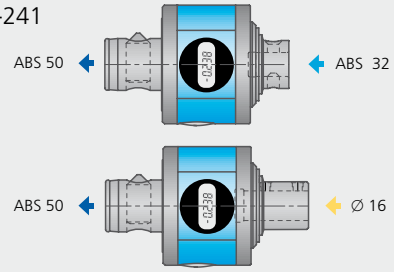



## 3 Adaptors

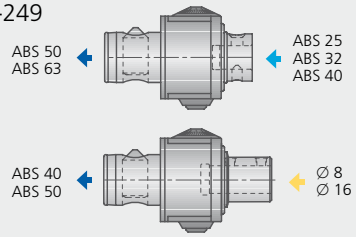
### MicroKom® *hi.flex*
Micro-adjustable head
▸ 217




### MicroKom® M04
Micro-adjustable head
▸ 240-241




### MicroKom® M02
Micro-adjustable head
▸ 248-249



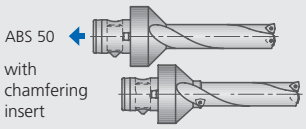



Further adaptors see chapter 5.

# 4 Easy Special™ Tools

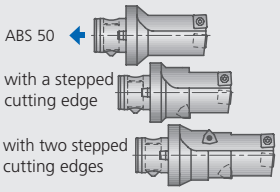
## Solid drilling ∅ 12 - 44,5 mm

### KUB Trigon®



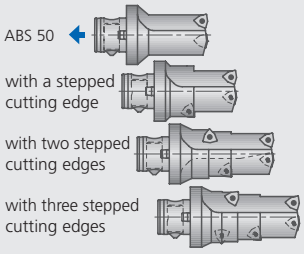

▶ 318
▶ 322

### KUB Quatron®



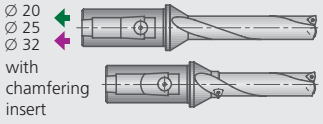

▶ 306
▶ 310
▶ 314

### KUB® Drill



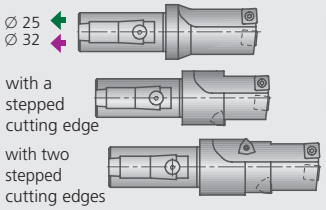

▶ 326
▶ 330
▶ 336
▶ 342

### KUB Trigon®



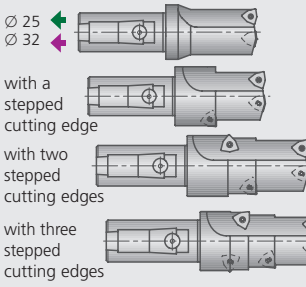

▶ 320
▶ 324

### KUB Quatron®




▶ 308
▶ 312
▶ 316

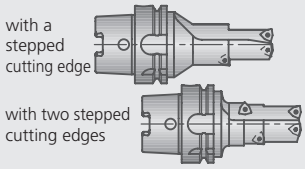
### KUB® Drill




▶ 328
▶ 334
▶ 340
▶ 344

### HSK-A Adaptors

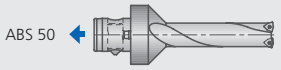
HSK-A 63



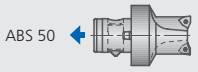

▶ 332
▶ 338

## Roughing ∅ 14 - 50 mm

### TwinKom®




▶ 346



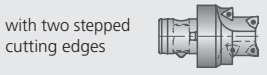

▶ 350



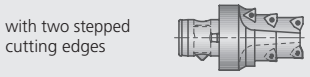

▶ 354



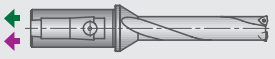

▶ 358



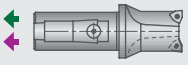

▶ 362




▶ 366



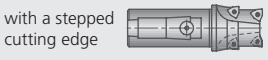

▶ 348



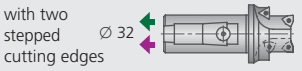

▶ 352



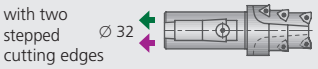

▶ 356




▶ 360

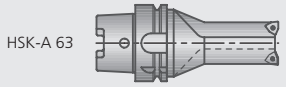



▶ 364




▶ 368

### HSK-A Adaptors



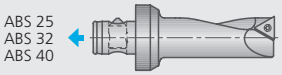

▶ 350

### Key

- ABS® connection
- ABS® connection
- Cylindrical connection
- Whistle Notch connection
- Weldon connection

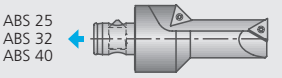
## Fine boring ∅ 8 - 40 mm

### Boring bars for machining steel




▶ 370

with chamfering insert




▶ 378



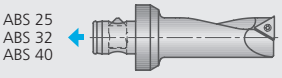

▶ 372

with chamfering insert



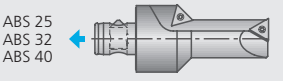

▶ 380

### Boring bars for machining aluminium




▶ 374

with chamfering insert

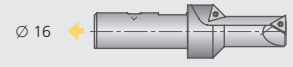



▶ 382




▶ 376

with chamfering insert

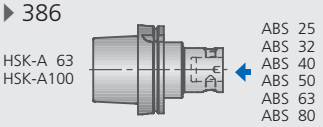



▶ 384

## Adaptors

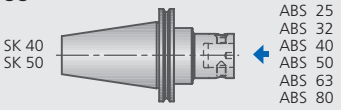
### HSK-A Adaptors with ABS® connection

▶ 386




### Taper shanks DIN 69871 with ABS® connection

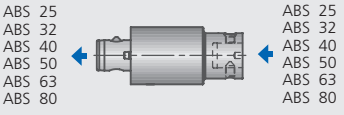
▶ 388




### ABS® Adaptors

Extension / Reducer

▶ 390



# KOMET® Tool Selection

## Help Table for Solid Drilling, Roughing and Fine Boring with Easy Special™

| Solid Drilling | | Machining | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø (mm) | L / D Length/ diameter ratio | solid drilling | blind hole | forge/ casting skin, interface | angled start and drilling out, inter-rupted cut | convex | cross bore | centering bore, seam | chamber | stack plate drilling | rough boring | adjustable |
| 14,0 – 44,5 ±0,2 | 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |
| 14,0 – 44,5 ±0,2 | 2×D | ● | ● | ● | ● | ● | ● | ● | | ● | ◐ | ◐ |
| 14,0 – 44,5 ±0,2 | 2×D | ● | ● | ● | ● | ● | ● | ● | | ● | ◐ | ◐ |
| 12,0 – 44,0 ±0,1 | 2×D | ● | ● | ● | ● | ● | ◐ | ◐ | ● | | ◐ | ● |
| 12,0 – 44,0 ±0,1 | 3×D | ● | ● | ● | ● | ◐ | ◐ | ◐ | ◐ | | ○ | ● |
| 12,0 – 44,0 ±0,1 | 4×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | | | ◐ |
| 14,0 – 44,0 ±0,1 | 2×D | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ◐ |
| 14,0 – 44,0 ±0,1 | 2×D | ● | ● | ● | ● | ● | ● | ● | ● | | ◐ | ◐ |
| 14,0 – 44,0 ±0,1 | 2×D | ● | ● | ● | ● | ● | ● | ● | ● | | ◐ | ◐ |
| 14,0 – 44,0 ±0,1 | 2×D | ● | ● | ● | ● | ● | ● | ● | ● | | ◐ | ◐ |

| Roughing | | through hole | blind hole | uneven | angled start and drilling out, inter-rupted cut | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø (mm) | L / D | | | | | | | | | | |
| 14,0 – 50,0 ±0,1 | 2 – 4×D | ● | ● | ● | ● | ● | ● | | ● | 80° | |
| 14,0 – 50,0 ±0,1 | 2×D | ● | ● | ● | ● | ● | ● | | ● | 80° | |
| 14,0 – 50,0 ±0,1 | 2×D | ● | ● | ● | ● | ● | ● | | ● | 80° | |
| 14,0 – 50,0 ±0,1 | 2×D | ● | ● | ● | ● | ● | ● | | ● | 80° | |
| 14,0 – 50,0 ±0,1 | 2×D | ● | ● | ● | ● | ● | ● | | ● | 80° | |
| 14,0 – 50,0 ±0,1 | 2×D | ● | ● | ● | ● | ● | ● | | ● | 80° | |

| Fine Boring | | through hole | blind hole | angled start and drilling out, interrupted cut | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|---|
| Ø (mm) | L / D | | | | | | | | |
| 8,0 – 40,0 -0,1 | 4×D | ● | ● | ◐ | ◐ | | | | ● |
| 8,0 – 24,0 -0,1 | 4×D | ● | ● | ◐ | ◐ | | | | ● |
| 8,0 – 40,0 -0,1 | 3×D | ● | ● | ◐ | ◐ | | ● | ● | ● |
| 8,0 – 24,0 -0,1 | 3,5×D | ● | ● | ◐ | ◐ | | ● | ● | |



● very good ◐ good ○ possible

## Help Table for Solid Drilling, Roughing and Fine Boring with Easy Special™

| Coolant: Emulsion internal | Coolant: Emulsion external | Coolant: MQL internal | Coolant: MQL external | Material: P Mild steel/tool steel | Material: M Stainless and acid-resistant steel | Material: K Grey cast iron, spheroidal cast iron | Material: N Non-ferrous metals | Material: S Heat-resistant steels | Material: H Hardened tool steel | Tool | Page |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ◐ | ● | ◐ | ● | ○ | ● | ● | ● | ○ | **KUB Quatron®**<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 306<br>▸ 308 |
| ● | ◐ | ● | ◐ | ● | ○ | ● | ● | ● | ○ | **KUB Quatron®** with a stepped cutting edge<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 310<br>▸ 312 |
| ● | ◐ | ● | ◐ | ● | ○ | ● | ● | ● | ○ | **KUB Quatron®** with two stepped cutting edges<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 314<br>▸ 316 |
| ● | ◐ | ● | ◐ | ● | ○ | ● | ● | ● | ○ | **KUB Trigon®**<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 318<br>▸ 320 |
| ● | ◐ | ● | ○ | ● | ○ | ● | ● | ● | ○ | | |
| ● | ○ | ● | ○ | ● | ○ | ● | ● | ● | ○ | **KUB Trigon®** with chamfering insert<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 322<br>▸ 324 |
| ● | ◐ | ○ | ◐ | ● | ○ | ● | ● | ● | ○ | **KUB® Drill**<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 326<br>▸ 328 |
| ● | ◐ | ○ | ○ | ● | ○ | ● | ● | ● | ○ | **KUB® Drill** with a stepped cutting edge<br>ABS® connection<br>Cylindrical shank (combination shank)<br>HSK-A connection | ▸ 330<br>▸ 334<br>▸ 332 |
| ● | ◐ | ○ | ○ | ● | ○ | ● | ● | ● | ○ | **KUB® Drill** with two stepped cutting edges<br>ABS® connection<br>Cylindrical shank (combination shank)<br>HSK-A connection | ▸ 336<br>▸ 340<br>▸ 338 |
| ● | ◐ | ○ | ○ | ● | ○ | ● | ● | ● | ○ | **KUB® Drill** with three stepped cutting edges<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 342<br>▸ 344 |

| Coolant: Emulsion internal | Coolant: Emulsion external | Coolant: MQL internal | Coolant: MQL external | Material: P Mild steel/tool steel | Material: M Stainless and acid-resistant steel | Material: K Grey cast iron, spheroidal cast iron | Material: N Non-ferrous metals | Material: S Heat-resistant steels | Material: H Hardened tool steel | Tool | Page |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ◐ | ● | ◐ | ● | ○ | ● | ● | ● | ○ | **TwinKom®**<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 346<br>▸ 348 |
| ● | ◐ | ◐ | ◐ | ● | ○ | ● | ● | ● | ○ | **TwinKom®**<br>ABS® connection<br>Cylindrical shank (combination shank)<br>HSK-A connection | ▸ 350<br>▸ 352<br>▸ 350 |
| ● | ◐ | ◐ | ◐ | ● | ○ | ● | ● | ● | ○ | **TwinKom®** with chamfering insert<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 354<br>▸ 356 |
| ● | ◐ | ◐ | ◐ | ● | ○ | ● | ● | ● | ○ | **TwinKom®** with a stepped cutting edge<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 358<br>▸ 360 |
| ● | ◐ | ◐ | ◐ | ● | ○ | ● | ● | ● | ○ | **TwinKom®** with two stepped cutting edges<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 362<br>▸ 364 |
| ● | ◐ | ◐ | ○ | ● | ○ | ● | ● | ● | ○ | **TwinKom®** with two stepped cutting edges<br>ABS® connection<br>Cylindrical shank (combination shank) | ▸ 366<br>▸ 368 |

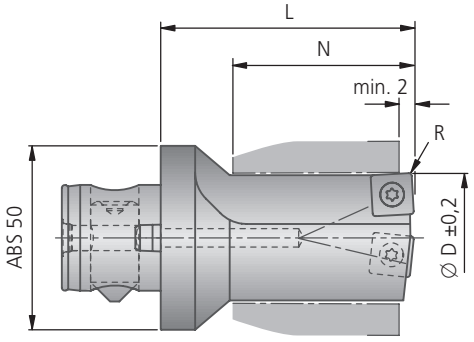
| Coolant: Emulsion internal | Coolant: Emulsion external | Coolant: MMS internal | Coolant: MMS external | Material: P Mild steel/tool steel | Material: M Stainless and acid-resistant steel | Material: K Grey cast iron, spheroidal cast iron | Material: N Non-ferrous metals | Material: S Heat-resistant steels | Material: H Hardened tool steel | Tool | Page |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ◐ | ● | ◐ | ● | ○ | ● | ● | ● | ○ | **Boring bar**<br>for machining steel | ▸ 370 – 372 |
| ● | ◐ | ● | ◐ | ● | ○ | ● | ● | ● | ○ | **Boring bar with chamfering insert**<br>for machining steel | ▸ 378 – 380 |
| ● | ◐ | ● | ◐ | ○ | ○ | ● | ○ | ○ | ○ | **Boring bar**<br>for machining aluminium | ▸ 374 – 376 |
| ● | ◐ | ● | ◐ | ○ | ○ | ● | ○ | ○ | ○ | **Boring bar with chamfering insert**<br>for machining aluminium | ▸ 382 – 384 |

## Insert Drill with ABS® Connection, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |

● very good ◐ good ○ possible >< not possible

■ drilling depth 2×D




N420270000

| **Solid drilling step** (min/max dimension) | | | | |
|---|---|---|---|---|
| Drilling examples | | | | |
| Drilling range Ø D min - max | Drilling depth N max | L | Insert | R |
| 14,0 - 17,5 | 2 × D | N + 35 | W83 13... | 0,4 |
| 17,6 - 21,5 | 2 × D | N + 35 | W83 18... | 0,6 |
| 21,6 - 27,0 | 2 × D | N + 35 | W83 23... | 0,8 |
| 27,1 - 33,0 | 2 × D | N + 35 | W83 32... | 0,8 |
| 33,1 - 44,5 | 2 × D | N + 35 | W83 44... | 0,8 |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.


Patent applied for inside and outside Germany (ABS) · Patent applications (KUB Quatron)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

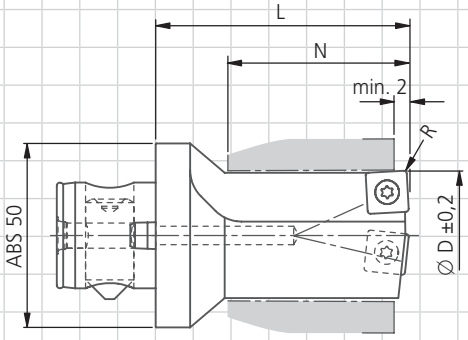
E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =

N =




XV02... N420270000

Please provide workpiece sketch!

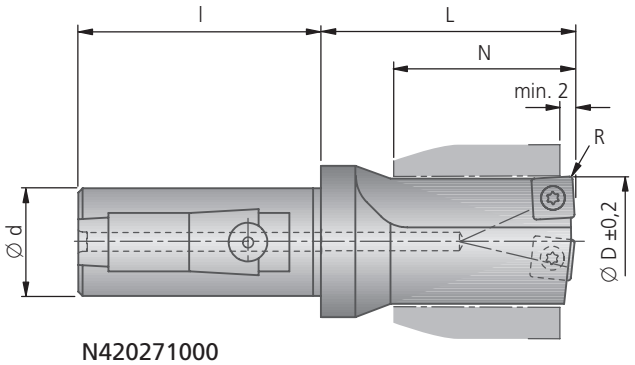
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |

● very good ◐ good ○ possible >< not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D




N420271000

**Solid drilling step** (min/max dimension)

Drilling examples 

| Drilling range Ø D min - max | Drilling depth N max | L | Insert | R | Cylindrical shank Ø d × l 25×56 | 32×60 |
|---|---|---|---|---|---|---|
| 14,0 - 17,5 | 2 × D | N + 24 | W83 13... | 0,4 | • | • |
| 17,6 - 21,5 | 2 × D | N + 24 | W83 18... | 0,6 | • | • |
| 21,6 - 27,0 | 2 × D | N + 29 | W83 23... | 0,8 | • | • |
| 27,1 - 33,0 | 2 × D | N + 29 | W83 32... | 0,8 | | • |
| 33,1 - 44,5 | 2 × D | N + 29 | W83 44... | 0,8 | | • |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.

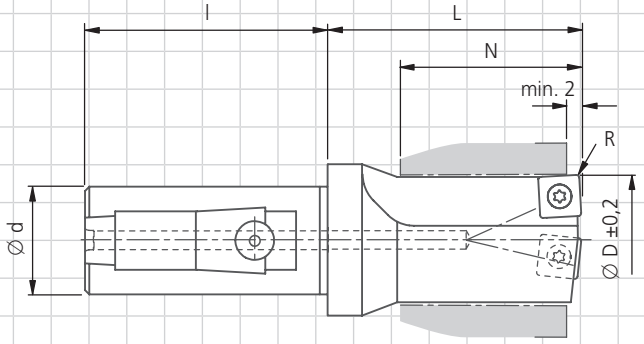
Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
N =
∅ d =




XV85... N420271000

Please provide workpiece sketch!

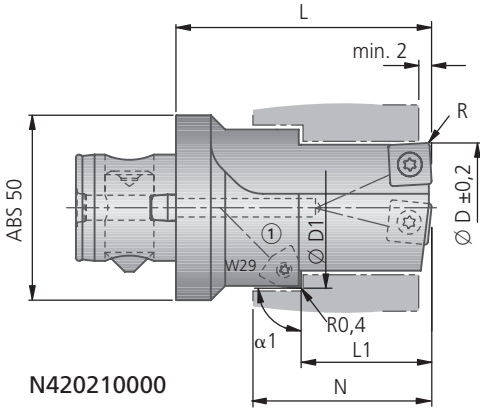
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with ABS® Connection, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ✕ | ● | ◐ | ◐ |

● very good ◐ good ○ possible ✕ not possible

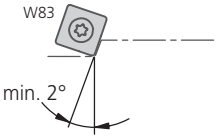
- drilling depth 2×D
- with a stepped cutting edge




Version 1:

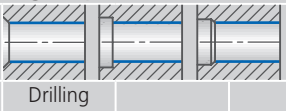



Version 2:




**Solid drilling step** (min/max dimension)

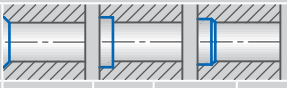
Drilling examples



| Drilling range Ø D min - max | Drilling depth N max | L | Insert | R |
|---|---|---|---|---|
| 14,0 - 17,5 | 2 × D | N + 35 | W83 13... | 0,4 |
| 17,6 - 21,5 | 2 × D | N + 35 | W83 18... | 0,6 |
| 21,6 - 27,0 | 2 × D | N + 35 | W83 23... | 0,8 |
| 27,1 - 33,0 | 2 × D | N + 40 | W83 32... | 0,8 |
| 33,1 - 44,5 | 2 × D | N + 40 | W83 44... | 0,8 |

**Step** ① (min/max dimension)

Drilling examples



| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | L | Insert Version 1 | Insert Version 2 |
|---|---|---|---|---|---|---|
| 17,5 - 24,9 | Version 1 W29/W59: 90°-15° Version 2 W83: 88°-15° | 10 | 1,5 × D | N + 35 | W29 10... | W83 13... |
| 25,0 - 29,9 | | 10 | 1,5 × D | N + 35 | W29 18... | W83 18... |
| 30,0 - 34,9 | | 15 | 1,5 × D | N + 40 | W29 24... | W83 23... |
| 35,0 - 50,0 | | 15 | 1,5 × D | N + 40 | W29 34... | W83 32... |
| 30,0 - 50,0 | | 15 | 1,5 × D | N + 40 | W59 18... | W83 44... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.



Patent applied for inside and outside Germany (ABS) · Patent applications (KUB Quatron)

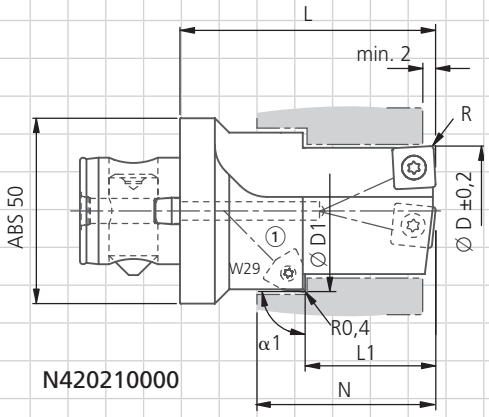
Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
N =
∅ D1 =
L1 =
α1 =




XV12... N420210000

Please provide workpiece sketch!

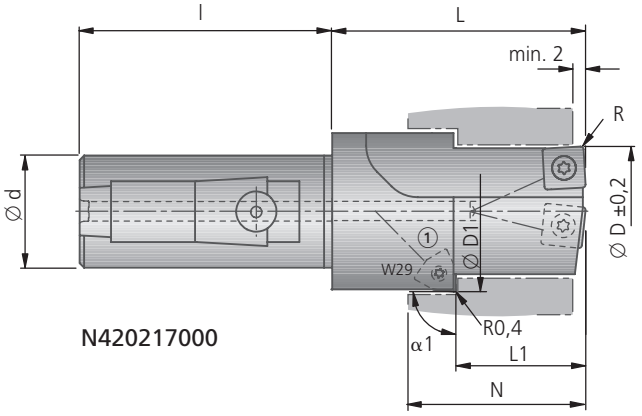
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ✕ | ● | ◐ | ◐ |

● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D
- with a stepped cutting edge

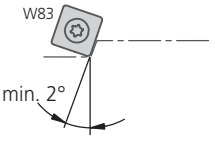



N420217000

Version 1:

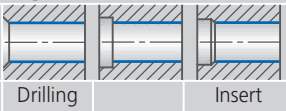



Version 2:




**Solid drilling step** (min/max dimension)

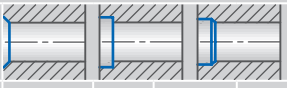
Drilling examples



| Drilling range Ø D min - max | Drilling depth N max | L | Insert | R | Cylindrical shank Ø d × l 25×56 | 32×60 |
|---|---|---|---|---|---|---|
| 14,0 - 17,5 | 2 × D | N + 24 | W83 13... | 0,4 | • | • |
| 17,6 - 21,5 | 2 × D | N + 24 | W83 18... | 0,6 | • | • |
| 21,6 - 27,0 | 2 × D | N + 29 | W83 23... | 0,8 | • | • |
| 27,1 - 33,0 | 2 × D | N + 29 | W83 32... | 0,8 | | • |
| 33,1 - 44,5 | 2 × D | N + 29 | W83 44... | 0,8 | | • |

**Step** ① (min/max dimension)

Drilling examples



| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | L | Insert Version 1 | Version 2 |
|---|---|---|---|---|---|---|
| 17,5 - 24,9 | Version 1 W29/W59: 90°-15° Version 2 W83: 88°-15° | 10 | 1,5 × D | N + 35 | W29 10... | W83 13... |
| 25,0 - 29,9 | | 10 | 1,5 × D | N + 35 | W29 18... | W83 18... |
| 30,0 - 34,9 | | 15 | 1,5 × D | N + 40 | W29 24... | W83 23... |
| 35,0 - 50,0 | | 15 | 1,5 × D | N + 40 | W29 34... | W83 32... |
| 30,0 - 50,0 | | 15 | 1,5 × D | N + 40 | W59 18... | W83 44... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

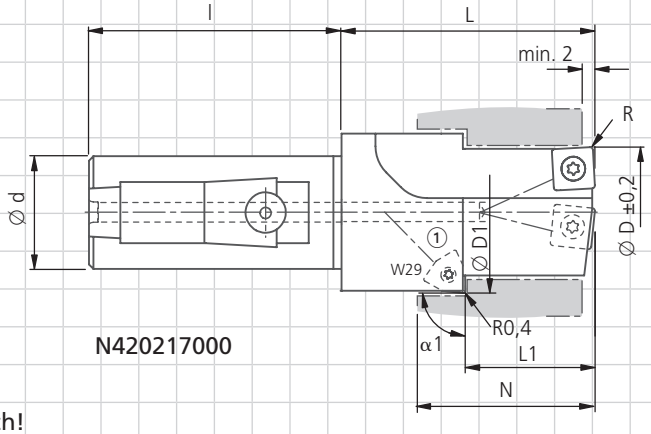
Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
N =
∅ D1 =
L1 =
α1 =
∅ d =




XV85... N420217000

Please provide workpiece sketch!

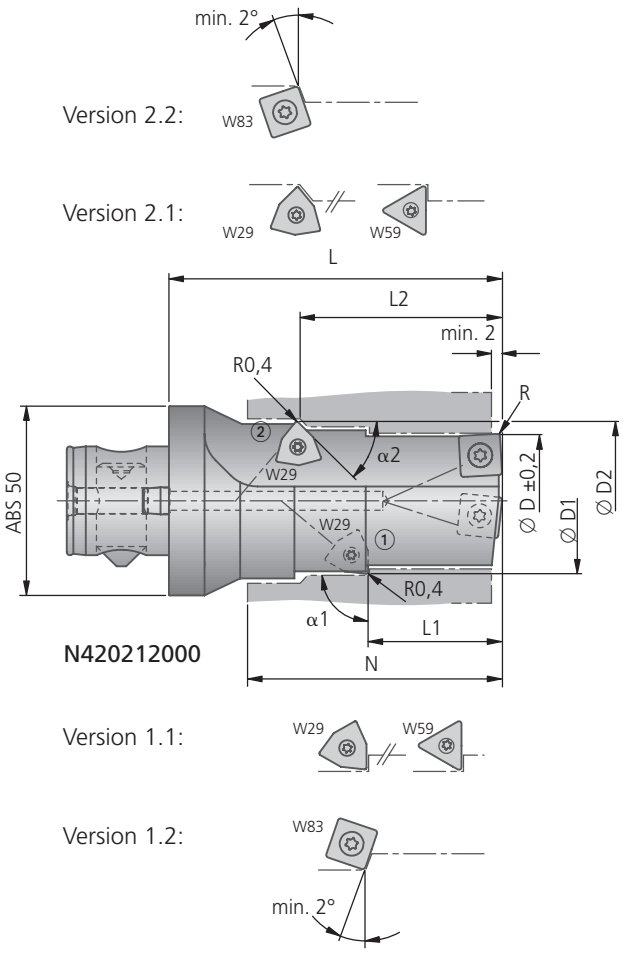
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with ABS® Connection, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ✕ | ● | ◐ | ◐ |

● very good ◐ good ○ possible ✕ not possible

- drilling depth 2×D
- with two stepped cutting edges




### Solid drilling step (min/max dimension)

| Drilling examples | | | | |
|---|---|---|---|---|
| Drilling range Ø D min - max | Drilling depth N max | L | Insert | R |
| 14,0 - 17,5 | 2 × D | N + 35 | W83 13... | 0,4 |
| 17,6 - 21,5 | 2 × D | N + 35 | W83 18... | 0,6 |
| 21,6 - 27,0 | 2 × D | N + 35 | W83 23... | 0,8 |
| 27,1 - 33,0 | 2 × D | N + 40 | W83 32... | 0,8 |
| 33,1 - 44,5 | 2 × D | N + 40 | W83 44... | 0,8 |

### Step ① (min/max dimension)

| Drilling examples | | | | | | |
|---|---|---|---|---|---|---|
| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | L | Insert Version 1.1 | Insert Version 1.2 |
| 17,5 - 24,9 | Version 1.1 W29/W59: 90°-15° Version 1.2 W83: 88°-15° | 10 | 1,5 × D | N + 35 | W29 10... | W83 13... |
| 25,0 - 29,9 | | 10 | 1,5 × D | N + 35 | W29 18... | W83 18... |
| 30,0 - 34,9 | | 15 | 1,5 × D | N + 40 | W29 24... | W83 23... |
| 35,0 - 50,0 | | 15 | 1,5 × D | N + 40 | W29 34... | W83 32... |
| 30,0 - 50,0 | | 15 | 1,5 × D | N + 40 | W59 18... | W83 44... |

### Step ② (min/max dimension)

| Drilling examples | | | | | | |
|---|---|---|---|---|---|---|
| Drilling range Ø D2 min - max | α2 max - min | L2 min | L2 max | L | Insert Version 2.1 | Insert Version 2.2 |
| 17,5 - 24,9 | Version 2.1 W29/W59: 90°-15° Version 2.2 W83: 88°-15° | L1 | L1+(1,5×D1) | N+35 | W29 10... | W83 13... |
| 25,0 - 29,9 | | L1 | L1+(1,5×D1) | N+35 | W29 18... | W83 18... |
| 30,0 - 34,9 | | L1 | L1+(1,5×D1) | N+40 | W29 24... | W83 23... |
| 35,0 - 50,0 | | L1 | L1+(1,5×D1) | N+40 | W29 34... | W83 32... |
| 30,0 - 50,0 | | L1 | L1+(1,5×D1) | N+40 | W59 18... | W83 44... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.


Patent applied for inside and outside Germany (ABS) · Patent applications (KUB Quatron)

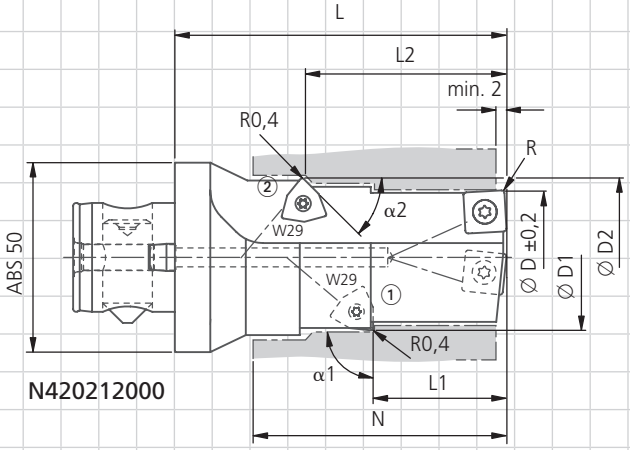
Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
N =
∅ D1 =
L1 =
α1 =
∅ D2 =
L2 =
α2 =




XV12... N420212000

Please provide workpiece sketch!

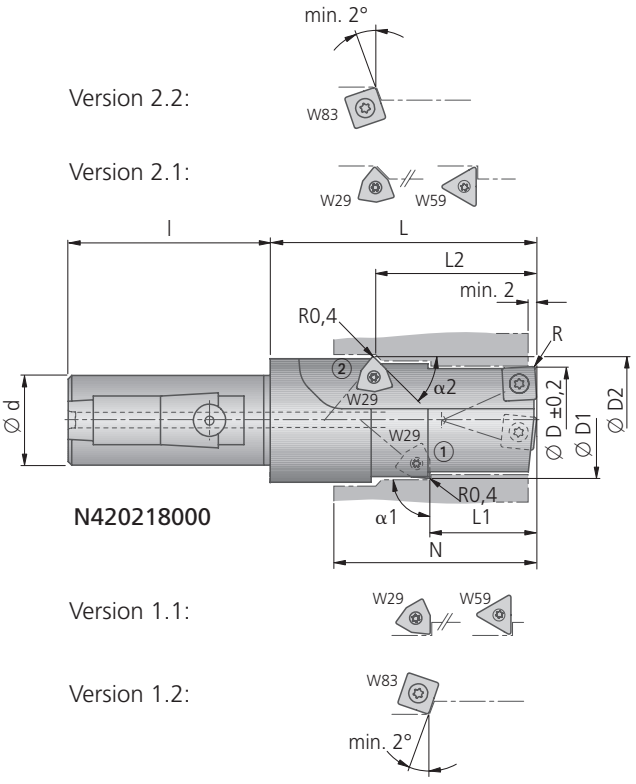
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ✕ | ● | ◐ | ◐ |

● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D
- with two stepped cutting edges




**Solid drilling step** (min/max dimension)

| Drilling examples | | | | | | |
|---|---|---|---|---|---|---|
| Drilling range Ø D min - max | Drilling depth N max | L | Insert | R | Cylindrical shank Ø d × l 25×56 | 32×60 |
| 14,0 - 17,5 | 2 × D | N + 24 | W83 13... | 0,4 | • | • |
| 17,6 - 21,5 | 2 × D | N + 24 | W83 18... | 0,6 | • | • |
| 21,6 - 27,0 | 2 × D | N + 29 | W83 23... | 0,8 | • | • |
| 27,1 - 33,0 | 2 × D | N + 29 | W83 32... | 0,8 | | • |
| 33,1 - 44,5 | 2 × D | N + 29 | W83 44... | 0,8 | | • |

**Step ①** (min/max dimension)

| Drilling examples | | | | | | |
|---|---|---|---|---|---|---|
| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | L | Insert Version 1.1 | Version 1.2 |
| 17,5 - 24,9 | Version 1.1 W29/W59: 90°-15° Version 1.2 W83: 88°-15° | 10 | 1,5 × D | N + 35 | W29 10... | W83 13... |
| 25,0 - 29,9 | | 10 | 1,5 × D | N + 35 | W29 18... | W83 18... |
| 30,0 - 34,9 | | 15 | 1,5 × D | N + 40 | W29 24... | W83 23... |
| 35,0 - 50,0 | | 15 | 1,5 × D | N + 40 | W29 34... | W83 32... |
| 30,0 - 50,0 | | 15 | 1,5 × D | N + 40 | W59 18... | W83 44... |

**Step ②** (min/max dimension)

| Drilling examples | | | | | | |
|---|---|---|---|---|---|---|
| Drilling range Ø D2 min - max | α2 max - min | L2 min | L2 max | L | Insert Version 2.1 | Version 2.2 |
| 17,5 - 24,9 | Version 2.1 W29/W59: 90°-15° Version 2.2 W83: 88°-15° | L1 | L1+(1,5×D1) | N+35 | W29 10... | W83 13... |
| 25,0 - 29,9 | | L1 | L1+(1,5×D1) | N+35 | W29 18... | W83 18... |
| 30,0 - 34,9 | | L1 | L1+(1,5×D1) | N+40 | W29 24... | W83 23... |
| 35,0 - 50,0 | | L1 | L1+(1,5×D1) | N+40 | W29 34... | W83 32... |
| 30,0 - 50,0 | | L1 | L1+(1,5×D1) | N+40 | W59 18... | W83 44... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

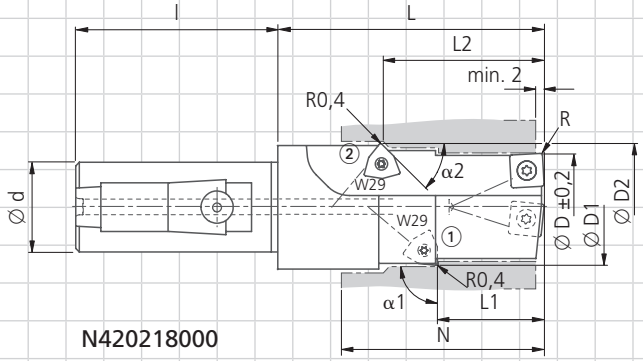
E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
N =
∅ D1 =
L1 =
α1 =
∅ D2 =
L2 =
α2 =
∅ d =

XV85...




N420218000

Please provide workpiece sketch!

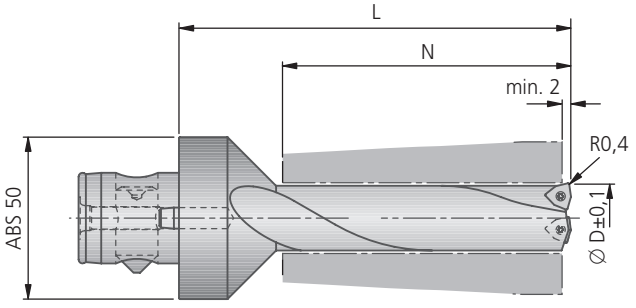
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with ABS® Connection, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ◐ | ◐ | ● | ✕ | ◐ | ● |
| 3×D | ● | ● | ● | ● | ◐ | ◐ | ◐ | ◐ | ✕ | ○ | ● |
| 4×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ◐ |

● very good ◐ good ○ possible ✕ not possible

■ drilling depth 2×D, 3×D, 4×D




N420001000

| Solid drilling step (min/max dimension) | | | | | |
|---|---|---|---|---|---|
| Drilling examples |  | | | | |
| Drilling range Ø D min - max | Drilling depth N 2×D | 3×D | 4×D | L | Insert |
| 14,0 - 19,9 | • | • | | N + 35 | W29 10... |
| 20,0 - 24,9 | • | • | • | N + 35 | W29 18... |
| 25,0 - 29,9 | • | • | • | N + 35 | W29 24... |
| 30,0 - 36,9 | • | • | • | N + 40 | W29 24... |
| 37,0 - 44,0 | • | • | • | N + 50 | W29 34... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.


Patent applied for inside and outside Germany (ABS), EP 883 455 and other patents (KUB Trigon)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

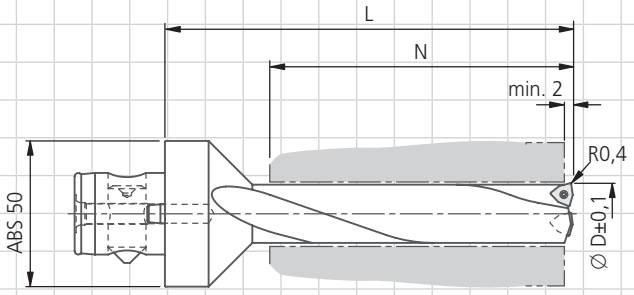
Material to be machined:

∅ D =

N = ☐ 2×D

☐ 3×D

☐ 4×D




XV02...

N420001000

Please provide workpiece sketch!

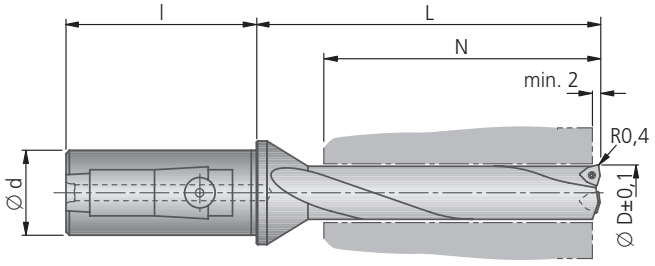
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ◐ | ◐ | ● | ✕ | ◐ | ● |
| 3×D | ● | ● | ● | ● | ◐ | ◐ | ◐ | ◐ | ✕ | ○ | ● |
| 4×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | ✕ | ✕ | ◐ |

● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D, 3×D, 4×D




N420002000

**Solid drilling step** (min/max dimension)

Drilling examples 

| Drilling range Ø D min - max | Drilling depth N 2×D | 3×D | 4×D | L | Insert | Cylindrical shank Ø d × l 20×50 | 25×56 | 32×60 |
|---|---|---|---|---|---|---|---|---|
| 12,0 - 13,9 | • | • | | N + 24 | W29 04... | • | | |
| 14,0 - 19,9 | • | • | • | N + 24 | W29 10... | • | • | • |
| 20,0 - 24,9 | • | • | • | N + 24 | W29 18... | • | • | • |
| 25,0 - 29,9 | • | • | • | N + 24 | W29 24... | | • | • |
| 30,0 - 36,9 | • | • | • | N + 29 | W29 24... | | | • |
| 37,0 - 44,0 | • | • | • | N + 39 | W29 34... | | | • |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.



EP 883 455 and other patents (KUB Trigon)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

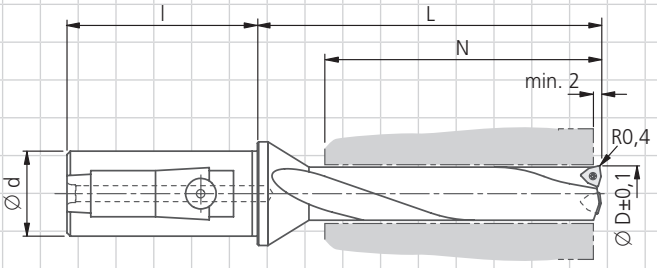
Ø D =

N = ☐ 2×D

☐ 3×D

☐ 4×D

Ø d =




XV85... N420002000

Please provide workpiece sketch!

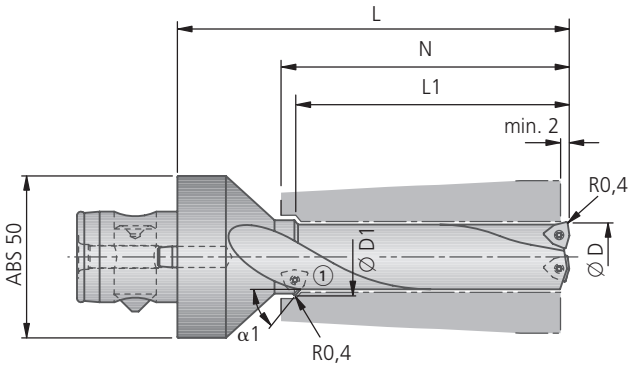
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with ABS® Connection, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ◐ | ◐ | ● | × | ◐ | ● |
| 3×D | ● | ● | ● | ● | ◐ | ◐ | ◐ | ◐ | × | ○ | ● |
| 4×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | × | × | ◐ |

● very good ◐ good ○ possible × not possible

- drilling depth 2×D, 3×D, 4×D
- with chamfering insert




N420005000

| Solid drilling step (min/max dimension) | | |
|---|---|---|
| Drilling examples |  | |
| Drilling range Ø D min - max | L | Insert |
| 14,0 - 19,9 | N + 40 | W29 10... |
| 20,0 - 24,9 | N + 40 | W29 18... |
| 25,0 - 29,9 | N + 40 | W29 24... |
| 30,0 - 36,9 | N + 45 | W29 24... |
| 37,0 - 44,0 | N + 55 | W29 34... |

| Chamfering step ① (min/max dimension) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drilling examples |  | | | | | | |
| Drilling range Ø D1 min - max | α1 max - min | L1 2×D | L1 3×D | L1 4×D | Drilling depth N min | Drilling depth N max | Insert |
| 20,0 - 24,9 | 90° - 15° | • | • | • | L1 | L1+5 | W29 10... |
| 25,0 - 29,9 | 90° - 15° | • | • | • | L1 | L1+5 | W29 24... |
| 30,0 - 36,9 | 90° - 15° | • | • | • | L1 | L1+5 | W29 24... |
| 37,0 - 44,0 | 90° - 15° | • | • | • | L1 | L1+5 | W29 34... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.



Patent applied for inside and outside Germany (ABS), EP 883 455 and other patents (KUB Trigon)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =

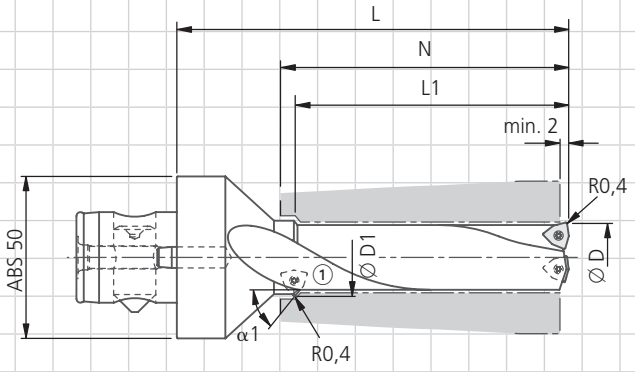
∅ D1 =

L1 = ☐ 2×D

☐ 3×D

☐ 4×D

α1 =




XV12... N420005000

Please provide workpiece sketch!

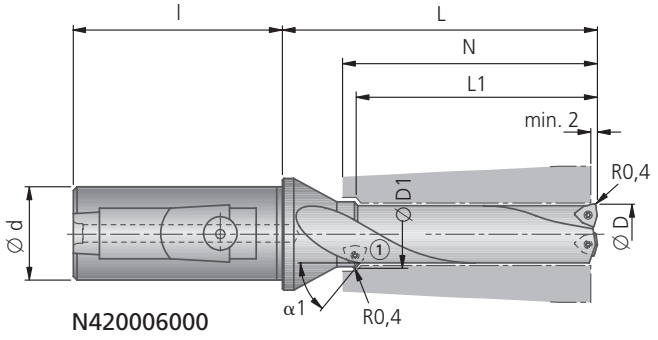
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ◐ | ◐ | ● | × | ◐ | ● |
| 3×D | ● | ● | ● | ● | ◐ | ◐ | ◐ | ◐ | × | ○ | ● |
| 4×D | ● | ● | ◐ | ○ | ○ | ○ | ○ | ○ | × | × | ◐ |

● very good ◐ good ○ possible × not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D, 3×D, 4×D
- with chamfering insert




N420006000

**Solid drilling step** (min/max dimension)

Drilling examples 

| Drilling range Ø D min - max | L | Insert | Cyl. shank Ø d × l 20×50 | 25×56 | 32×60 |
|---|---|---|---|---|---|
| 14,0 - 19,9 | N + 29 | W29 10... | • | • | • |
| 20,0 - 24,9 | N + 29 | W29 18... | • | • | • |
| 25,0 - 29,9 | N + 29 | W29 24... | | • | • |
| 30,0 - 36,9 | N + 34 | W29 24... | | | • |
| 37,0 - 44,0 | N + 44 | W29 34... | | | • |

**Chamfering step** ① (min/max dimension)

Drilling examples 

| Drilling range Ø D1 min - max | α1 max - min | L1 2×D | 3×D | 4×D | Drilling depth N min | N max | Insert |
|---|---|---|---|---|---|---|---|
| 20,0 - 24,9 | 90° - 15° | • | • | • | L1 | L1+5 | W29 10... |
| 25,0 - 29,9 | 90° - 15° | • | • | • | L1 | L1+5 | W29 24... |
| 30,0 - 36,9 | 90° - 15° | • | • | • | L1 | L1+5 | W29 24... |
| 37,0 - 44,0 | 90° - 15° | • | • | • | L1 | L1+5 | W29 34... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =

∅ D1 =

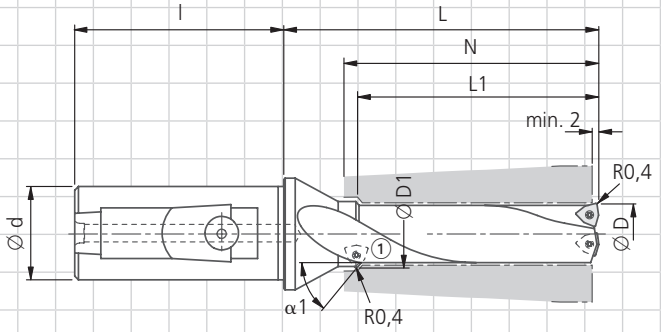
L1 = ☐ 2×D

☐ 3×D

☐ 4×D

α1 =

∅ d =




XV85...

N420006000

Please provide workpiece sketch!

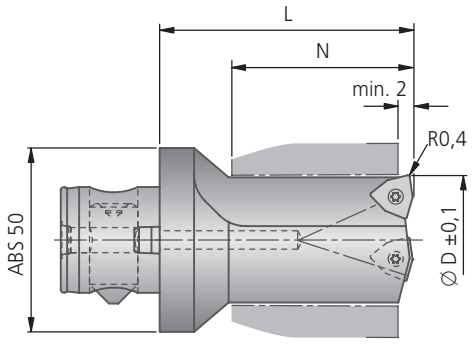
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with ABS® Connection, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ✕ | ◐ | ● |

● very good ◐ good ○ possible ✕ not possible

■ drilling depth 2×D




N420070000

**Solid drilling step** (min/max dimension)

Drilling examples 

| Drilling range D min - max | Drilling depth N min | Drilling depth N max | L | Insert |
|---|---|---|---|---|
| 14,0 - 19,9 | 15 | 2 × D | N + 35 | W29 10... |
| 20,0 - 24,9 | 15 | 2 × D | N + 35 | W29 18... |
| 25,0 - 29,9 | 15 | 2 × D | N + 35 | W29 24... |
| 30,0 - 36,9 | 20 | 2 × D | N + 40 | W29 24... |
| 37,0 - 44,0 | 20 | 2 × D | N + 40 | W29 34... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.



Patent applied for inside and outside Germany (ABS)

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Company: Contact:

Address: Department:

Phone:

Fax:

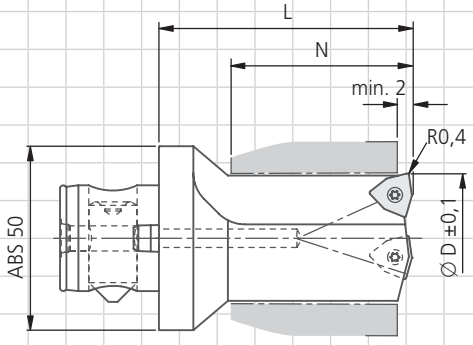
E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =

N =




XV02... N420070000

Please provide workpiece sketch!

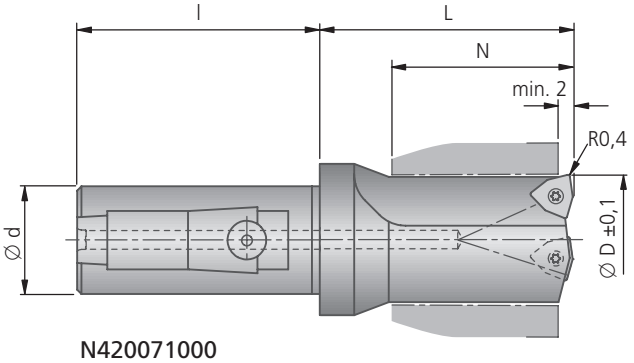
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ✕ | ◐ | ● |

● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D




N420071000

**Solid drilling step** (min/max dimension)

Drilling examples 

| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | L | Insert | Cylindrical shank Ø d × l 25×56 | Cylindrical shank Ø d × l 32×60 |
|---|---|---|---|---|---|---|
| 14,0 - 19,9 | 10 | 2 × D | N + 24 | W29 10... | • | • |
| 20,0 - 24,9 | 10 | 2 × D | N + 24 | W29 18... | • | • |
| 25,0 - 29,9 | 10 | 2 × D | N + 29 | W29 24... | • | • |
| 30,0 - 36,9 | 15 | 2 × D | N + 29 | W29 24... | | • |
| 37,0 - 44,0 | 15 | 2 × D | N + 29 | W29 34... | | • |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

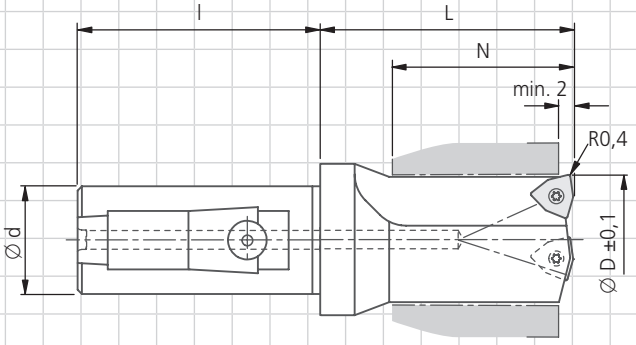
☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =

N =

∅ d =




XV85... N420071000

Please provide workpiece sketch!

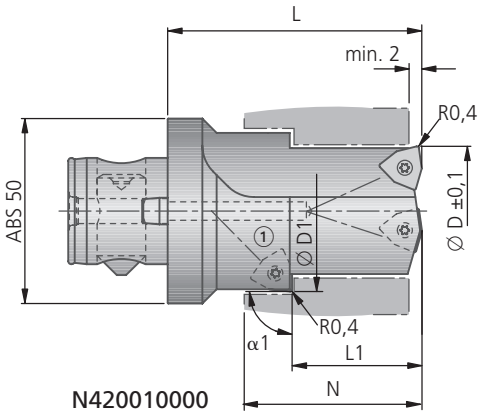
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with ABS® Connection, R.H. cutting

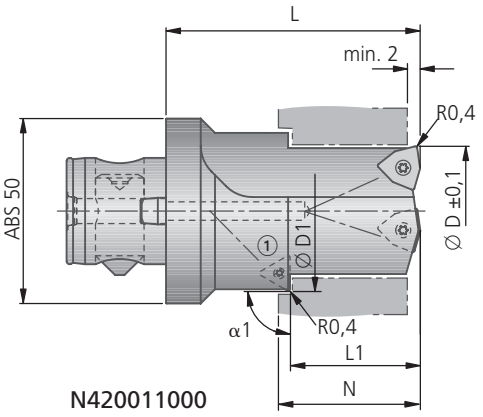
| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ✕ | ◐ | ● |

● very good ◐ good ○ possible ✕ not possible

- drilling depth 2×D
- with a stepped cutting edge

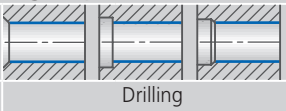



N420010000



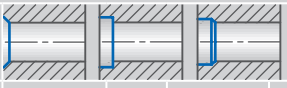

N420011000

**Solid drilling step** (min/max dimension)

Drilling examples 

| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | Insert |
|---|---|---|---|
| 14,0 - 19,9 | 15 | L1+(1,5×D1) | W29 10... |
| 20,0 - 24,9 | 15 | L1+(1,5×D1) | W29 18... |
| 25,0 - 29,9 | 20 | L1+(1,5×D1) | W29 24... |
| 30,0 - 36,9 | 20 | L1+(1,5×D1) | W29 24... |
| 37,0 - 44,0 | 20 | L1+(1,5×D1) | W29 34... |

**Step** ① (min/max dimension)

Drilling examples 

| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | L | Insert |
|---|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | 10 | 1,5 × D | N + 35 | W29 10... |
| 25,0 - 29,9 | 90°-15° | 10 | 1,5 × D | N + 35 | W29 18... |
| 30,0 - 34,9 | 90°-15° | 15 | 1,5 × D | N + 40 | W29 24... |
| 35,0 - 50,0 | 90°-15° | 15 | 1,5 × D | N + 40 | W29 34... |
| 30,0 - 50,0 | 90°-15° | 15 | 1,5 × D | N + 40 | W59 18... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.



Patent applied for inside and outside Germany (ABS)

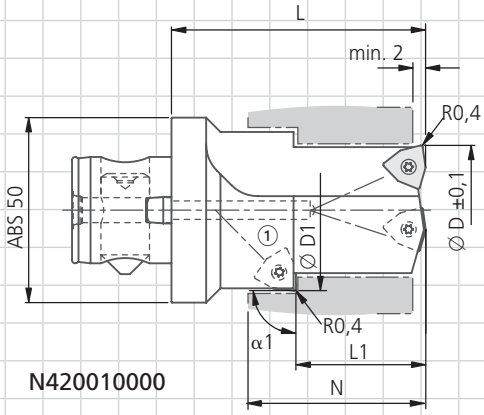
Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

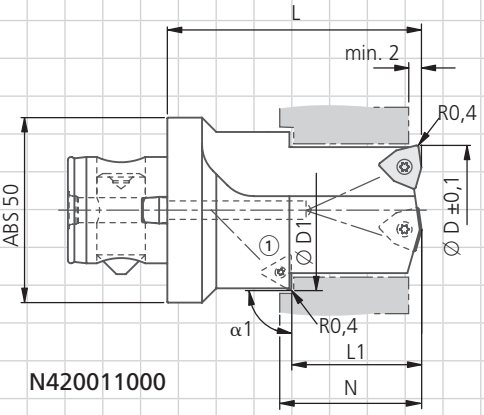
☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
N =
∅ D1 =
L1 =
α1 =




XV12... N420010000




N420011000

Please provide workpiece sketch!

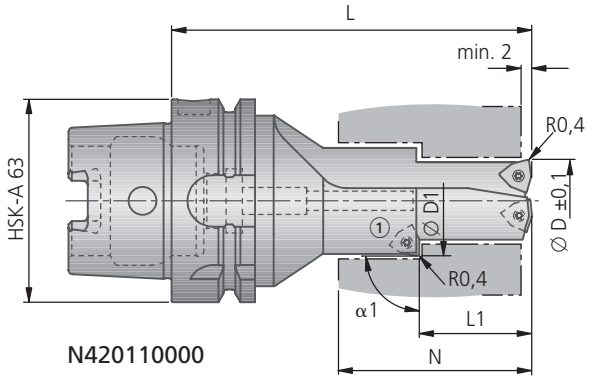
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with HSK-A Connection, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ✕ | ◐ | ● |

● very good ◐ good ○ possible ✕ not possible

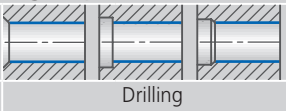
- HSK-A connection to ISO 12164-1
- drilling depth 2×D
- with a stepped cutting edge




N420110000

**Solid drilling step** (min/max dimension)

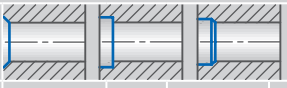
Drilling examples



| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | Insert |
|---|---|---|---|
| 14,0 - 19,9 | 15 | L1+(1,5×D1) | W29 10... |
| 20,0 - 24,9 | 15 | L1+(1,5×D1) | W29 18... |
| 25,0 - 29,9 | 20 | L1+(1,5×D1) | W29 24... |
| 30,0 - 36,9 | 20 | L1+(1,5×D1) | W29 24... |
| 37,0 - 44,0 | 20 | L1+(1,5×D1) | W29 34... |

**Step** ① (min/max dimension)

Drilling examples



| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | L | Insert |
|---|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | 10 | 1,5 × D | N + 54 | W29 10... |
| 25,0 - 29,9 | 90°-15° | 10 | 1,5 × D | N + 54 | W29 18... |
| 30,0 - 34,9 | 90°-15° | 15 | 1,5 × D | N + 59 | W29 24... |
| 35,0 - 50,0 | 90°-15° | 15 | 1,5 × D | N + 59 | W29 34... |
| 30,0 - 50,0 | 90°-15° | 15 | 1,5 × D | N + 59 | W59 18... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

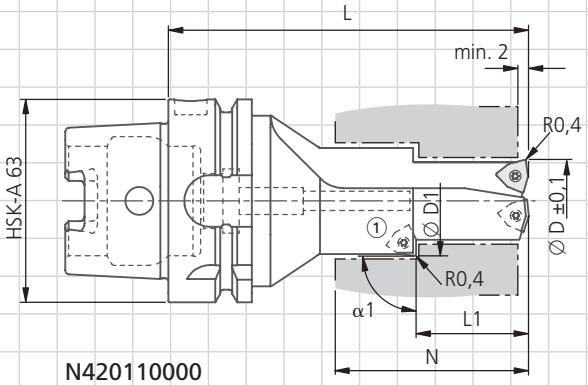
∅ D =

N =

∅ D1 =

L1 =

α1 =




XV77...

N420110000

Please provide workpiece sketch!

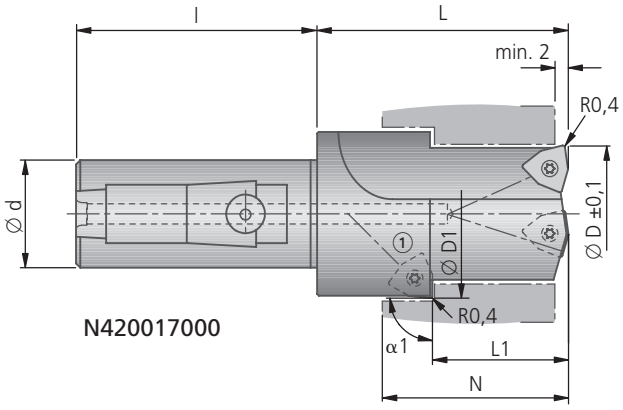
Delivery consists of: Basic tool body. Insert not included.

# Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

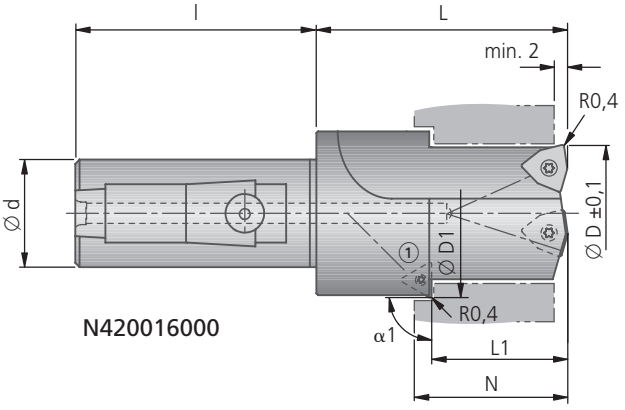
| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ✕ | ◐ | ● |

● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D
- with a stepped cutting edge



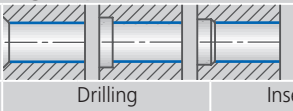

N420017000




N420016000

**Solid drilling step** (min/max dimension)

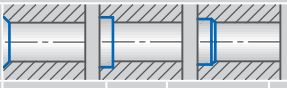
Drilling examples



| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | Insert | Cylindrical shank Ø d × l 25×56 | Cylindrical shank Ø d × l 32×60 |
|---|---|---|---|---|---|
| 14,0 - 19,9 | 15 | L1+(1,5×D1) | W29 10... | • | • |
| 20,0 - 24,9 | 15 | L1+(1,5×D1) | W29 18... | • | • |
| 25,0 - 29,9 | 20 | L1+(1,5×D1) | W29 24... | • | • |
| 30,0 - 36,9 | 20 | L1+(1,5×D1) | W29 24... | | • |
| 37,0 - 44,0 | 20 | L1+(1,5×D1) | W29 34... | | • |

**Step** ① (min/max dimension)

Drilling examples



| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | L | Insert |
|---|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | 10 | 1,5 × D | N + 24 | W29 10... |
| 25,0 - 29,9 | 90°-15° | 10 | 1,5 × D | N + 24 | W29 18... |
| 30,0 - 34,9 | 90°-15° | 15 | 1,5 × D | N + 29 | W29 24... |
| 35,0 - 44,0 | 90°-15° | 15 | 1,5 × D | N + 29 | W29 34... |
| 30,0 - 44,0 | 90°-15° | 15 | 1,5 × D | N + 29 | W59 18... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

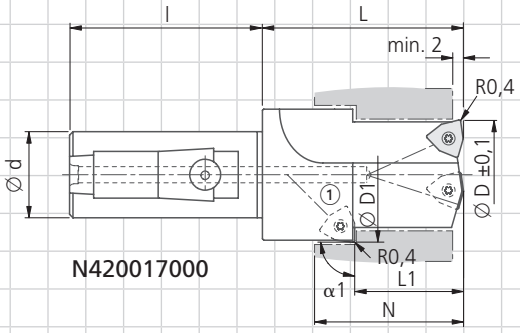
Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry Quantity:

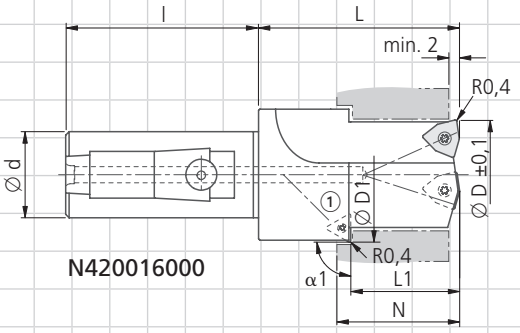
Material to be machined:

∅ D =
N =
∅ D1 =
L1 =
α1 =
∅ d =

XV85...




N420017000




N420016000

Please provide workpiece sketch!

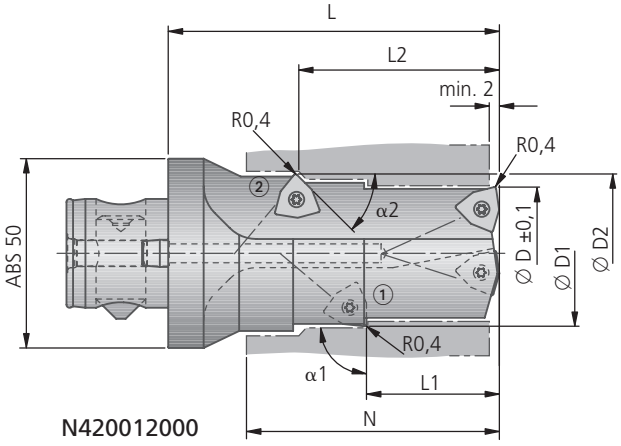
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with ABS® Connection, R.H. cutting

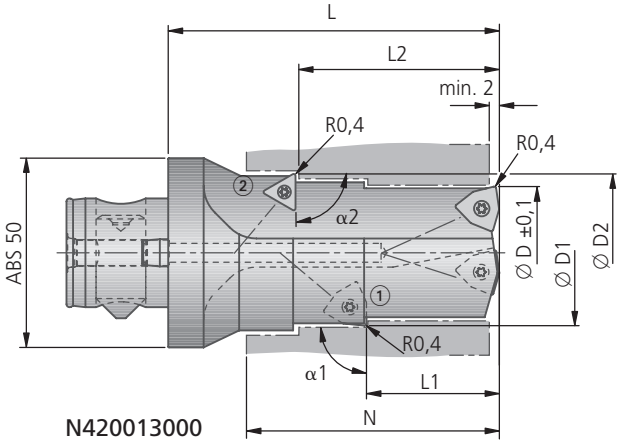
| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ✕ | ◐ | ● |

● very good ◐ good ○ possible ✕ not possible

- drilling depth 2×D
- with two stepped cutting edges

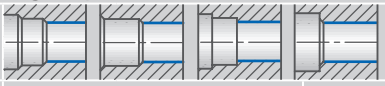



N420012000



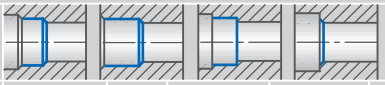

N420013000

**Solid drilling step** (min/max dimension)

Drilling examples 

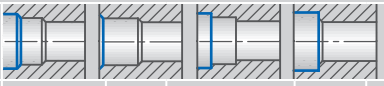
| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | Insert |
|---|---|---|---|
| 14,0 - 19,9 | 15 | L2 + (1,5×D2) | W29 10... |
| 20,0 - 24,9 | 15 | L2 + (1,5×D2) | W29 18... |
| 25,0 - 29,9 | 20 | L2 + (1,5×D2) | W29 24... |
| 30,0 - 36,9 | 20 | L2 + (1,5×D2) | W29 24... |
| 37,0 - 44,0 | 20 | L2 + (1,5×D2) | W29 34... |

**Step ①** (min/max dimension)

Drilling examples 

| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | L | Insert |
|---|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | 10 | 1,5 × D | N + 54 | W29 10... |
| 25,0 - 29,9 | 90°-15° | 10 | 1,5 × D | N + 54 | W29 18... |
| 30,0 - 34,9 | 90°-15° | 15 | 1,5 × D | N + 59 | W29 24... |
| 35,0 - 50,0 | 90°-15° | 15 | 1,5 × D | N + 59 | W29 34... |

**Step ②** (min/max dimension)

Drilling examples 

| Drilling range Ø D2 min - max | α2 max - min | L2 min | L2 max | L | Insert |
|---|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | L1 | L1+(1,5×D1) | N+35 | W29 10... |
| 25,0 - 29,9 | 90°-15° | L1 | L1+(1,5×D1) | N+35 | W29 18... |
| 30,0 - 34,9 | 90°-15° | L1 | L1+(1,5×D1) | N+40 | W29 24... |
| 35,0 - 50,0 | 90°-15° | L1 | L1+(1,5×D1) | N+40 | W29 34... |
| 30,0 - 50,0 | 90°-15° | L1 | L1+(1,5×D1) | N+40 | W59 18... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.



Patent applied for inside and outside Germany (ABS)

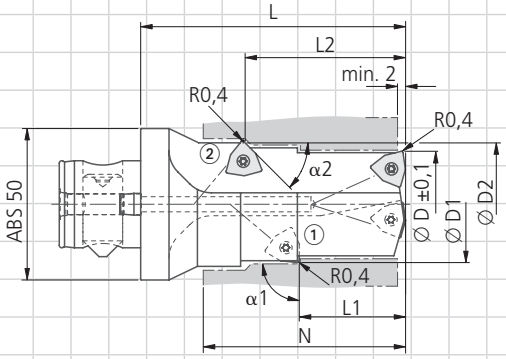
Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

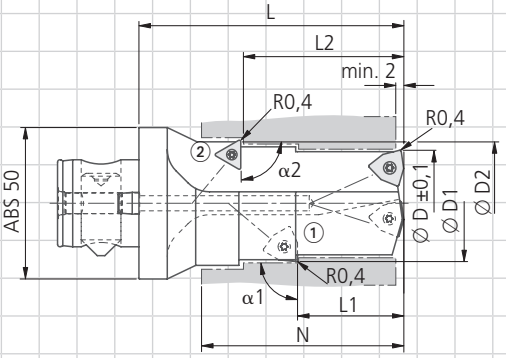
☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
N =
∅ D1 =
L1 =
α1 =
∅ D2 =
L2 =
α2 =




XV12... N420012000




N420013000

Please provide workpiece sketch!

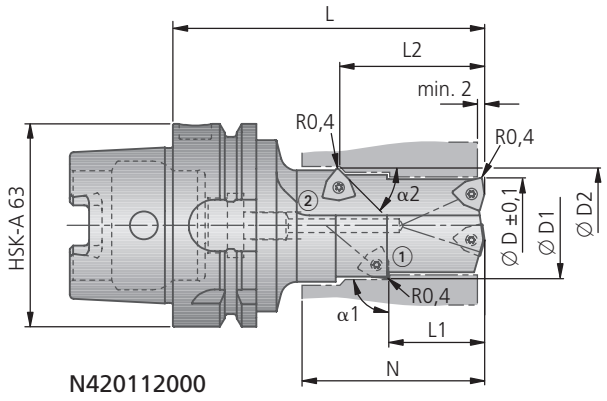
Delivery consists of: Basic tool body. Insert not included.

## Insert Drill with HSK-A Connection, R.H. cutting

| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ✕ | ◐ | ● |

● very good ◐ good ○ possible ✕ not possible

- HSK-A connection to ISO 12164-1
- drilling depth 2×D
- with two stepped cutting edges




**Solid drilling step** (min/max dimension)

| Drilling examples | | | |
|---|---|---|---|
| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | Insert |
| 14,0 - 19,9 | 15 | L2 + (1,5×D2) | W29 10... |
| 20,0 - 24,9 | 15 | L2 + (1,5×D2) | W29 18... |
| 25,0 - 29,9 | 20 | L2 + (1,5×D2) | W29 24... |
| 30,0 - 36,9 | 20 | L2 + (1,5×D2) | W29 24... |
| 37,0 - 44,0 | 20 | L2 + (1,5×D2) | W29 34... |

**Step ①** (min/max dimension)

| Drilling examples | | | | | |
|---|---|---|---|---|---|
| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | L | Insert |
| 17,5 - 24,9 | 90°-15° | 10 | 1,5 × D | N + 54 | W29 10... |
| 25,0 - 29,9 | 90°-15° | 10 | 1,5 × D | N + 54 | W29 18... |
| 30,0 - 34,9 | 90°-15° | 15 | 1,5 × D | N + 59 | W29 24... |
| 35,0 - 50,0 | 90°-15° | 15 | 1,5 × D | N + 59 | W29 34... |

**Step ②** (min/max dimension)

| Drilling examples | | | | | |
|---|---|---|---|---|---|
| Drilling range Ø D2 min - max | α2 max - min | L2 min | L2 max | L | Insert |
| 17,5 - 24,9 | 90°-15° | L1 | L1+(1,5×D1) | N+54 | W29... |
| 25,0 - 29,9 | 90°-15° | L1 | L1+(1,5×D1) | N+54 | W29... |
| 30,0 - 34,9 | 90°-15° | L1 | L1+(1,5×D1) | N+59 | W29... |
| 35,0 - 50,0 | 90°-15° | L1 | L1+(1,5×D1) | N+59 | W29... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company:
Address:

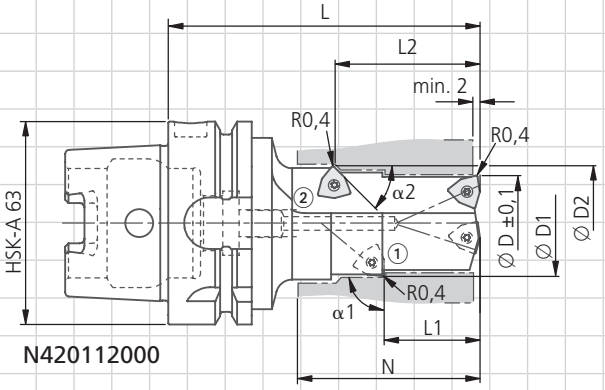
Contact:
Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry

Quantity:

Material to be machined:

∅ D =
N =
∅ D1 =
L1 =
α1 =
∅ D2 =
L2 =
α2 =




XV77...

N420112000

Please provide workpiece sketch!

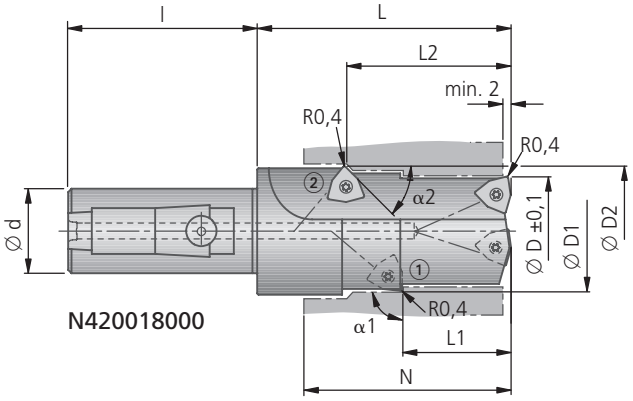
Delivery consists of: Basic tool body. Insert not included.

# Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

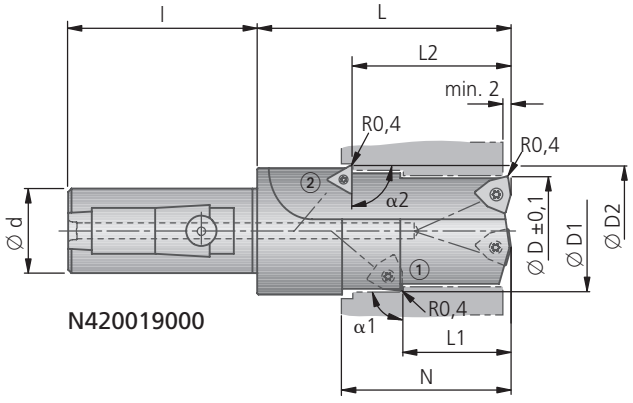
| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ✕ | ◐ | ● |

● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D
- with two stepped cutting edges

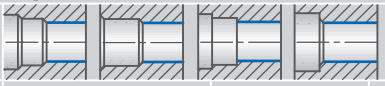



N420018000



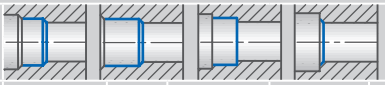

N420019000

**Solid drilling step** (min/max dimension)



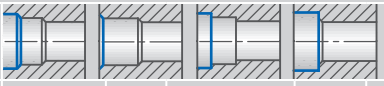
| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | Insert | Cylindrical shank Ø d × l 25×56 | Cylindrical shank Ø d × l 32×60 |
|---|---|---|---|---|---|
| 14,0 - 19,9 | 15 | L2+(1,5×D2) | W29 10... | • | • |
| 20,0 - 24,9 | 15 | L2+(1,5×D2) | W29 18... | • | • |
| 25,0 - 29,9 | 20 | L2+(1,5×D2) | W29 24... | • | • |
| 30,0 - 36,9 | 20 | L2+(1,5×D2) | W29 24... | | • |
| 37,0 - 44,0 | 20 | L2+(1,5×D2) | W29 34... | | • |

**Step ①** (min/max dimension)



| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | L | Insert |
|---|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | 10 | 1,5 × D | N + 54 | W29 10... |
| 25,0 - 29,9 | 90°-15° | 10 | 1,5 × D | N + 54 | W29 18... |
| 30,0 - 34,9 | 90°-15° | 15 | 1,5 × D | N + 59 | W29 24... |
| 35,0 - 50,0 | 90°-15° | 15 | 1,5 × D | N + 59 | W29 34... |

**Step ②** (min/max dimension)



| Drilling range Ø D2 min - max | α2 max - min | L2 min | L2 max | L | Insert |
|---|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | L1 | L1+(1,5×D1) | N+35 | W29... |
| 25,0 - 29,9 | 90°-15° | L1 | L1+(1,5×D1) | N+35 | W29... |
| 30,0 - 34,9 | 90°-15° | L1 | L1+(1,5×D1) | N+40 | W29... |
| 35,0 - 50,0 | 90°-15° | L1 | L1+(1,5×D1) | N+40 | W29... |
| 30,0 - 50,0 | 90°-15° | L1 | L1+(1,5×D1) | N+40 | W59 18... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.

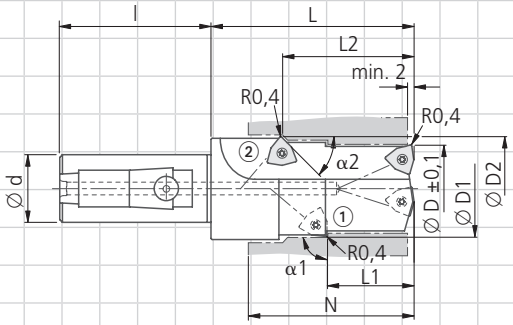
Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

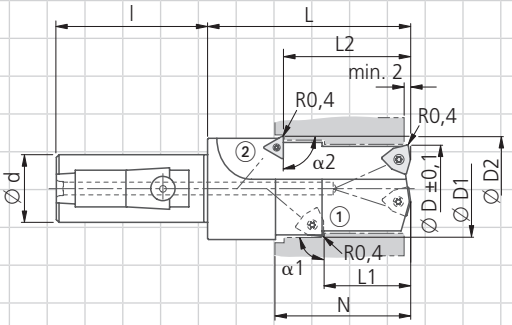
☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
N =
∅ D1 =
L1 =
α1 =
∅ D2 =
L2 =
α2 =
∅ d =




XV85... N420018000




N420019000

Please provide workpiece sketch!

Delivery consists of: Basic tool body. Insert not included.

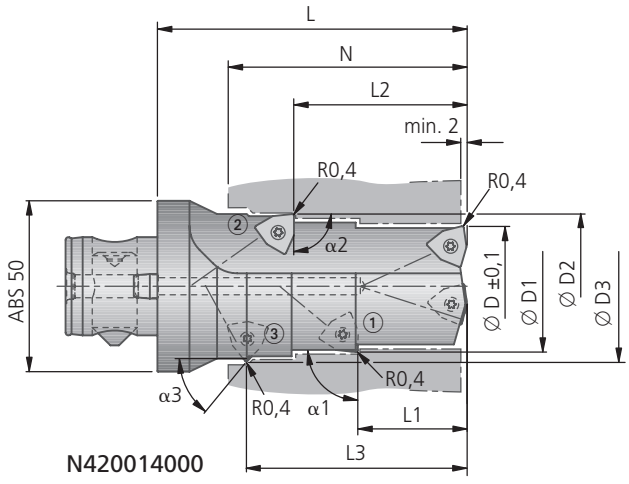
# KOMET® Easy Special™ KUB® Ø 14 – 44 mm

## Insert Drill with ABS® Connection, R.H. cutting

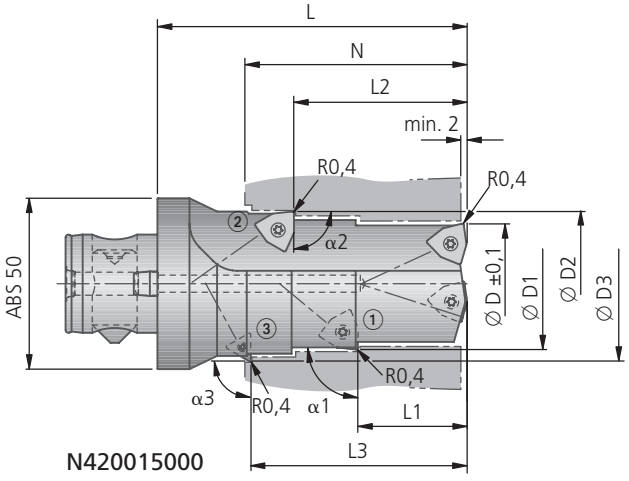
| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ✕ | ◐ | ● |

● very good ◐ good ○ possible ✕ not possible

- drilling depth 2×D
- with three stepped cutting edges




N420014000




N420015000

**Solid drilling step** (min/max dimension)

Drilling examples

| Drilling range Ø D min - max | Drilling depth N min | N max | Insert |
|---|---|---|---|
| 14,0 - 19,9 | 30 | L3 + (1,5×D3) | W29 10... |
| 20,0 - 24,9 | 30 | L3 + (1,5×D3) | W29 18... |
| 25,0 - 29,9 | 40 | L3 + (1,5×D3) | W29 24... |
| 30,0 - 36,9 | 40 | L3 + (1,5×D3) | W29 24... |
| 37,0 - 44,0 | 40 | L3 + (1,5×D3) | W29 34... |

**Step ①** (min/max dimension)

Drilling examples

| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | Insert |
|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | 10 | 1,5 × D | W29 10... |
| 25,0 - 29,9 | 90°-15° | 10 | 1,5 × D | W29 18... |
| 30,0 - 34,9 | 90°-15° | 15 | 1,5 × D | W29 24... |
| 35,0 - 50,0 | 90°-15° | 15 | 1,5 × D | W29 34... |

**Step ②** (min/max dimension)

Drilling examples

| Drilling range Ø D2 min - max | α2 max - min | L2 min | L2 max | Insert |
|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | L1 | L1 + (1,5×D1) | W29... |
| 25,0 - 29,9 | 90°-15° | L1 | L1 + (1,5×D1) | W29... |
| 30,0 - 34,9 | 90°-15° | L1 | L1 + (1,5×D1) | W29... |
| 35,0 - 50,0 | 90°-15° | L1 | L1 + (1,5×D1) | W29... |

**Step ③** (min/max dimension)

Drilling examples

| Drilling range Ø D3 min - max | α3 max - min | L3 min | L2 max | L | Insert |
|---|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | L2 | L2+(1,5×D2) | N+35 | W29... |
| 25,0 - 29,9 | 90°-15° | L2 | L2+(1,5×D2) | N+35 | W29... |
| 30,0 - 34,9 | 90°-15° | L2 | L2+(1,5×D2) | N+40 | W29... |
| 35,0 - 50,0 | 90°-15° | L2 | L2+(1,5×D2) | N+40 | W29... |
| 30,0 - 50,0 | 90°-15° | L2 | L2+(1,5×D2) | N+40 | W59 18... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.



Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

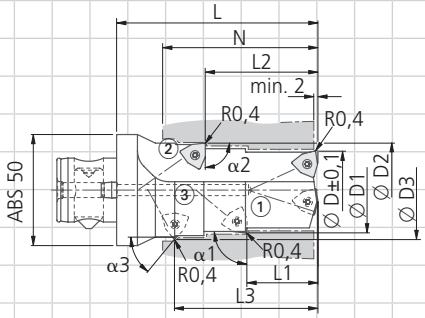
Fax:

E-Mail:

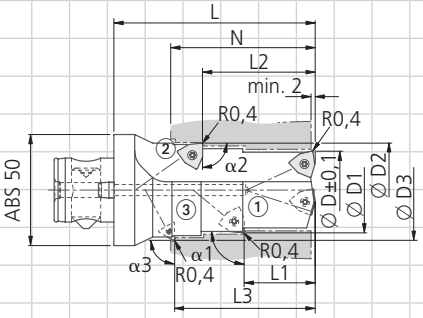
☐ Order ☐ Enquiry Quantity:

Material to be machined:

| | |
|---|---|
| ∅ D | = |
| N | = |
| ∅ D1 | = |
| L1 | = |
| α1 | = |
| ∅ D2 | = |
| L2 | = |
| α2 | = |
| ∅ D3 | = |
| L3 | = |
| α3 | = |




XV12... N420014000




N420015000

Please provide workpiece sketch!

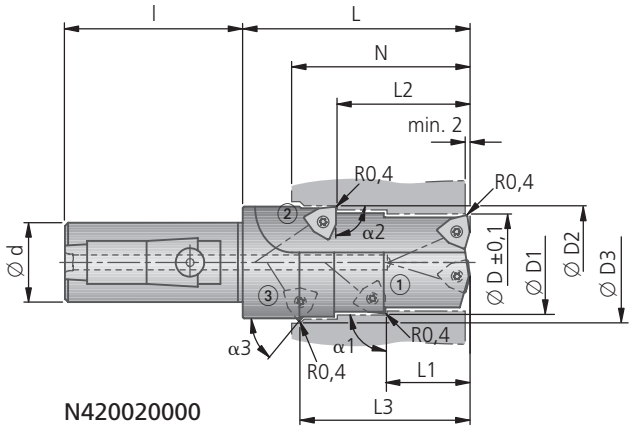
Delivery consists of: Basic tool body. Insert not included.

# Insert Drill with Cylindrical Shank (Combination Shank), R.H. cutting

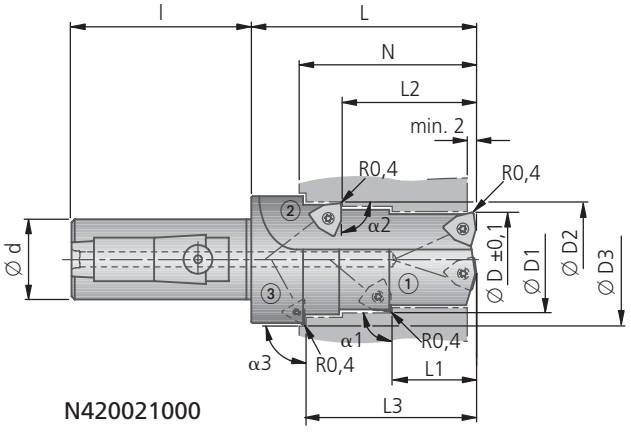
| L / D | solid drilling | blind hole | forge/casting skin, interface | angled | convex | cross bore | centering bore | chamber | stack plate drilling | rough boring | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ● | ● | ✕ | ◐ | ● |

● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D
- with three stepped cutting edges




N420020000




N420021000

## Solid drilling step (min/max dimension)

Drilling examples

| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | Insert | Cylindrical shank Ø d × l 25×56 | Cylindrical shank Ø d × l 32×60 |
|---|---|---|---|---|---|
| 14,0 - 19,9 | 15 | L3+(1,5×D3) | W29 10... | • | • |
| 20,0 - 24,9 | 15 | L3+(1,5×D3) | W29 18... | • | • |
| 25,0 - 29,9 | 20 | L3+(1,5×D3) | W29 24... | • | • |
| 30,0 - 36,9 | 20 | L3+(1,5×D3) | W29 24... | | • |
| 37,0 - 44,0 | 20 | L3+(1,5×D3) | W29 34... | | • |

## Step ① (min/max dimension)

Drilling examples

| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 max | Insert |
|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | 10 | 1,5 × D | W29 10... |
| 25,0 - 29,9 | 90°-15° | 10 | 1,5 × D | W29 18... |
| 30,0 - 34,9 | 90°-15° | 15 | 1,5 × D | W29 24... |
| 35,0 - 44,0 | 90°-15° | 15 | 1,5 × D | W29 34... |

## Step ② (min/max dimension)

Drilling examples

| Drilling range Ø D2 min - max | α2 max - min | L2 min | L2 max | Insert |
|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | L1 | L1 + (1,5×D1) | W29... |
| 25,0 - 29,9 | 90°-15° | L1 | L1 + (1,5×D1) | W29... |
| 30,0 - 34,9 | 90°-15° | L1 | L1 + (1,5×D1) | W29... |
| 35,0 - 44,0 | 90°-15° | L1 | L1 + (1,5×D1) | W29... |

## Step ③ (min/max dimension)

Drilling examples

| Drilling range Ø D3 min - max | α3 max - min | L3 min | L2 max | L | Insert |
|---|---|---|---|---|---|
| 17,5 - 24,9 | 90°-15° | L2 | L2+(1,5×D2) | N+24 | W29... |
| 25,0 - 29,9 | 90°-15° | L2 | L2+(1,5×D2) | N+24 | W29... |
| 30,0 - 34,9 | 90°-15° | L2 | L2+(1,5×D2) | N+29 | W29... |
| 35,0 - 44,0 | 90°-15° | L2 | L2+(1,5×D2) | N+29 | W29... |
| 30,0 - 44,0 | 90°-15° | L2 | L2+(1,5×D2) | N+29 | W59 18... |

Note! On exit of the drill risk of accident by detached parts of workpiece ● . Please arrange suitable guarding.

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

Ø D =

N =

Ø D1 =

L1 =

α1 =

Ø D2 =

L2 =

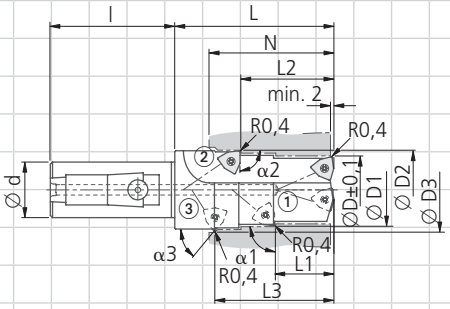
α2 =

Ø D3 =

L3 =

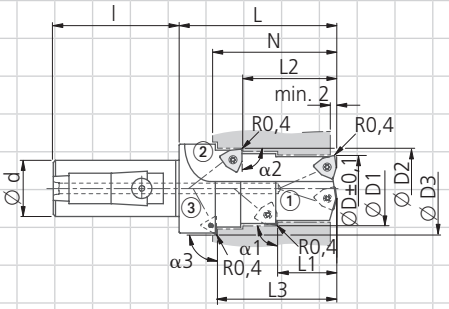
α3 =

Ø d =




XV85...

N420020000




N420021000

Please provide workpiece sketch!

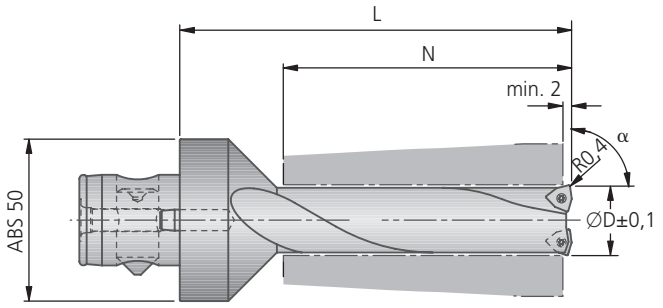
Delivery consists of: Basic tool body. Insert not included.

## Twin Cutter with ABS® Connection, R.H. cutting

| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |
| 3×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |
| 4×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

● very good ◐ good ○ possible ✕ not possible

■ drilling depth 2×D, 3×D, 4×D




N420022000

| Roughing step (min/max dimension) | | | | | | |
|---|---|---|---|---|---|---|
| Drilling examples |  | | | | | |
| Drilling range Ø D min - max | Drilling depth N 2×D | 3×D | 4×D | L | α max - min | Insert |
| 14,0 - 19,9 | • | • | • | N + 35 | 90° - 15° | W29 10... |
| 20,0 - 24,9 | • | • | • | N + 35 | 90° - 15° | W29 18... |
| 25,0 - 29,9 | • | • | • | N + 35 | 90° - 15° | W29 24... |
| 30,0 - 36,9 | • | • | • | N + 40 | 90° - 15° | W29 24... |
| 37,0 - 44,0 | • | • | • | N + 50 | 90° - 15° | W29 34... |



Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company:
Address:

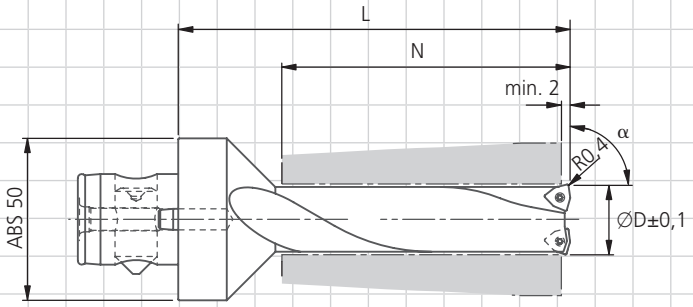
Contact:
Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry

Quantity:

Material to be machined:

∅ D =
α =
N = ☐ 2×D
☐ 3×D
☐ 4×D




XB86...

N420022000

Please provide workpiece sketch!

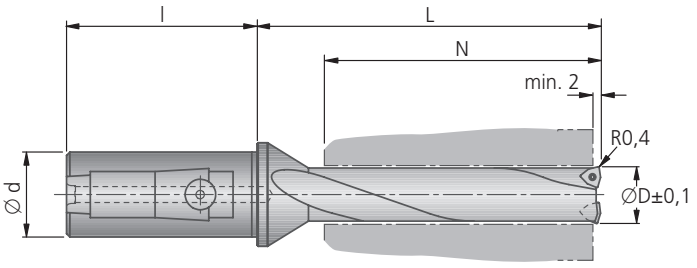
Delivery consists of: Basic tool body. Insert not included.

## Twin Cutter with Cylindrical Shank (Combination Shank), R.H. cutting

| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |
| 3×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |
| 4×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D, 3×D, 4×D




N420023000

**Roughing step** (min/max dimension)

Drilling examples 

| Drilling range Ø D min - max | Drilling depth N 2×D | 3×D | 4×D | L | Insert | Cylindrical shank Ø d × l 20×50 | 25×56 | 32×60 |
|---|---|---|---|---|---|---|---|---|
| 14,0 - 19,9 | • | • | • | N + 24 | W29 10... | • | • | • |
| 20,0 - 24,9 | • | • | • | N + 24 | W29 18... | • | • | • |
| 25,0 - 29,9 | • | • | • | N + 24 | W29 24... | | • | • |
| 30,0 - 36,9 | • | • | • | N + 29 | W29 24... | | | • |
| 37,0 - 44,0 | • | • | • | N + 39 | W29 34... | | | • |

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company:
Address:

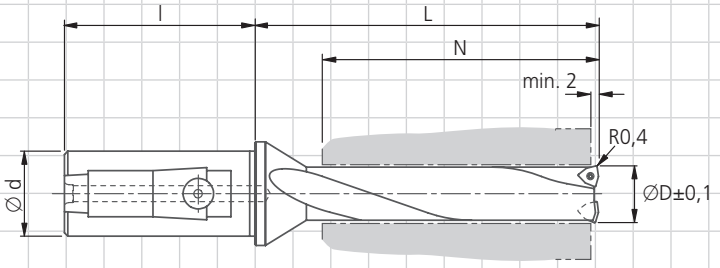
Contact:
Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry

Quantity:

Material to be machined:

Ø D =
N = ☐ 2×D
☐ 3×D
☐ 4×D
Ø d =




XB97...

N420023000

Please provide workpiece sketch!

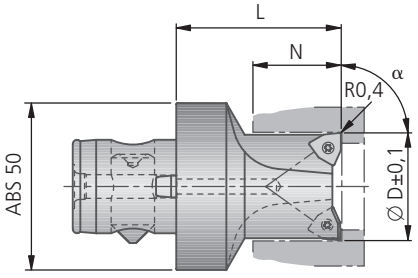
Delivery consists of: Basic tool body. Insert not included.

## Twin Cutter with ABS® or HSK-A Connection, R.H. cutting

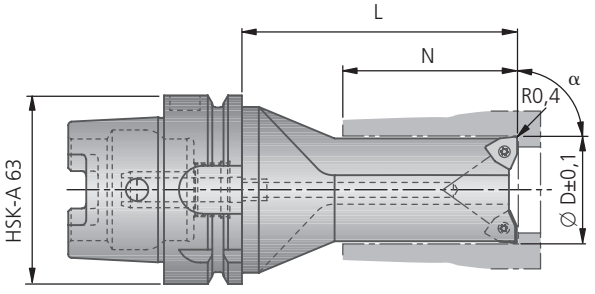
| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

● very good ◐ good ○ possible ✕ not possible

- HSK-A connection to ISO 12164-1
- drilling depth 2×D

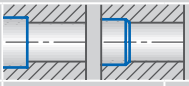



N420022000




N420122000

**Roughing step** (min/max dimension)

Drilling examples 

| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | ABS L | HSK L | Insert |
|---|---|---|---|---|---|
| 14,0 - 19,9 | 5 | 2 × D | N + 35 | N + 54 | W29 10... |
| 20,0 - 24,9 | 5 | 2 × D | N + 35 | N + 54 | W29 18... |
| 25,0 - 29,9 | 5 | 2 × D | N + 35 | N + 54 | W29 24... |
| 30,0 - 50,0 | 5 | 2 × D | N + 40 | N + 59 | W29 34... |



Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company:
Address:

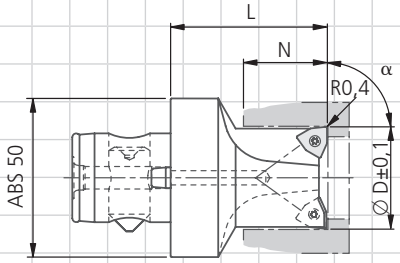
Contact:
Department:
Phone:
Fax:
E-Mail:

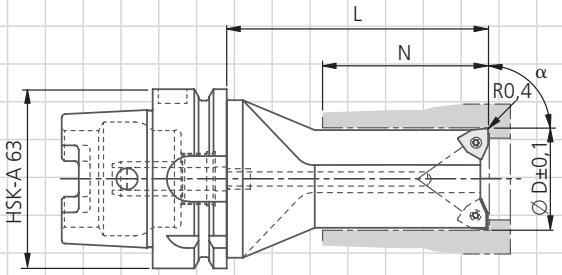
☐ Order ☐ Enquiry

Quantity:

Material to be machined:

∅ D =
α =
N =
ABS 50 ☐
HSK-A 63 ☐




XB86.../XB83... N420022000 N420122000

Please provide workpiece sketch!

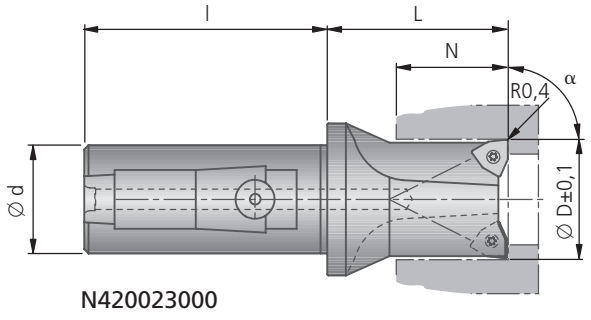
Delivery consists of: Basic tool body. Insert not included.

## Twin Cutter with Cylindrical Shank (Combination Shank), R.H. cutting

| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

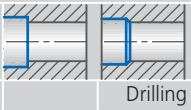
● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D




N420023000

**Roughing step** (min/max dimension)

Drilling examples 

| Drilling range Ø D min - max | α max - min | Drilling depth N min | Drilling depth N max | L | Insert | Cylindrical shank Ø d × l 25×56 | Cylindrical shank Ø d × l 32×60 |
|---|---|---|---|---|---|---|---|
| 14,0 - 19,9 | 90°-15° | 5 | 2 × D | N + 24 | W29 10... | • | • |
| 20,0 - 24,9 | 90°-15° | 5 | 2 × D | N + 24 | W29 18... | • | • |
| 25,0 - 29,9 | 90°-15° | 5 | 2 × D | N + 24 | W29 24... | • | • |
| 30,0 - 44,0 | 90°-15° | 5 | 2 × D | N + 29 | W29 34... | | • |

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

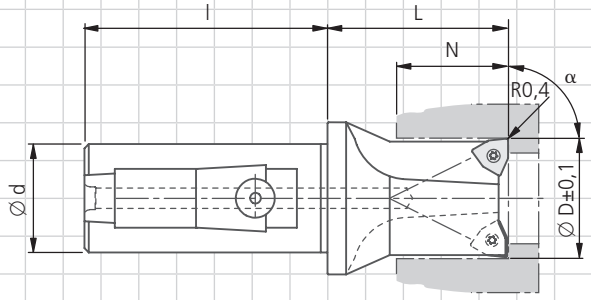
Material to be machined:

Ø D =

α =

N =

Ø d =




XV97... N420023000

Please provide workpiece sketch!

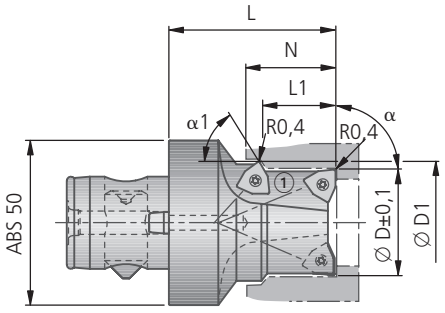
Delivery consists of: Basic tool body. Insert not included.

## Twin Cutter with ABS® Connection, R.H. cutting

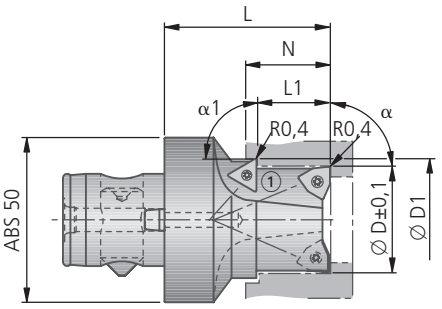
| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

● very good ◐ good ○ possible ✕ not possible

- drilling depth 2×D
- with chamfering insert

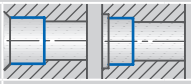



N420025000



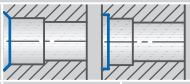

N420027000

**Roughing step** (min/max dimension)

Drilling examples 

| Drilling range Ø D min - max | Drilling depth for N420025000 N min | Drilling depth for N420027000 N min | N max | α max - min | Insert |
|---|---|---|---|---|---|
| 14,0 - 19,9 | 10 | L1 | 2 × D | 90° - 15° | W29 10... |
| 20,0 - 24,9 | 10 | L1 | 2 × D | 90° - 15° | W29 18... |
| 25,0 - 29,9 | 10 | L1 | 2 × D | 90° - 15° | W29 24... |
| 30,0 - 50,0 | 10 | L1 | 2 × D | 90° - 15° | W29 34... |

**Chamfering step** ① (min/max dimension)

Drilling examples 

| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 | L | Insert |
|---|---|---|---|---|---|
| 17,0 - 22,9 | 75° - 15° | 10 | ≦ N | N + 35 | W29 10... |
| 23,0 - 29,9 | 75° - 15° | 10 | ≦ N | N + 35 | W29 24... |
| 30,0 - 34,9 | 75° - 15° | 15 | ≦ N | N + 40 | W29 24... |
| 35,0 - 50,0 | 75° - 15° | 15 | ≦ N | N + 40 | W29 34... |
| 30,0 - 50,0 | 90° - 15° | 15 | 2×D | N + 40 | W59 18... |



Patent applied for inside and outside Germany (ABS)

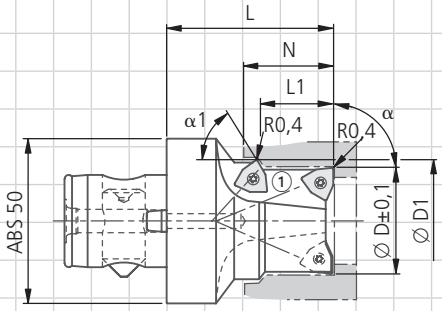
Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

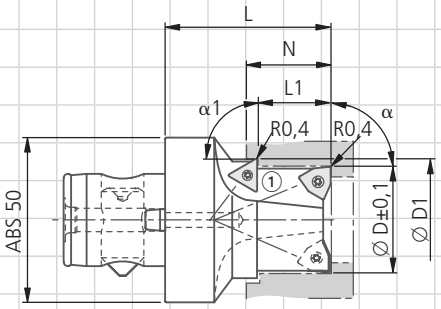
☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
α =
N =
∅ D1 =
L1 =
α1 =




XB86... N420025000




N420027000

Please provide workpiece sketch!

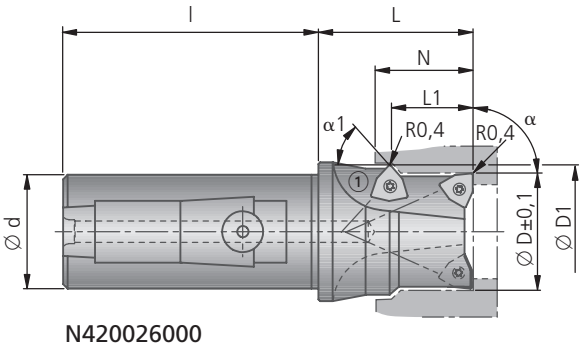
Delivery consists of: Basic tool body. Insert not included.

## Twin Cutter with Cylindrical Shank (Combination Shank), R.H. cutting

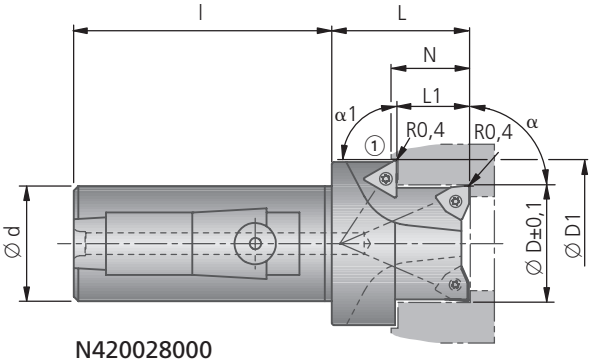
| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D
- with chamfering insert

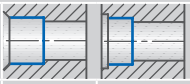



N420026000



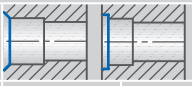

N420028000

**Roughing step** (min/max dimension)

Drilling examples 

| Drilling range Ø D min - max | α max - min | Drilling depth N min | Drilling depth N max | L | Insert | Cylindrical shank Ø d × l 25×56 | Cylindrical shank Ø d × l 32×60 |
|---|---|---|---|---|---|---|---|
| 14,0 - 19,9 | 90°-15° | 10 | 2 × D | N + 24 | W29 10... | • | • |
| 20,0 - 24,9 | 90°-15° | 10 | 2 × D | N + 24 | W29 18... | • | • |
| 25,0 - 29,9 | 90°-15° | 10 | 2 × D | N + 24 | W29 24... | • | • |
| 30,0 - 44,0 | 90°-15° | 10 | 2 × D | N + 29 | W29 34... | | • |

**Chamfering step** ① (min/max dimension)

Drilling examples 

| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 | L | Insert |
|---|---|---|---|---|---|
| 17,0 - 22,9 | 75° - 15° | 10 | ≦ N | N + 35 | W29 10... |
| 23,0 - 29,9 | 75° - 15° | 10 | ≦ N | N + 35 | W29 24... |
| 30,0 - 34,9 | 75° - 15° | 15 | ≦ N | N + 40 | W29 24... |
| 35,0 - 50,0 | 75° - 15° | 15 | ≦ N | N + 40 | W29 34... |
| 30,0 - 50,0 | 90° - 15° | 15 | 2×D | N + 40 | W59 18... |

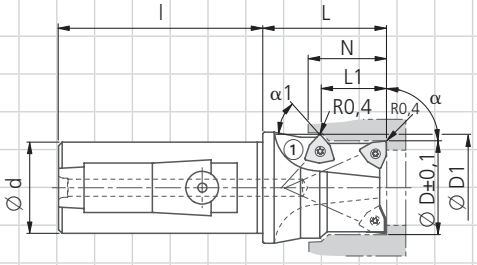
Order No. / Order date | Please state Customer No. | Signature | KOMET internal

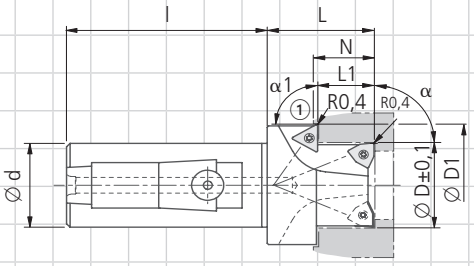
Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
α =
N =
∅ D1 =
L1 =
α1 =
∅ d =




XB97... N420026000 N420028000

Please provide workpiece sketch!

Delivery consists of: Basic tool body. Insert not included.

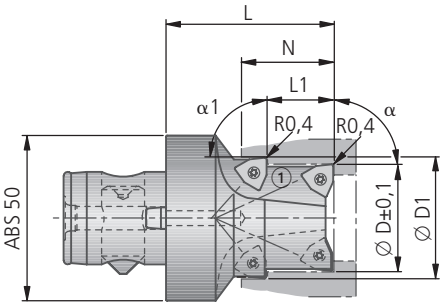
# KOMET® Easy Special™ TwinKom® Ø 14 – 50 mm

## Twin Cutter with ABS® Connection, R.H. cutting

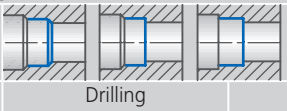
| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

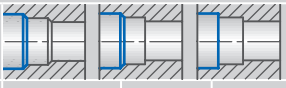
● very good ◐ good ○ possible ✕ not possible

- drilling depth 2×D
- with a stepped cutting edge




N420060000

| Roughing step (min/max dimension) | | | | |
|---|---|---|---|---|
| Drilling examples |  | | | |
| Drilling range Ø D min - max | Drilling depth N min | N max | α max - min | Insert |
| 14,0 - 19,9 | > L1 | 2 × D | 90° - 15° | W29 10... |
| 20,0 - 24,9 | > L1 | 2 × D | 90° - 15° | W29 18... |
| 25,0 - 29,9 | > L1 | 2 × D | 90° - 15° | W29 24... |
| 30,0 - 50,0 | > L1 | 2 × D | 90° - 15° | W29 34... |

| Step ① (min/max dimension) | | | | | |
|---|---|---|---|---|---|
| Drilling examples |  | | | | |
| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 | L | Insert |
| 17,0 - 22,9 | 90° - 15° | 10 | ≦ N | N + 35 | W29 10... |
| 23,0 - 29,9 | 90° - 15° | 10 | ≦ N | N + 35 | W29 24... |
| 30,0 - 34,9 | 90° - 15° | 15 | ≦ N | N + 40 | W29 24... |
| 35,0 - 50,0 | 90° - 15° | 15 | ≦ N | N + 40 | W29 34... |



Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =

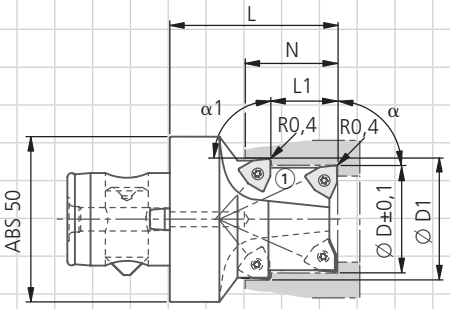
α =

N =

∅ D1 =

L1 =

α1 =




XB86... N420060000

Please provide workpiece sketch!

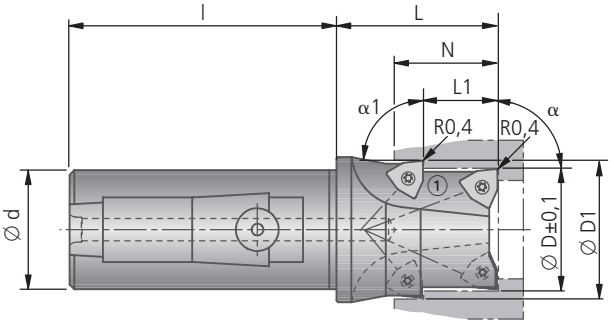
Delivery consists of: Basic tool body. Insert not included.

## Twin Cutter with Cylindrical Shank (Combination Shank), R.H. cutting

| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

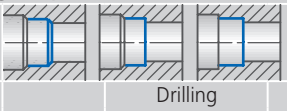
● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D
- with a stepped cutting edge



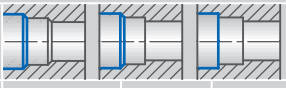

N420061000

**Roughing step** (min/max dimension)

Drilling examples 

| Drilling range Ø D min - max | α max - min | Drilling depth N min | Drilling depth N max | Insert | Cylindrical shank Ø d × l 25×56 | Cylindrical shank Ø d × l 32×60 |
|---|---|---|---|---|---|---|
| 14,0 - 19,9 | 90° - 15° | > L1 | 2 × D | W29 10... | • | • |
| 20,0 - 24,9 | 90° - 15° | > L1 | 2 × D | W29 18... | • | • |
| 25,0 - 29,9 | 90° - 15° | > L1 | 2 × D | W29 24... | • | • |
| 30,0 - 44,0 | 90° - 15° | > L1 | 2 × D | W29 34... | | • |

**Step** ① (min/max dimension)

Drilling examples 

| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 | L | Insert |
|---|---|---|---|---|---|
| 17,0 - 22,9 | 90° - 15° | 10 | < N | N + 24 | W29 10... |
| 23,0 - 29,9 | 90° - 15° | 10 | < N | N + 24 | W29 24... |
| 30,0 - 34,9 | 90° - 15° | 15 | < N | N + 29 | W29 24... |
| 35,0 - 44,0 | 90° - 15° | 15 | < N | N + 29 | W29 34... |

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

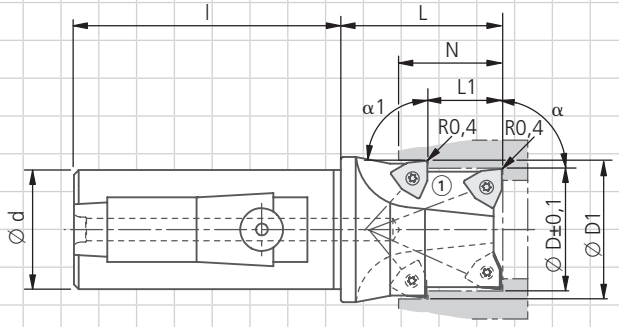
Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
α =
N =
∅ D1 =
L1 =
α1 =
∅ d =




XB97... N420061000

Please provide workpiece sketch!

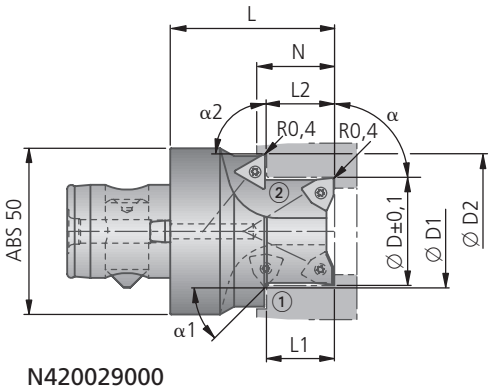
Delivery consists of: Basic tool body. Insert not included.

# Twin Cutter with ABS® Connection, R.H. cutting

| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

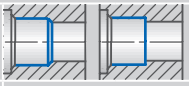
● very good ◐ good ○ possible ✕ not possible

- drilling depth 2×D
- with two stepped cutting edges



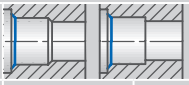

N420029000

**Roughing step** (min/max dimension)

Drilling examples 

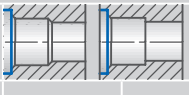
| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | α max - min | Insert |
|---|---|---|---|---|
| 14,0 - 19,9 | L2 | L2 + 2 | 90° - 15° | W29 10... |
| 20,0 - 24,9 | L2 | L2 + 2 | 90° - 15° | W29 18... |
| 25,0 - 29,9 | L2 | L2 + 2 | 90° - 15° | W29 24... |
| 30,0 - 50,0 | L2 | L2 + 2 | 90° - 15° | W29 34... |

**Step** ① (min/max dimension)

Drilling examples 

| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 | Insert |
|---|---|---|---|---|
| 17,0 - 22,9 | 90° - 15° | 10 | ≦ L2 | W29 10... |
| 23,0 - 29,9 | 90° - 15° | 10 | ≦ L2 | W29 24... |
| 30,0 - 34,9 | 90° - 15° | 15 | ≦ L2 | W29 24... |
| 35,0 - 50,0 | 90° - 15° | 15 | ≦ L2 | W29 34... |

**Step** ② (min/max dimension)

Drilling examples 

| Drilling range Ø D2 min - max | α2 max - min | L2 min | L2 | L | Insert |
|---|---|---|---|---|---|
| 30,0 - 50,0 | 90° - 15° | L1 | 2 × D | N + 40 | W59 18... |



Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company:
Address:

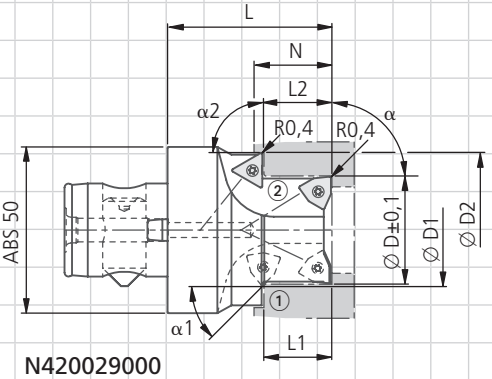
Contact:
Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry

Quantity:

Material to be machined:

∅ D =
N =
α =
∅ D1 =
L1 =
α1 =
∅ D2 =
L2 =
α2 =
XB86...



N420029000

Please provide workpiece sketch!

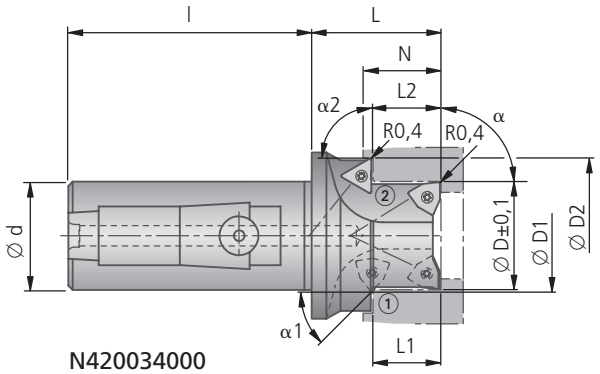
Delivery consists of: Basic tool body. Insert not included.

## Twin Cutter with Cylindrical Shank (Combination Shank), R.H. cutting

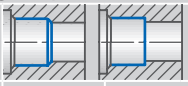
| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D
- with two stepped cutting edges

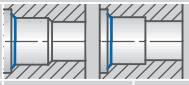



**Roughing step** (min/max dimension)

Drilling examples 

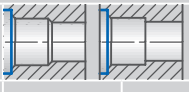
| Drilling range Ø D min - max | α max - max | Drilling depth N min | Drilling depth N max | Insert | Cylindrical shank Ø d × l 32×60 |
|---|---|---|---|---|---|
| 14,0 - 19,9 | 90° - 15° | L2 | L2 + 2 | W29 10... | • |
| 20,0 - 24,9 | 90° - 15° | L2 | L2 + 2 | W29 18... | • |
| 25,0 - 29,9 | 90° - 15° | L2 | L2 + 2 | W29 24... | • |
| 30,0 - 44,0 | 90° - 15° | L2 | L2 + 2 | W29 34... | • |

**Step ①** (min/max dimension)

Drilling examples 

| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 | Insert |
|---|---|---|---|---|
| 17,0 - 22,9 | 90° - 15° | 10 | ≦ L2 | W29 10... |
| 23,0 - 29,9 | 90° - 15° | 10 | ≦ L2 | W29 24... |
| 30,0 - 34,9 | 90° - 15° | 15 | ≦ L2 | W29 24... |
| 35,0 - 44,0 | 90° - 15° | 15 | ≦ L2 | W29 34... |

**Step ②** (min/max dimension)

Drilling examples 

| Drilling range Ø D2 min - max | α2 max - min | L2 min | L2 | L | Insert |
|---|---|---|---|---|---|
| 30,0 - 44,0 | 90° - 15° | L1 | 2 × D | N + 29 | W59 18... |

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company:
Address:

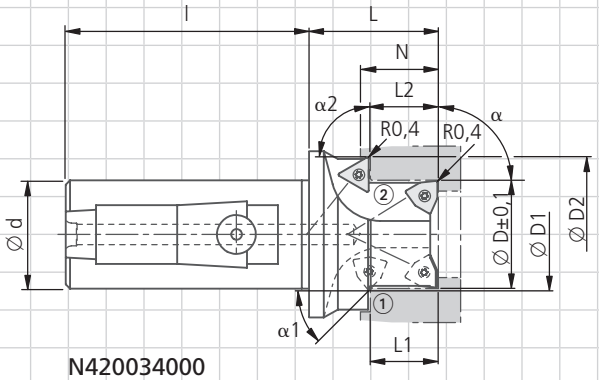
Contact:
Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry

Quantity:

Material to be machined:

| | |
|---|---|
| ∅ D | = |
| α | = |
| N | = |
| ∅ D1 | = |
| L1 | = |
| α1 | = |
| ∅ D2 | = |
| L2 | = |
| α2 | = |
| ∅ d | = |




N420034000

XB97...

Please provide workpiece sketch!

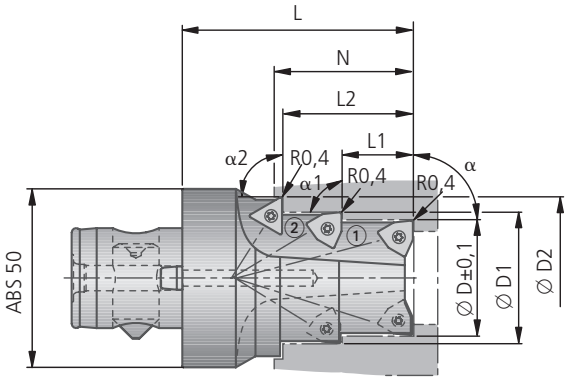
Delivery consists of: Basic tool body. Insert not included.

# Twin Cutter with ABS® Connection, R.H. cutting

| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

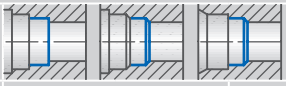
● very good ◐ good ○ possible ✕ not possible

- drilling depth 2×D
- with two stepped cutting edges



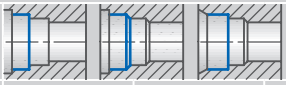

N420062000

**Roughing step** (min/max dimension)

Drilling examples 

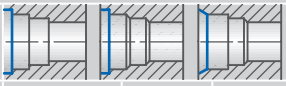
| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | α max - min | Insert |
|---|---|---|---|---|
| 14,0 - 19,9 | > L2 | L2 + 2 | 90° - 15° | W29 10... |
| 20,0 - 24,9 | > L2 | L2 + 2 | 90° - 15° | W29 18... |
| 25,0 - 29,9 | > L2 | L2 + 2 | 90° - 15° | W29 24... |
| 30,0 - 50,0 | > L2 | L2 + 2 | 90° - 15° | W29 34... |

**Step ①** (min/max dimension)

Drilling examples 

| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 | Insert |
|---|---|---|---|---|
| 17,0 - 22,9 | 90° - 15° | 10 | L2 – 10 | W29 10... |
| 23,0 - 29,9 | 90° - 15° | 10 | L2 – 10 | W29 24... |
| 30,0 - 34,9 | 90° - 15° | 15 | L2 – 10 | W29 24... |
| 35,0 - 50,0 | 90° - 15° | 15 | L2 – 10 | W29 34... |

**Step ②** (min/max dimension)

Drilling examples 

| Drilling range Ø D2 min - max | α2 max - min | L2 min | L2 | L | Insert |
|---|---|---|---|---|---|
| 30,0 - 50,0 | 90° - 15° | L1 + 15 | 2 × D | N + 40 | W59 18... |



Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company:
Address:

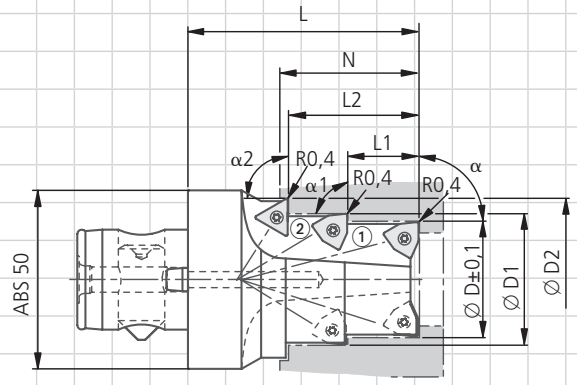
Contact:
Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry

Quantity:

Material to be machined:

| | |
|---|---|
| ∅ D | = |
| L | = |
| α | = |
| N | = |
| ∅ D1 | = |
| L1 | = |
| α1 | = |
| ∅ D2 | = |
| L2 | = |
| α2 | = |




XB86...

N420062000

Please provide workpiece sketch!

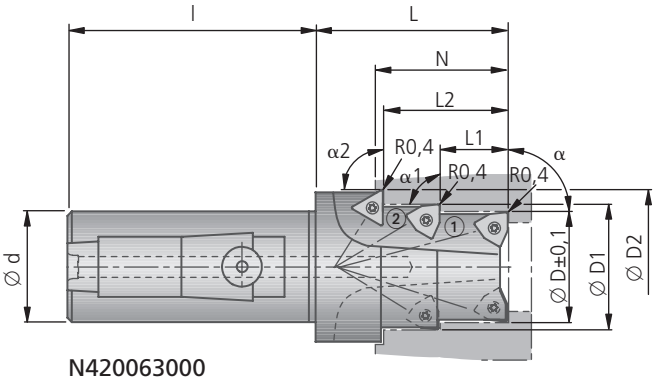
Delivery consists of: Basic tool body. Insert not included.

## Twin Cutter with Cylindrical Shank (Combination Shank), R.H. cutting

| L / D | through hole | blind hole | uneven | angled | convex | cross bore | divided cut | large hole offset | stack plate drilling | adjustable |
|---|---|---|---|---|---|---|---|---|---|---|
| 2×D | ● | ● | ● | ● | ● | ● | ✕ | ● | 80° | ✕ |

● very good ◐ good ○ possible ✕ not possible

- cylindrical shank (combination shank) DIN 6535 HE (similar 1835 E) and 6595
- drilling depth 2×D
- with two stepped cutting edges




N420063000

**Roughing step** (min/max dimension)

Drilling examples

| Drilling range Ø D min - max | α max - min | Drilling depth N min | Drilling depth N max | Insert | Cylindrical shank Ø d × l 32×60 |
|---|---|---|---|---|---|
| 14,0 - 19,9 | 90° - 15° | > L2 | L2 + 2 | W29 10... | • |
| 20,0 - 24,9 | 90° - 15° | > L2 | L2 + 2 | W29 18... | • |
| 25,0 - 29,9 | 90° - 15° | > L2 | L2 + 2 | W29 24... | • |
| 30,0 - 44,0 | 90° - 15° | > L2 | L2 + 2 | W29 34... | • |

**Step** ① (min/max dimension)

Drilling examples

| Drilling range Ø D1 min - max | α1 max - min | L1 min | L1 | Insert |
|---|---|---|---|---|
| 17,0 - 22,9 | 90° - 15° | 10 | L2 – 10 | W29 10... |
| 23,0 - 29,9 | 90° - 15° | 10 | L2 – 10 | W29 24... |
| 30,0 - 34,9 | 90° - 15° | 15 | L2 – 10 | W29 24... |
| 35,0 - 44,0 | 90° - 15° | 15 | L2 – 10 | W29 34... |

**Step** ② (min/max dimension)

Drilling examples

| Drilling range Ø D2 min - max | α2 max - min | L2 min | L2 | L | Insert |
|---|---|---|---|---|---|
| 30,0 - 44,0 | 90° - 15° | L1 + 15 | 2 × D | N + 29 | W59 18... |

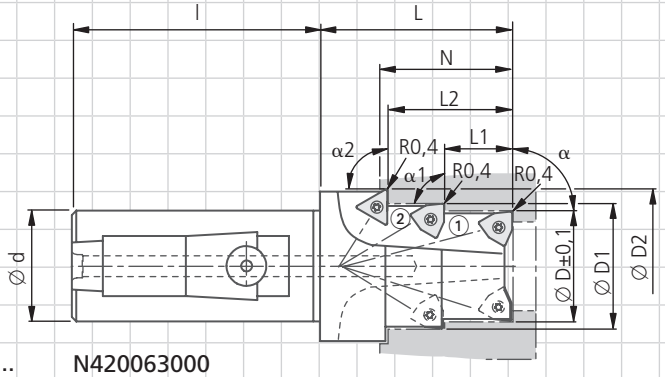
Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry Quantity:

Material to be machined:

∅ D =
L =
α =
N =
∅ D1 =
L1 =
α1 =
∅ D2 =
L2 =
α2 =
∅ d =




XB97... N420063000

Please provide workpiece sketch!

Delivery consists of: Basic tool body. Insert not included.

# KOMET® Easy Special™ Ø 8 – 40 mm

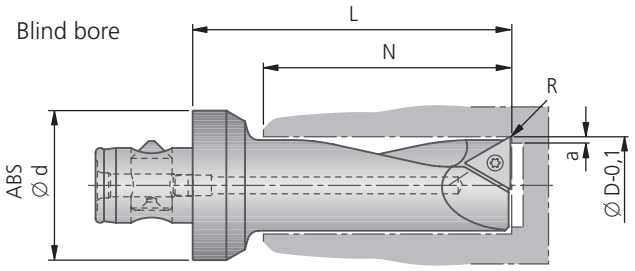
## Boring Bar with ABS® Connection, R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ● | ● | ✕ | ● up to 2×D | ● up to 2×D | ✕ |

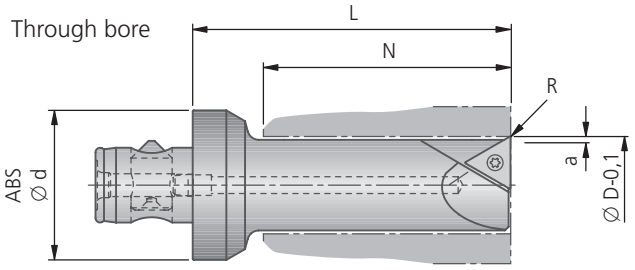
● very good ◐ good ○ possible ✕ not possible

- for machining steel
- drilling depth 4×D
- use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex*

Blind bore




Through bore




N420030000

**Fine boring step** (min/max dimension)

| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | L | a max | Insert | ABS Ø d |
|---|---|---|---|---|---|---|
| 8,0 - 11,9 | 15 | 4 × D | N + 17 | 0,3 | W30 04... | 25 |
| 12,0 - 14,0 | | | | | W30 14... | |
| 8,0 - 11,9 | 15 | 4 × D | N + 17 | 0,3 | W30 04... | 32 |
| 12,0 - 32,0 | | | | | W30 14... | |
| 8,0 - 11,9 | 15 | 4 × D | N + 20 | 0,3 | W30 04... | 40 |
| 12,0 - 40,0 | | | | | W30 14... | |



Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

for machining steel

Material to be machined:

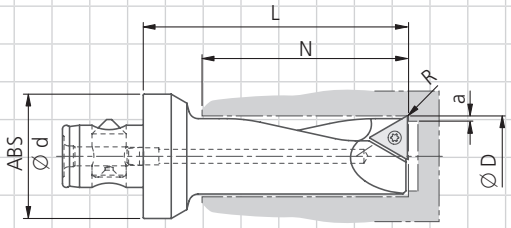
Ø D =

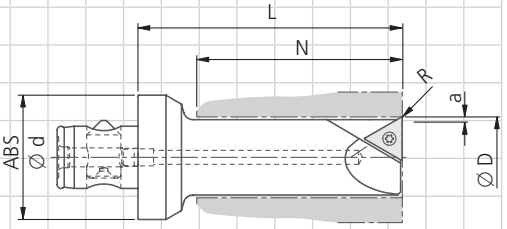
N =

Ø d = ☐ ABS 25

☐ ABS 32

☐ ABS 40




XB00... N42003000

Please provide workpiece sketch!

Delivery consists of: Basic tool body. Insert not included.

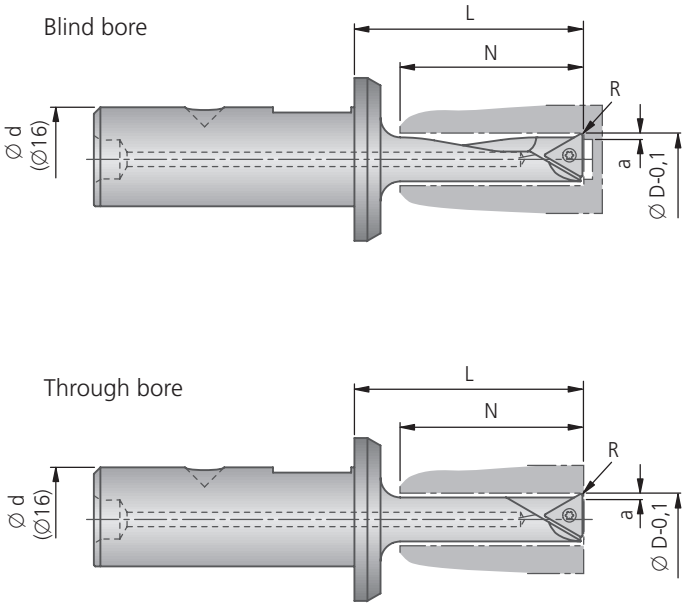
# KOMET® Easy Special™ Ø 8 – 24 mm

## Boring Bar with Cylindrical Shank (KFK-UJ), R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ● | ● | ✕ | ● up to 2×D | ● up to 2×D | ✕ |

● very good ◐ good ○ possible ✕ not possible

- for machining steel
- drilling depth 4×D
- use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex* (with adaptor M05 90240)




**N420031000**

| **Fine boring step** (min/max dimension) | | | | | | |
|---|---|---|---|---|---|---|
| Drilling range **Ø D** min - max | Drilling depth **N** min | **N** max | **L** | **a** max | Insert | **Ø d** |
| 8,0 - 11,9 | 15 | 4 × D | N + 9 | 0,3 | W30 04... | 16 |
| 12,0 - 24,0 | | | | | W30 14... | |

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company:
Address:

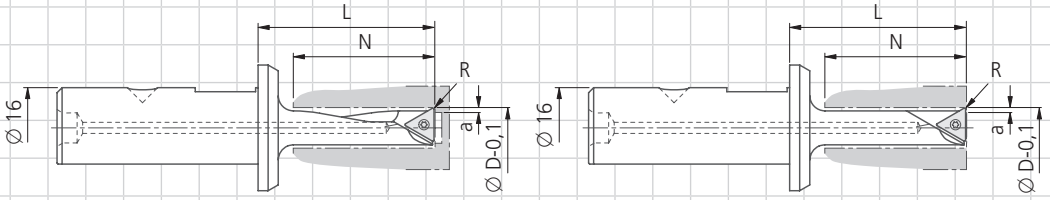
Contact:
Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry

Quantity:

for machining steel
Material to be machined:

∅ D =
N =




XB00...

N420031000

Please provide workpiece sketch!

Delivery consists of: Basic tool body. Insert not included.

# KOMET® Easy Special™ Ø 8 – 40 mm

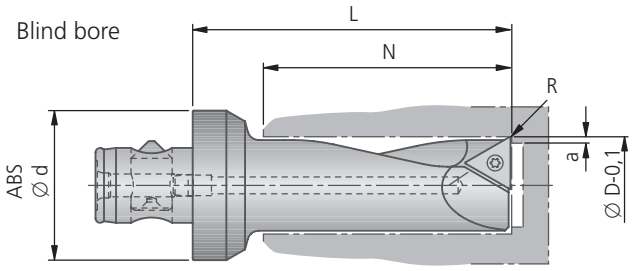
## Boring Bar with ABS® Connection, R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ● | ● | ✕ | ● up to 2×D | ● up to 2×D | ✕ |

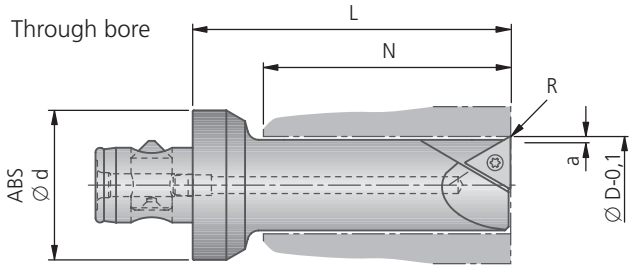
● very good ◐ good ○ possible ✕ not possible

- N for machining aluminium
- drilling depth 4×D
- use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex*

Blind bore




Through bore




N420030000

**Fine boring step** (min/max dimension)

| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | L | a max | Insert | ABS Ø d |
|---|---|---|---|---|---|---|
| 8,0 - 11,9 | 15 | 4 × D | N + 17 | 0,3 | W32 03... | 25 |
| 12,0 - 14,0 | | | | | W32 13... | |
| 8,0 - 11,9 | 15 | 4 × D | N + 17 | 0,3 | W32 03... | 32 |
| 12,0 - 32,0 | | | | | W32 13... | |
| 8,0 - 11,9 | 15 | 4 × D | N + 20 | 0,3 | W32 03... | 40 |
| 12,0 - 40,0 | | | | | W32 13... | |



Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

N for machining aluminium

Material to be machined:

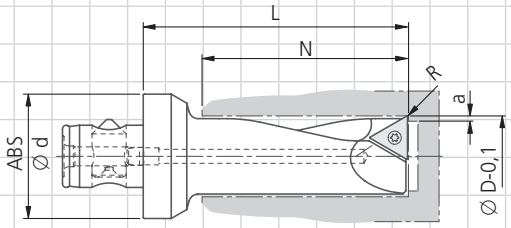
∅ D =

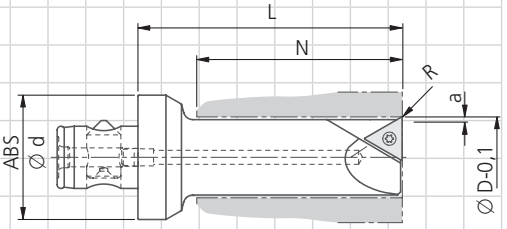
N =

∅ d = ☐ ABS 25

☐ ABS 32

☐ ABS 40




XB00... N42003000

Please provide workpiece sketch!

Delivery consists of: Basic tool body. Insert not included.

# KOMET® Easy Special™ Ø 8 – 24 mm

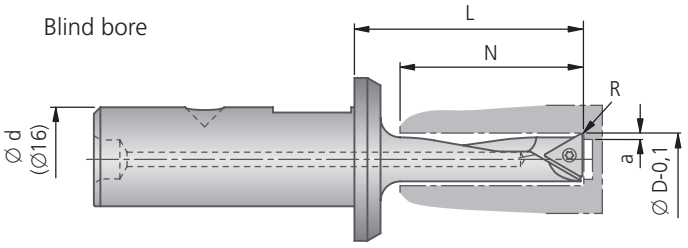
## Boring Bar with Cylindrical Shank (KFK-UJ), R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ● | ● | ✕ | ● up to 2×D | ● up to 2×D | ✕ |

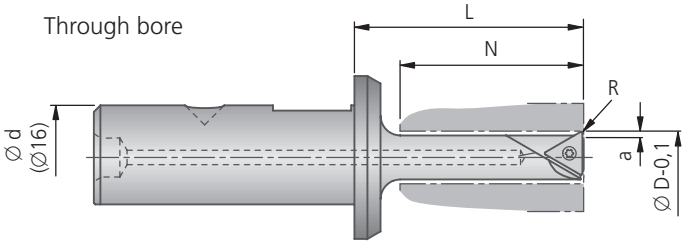
● very good ◐ good ○ possible ✕ not possible

- N for machining aluminium
- drilling depth 4×D
- use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex* (with adaptor M05 90240)

Blind bore




Through bore




**N420031000**

| **Fine boring step** (min/max dimension) | | | | | | |
|---|---|---|---|---|---|---|
| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | L | a max | Insert | Ø d |
| 8,0 - 11,9 | 15 | 4 × D | N + 9 | 0,3 | W32 03... | 16 |
| 12,0 - 24,0 | | | | | W32 13... | |

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

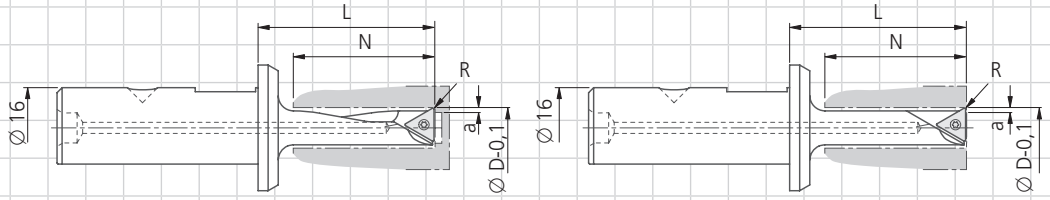
☐ Order ☐ Enquiry Quantity:

N for machining aluminium

Material to be machined:

∅ D =

N =




XB00... N420031000

Please provide workpiece sketch!

Delivery consists of: Basic tool body. Insert not included.

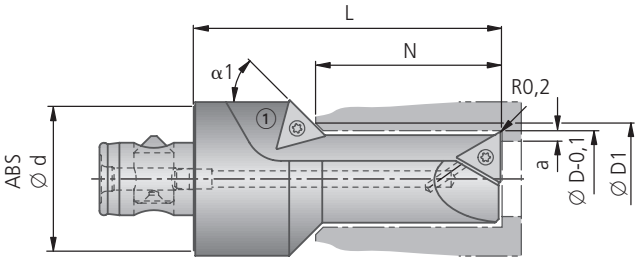
# KOMET® Easy Special™ Ø 8 – 28 mm

## Boring Bar with ABS® Connection, R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ● | ● | ✕ | ● up to 2×D | ● up to 2×D | ✕ |

● very good ◐ good ○ possible ✕ not possible

- for machining steel
- drilling depth 4×D
- use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex*
- with chamfering insert

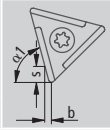
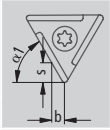
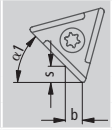
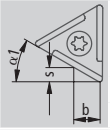
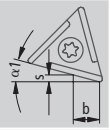



N420032000

| Fine boring step (min/max dimension) | | | | | | |
|---|---|---|---|---|---|---|
| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | L | a max | Insert | ABS Ø d |
| 8,0 - 11,9 | 15 | 4 × D | N + 17 | 0,3 | W30 04... | 25 |
| 12,0 - 14,0 | | | | | W30 14... | |
| 8,0 - 11,9 | 15 | 4 × D | N + 17 | 0,3 | W30 04... | 32 |
| 12,0 - 24,0 | | | | | W30 14... | |
| 8,0 - 11,9 | 15 | 4 × D | N + 20 | 0,3 | W30 04... | 40 |
| 12,0 - 28,0 | | | | | W30 14... | |

Step ① can only be used for chamfering the rough boring step.

| Chamfering step ① (min/max dimension) | | | | | |
|---|---|---|---|---|---|
| Drilling range Ø D1 min - max | α1 max - min | Drilling depth N min | Drilling depth N max | L | Insert |
| 8,0 - 9,9 | 75° - 50° | 15 | 4×D | N + 27 | W30 04... |
| 10,0 - 14,9 | 75° - 45° | | | | |
| 15,0 - 18,9 | 75° - 30° | | | | |
| 19,0 - 28,0 | 75° - 15° | | | | |

| Drilling range Ø 8 – 28 mm | | | | | |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| α1 | 75° | 60° | 45° | 30° | 15° |
| s max | 1,3 | 1,2 | 1,0 | 0,6 | 0,3 |
| b max | 0,3 | 0,6 | 1,0 | 1,2 | 1,3 |

$s_{max}$ = max. cutting width $b_{max}$ = max. chamfering width



Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

for machining steel

Material to be machined:

Ø D =

N =

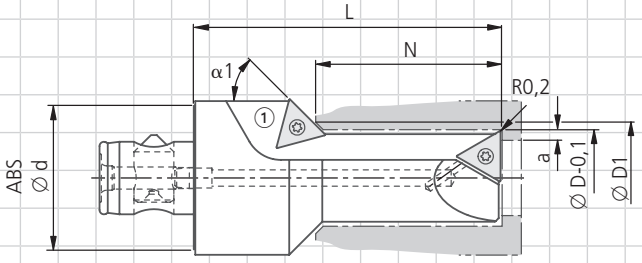
Ø D1 =

α1 =

Ø d = ☐ ABS 25

☐ ABS 32

☐ ABS 40




XB85... N420032000

Please provide workpiece sketch!

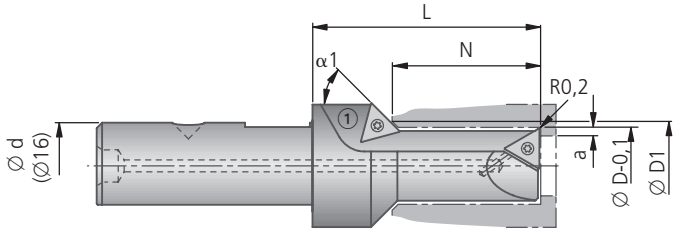
Delivery consists of: Basic tool body. Insert not included.

## Boring Bar with Cylindrical Shank (KFK-UJ), R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ● | ● | ✕ | ● up to 2×D | ● up to 2×D | ✕ |

● very good ◐ good ○ possible ✕ not possible

- for machining steel
- drilling depth 4×D
- use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex* (with adaptor M05 90240)
- with chamfering insert




N420033000

**Fine boring step** (min/max dimension)

| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | L | a max | Insert | Ø d |
|---|---|---|---|---|---|---|
| 8,0 - 11,9 | 15 | 4 × D | N + 9 | 0,3 | W30 04... | 16 |
| 12,0 - 24,0 | | | | | W30 14... | |

Step ① can only be used for chamfering the rough boring step.

**Chamfering step** ① (min/max dimension)

| Drilling range Ø D1 min - max | α1 max - min | Drilling depth N min | Drilling depth N max | L | Insert |
|---|---|---|---|---|---|
| 8,0 - 9,9 | 75° - 50° | 15 | 4×D | N + 27 | W30 04... |
| 10,0 - 14,9 | 75° - 45° | | | | |
| 15,0 - 18,9 | 75° - 30° | | | | |
| 19,0 - 28,0 | 75° - 15° | | | | |

**Drilling range Ø 8 – 28 mm**

| | | | | | |
|---|---|---|---|---|---|
| α1 | 75° | 60° | 45° | 30° | 15° |
| s max | 1,3 | 1,2 | 1,0 | 0,6 | 0,3 |
| b max | 0,3 | 0,6 | 1,0 | 1,2 | 1,3 |

$s_{max}$ = max. cutting width $b_{max}$ = max. chamfering width

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

for machining steel

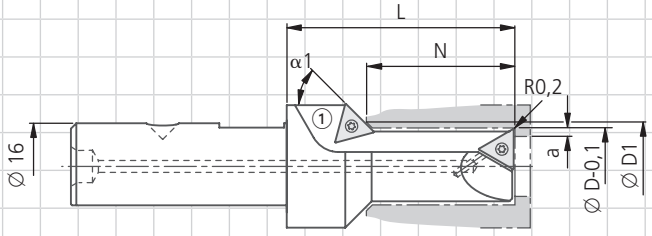
Material to be machined:

∅ D =

N =

∅ D1 =

α1 =




XB98... N420033000

Please provide workpiece sketch!

Delivery consists of: Basic tool body. Insert not included.

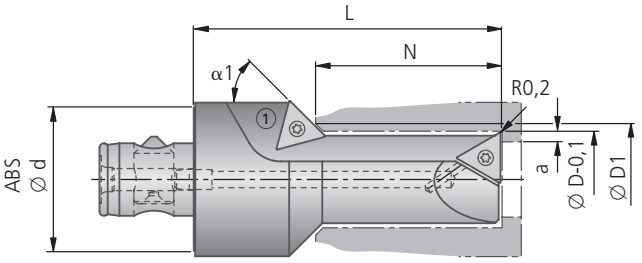
# KOMET® Easy Special™ Ø 8 – 28 mm

## Boring Bar with ABS® Connection, R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ● | ● | ✕ | ● up to 2×D | ● up to 2×D | ✕ |

● very good ◐ good ○ possible ✕ not possible

- N for machining aluminium
- drilling depth 4×D
- use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex*
- with chamfering insert

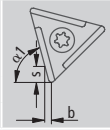
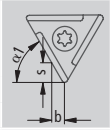
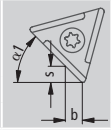
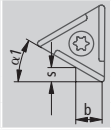
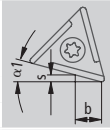



N420032000

| Fine boring step (min/max dimension) | | | | | | |
|---|---|---|---|---|---|---|
| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | L | a max | Insert | ABS Ø d |
| 8,0 - 11,9 | 15 | 4 × D | N + 17 | 0,3 | W32 03... | 25 |
| 12,0 - 14,0 | | | | | W32 13... | |
| 8,0 - 11,9 | 15 | 4 × D | N + 17 | 0,3 | W32 03... | 32 |
| 12,0 - 24,0 | | | | | W32 13... | |
| 8,0 - 11,9 | 15 | 4 × D | N + 20 | 0,3 | W32 03... | 40 |
| 12,0 - 28,0 | | | | | W32 13... | |

Step ① can only be used for chamfering the rough boring step.

| Chamfering step ① (min/max dimension) | | | | | |
|---|---|---|---|---|---|
| Drilling range Ø D1 min - max | α1 max - min | Drilling depth N min | Drilling depth N max | L | Insert |
| 8,0 - 9,9 | 75° - 50° | 15 | 4×D | N + 27 | W32 03... |
| 10,0 - 14,9 | 75° - 45° | | | | |
| 15,0 - 18,9 | 75° - 30° | | | | |
| 19,0 - 28,0 | 75° - 15° | | | | |

| Drilling range Ø 8 – 28 mm | | | | | |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| α1 | 75° | 60° | 45° | 30° | 15° |
| s max | 1,3 | 1,2 | 1,0 | 0,6 | 0,3 |
| b max | 0,3 | 0,6 | 1,0 | 1,2 | 1,3 |

$s_{max}$ = max. cutting width $b_{max}$ = max. chamfering width



Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:

Address: Department:

Phone:

Fax:

E-Mail:

☐ Order ☐ Enquiry Quantity:

N for machining aluminium

Material to be machined:

∅ D =

N =

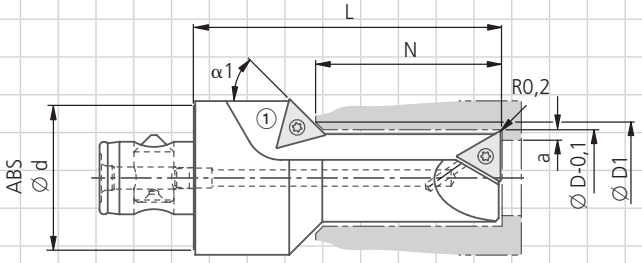
∅ D1 =

α1 =

∅ d = ☐ ABS 25

☐ ABS 32

☐ ABS 40




XB85... N420032000

Please provide workpiece sketch!

Delivery consists of: Basic tool body. Insert not included.

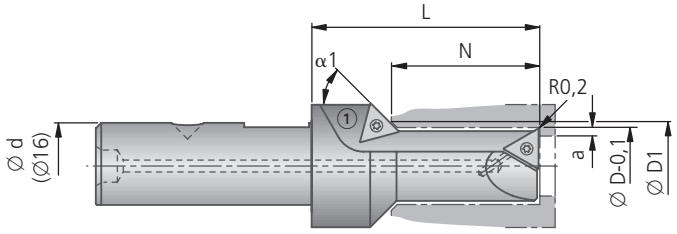
# KOMET® Easy Special™ Ø 8 – 28 mm

## Boring Bar with Cylindrical Shank (KFK-UJ), R.H. cutting

| L / D | through hole | blind hole | angled | cross bore | reverse machining | HRC > 54 through hole | HRC > 54 blind hole | vibration dampening |
|---|---|---|---|---|---|---|---|---|
| 4×D | ● | ● | ● | ● | ✕ | ● up to 2×D | ● up to 2×D | ✕ |

● very good ◐ good ○ possible ✕ not possible

- N for machining aluminium
- drilling depth 4×D
- use with micro-adjustable heads MicroKom® M02, MicroKom® M04 and MicroKom® *hi.flex* (with adaptor M05 90240)
- with chamfering insert




N420033000

**Fine boring step** (min/max dimension)

| Drilling range Ø D min - max | Drilling depth N min | Drilling depth N max | L | a max | Insert | Ø d |
|---|---|---|---|---|---|---|
| 8,0 - 11,9 | 15 | 4 × D | N + 9 | 0,3 | W32 03... | 16 |
| 12,0 - 24,0 | | | | | W32 13... | |

Step ① can only be used for chamfering the rough boring step.

**Chamfering step** ① (min/max dimension)

| Drilling range Ø D1 min - max | α1 max - min | Drilling depth N min | Drilling depth N max | L | Insert |
|---|---|---|---|---|---|
| 8,0 - 9,9 | 75° - 50° | 15 | 4×D | N + 27 | W32 03... |
| 10,0 - 14,9 | 75° - 45° | | | | |
| 15,0 - 18,9 | 75° - 30° | | | | |
| 19,0 - 28,0 | 75° - 15° | | | | |

**Drilling range Ø 8 – 28 mm**

| | | | | | |
|---|---|---|---|---|---|
| α1 | 75° | 60° | 45° | 30° | 15° |
| s max | 1,3 | 1,2 | 1,0 | 0,6 | 0,3 |
| b max | 0,3 | 0,6 | 1,0 | 1,2 | 1,3 |

$s_{max}$ = max. cutting width $b_{max}$ = max. chamfering width

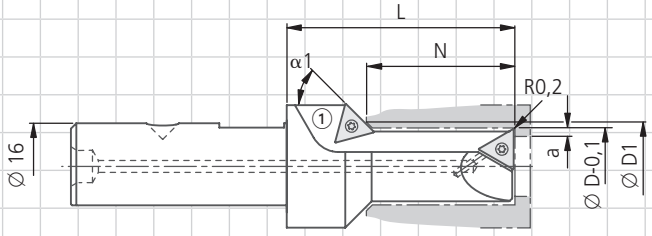
Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

☐ Order ☐ Enquiry Quantity:

N for machining aluminium
Material to be machined:

∅ D =
N =
∅ D1 =
α1 =



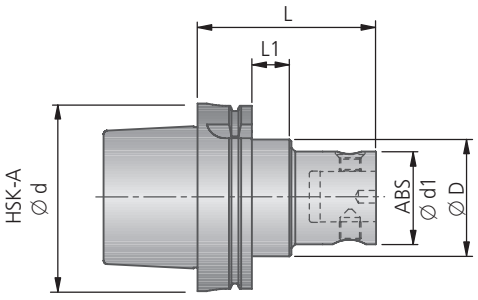

XB98... N420033000

Please provide workpiece sketch!

Delivery consists of: Basic tool body. Insert not included.

# HSK-A Adaptor with ABS® Connection

| machine adaptor | coolant central | rotating tool | stationary tool | tool holder |
|---|---|---|---|---|
|  |  |  |  |  |




N410004...

**Adaptor** (min/max dimension)

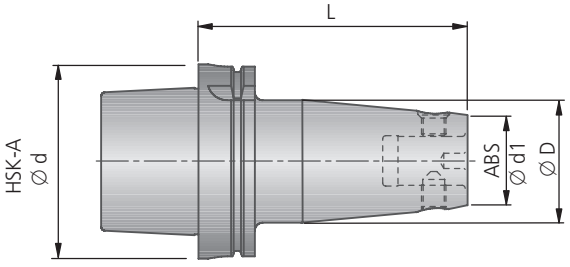
| No. | HSK Ø d | ABS Ø d1 | Ø D max | L min | L max |
|---|---|---|---|---|---|
| N41 0004000 | 63 | 25 · 32 · 40 · 50 · 63 | 84 | 1×D | 185 |
| N41 0004100 | 100 | 25 · 32 · 40 · 50 · 63 · 80 | 100 | 1×D | 200 |

**Note:** For facing for HSK gripper collar see standard sheet HSK DIN 69893 A.

Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.

Also possible: $L1_{max}$ = L and d = D

conical version




N410001...

**Adaptor** (min/max dimension)

| No. | HSK Ø d | ABS Ø d1 | Ø D max | L min | L max |
|---|---|---|---|---|---|
| N41 0001000 | 63 | 25 · 32 · 40 · 50 · 63 | 84 | 1×D | 190 |
| N41 0001100 | 100 | 25 · 32 · 40 · 50 · 63 · 80 | 100 | 1×D | 200 |

**Note:** For facing for HSK gripper collar see standard sheet HSK DIN 69893 A.

Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.



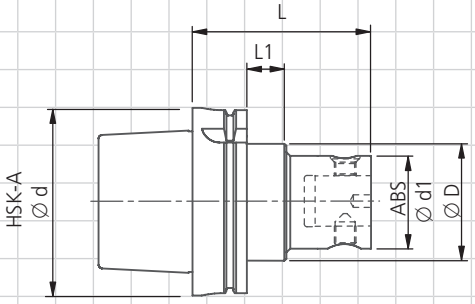
Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

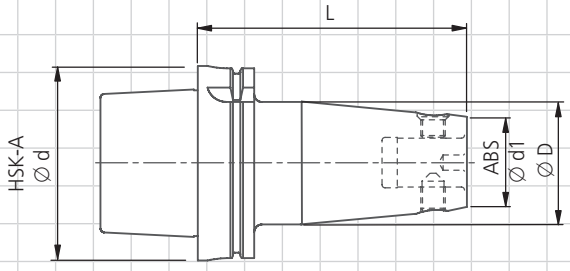
☐ Order ☐ Enquiry Quantity:

Ø d = ☐ HSK 63 (N410004000)
☐ HSK100 (N410004100)
Ø d1 = ABS
Ø D =
L =
L1 =




XA... N410004...

Ø d = ☐ HSK 63 (N410001000)
☐ HSK100 (N410001100)
Ø d1 = ABS
Ø D =
L =

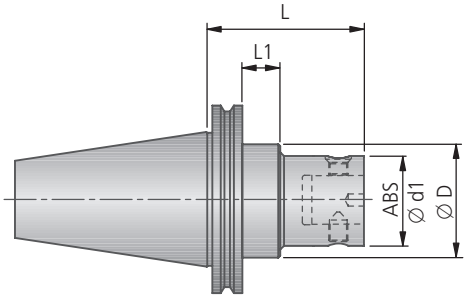



XA... N410001...

Delivery consists of: Basic tool body fitted complete.

## Taper Shank with ABS® Connection

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
| DIN 69871 AD/B | | | ABS® |




N410005...

**Adaptor** (min/max dimension)

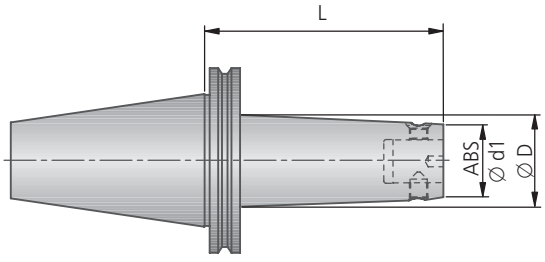
| No. | ISO | ABS Ø d1 | Ø D max | L min | L max |
|---|---|---|---|---|---|
| N41 0005000 | 40 | 25 · 32 · 40 · 50 · 63 | 63 | 1×D | 180 |
| N41 0005100 | 50 | 25 · 32 · 40 · 50 · 63 · 80 | 80 | 1×D | 200 |

**Note:** For facing for gripper groove see standard sheet DIN 69871 AD/B.

Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.

Also possible: $L1_{max}$ = L and d = D

conical version




N410002...

**Adaptor** (min/max dimension)

| No. | ISO | ABS Ø d1 | Ø D max | L min | L max |
|---|---|---|---|---|---|
| N41 0002000 | 40 | 25 · 32 · 40 · 50 · 63 | 63 | 1×D | 180 |
| N41 0002100 | 50 | 25 · 32 · 40 · 50 · 63 · 80 | 80 | 1×D | 200 |

**Note:** For facing for gripper groove see standard sheet DIN 69871 AD/B.

Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.



Patent applied for inside and outside Germany (ABS)

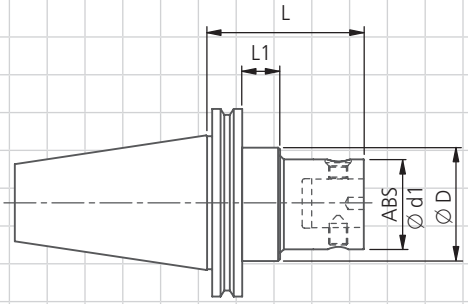
Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company:
Address:

Contact:
Department:
Phone:
Fax:
E-Mail:

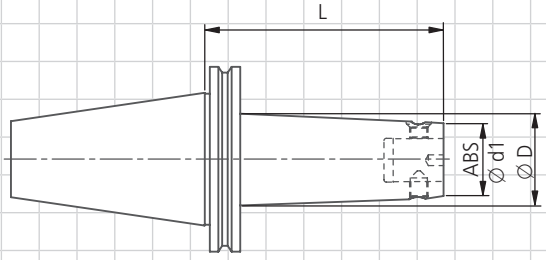
☐ Order ☐ Enquiry Quantity:

☐ ISO40 (N410005000)
☐ ISO50 (N410005100)
∅ d1 = ABS
∅ D =
L =
L1 =




XA... N410005...

☐ ISO40 (N410002000)
☐ ISO50 (N410002100)
∅ d1 = ABS
∅ D =
L =

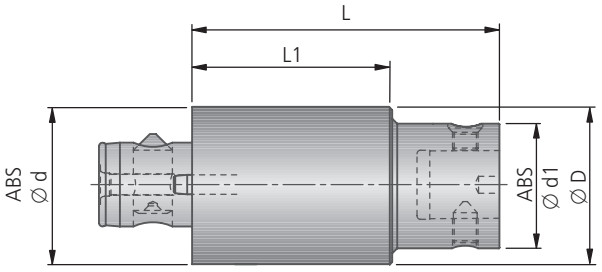



XA... N410002...

Delivery consists of: Basic tool body fitted complete.

# Extension / Reducer with ABS® Connection

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |




N410006...

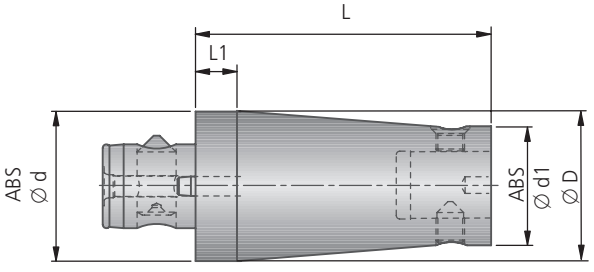
**Adaptor** (min/max dimension)

| No. | ABS Ø d | ABS Ø d1 | Ø D max | L1 min | L max |
|---|---|---|---|---|---|
| N41 0006000 | 25 | 25 | 34 | 10 | 105 |
| N41 0006100 | 32 | 25 · 32 | 49 | 12 | 115 |
| N41 0006200 | 40 | 25 · 32 · 40 | 59 | 12 | 120 |
| N41 0006300 | 50 | 25 · 32 · 40 · 50 | 74 | 15 | 175 |
| N41 0006400 | 63 | 25 · 32 · 40 · 50 · 63 | 84 | 20 | 180 |
| N41 0006500 | 80 | 25 · 32 · 40 · 50 · 63 · 80 | 84 | 25 | 200 |

Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.

Also possible: $L1_{max}$ = L and d = D

conical version




N410003...

**Adaptor** (min/max dimension)

| No. | ABS Ø d | ABS Ø d1 | Ø D max | L1 min | L max |
|---|---|---|---|---|---|
| N41 0003000 | 25 | 25 | 34 | 10 | 105 |
| N41 0003100 | 32 | 25 · 32 | 49 | 12 | 115 |
| N41 0003200 | 40 | 25 · 32 · 40 | 59 | 12 | 120 |
| N41 0003300 | 50 | 25 · 32 · 40 · 50 | 74 | 15 | 175 |
| N41 0003400 | 63 | 25 · 32 · 40 · 50 · 63 | 84 | 20 | 180 |
| N41 0003500 | 80 | 25 · 32 · 40 · 50 · 63 · 80 | 84 | 25 | 200 |

Intermediate sizes for ABS® tool adaptors and ABS® extensions can be supplied with a larger external diameter than the ABS external diameter.



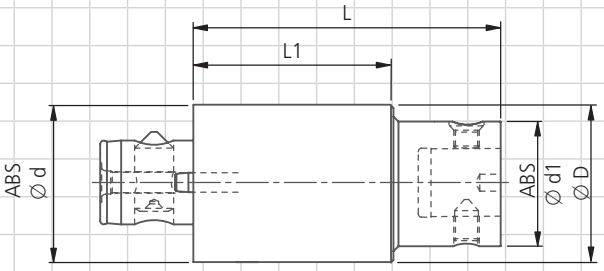
Patent applied for inside and outside Germany (ABS)

Order No. / Order date | Please state Customer No. | Signature | KOMET internal

Company: Contact:
Address: Department:
Phone:
Fax:
E-Mail:

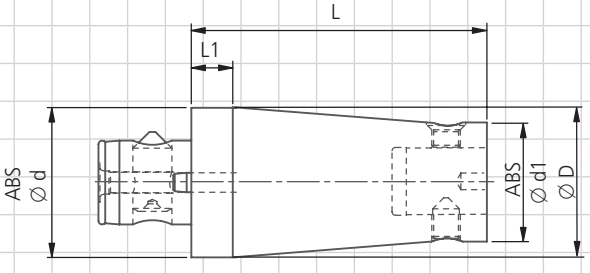
☐ Order ☐ Enquiry Quantity:

Ø d = ☐ ABS25 (N410006000)
☐ ABS32 (N410006100)
☐ ABS40 (N410006200)
☐ ABS50 (N410006300)
☐ ABS63 (N410006400)
☐ ABS80 (N410006500)
Ø d1 = ABS
Ø D =
L =
L1 =




XA... N410006...

Ø d = ☐ ABS25 (N410003000)
☐ ABS32 (N410003100)
☐ ABS40 (N410003200)
☐ ABS50 (N410003300)
☐ ABS63 (N410003400)
☐ ABS80 (N410003500)
Ø d1 = ABS
Ø D =
L =
L1 =




XA... N410003...

Delivery consists of: Basic tool body fitted complete.

# KOMET®

## Adaptors – Perfecting the Connection



With our comprehension programme of tool adaptors we have the right answer for every requirement.

Adaptors with connections specified by manufacturers available on request.

BENEFITS for you:

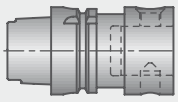
- Maximum tool change accuracy
- Perfect static rigidity
- High radial rigidity
- Short tool change times
- Ideal dimensions
- Low weight

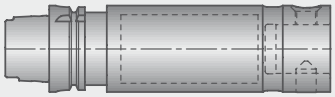


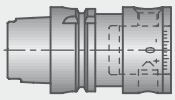

| KOMET® Adaptors | Page |
|---|---|
| HSK-A Adaptors ISO 12164-1 | 398 – 427 |
| PSC Adaptors ISO 26623 | 460 |
| Taper Shanks | 428 – 453 |
| Spindle adaptor flange | 422 / 458 |
| VDI Adaptors | 456 – 457 |
| ABS® Adaptors | 454 – 487 |
| Shrink fit technology THERMOGRIP® | 488 – 505 |
| Easy Special™ Adaptors | Chapter 4 |

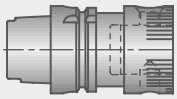
# Programme Summary – Adaptors

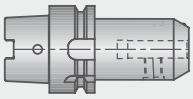
## 5 HSK-A Adaptors ISO 12164-1

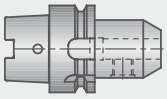
with ABS® connection
▸ 400
HSK-A 50 HSK-A 63 HSK-A 80 HSK-A100

ABS 25 ABS 32 ABS 40 ABS 50 ABS 63 ABS 80 ABS 100

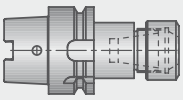
Lightweight adaptor with ABS® connection
▸ 401
HSK-A 63 HSK-A100

ABS 63 ABS 80 ABS 100

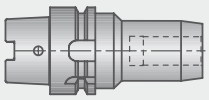
Eccentric adjusting device with ABS® connection
▸ 402
HSK-A 63 HSK-A100

ABS 50 ABS 63

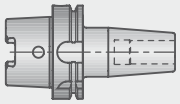
Torsional dampener with ABS® connection
▸ 403
HSK-A 63 HSK-A100

ABS 50 ABS 63 ABS 80

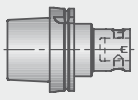
Adaptor sleeve Whistle Notch
▸ 404 – 405
HSK-A 50 HSK-A 63 HSK-A100

Ø 6 – Ø 32

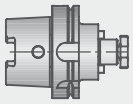
Adaptor sleeve Weldon
▸ 406 – 407
HSK-A 50 HSK-A 63 HSK-A100

Ø 6 – Ø 32

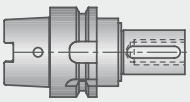
Collet holder
▸ 408
HSK-A 50 HSK-A 63 HSK-A100


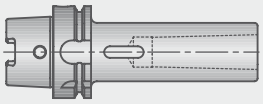
Expanding chuck
▸ 410 – 413
HSK-A 50 HSK-A 63 HSK-A100

Ø 6 – Ø 32

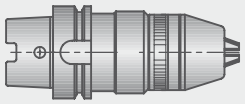
Thermal expansion chuck THERMOGRIP®
▸ 490 – 494
HSK-A 32 HSK-A 40 HSK-A 50 HSK-A 63 HSK-A100

Ø 3 – Ø 32

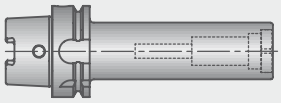
Easy Special™
▸ Chapter 4
HSK-A 63 HSK-A100

ABS 25 ABS 32 ABS 40 ABS 50 ABS 63 ABS 80

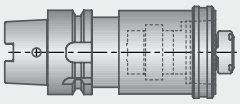
Milling cutter arbor
▸ 414
HSK-A 63 HSK-A100


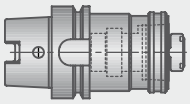
Combination milling cutter arbor
▸ 415
HSK-A 50 HSK-A 63 HSK-A100


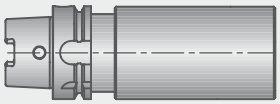
Morse taper
▸ 416
HSK-A 63

MK 1 MK 2 MK 3 MK 4

Short drill chuck
▸ 417
HSK-A 50 HSK-A 63

Ø 0,5 – Ø 16

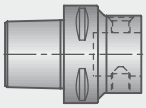
Test arbor
▸ 418
HSK-A 50 HSK-A 63 HSK-A100


Extension with KomLoc® HSK clamping system
▸ 420
HSK-A 63 HSK-A100

HSK-A 63 HSK-A100

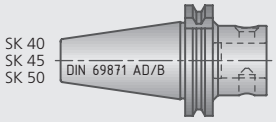
Reducer with KomLoc® HSK clamping system
▸ 421
HSK-A 63 HSK-A100

HSK-A 50 HSK-A 63 HSK-A 80

Semi-finished head
▸ Chapter 6
HSK-A 63 HSK-A100


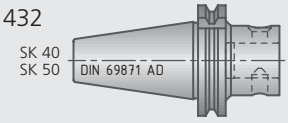
## 5 PSC Adaptors ISO 26623

PSC interface with ABS® connection
▸ 460
C5 C6 C8

ABS 50 ABS 63 ABS 80

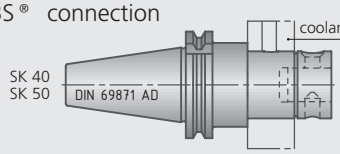
## 5 Taper Shanks

with ABS® connection
▸ 430


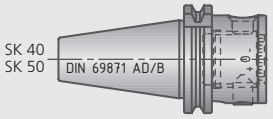
ABS 25 ABS 63
ABS 32 ABS 80
ABS 40 ABS 100
ABS 50

with ABS® connection
▸ 431 / 432


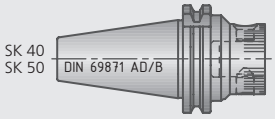
ABS 25 ABS 63
ABS 32 ABS 80
ABS 40 ABS 100
ABS 50 ABS 125

with ABS® connection
▸ 433


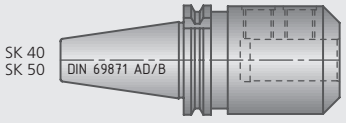
ABS 50
ABS 63
ABS 80
ABS 100

Eccentric adjusting device with ABS® connection
▸ 434


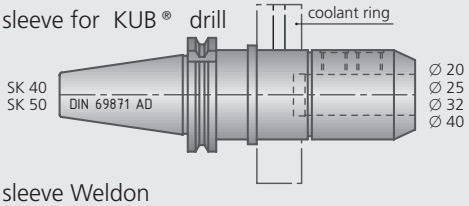
ABS 50
ABS 63

Torsional dampener with ABS® connection
▸ 435


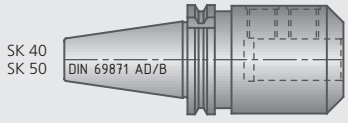
ABS 50
ABS 63
ABS 80

Adaptor sleeve for KUB® drill
▸ 444


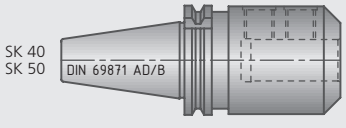
Ø 20
Ø 25
Ø 32
Ø 40

Adaptor sleeve for KUB® drill
▸ 445


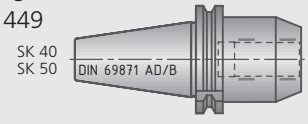
Ø 20
Ø 25
Ø 32
Ø 40

Adaptor sleeve Weldon
▸ 447


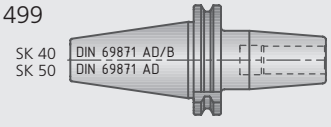
Ø 6 – Ø 32

Adaptor sleeve Whistle Notch
▸ 446


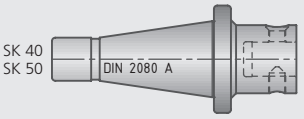
Ø 6 – Ø 32

Expanding chuck
▸ 448 – 449


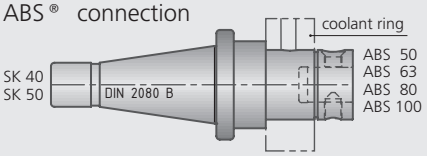
Ø 6 – Ø 32

Thermal expansion chuck THERMOGRIP®
▸ 496 – 499


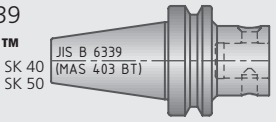
Ø 3 – Ø 32

with ABS® connection
▸ 436


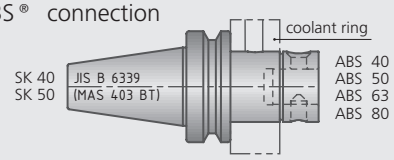
ABS 25 ABS 63
ABS 32 ABS 80
ABS 40 ABS 100
ABS 50

with ABS® connection
▸ 437


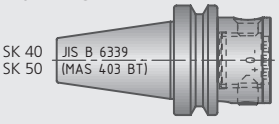
ABS 50
ABS 63
ABS 80
ABS 100

with ABS® connection
▸ 438 – 439
BIG-PLUS™
▸ 443


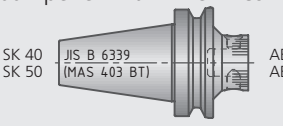
ABS 25 ABS 63
ABS 32 ABS 80
ABS 40 ABS 100
ABS 50

with ABS® connection
▸ 440


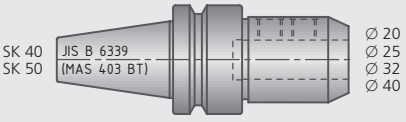
ABS 40
ABS 50
ABS 63
ABS 80

Eccentric adjusting device with ABS® connection
▸ 441


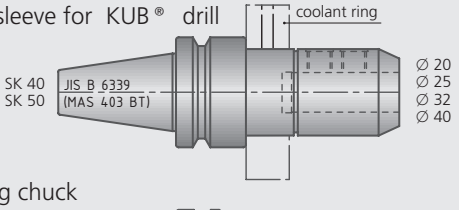
ABS 50
ABS 63

Torsional dampener with ABS® connection
▸ 442


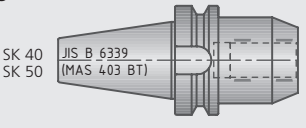
ABS 50
ABS 63

Adaptor sleeve for KUB® drill
▸ 450


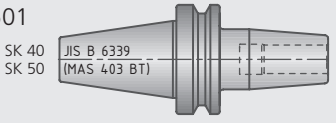
Ø 20
Ø 25
Ø 32
Ø 40

Adaptor sleeve for KUB® drill
▸ 451


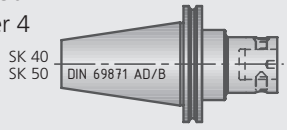
Ø 20
Ø 25
Ø 32
Ø 40

Expanding chuck
▸ 452


Ø 6 – Ø 32

Thermal expansion chuck THERMOGRIP®
▸ 500 – 501


Ø 6 – Ø 32

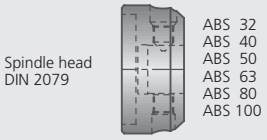
Easy Special™
▸ Chapter 4


ABS 25 ABS 50
ABS 32 ABS 63
ABS 40 ABS 80

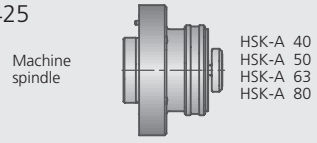
# Programme Summary – Adaptors

## 5 Spindle Adaptor Flanges

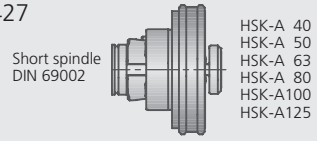
Spindle adaptor flange with ABS® connection
▸ 458



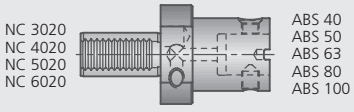

Spindle adaptor flange with KomLoc® HSK clamping system
▸ 422 – 425



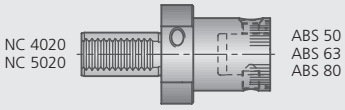

Built-in flange with KomLoc® HSK clamping system
▸ 426 – 427



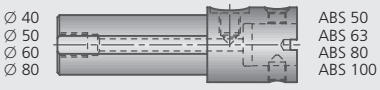

VDI adaptor with ABS® connection
▸ 456




VDI torsional dampener with ABS® connection
▸ 457

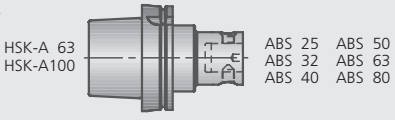



TC adaptor with ABS® connection
▸ 459

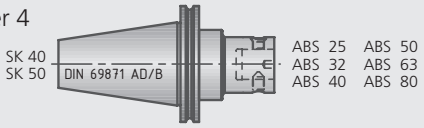



## 4 Easy Special™ Adaptors

HSK-A adaptor
▸ Chapter 4




Taper shank
▸ Chapter 4

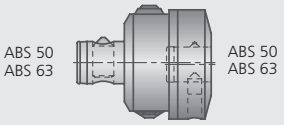



ABS® adaptor
▸ Chapter 4

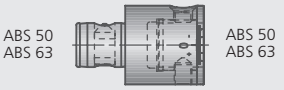



## 5 ABS® Adaptors

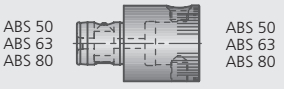
Adjustment device
▸ 461



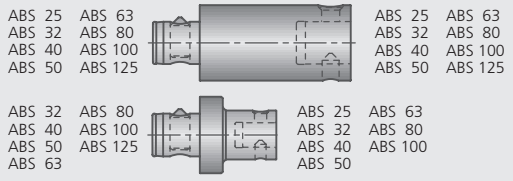

Eccentric adjusting device
▸ 462



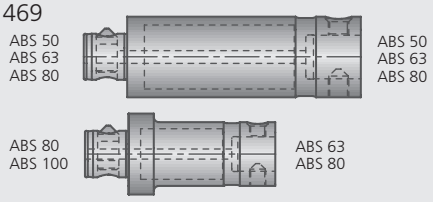

Torsional dampener
▸ 463



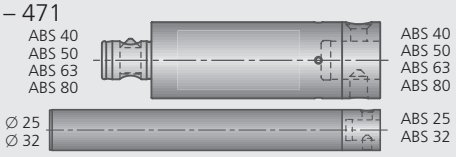

Extension / Reducer
▸ 464 – 467



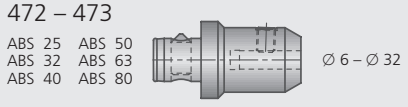

Lightweight Extension / Reducer
▸ 468 – 469



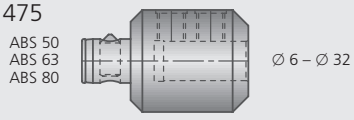

Damping element
▸ 470 – 471



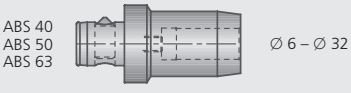

Adaptor sleeve Whistle Notch
▸ 472 – 473



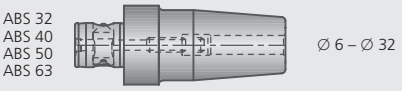

Adaptor sleeve Weldon
▸ 474 – 475




Expanding chuck
▸ 482



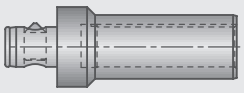

Thermal expansion chuck
▸ 502



## 5 ABS® Adaptors

### Adaptor HTR
▸ 476

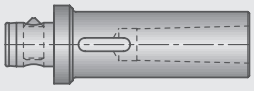
ABS 50
ABS 63



Ø 28
Ø 36

### Adaptor HMK
▸ 477

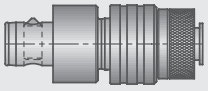
ABS 50
ABS 63



MK 1
MK 2
MK 3
MK 4

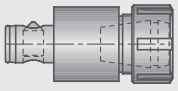
### Tapping chuck GWF
▸ 478

ABS 32 ABS 63
ABS 40 ABS 80
ABS 50 ABS 100



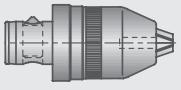
### Collet holder SZV
▸ 480

ABS 25 ABS 50
ABS 32 ABS 63
ABS 40 ABS 80



### Short drill chuck NCB
▸ 484

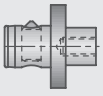
ABS 50



Ø 0,5 – Ø 16

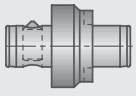
### Milling cutter arbor FA
▸ 485

ABS 50
ABS 63
ABS 80
ABS 100



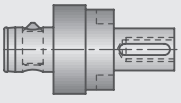
### Milling cutter arbor FAM
▸ 486

ABS 80
ABS 100



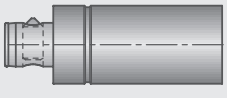
### Combination milling cutter arbor FAK
▸ 487

ABS 50
ABS 63
ABS 80



### Semi-finished head
▸ Chapter 6

ABS 25 ABS 63
ABS 32 ABS 80
ABS 40 ABS 100
ABS 50



### Easy Special™
▸ Chapter 4

ABS 25 ABS 50
ABS 32 ABS 63
ABS 40 ABS 80

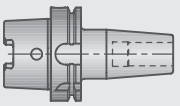


ABS 25 ABS 50
ABS 32 ABS 63
ABS 40 ABS 80

## 5 Shrink Fit Technology THERMOGRIP®

### HSK-A Adaptor
▸ 490 – 493

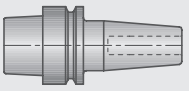
HSK-A 32 HSK-A 63
HSK-A 40 HSK-A100
HSK-A 50



Ø 3 – Ø 32

### HSK-E Adaptor
▸ 494

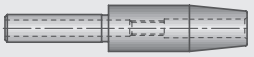
HSK-E 32 HSK-E 50
HSK-E 40 HSK-E 63



Ø 3 – Ø 20

### Extension / Reducer
▸ 495

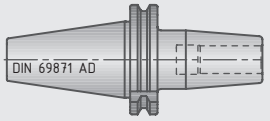
Ø 12 Ø 20
Ø 16 Ø 25



Ø 3 – Ø 16

### Taper shank DIN 69871-1 AD
▸ 496 – 497

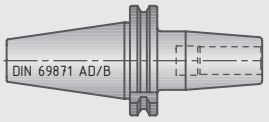
SK 40




Ø 3 – Ø 25

### Taper shank DIN 69871-1 AD/B
▸ 498 – 499

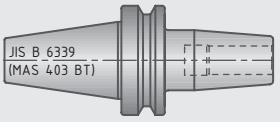
SK 40
SK 50




Ø 6 – Ø 32

### Taper shank JIS B 6339 (MAS 403 BT)
▸ 500 – 501

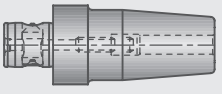
SK 40
SK 50




Ø 6 – Ø 32

### ABS® Adaptor
▸ 502

ABS 32
ABS 40
ABS 50
ABS 63



Ø 6 – Ø 32

### Symbols




**Machine adaptor**
Connection on machine side p.ex.
taper shank
DIN 69871 AD/B;
HSK-A ISO 12164-1






**Vibration dampening**
p.ex.
torsion damping
bending vibration






**Balancing note**
Balance as despatched



**adjustable**
p.ex.
radially
axially



**Coolant**
Coolant supply
p.ex. central




**Concentricity**
p.ex. ≦ 5µm




**KomLoc® HSK clamping system**
p.ex. system K



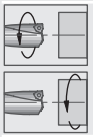
**Lightweight**







**Tool holder**
Connection on tool side p.ex.
Whistle Notch
Weldon
ABS®



**Tool**
rotating
stationary



# KOMET®

## HSK-A Adaptors to ISO 12164-1



BENEFITS for you:

- The modern connection between machine spindle and tool is the hollow taper shank system (HSK)
- HSK is standardised under ISO 12164
- The HSK-A version is used for automatic tool change on machining centres, turning/milling centres, milling machines and other machine tools
- HSK-A can also be used on machines with manual tool change
- Other HSK versions can of course be supplied by KOMET on request (see chapter 8)
- Chip bore 10×4.5 included in the standard

The main feature of HSK is the taper and face connection.

This gives important advantages:

- maximum tool change accuracy
- high static rigidity
- high radial rigidity
- small dimensions
- low weights
- use at high spindle speeds
- shorter tool change times because of lower weights
- higher machine acceleration

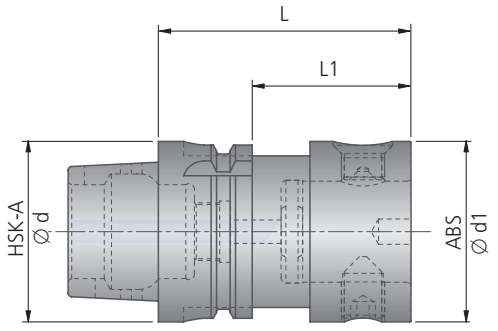

| KOMET® HSK-A Adaptors | Page |
|---|---|
| with ABS® / ABS® N connection | 400 |
| Lightweight adaptor | 401 |
| Eccentric adjusting device | 402 |
| Torsional dampener | 403 |
| Adaptor sleeve Whistle Notch | 404 – 405 |
| Adaptor sleeve Weldon | 406 – 407 |
| Collet holder | 408 – 409 |
| Expanding chuck | 410 – 413 |
| Milling cutter arbor | 414 |
| Combination milling cutter arbor | 415 |
| Morse taper | 416 |
| Short drill chuck NCB | 417 |
| Test arbor | 418 |

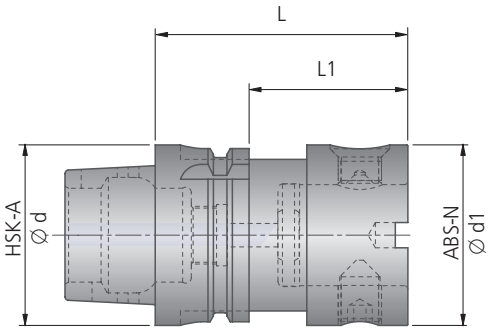
| KomLoc® HSK clamping system | |
|---|---|
| Extension | 420 |
| Reducer | 421 |
| Adaptor flange | 422 |
| Adaptor flange, adjustable | 424 |
| Built-in flange | 426 |

# KOMET® ISO 12164-1

## HSK-A Adaptor with ABS® / ABS® N Connection

| machine adaptor | balancing note (chapter 8) | coolant central | rotating tool | stationary tool | tool holder |
|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | pre-balanced Q6,3 10.000 min⁻¹ | | | | ABS® / ABS® N |




**HSK-A DIN 69893 T1 ABS®**

| Article | Order No. | HSK-A Ø d | ABS Ø d1 | L | L1 | kg |
|---|---|---|---|---|---|---|
| HSK-A32-ABS25 | **A06 00120** | 32 | 25 | 40 | 20 | 0,16 |
| HSK-A32-ABS32 | **A06 00130** | 32 | 32 | 55 | 35 | 0,25 |
| HSK-A40-ABS25 | **A06 10120** | 40 | 25 | 45 | 25 | 0,25 |
| HSK-A40-ABS32 | **A06 10130** | 40 | 32 | 45 | 25 | 0,30 |
| HSK-A40-ABS40 | **A06 10140** | 40 | 40 | 55 | – | 0,40 |
| HSK-A50-ABS25 | **A06 20121** | 50 | 25 | 50 | 24 | 0,45 |
| HSK-A50-ABS32 | **A06 20131** | 50 | 32 | 50 | 24 | 0,50 |
| HSK-A50-ABS40 | **A06 20141** | 50 | 40 | 60 | 34 | 0,64 |
| HSK-A50-ABS50 | **A06 20151** | 50 | 50 | 70 | – | 0,79 |
| HSK-A63-ABS25 | **A06 30120** | 63 | 25 | 50 | 24 | 0,70 |
| HSK-A63-ABS32 | **A06 30130** | 63 | 32 | 50 | 24 | 0,75 |
| HSK-A63-ABS40 | **A06 30140** | 63 | 40 | 60 | 34 | 1,00 |
| HSK-A63-ABS50 | **A06 30150** | 63 | 50 | 70 | 44 | 1,22 |
| HSK-A63-ABS50* | **A06 30220** | 63 | 50 | 42 | – | 0,77 |
| HSK-A63-ABS63 | **A06 30160** | 63 | 63 | 80 | – | 1,64 |
| HSK-A63-ABS80 | **A06 30170** | 63 | 80 | 100 | – | 2,50 |
| HSK-A80-ABS40 | **A06 40140** | 80 | 40 | 65 | 39 | 1,36 |
| HSK-A80-ABS50 | **A06 40150** | 80 | 50 | 75 | 49 | 1,60 |
| HSK-A80-ABS63 | **A06 40160** | 80 | 63 | 85 | 59 | 2,20 |
| HSK-A80-ABS80 | **A06 40170** | 80 | 80 | 95 | – | 2,99 |
| HSK-A100-ABS25 | **A06 50120** | 100 | 25 | 60 | 31 | 2,20 |
| HSK-A100-ABS32 | **A06 50130** | 100 | 32 | 60 | 31 | 2,30 |
| HSK-A100-ABS40 | **A06 50140** | 100 | 40 | 80 | 51 | 2,45 |
| HSK-A100-ABS50 | **A06 50150** | 100 | 50 | 80 | 51 | 2,68 |
| HSK-A100-ABS63 | **A06 50160** | 100 | 63 | 80 | 51 | 3,01 |
| HSK-A100-ABS80 | **A06 50170** | 100 | 80 | 90 | 61 | 3,70 |
| HSK-A100-ABS100 | **A06 50180** | 100 | 100 | 100 | – | 4,75 |

**HSK-A DIN 69893 T1 ABS® N**

| Article | Order No. | HSK-A Ø d | ABS-N Ø d1 | L | L1 | kg |
|---|---|---|---|---|---|---|
| HSK-A63-ABS50N | **A06 30050** | 63 | 50 | 70 | 44 | 1,22 |
| HSK-A63-ABS63N | **A06 30060** | 63 | 63 | 80 | – | 1,64 |
| HSK-A63-ABS80N | **A06 30070** | 63 | 80 | 100 | – | 2,50 |
| HSK-A100-ABS50N | **A06 50050** | 100 | 50 | 80 | 51 | 2,68 |
| HSK-A100-ABS63N | **A06 50060** | 100 | 63 | 80 | 51 | 3,01 |
| HSK-A100-ABS80N | **A06 50070** | 100 | 80 | 90 | 61 | 3,70 |

* for fineboring only

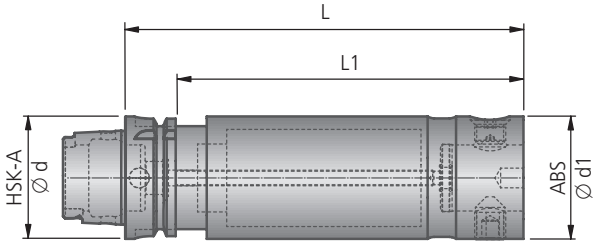
**Supply includes:**
Adaptor fitted complete. Please order coolant supply connection and key separately (chapter 8).



Patent applied for inside and outside Germany (ABS)

# HSK-A Lightweight Adaptor with ABS® Connection

| machine adaptor | coolant central | lightweight | rotating tool | tool holder |
|---|---|---|---|---|
| HSK-A ISO 12164-1 | | | | ABS® |




| HSK-A DIN 69893 T1 ABS® | | | | | | |
|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | ABS Ø d1 | L | L1 | kg |
| HSK-A63-ABS63-LB | **A06 30360** | 63 | 63 | 205 | – | 3,00 |
| HSK-A100-ABS63-LB | **A06 50360** | 100 | 63 | 205 | 176 | 4,20 |
| HSK-A100-ABS80-LB | **A06 50370** | 100 | 80 | 215 | 186 | 5,90 |
| HSK-A100-ABS100-LB | **A06 50380** | 100 | 100 | 260 | – | 8,90 |

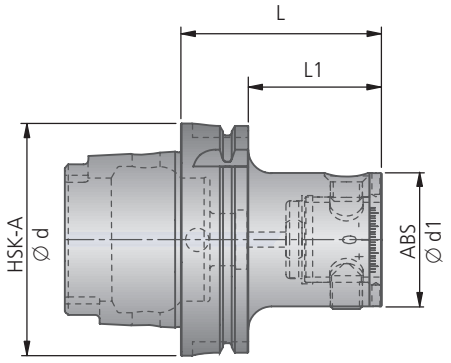
**Supply includes:**
Adaptor fitted complete. Please order coolant supply connection and key separately (chapter 8).

# KOMET® ISO 12164-1

## HSK-A Eccentric Adjusting Device with ABS® Connection

| machine adaptor | coolant central | rotating tool | stationary tool | adjustable | tool holder |
|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | | | | | ABS® |

■ adjustment path ± 0.25 mm in the diameter




| HSK-A DIN 69893 T1 ABS® EXZ | | | | | | | Assembly parts |
|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | ABS Ø d1 | L | L1 | kg | Adjusting key (cotter pin) Order No. |
| HSK-A63 ABS50 EXZ | **A06 36730** | 63 | 50 | 70 | 39,5 | 1,13 | **18043 00028** |
| HSK-A63 ABS63 EXZ. | **A06 36740** | 63 | 63 | 80 | 54 | 1,50 | **18043 00028** |
| HSK-A100 ABS50 EXZ | **A06 56730** | 100 | 50 | 80 | 46,5 | 2,60 | **18043 00028** |
| HSK-A100 ABS63 EXZ | **A06 56740** | 100 | 63 | 80 | 51 | 2,80 | **18043 00028** |

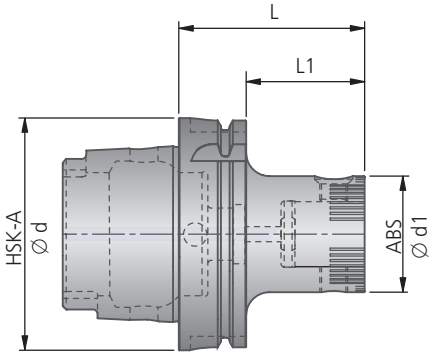
**Supply includes:**
Adaptor with adjusting key. Please order coolant supply connection and key separately (see chapter 8).



Patent applied for inside and outside Germany (ABS)

# HSK-A Torsional Dampener with ABS® Connection

| machine adaptor | coolant central | rotating tool | stationary tool | vibration dampening | tool holder |
|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | | | | | ABS® N |




| HSK-A DIN 69893 T1 ABS® TSD | | | | | | | Assembly parts |
|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | ABS Ø d1 | L | L1 | kg | ABS Sealing plate Order No. |
| HSK-A63-ABS50-TSD | **A06 30251** | 63 | 50 | 70 | 44 | 1,10 | **L01 02041** |
| HSK-A63-ABS63-TSD | **A06 30261** | 63 | 63 | 80 | – | 1,45 | **L01 02051** |
| HSK-A63-ABS80-TSD | **A06 30270** | 63 | 80 | 100 | – | 2,34 | **L01 02061** |
| HSK-A100-ABS50-TSD | **A06 50251** | 100 | 50 | 80 | 51 | 2,70 | **L01 02041** |
| HSK-A100-ABS63-TSD | **A06 50261** | 100 | 63 | 80 | 51 | 2,85 | **L01 02051** |
| HSK-A100-ABS80-TSD | **A06 50270** | 100 | 80 | 90 | 61 | 3,64 | **L01 02061** |

**Supply includes:**
Adaptor fitted complete. Please order coolant supply connection and key separately (see chapter 8).

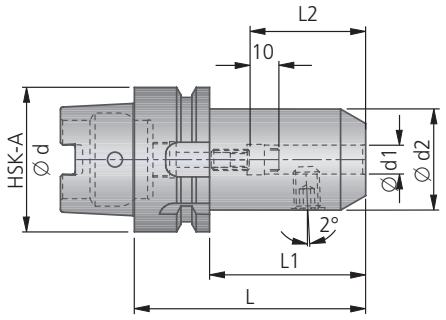
The torsional dampeners are designed for solid drills in line with the torque which is produced.
Recommended use:
...-ABS50-TSD for drill ∅ 14 - 44 mm
...-ABS63-TSD for drill ∅ 45 - 54 mm
...-ABS80-TSD for drill ∅ 55 - 81 mm
For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).

# KOMET® ISO 12164-1

## HSK-A Adaptor Sleeve Whistle Notch

| machine adaptor | location | balancing note (Chapter 8) | concentricity | coolant central | rotating tool | stationary tool | tool holder | |
|---|---|---|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | DIN 69882-5 | pre-balanced Q6,3 10.000 min⁻¹ | ≦ 5 µm | | | | DIN 1835-E Whistle Notch | DIN 6535 HE |

- short design
- the 2° tilt of the clamping screws prevents the tool from pulling out




| HSK-A DIN 69893 T1 FWD | | | | | | | | | Assembly parts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Clamping screw | | Adjusting screw |
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | L | L1 | L2 | kg | Order No. | Piece | Order No. |
| HSK-A50-FWD06 | A06 20601 | 50 | 6 | 25 | 80 | 54 | 36 | 0,80 | 51050 06010 | 1 | N00 71000 |
| HSK-A50-FWD08 | A06 20801 | 50 | 8 | 28 | 80 | 54 | 36 | 0,90 | 51050 08010 | 1 | N00 71050 |
| HSK-A50-FWD10 | A06 21001 | 50 | 10 | 35 | 80 | 54 | 40 | 0,90 | 51050 10012 | 1 | 51049 08016 |
| HSK-A50-FWD12 | A06 21201 | 50 | 12 | 42 | 90 | 64 | 45 | 1,00 | 51050 12016 | 1 | 51049 10020 |
| HSK-A50-FWD14 | A06 21401 | 50 | 14 | 44 | 90 | 64 | 45 | 1,04 | 51050 12016 | 1 | 51049 10020 |
| HSK-A50-FWD16 | A06 21601 | 50 | 16 | 48 | 90 | 64 | 48 | 1,12 | 51050 14016 | 1 | 51049 12025 |
| HSK-A50-FWD18 | A06 21801 | 50 | 18 | 50 | 90 | 64 | 48 | 1,12 | 51050 14016 | 1 | 51049 12025 |
| HSK-A50-FWD20 | A06 22001 | 50 | 20 | 52 | 100 | 74 | 50 | 1,28 | 51050 16016 | 1 | 51049 16025 |
| HSK-A63-FWD06 | A06 30600 | 63 | 6 | 25 | 80 | 54 | 36 | 0,82 | 51050 06010 | 1 | N00 71000 |
| HSK-A63-FWD08 | A06 30800 | 63 | 8 | 28 | 80 | 54 | 36 | 0,90 | 51050 08010 | 1 | N00 71050 |
| HSK-A63-FWD10 | A06 31000 | 63 | 10 | 35 | 80 | 54 | 40 | 0,99 | 51050 10012 | 1 | N00 71120 |
| HSK-A63-FWD12 | A06 31200 | 63 | 12 | 42 | 90 | 64 | 45 | 1,20 | 51050 12016 | 1 | N00 71270 |
| HSK-A63-FWD14 | A06 31400 | 63 | 14 | 44 | 90 | 64 | 45 | 1,20 | 51050 12016 | 1 | N00 71270 |
| HSK-A63-FWD16 | A06 31600 | 63 | 16 | 48 | 100 | 74 | 48 | 1,56 | 51050 14016 | 1 | N00 71420 |
| HSK-A63-FWD18 | A06 31800 | 63 | 18 | 50 | 100 | 74 | 48 | 1,60 | 51050 14016 | 1 | N00 71420 |
| HSK-A63-FWD20 | A06 32000 | 63 | 20 | 52 | 100 | 74 | 50 | 1,67 | 51050 16016 | 1 | N00 71510 |
| HSK-A63-FWD25 | A06 32500 | 63 | 25 | 65 | 110 | 84 | 56 | 2,30 | 51050 18220 | 2 | N00 71510 |
| HSK-A63-FWD32 | A06 33200 | 63 | 32 | 72 | 110 | 84 | 60 | 2,32 | 51050 20220 | 2 | N00 71510 |
| HSK-A100-FWD06 | A06 50600 | 100 | 6 | 25 | 90 | 61 | 36 | 2,18 | 51050 06010 | 1 | N00 71000 |
| HSK-A100-FWD08 | A06 50800 | 100 | 8 | 28 | 90 | 61 | 36 | 2,24 | 51050 08010 | 1 | N00 71050 |
| HSK-A100-FWD10 | A06 51000 | 100 | 10 | 35 | 90 | 61 | 40 | 2,45 | 51050 10012 | 1 | N00 71120 |
| HSK-A100-FWD12 | A06 51200 | 100 | 12 | 42 | 100 | 71 | 45 | 2,70 | 51050 12016 | 1 | N00 71270 |
| HSK-A100-FWD14 | A06 51400 | 100 | 14 | 44 | 100 | 71 | 45 | 2,70 | 51050 12016 | 1 | N00 71270 |
| HSK-A100-FWD16 | A06 51600 | 100 | 16 | 48 | 100 | 71 | 48 | 2,86 | 51050 14016 | 1 | N00 71420 |
| HSK-A100-FWD18 | A06 51800 | 100 | 18 | 50 | 100 | 71 | 48 | 2,90 | 51050 14016 | 1 | N00 71420 |
| HSK-A100-FWD20 | A06 52000 | 100 | 20 | 52 | 110 | 81 | 50 | 2,95 | 51050 16016 | 1 | N00 71510 |
| HSK-A100-FWD25 | A06 52500 | 100 | 25 | 65 | 120 | 91 | 56 | 3,85 | 51050 18220 | 2 | N00 71510 |
| HSK-A100-FWD32 | A06 53200 | 100 | 32 | 72 | 120 | 91 | 60 | 4,32 | 51050 20220 | 2 | N00 71510 |

Further HSK-sizes on request

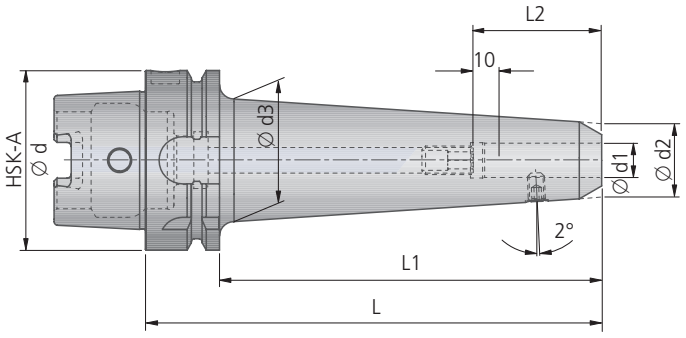
**Supply includes:** Adaptor sleeve complete with clamping screw and adjusting screw. Please order coolant supply connection and key separately (chapter 8).

# HSK-A Adaptor Sleeve Whistle Notch

| machine adaptor | balancing note (Chapter 8) | coolant central | rotating tool | stationary tool | tool holder | |
|---|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | pre-balanced Q6,3 10.000 min⁻¹ | | | | DIN 1835-E Whistle Notch | DIN 6535 HE |

long design ■

the 2° tilt of the clamping screws prevents the tool from pulling out ■




| HSK-A DIN 69893 T1 FWD | | | | | | | | | | Assembly parts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Clamping screw | | Adjusting screw |
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | L2 | kg | Order No. | Piece | Order No. |
| HSK-A63-FWD06-160 | **A06 34060** | 63 | 6 | 22 | 33 | 160 | 134 | 36 | 1,30 | **N00 70200** | 1 | **N00 71000** |
| HSK-A63-FWD08-160 | **A06 34080** | 63 | 8 | 24 | 35 | 160 | 134 | 36 | 1,34 | **51050 06010** | 1 | **N00 71050** |
| HSK-A63-FWD10-160 | **A06 34100** | 63 | 10 | 25 | 39 | 160 | 134 | 40 | 1,44 | **51050 06010** | 1 | **N00 71120** |
| HSK-A63-FWD12-160 | **A06 34120** | 63 | 12 | 26 | 43 | 160 | 134 | 45 | 1,60 | **51050 06010** | 1 | **N00 71270** |
| HSK-A63-FWD14-160 | **A06 34140** | 63 | 14 | 28 | 44 | 160 | 134 | 45 | 1,60 | **51050 08010** | 1 | **N00 71270** |
| HSK-A63-FWD16-160 | **A06 34160** | 63 | 16 | 30 | 45 | 160 | 134 | 48 | 1,70 | **51050 08010** | 1 | **N00 71420** |
| HSK-A63-FWD18-160 | **A06 34180** | 63 | 18 | 32 | 46 | 160 | 134 | 48 | 1,70 | **51050 08010** | 1 | **N00 71420** |
| HSK-A63-FWD20-160 | **A06 34200** | 63 | 20 | 34 | 50 | 160 | 134 | 50 | 1,90 | **51050 08010** | 1 | **N00 71510** |
| HSK-A63-FWD25-160 | **A06 34250** | 63 | 25 | 65 | 65 | 160 | 134 | 56 | 3,65 | **51050 18220** | 2 | **N00 71510** |
| HSK-A63-FWD32-160 | **A06 34320** | 63 | 32 | 72 | 72 | 160 | 134 | 60 | 4,24 | **51050 20220** | 2 | **N00 71510** |
| HSK-A100-FWD06-160 | **A06 54060** | 100 | 6 | 22 | 33 | 160 | 131 | 36 | 2,60 | **N00 70200** | 1 | **N00 71000** |
| HSK-A100-FWD08-160 | **A06 54080** | 100 | 8 | 24 | 35 | 160 | 131 | 36 | 2,60 | **51050 06010** | 1 | **N00 71050** |
| HSK-A100-FWD10-160 | **A06 54100** | 100 | 10 | 25 | 39 | 160 | 131 | 40 | 2,80 | **51050 06010** | 1 | **N00 71120** |
| HSK-A100-FWD12-160 | **A06 54120** | 100 | 12 | 26 | 43 | 160 | 131 | 45 | 2,83 | **51050 06010** | 1 | **N00 71270** |
| HSK-A100-FWD14-160 | **A06 54140** | 100 | 14 | 28 | 44 | 160 | 131 | 45 | 2,90 | **51050 08010** | 1 | **N00 71270** |
| HSK-A100-FWD16-160 | **A06 54160** | 100 | 16 | 30 | 45 | 160 | 131 | 48 | 2,97 | **51050 08010** | 1 | **N00 71420** |
| HSK-A100-FWD18-160 | **A06 54180** | 100 | 18 | 32 | 46 | 160 | 131 | 48 | 3,10 | **51050 08010** | 1 | **N00 71420** |
| HSK-A100-FWD20-160 | **A06 54200** | 100 | 20 | 34 | 50 | 160 | 131 | 50 | 3,20 | **51050 08010** | 1 | **N00 71510** |
| HSK-A100-FWD25-160 | **A06 54250** | 100 | 25 | 65 | 65 | 160 | 131 | 56 | 4,98 | **51050 18220** | 2 | **N00 71510** |
| HSK-A100-FWD32-160 | **A06 54320** | 100 | 32 | 72 | 72 | 160 | 131 | 60 | 5,60 | **51050 20220** | 2 | **N00 71510** |

Further HSK-sizes on request

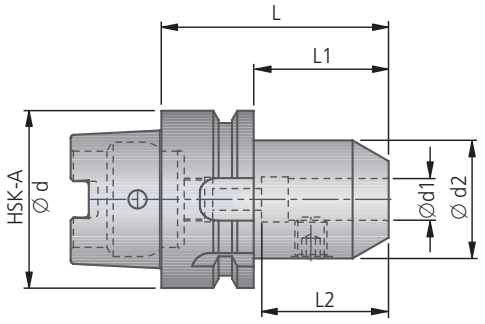
**Supply includes:** Adaptor sleeve complete with clamping screw and adjusting screw. Please order coolant supply connection and key separately (chapter 8).

# KOMET® ISO 12164-1

## HSK-A Adaptor Sleeve Weldon

| machine adaptor | location | balancing note (Chapter 8) | concentricity | coolant central | rotating tool | stationary tool | tool holder | |
|---|---|---|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | DIN 69882-4 | pre-balanced Q6,3 10.000 min⁻¹ | ≦ 5 µm | | | | DIN 1835-B Weldon | DIN 6535 HB |

■ short design




| HSK-A DIN 69893 T1 HWD | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Clamping screw | |
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | L | L1 | L2 | kg | Order No. | Piece |
| HSK-A50-HWD06 | **A06 23301** | 50 | 6 | 25 | 65 | 39 | 37 | 0,50 | **51050 06010** | 1 |
| HSK-A50-HWD08 | **A06 23311** | 50 | 8 | 28 | 65 | 39 | 37 | 0,55 | **51050 08010** | 1 |
| HSK-A50-HWD10 | **A06 23321** | 50 | 10 | 35 | 65 | 39 | 41 | 0,62 | **51050 10012** | 1 |
| HSK-A50-HWD12 | **A06 23331** | 50 | 12 | 42 | 80 | 54 | 46 | 0,89 | **51050 12016** | 1 |
| HSK-A50-HWD14 | **A06 23341** | 50 | 14 | 44 | 80 | 54 | 46 | 0,91 | **51050 12016** | 1 |
| HSK-A50-HWD16 | **A06 23351** | 50 | 16 | 48 | 80 | 54 | 49 | 0,97 | **51050 14016** | 1 |
| HSK-A50-HWD18 | **A06 23361** | 50 | 18 | 50 | 80 | 54 | 49 | 0,99 | **51050 14016** | 1 |
| HSK-A50-HWD20 | **A06 23371** | 50 | 20 | 52 | 80 | 54 | 51 | 1,00 | **51050 16016** | 1 |
| HSK-A63-HWD06 | **A06 33300** | 63 | 6 | 25 | 65 | 39 | 40 | 0,58 | **51050 06010** | 1 |
| HSK-A63-HWD08 | **A06 33310** | 63 | 8 | 28 | 65 | 39 | 40 | 0,63 | **51050 08010** | 1 |
| HSK-A63-HWD10 | **A06 33320** | 63 | 10 | 35 | 65 | 39 | 45 | 0,73 | **51050 10012** | 1 |
| HSK-A63-HWD12 | **A06 33330** | 63 | 12 | 42 | 80 | 54 | 49 | 1,03 | **51050 12016** | 1 |
| HSK-A63-HWD14 | **A06 33340** | 63 | 14 | 44 | 80 | 54 | 49 | 1,03 | **51050 12016** | 1 |
| HSK-A63-HWD16 | **A06 33350** | 63 | 16 | 48 | 80 | 54 | 52 | 1,12 | **51050 14016** | 1 |
| HSK-A63-HWD18 | **A06 33360** | 63 | 18 | 50 | 80 | 54 | 52 | 1,12 | **51050 14016** | 1 |
| HSK-A63-HWD20 | **A06 33370** | 63 | 20 | 52 | 80 | 54 | 54 | 1,21 | **51050 16016** | 1 |
| HSK-A63-HWD25 | **A06 33380** | 63 | 25 | 65 | 110 | 84 | 59 | 2,28 | **51050 18220** | 2 |
| HSK-A63-HWD32 | **A06 33390** | 63 | 32 | 72 | 110 | 84 | 63 | 2,55 | **51050 20220** | 2 |
| HSK-A100-HWD06 | **A06 53300** | 100 | 6 | 25 | 80 | 51 | 40 | 2,13 | **51050 06010** | 1 |
| HSK-A100-HWD08 | **A06 53310** | 100 | 8 | 28 | 80 | 51 | 40 | 2,20 | **51050 08010** | 1 |
| HSK-A100-HWD10 | **A06 53320** | 100 | 10 | 35 | 80 | 51 | 45 | 2,50 | **51050 10012** | 1 |
| HSK-A100-HWD12 | **A06 53330** | 100 | 12 | 42 | 80 | 51 | 49 | 2,50 | **51050 12016** | 1 |
| HSK-A100-HWD14 | **A06 53340** | 100 | 14 | 44 | 80 | 51 | 49 | 2,50 | **51050 12016** | 1 |
| HSK-A100-HWD16 | **A06 53350** | 100 | 16 | 48 | 100 | 71 | 52 | 2,88 | **51050 14016** | 1 |
| HSK-A100-HWD18 | **A06 53360** | 100 | 18 | 50 | 100 | 71 | 52 | 3,00 | **51050 14016** | 1 |
| HSK-A100-HWD20 | **A06 53370** | 100 | 20 | 52 | 100 | 71 | 54 | 3,00 | **51050 16016** | 1 |
| HSK-A100-HWD25 | **A06 53380** | 100 | 25 | 65 | 100 | 71 | 59 | 3,43 | **51050 18220** | 2 |
| HSK-A100-HWD32 | **A06 53390** | 100 | 32 | 72 | 100 | 71 | 63 | 3,77 | **51050 20220** | 2 |

Further HSK sizes on request

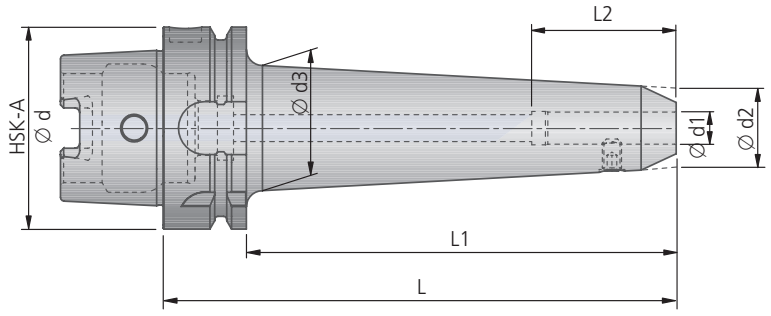
**Supply includes:**

Adaptor sleeve complete with clamping screw. Please order coolant supply connection and key separately (chapter 8).

# HSK-A Adaptor Sleeve Weldon

| machine adaptor | balancing note (Chapter 8) | coolant central | rotating tool | stationary tool | tool holder |
|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | pre-balanced Q6,3 10.000 min⁻¹ | | | | DIN 1835-B Weldon / DIN 6535 HB |

long design ■




| HSK-A DIN 69893 T1 HWD | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | L2 | kg | Clamping screw Order No. | Piece |
| HSK-A63-HWD06-160 | **A06 34400** | 63 | 6 | 22 | 33 | 160 | 134 | 40 | 1,23 | **51050 06010** | 1 |
| HSK-A63-HWD08-160 | **A06 34410** | 63 | 8 | 24 | 35 | 160 | 134 | 40 | 1,30 | **51050 06010** | 1 |
| HSK-A63-HWD10-160 | **A06 34420** | 63 | 10 | 25 | 39 | 160 | 134 | 45 | 1,42 | **51050 06010** | 1 |
| HSK-A63-HWD12-160 | **A06 34430** | 63 | 12 | 26 | 43 | 160 | 134 | 49 | 1,56 | **51050 06010** | 1 |
| HSK-A63-HWD14-160 | **A06 34440** | 63 | 14 | 28 | 44 | 160 | 134 | 49 | 1,62 | **51050 08010** | 1 |
| HSK-A63-HWD16-160 | **A06 34450** | 63 | 16 | 30 | 45 | 160 | 134 | 52 | 1,68 | **51050 08010** | 1 |
| HSK-A63-HWD18-160 | **A06 34460** | 63 | 18 | 32 | 46 | 160 | 134 | 52 | 1,75 | **51050 08010** | 1 |
| HSK-A63-HWD20-160 | **A06 34470** | 63 | 20 | 34 | 50 | 160 | 134 | 54 | 1,92 | **51050 08010** | 1 |
| HSK-A63-HWD25-160 | **A06 34480** | 63 | 25 | 65 | 65 | 160 | 134 | 59 | 3,56 | **51050 18220** | 2 |
| HSK-A63-HWD32-160 | **A06 34490** | 63 | 32 | 72 | 72 | 160 | 134 | 63 | 4,26 | **51050 20220** | 2 |
| HSK-A100-HWD06-160 | **A06 54400** | 100 | 6 | 22 | 33 | 160 | 131 | 40 | 2,60 | **51050 06010** | 1 |
| HSK-A100-HWD08-160 | **A06 54410** | 100 | 8 | 24 | 35 | 160 | 131 | 40 | 2,60 | **51050 06010** | 1 |
| HSK-A100-HWD10-160 | **A06 54420** | 100 | 10 | 25 | 39 | 160 | 131 | 45 | 2,80 | **51050 06010** | 1 |
| HSK-A100-HWD12-160 | **A06 54430** | 100 | 12 | 26 | 43 | 160 | 131 | 49 | 2,80 | **51050 06010** | 1 |
| HSK-A100-HWD14-160 | **A06 54440** | 100 | 14 | 28 | 44 | 160 | 131 | 49 | 2,90 | **51050 08010** | 1 |
| HSK-A100-HWD16-160 | **A06 54450** | 100 | 16 | 30 | 45 | 160 | 131 | 52 | 3,00 | **51050 08010** | 1 |
| HSK-A100-HWD18-160 | **A06 54460** | 100 | 18 | 32 | 46 | 160 | 131 | 52 | 3,10 | **51050 08010** | 1 |
| HSK-A100-HWD20-160 | **A06 54470** | 100 | 20 | 34 | 50 | 160 | 131 | 54 | 3,20 | **51050 08010** | 1 |
| HSK-A100-HWD25-160 | **A06 54480** | 100 | 25 | 65 | 65 | 160 | 131 | 59 | 4,96 | **51050 18220** | 2 |
| HSK-A100-HWD32-160 | **A06 54490** | 100 | 32 | 72 | 72 | 160 | 131 | 63 | 5,60 | **51050 20220** | 2 |

Further HSK-sizes on request

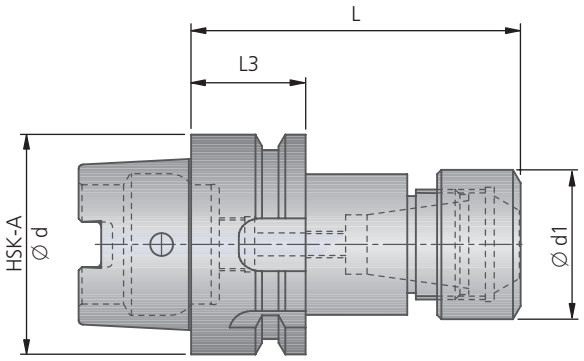
**Supply includes:**
Adaptor sleeve complete with clamping screw. Please order coolant supply connection and key separately (chapter 8).

# KOMET® ISO 12164-1

## HSK-A Collet Holder

| machine adaptor | location | balancing note (Chapter 8) | coolant central | rotating tool | stationary tool | tool holder |
|---|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | DIN 69882-6 | pre-balanced Q6,3 10.000 min⁻¹ | | | | Cylindrical shank |

- high concentricity with ground thread on holder and clamping nut
- axial adjustment




| HSK-A DIN 69893 T1 SZV | | | | | | | | Accessory | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Hook spanner | Adjusting screw | | |
| Article | Order No. | HSK-A Ø d | Ø d1 | L | L3 | Clamping range for collet | kg | Order No. | Article | with hole Order No. | without hole Order No. |
| HSK-A50-SZV/ER16 | **A06 23401** | 50 | SW25 | 96,4–100 | 26 | 0,5 – 10,0 | 0,5 | SW 25 | M16×20 | **51049 16025** | **51050 16016** |
| HSK-A50-SZV/ER32 | **A06 23431** | 50 | 50 | 96,5–100 | 26 | 2,0 – 20,0 | 1,2 | **L05 02050** | M16×20 | **51049 16025** | **51050 16016** |
| HSK-A63-SZV/ER16 | **A06 33400** | 63 | SW25 | 96,4–100 | 26 | 0,5 – 10,0 | 1,2 | SW 25 | M5×8 | **N00 71900** | **N00 71910** |
| HSK-A63-SZV/ER20 | **A06 33410** | 63 | 35 | 96,5–100 | 26 | 1,0 – 13,0 | 0,87 | **L05 02030** | M6×12 | **N00 71070** | **N00 71940** |
| HSK-A63-SZV/ER25 | **A06 33420** | 63 | 42 | 96,5–100 | 26 | 1,0 – 16,0 | 1,03 | **L05 02040** | M8×1×14 | **N00 71970** | **N00 71980** |
| HSK-A63-SZV/ER32 | **A06 33430** | 63 | 50 | 96,5–100 | 26 | 2,0 – 20,0 | 1,36 | **L05 02050** | M10×1×14 | **N00 71280** | **N00 71240** |
| HSK-A63-SZV/ER40 | **A06 33440** | 63 | 63 | 116,5–120 | 26 | 3,0 – 26,0 | 1,76 | **L05 02060** | M12×1×18 | **N00 71330** | **N00 71340** |
| HSK-A63-SZV/ER16-160 | **A06 34500** | 63 | SW25 | 156,4–160 | 26 | 0,5 – 10,0 | 1,15 | SW 25 | M5×8 | **N00 71900** | **N00 71910** |
| HSK-A63-SZV/ER25-160 | **A06 34520** | 63 | 42 | 156,5–160 | 26 | 1,0 – 16,0 | 1,37 | **L05 02040** | M8×1×14 | **N00 71970** | **N00 71980** |
| HSK-A100-SZV/ER16 | **A06 53400** | 100 | SW25 | 96,4–100 | 29 | 0,5 – 10,0 | 2,00 | SW 25 | M5×8 | **N00 71900** | **N00 71910** |
| HSK-A100-SZV/ER20 | **A06 53410** | 100 | 35 | 96,5–100 | 29 | 1,0 – 13,0 | 2,19 | **L05 02030** | M6×12 | **N00 71070** | **N00 71940** |
| HSK-A100-SZV/ER25 | **A06 53420** | 100 | 42 | 96,5–100 | 29 | 1,0 – 16,0 | 2,35 | **L05 02040** | M8×1×14 | **N00 71970** | **N00 71980** |
| HSK-A100-SZV/ER32 | **A06 53430** | 100 | 50 | 96,5–100 | 29 | 2,0 – 20,0 | 2,50 | **L05 02050** | M10×1×14 | **N00 71280** | **N00 71240** |
| HSK -A100-SZV/ER40 | **A06 53440** | 100 | 63 | 116,5–120 | 29 | 3,0 – 26,0 | 3,00 | **L05 02060** | M12×1×18 | **N00 71330** | **N00 71340** |
| HSK-A100-SZV/ER16-160 | **A06 54500** | 100 | SW25 | 156,4–160 | 29 | 0,5 – 10,0 | 2,40 | SW 25 | M5×8 | **N00 71900** | **N00 71910** |
| HSK-A100-SZV/ER25-160 | **A06 54520** | 100 | 42 | 156,5–160 | 29 | 1,0 – 16,0 | 2,66 | **L05 02040** | M8×1×14 | **N00 71970** | **N00 71980** |

| | Assembly parts | Accessories | | |
|---|---|---|---|---|
| | Collet nut ① | Collet nut ② for washer | Collet nut ③ with friction bearings | Collet nut ④ with friction bearings for washer |
| for size | Order No. | Order No. | Order No. | Order No. |
| ER16 | **51200 00316** | **51200 00416** | **52807 03016** | **52807 01016** |
| ER20 | **51200 00320** | **51200 00420** | **52807 03020** | **52807 01020** |
| ER25 | **51200 00325** | **51200 00425** | **52807 03025** | **52807 01025** |
| ER32 | **51200 00332** | **51200 00432** | **52807 03032** | **52807 01032** |
| ER40 | **51200 00340** | **51200 00440** | **52807 03040** | **52807 01040** |

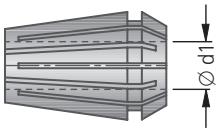
**Washer** for collet nuts ② and ④

| Article | Order No. | optional from Ø d1 | Clamping range increasing by |
|---|---|---|---|
| DS/ER 16... | **52806 16...** | 3 – 10 | 0,5 mm |
| DS/ER 20... | **52806 20...** | 3 – 13 | 0,5 mm |
| DS/ER 25... | **52806 25...** | 3 – 16 | 0,5 mm |
| DS/ER 32... | **52806 32...** | 3 – 20 | 0,5 mm |
| DS/ER 40... | **52806 33...** | 3 – 26 | 0,5 mm |

Please state diameter required d1, e.g. : ▲
**035** → Ø 3,5 mm≙d1 3,5–3,0 mm
**090** → Ø 9,0 mm≙d1 9,0–8,5 mm
**260** → Ø 26,0 mm≙d1 26,0–25,5 mm

**Supply includes:**
Collet holder complete with collet nut ①.
Please order separately: accessory and coolant supply connection and key (chapter 8).

**Note:** The washers can be used up to a coolant pressure of 100 bar.




Note:
[1] Tool shank diameter d1 must not be greater than collet nominal dimension d1 (risk of fracture)

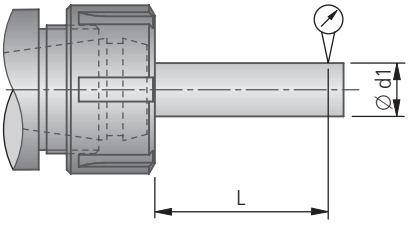
| for collet holder | Order No. | [1] optional from Ø d1 | Clamping range |
|---|---|---|---|
| HSK...A-SZV/ER16 | **A33 52000...** | 3 – 10 | 1 mm |
| HSK...A-SZV/ER20 | **A33 53000...** | 3 – 13 | 1 mm |
| HSK...A-SZV/ER25 | **A33 54000...** | 3 – 16 | 1 mm |
| HSK...A-SZV/ER32 | **A33 55000...** | 3 – 20 | 1 mm |
| HSK...A-SZV/ER40 | **A33 56000...** | 3 – 26 | 1 mm |

Please state diameter ▲
required d1, e. g.: **0300** for Ø 3,0 mm
**2600** for Ø 26,0 mm

| high precision | | | |
|---|---|---|---|
| for collet holder | Order No. | [1] optional from Ø d1 | Clamping range |
| HSK...A-SZV/ER16 | **A33 52010...** | 3 – 10 | from diameter 3 mm in 0.5 mm stages |
| HSK...A-SZV/ER20 | **A33 53010...** | 3 – 13 | |
| HSK...A-SZV/ER25 | **A33 54010...** | 3 – 16 | |
| HSK...A-SZV/ER32 | **A33 55010...** | 3 – 20 | |
| HSK...A-SZV/ER40 | **A33 56010...** | 3 – 26 | |

Please state diameter ▲
required d1, e. g.: **0300** for Ø 3,0 mm
**2650** for Ø 26,5 mm

## Concentricity of collets

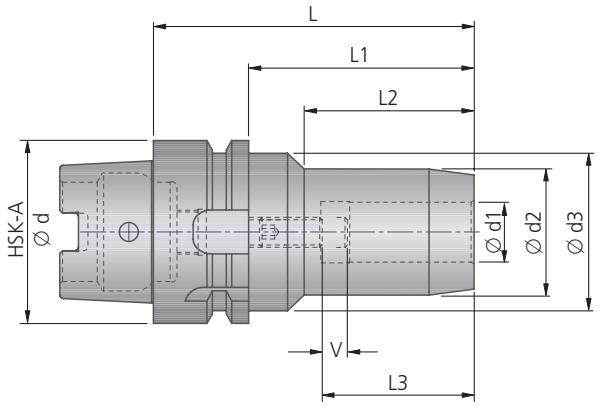



| L | Ø d1 | Accuracy of concentricity to collets and collet holder | Accuracy of concentricity (higher precision) to collets and collet holder |
|---|---|---|---|
| 6 | 1,0 – 1,6 | 0,015 | 0,010 |
| 10 | 1,6 – 3,0 | 0,015 | 0,010 |
| 16 | 3,0 – 6,0 | 0,015 | 0,010 |
| 25 | 6,0 – 10,0 | 0,015 | 0,010 |
| 40 | 10,0 – 18,0 | 0,020 | 0,015 |
| 50 | 18,0 – 26,0 | 0,020 | 0,015 |

# KOMET® ISO 12164-1

## HSK-A Expanding Chuck

| machine adaptor | location | balancing note (chap. 8) HSK-A50 HSK-A63 | balancing note (chap. 8) HSK-A100 | concentricity | coolant central | rotating tool | tool holder |
|---|---|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | DIN 69882-7 | pre-balanced Q6,3 15.000 min⁻¹ | pre-balanced Q6,3 12.000 min⁻¹ | < 3 µm | | | cylindrical shank; DIN 6535 HA; DIN 6535 HB; DIN 6535 HE; DIN 1835-B Weldon; DIN 1835-E Whistle Notch; DIN 6535 HE + DIN 6595 |




| HSK-A DIN 69893 T1 Expanding chuck | | | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Adjusting screw | |
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | L2 | L3 | V | kg | Article | Order No. |
| HSK-A50-D12 | **A06 23530** | 50 | 12 | 32 | 40 | 85 | 59 | 44 | 46 | 10 | 0,80 | M10×1×12 | **N00 71800** |
| HSK-A50-D20 | **A06 23570** | 50 | 20 | 42 | 60 | 90 | 64 | 29 | 51 | 10 | 1,10 | M16×1×14 | **N00 71550** |
| HSK-A63-D6 | **A06 33500** | 63 | 6 | 26 | 50 | 70 | 44 | 24 | 37 | 10 | 0,74 | M5×12 | **N00 71020** |
| HSK-A63-D8 | **A06 33510** | 63 | 8 | 28 | 50 | 70 | 44 | 25 | 37 | 10 | 0,83 | M6×12 | **N00 71070** |
| HSK-A63-D10 | **A06 33520** | 63 | 10 | 30 | 50 | 80 | 54 | 35 | 41 | 10 | 0,83 | M8×1×12 | **N00 71730** |
| HSK-A63-D12 | **A06 33530** | 63 | 12 | 32 | 50 | 85 | 59 | 40 | 46 | 10 | 1,14 | M10×1×12 | **N00 71800** |
| HSK-A63-D14 | **A06 33540** | 63 | 14 | 34 | 50 | 85 | 59 | 40 | 46 | 10 | 0,83 | M10×1×12 | **N00 71800** |
| HSK-A63-D16 | **A06 33550** | 63 | 16 | 38 | 50 | 90 | 64 | 46 | 49 | 10 | 1,05 | M12×1×12 | **N00 71860** |
| HSK-A63-D18 | **A06 33560** | 63 | 18 | 40 | 50 | 90 | 64 | 47 | 49 | 10 | 0,91 | M12×1×12 | **N00 71860** |
| HSK-A63-D20 | **A06 33570** | 63 | 20 | 42 | 50 | 90 | 64 | 48 | 51 | 10 | 1,15 | M16×1×14 | **N00 71550** |
| HSK-A63-D25 | **A06 33580** | 63 | 25 | 57 | 63 | 120 | 94 | 59 | 57 | 10 | 2,3 | M16×1×14 | **N00 71550** |
| HSK-A63-D32 | **A06 33590** | 63 | 32 | 64 | 75 | 125 | 99 | 63 | 61 | 10 | 2,9 | M16×1×14 | **N00 71550** |
| HSK-A100-D6 | **A06 53500** | 100 | 6 | 26 | 50 | 75 | 46 | 26 | 37 | 10 | 2,28 | M5×12 | **N00 71020** |
| HSK-A100-D8 | **A06 53510** | 100 | 8 | 28 | 50 | 75 | 46 | 26 | 37 | 10 | 2,28 | M6×12 | **N00 71070** |
| HSK-A100-D10 | **A06 53520** | 100 | 10 | 30 | 50 | 90 | 61 | 42 | 41 | 10 | 2,40 | M8×1×12 | **N00 71730** |
| HSK-A100-D12 | **A06 53530** | 100 | 12 | 32 | 50 | 95 | 66 | 47 | 46 | 10 | 2,29 | M10×1×12 | **N00 71800** |
| HSK-A100-D14 | **A06 53540** | 100 | 14 | 34 | 50 | 95 | 66 | 47 | 46 | 10 | 2,45 | M10×1×12 | **N00 71800** |
| HSK-A100-D16 | **A06 53550** | 100 | 16 | 38 | 50 | 100 | 71 | 53 | 49 | 10 | 2,59 | M12×1×12 | **N00 71860** |
| HSK-A100-D18 | **A06 53560** | 100 | 18 | 40 | 50 | 100 | 71 | 53 | 49 | 10 | 2,61 | M12×1×12 | **N00 71860** |
| HSK-A100-D20 | **A06 53570** | 100 | 20 | 42 | 50 | 105 | 76 | 59 | 51 | 10 | 3,07 | M16×1×14 | **N00 71550** |
| HSK-A100-D25 | **A06 53580** | 100 | 25 | 57 | 63 | 110 | 81 | 62 | 57 | 10 | 3,54 | M16×1×14 | **N00 71550** |
| HSK-A100-D32 | **A06 53590** | 100 | 32 | 64 | 75 | 110 | 81 | 62 | 61 | 10 | 2,80 | M16×1×14 | **N00 71550** |

Further HSK-size on request.

**Tool shank tolerance:** h6 for ∅ 6 - 32 mm

**Supply includes:** Expanding chuck fitted complete, inclusive adjusting screw.
Please order coolant supply connection and key separately (chapter 8).

**Accessories expanding chuck:**
Adaptor sleeve
▸ 453

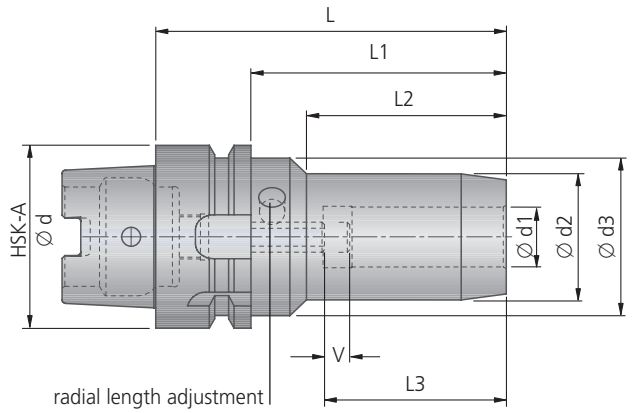
**Closed system:**
The system is fully sealed. No dirt, coolant lubricants or chips can penetrate.

**rpm limit:** Depending on the HSK size, all expanding chucks are applicable up to n = 50,000 rpm in its balanced version.

# HSK-A Expanding Chuck

| machine adaptor | location | balancing note (chap. 8) | concentricity | coolant central | rotating tool | tool holder | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | DIN 69882-7 | pre-balanced Q6,3 15.000 min⁻¹ | < 3 µm | | | cylindrical shank | DIN 6535 HA | DIN 6535 HB | DIN 6535 HE | DIN 1835-B Weldon | DIN 1835-E Whistle Notch | DIN 6535 HE + DIN 6595 |

with radial length adjustment ■




| HSK-A DIN 69893 T1 Expanding chuck | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | L2 | L3 | V | kg |
| HSK-A63-D6 | **A06 34800** | 63 | 6 | 26 | 50 | 80 | 54 | 33 | 37 | 10 | 1,1 |
| HSK-A63-D8 | **A06 34810** | 63 | 8 | 28 | 50 | 80 | 54 | 33 | 37 | 10 | 1,1 |
| HSK-A63-D10 | **A06 34820** | 63 | 10 | 30 | 50 | 85 | 59 | 38 | 41 | 10 | 1,1 |
| HSK-A63-D12 | **A06 34830** | 63 | 12 | 32 | 50 | 90 | 64 | 40 | 46 | 10 | 1,2 |
| HSK-A63-D14 | **A06 34840** | 63 | 14 | 34 | 50 | 90 | 64 | 46 | 46 | 10 | 1,2 |
| HSK-A63-D16 | **A06 34850** | 63 | 16 | 38 | 50 | 95 | 69 | 51 | 49 | 10 | 1,3 |
| HSK-A63-D18 | **A06 34860** | 63 | 18 | 40 | 50 | 95 | 69 | 52 | 49 | 10 | 1,3 |
| HSK-A63-D20 | **A06 34870** | 63 | 20 | 42 | 50 | 100 | 74 | 51 | 51 | 10 | 1,4 |
| HSK-A63-D25 | **A06 34880** | 63 | 25 | 57 | 63 | 120 | 94 | 54,5 | 57 | 10 | 2,2 |
| HSK-A63-D32 | **A06 34890** | 63 | 32 | 64 | 75 | 125 | 99 | 57,5 | 61 | 10 | 2,7 |

further HSK-size on request

**Tool shank tolerance:** h6 for Ø 6 - 32 mm

**Accessories expanding chuck:**
Adaptor sleeve


▸ 453

**Closed system:**
The system is fully sealed. No dirt, coolant. lubricants or chips can penetrate.

**rpm limit:**
Depending on the HSK size, all expanding chucks are applicable up to n = 50,000 rpm in its balanced version.

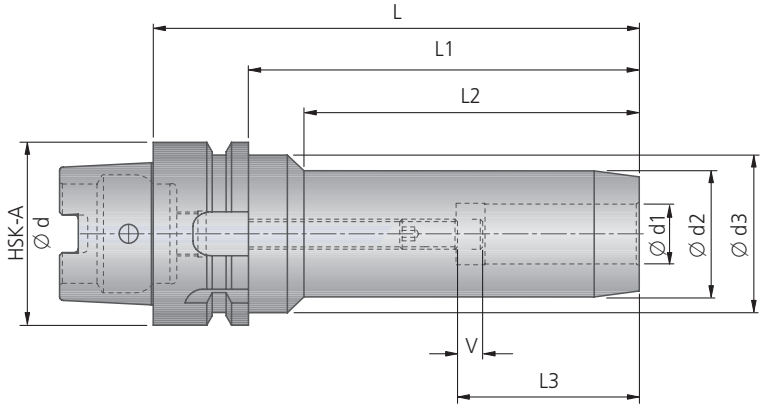
**Supply includes:**
Expanding chuck fitted complete, inclusive adjusting screw.
Please order coolant supply connection and key separately (chapter 8).

# KOMET® ISO 12164-1

## HSK-A Expanding chuck

| machine adaptor | location | balancing note (chap. 8) | concentricity | coolant central | rotating tool | tool holder | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | DIN 69882-7 | pre-balanced Q6,3 15.000 min⁻¹ | < 3 µm | | | cylindrical shank | DIN 6535 HA | DIN 6535 HB | DIN 6535 HE | DIN 1835-B Weldon | DIN 1835-E Whistle Notch | DIN 6535 HE + DIN 6595 |

■ long version

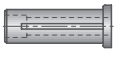



| HSK-A DIN 69893 T1 Expanding chuck | | | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Adjusting screw | |
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | L2 | L3 | V | kg | Article | Order No. |
| HSK-A63-D6 | **A06 34900** | 63 | 6 | 26 | 50 | 200 | 174 | 153 | 37 | 10 | 1,6 | M5×12 | **N00 71020** |
| HSK-A63-D8 | **A06 34910** | 63 | 8 | 28 | 50 | 200 | 174 | 154 | 37 | 10 | 1,6 | M6×12 | **N00 71070** |
| HSK-A63-D10 | **A06 34920** | 63 | 10 | 30 | 50 | 200 | 174 | 154 | 41 | 10 | 1,7 | M8×1×12 | **N00 71730** |
| HSK-A63-D12 | **A06 34930** | 63 | 12 | 32 | 50 | 200 | 174 | 155 | 46 | 10 | 1,8 | M10×1×12 | **N00 71800** |
| HSK-A63-D14 | **A06 34940** | 63 | 14 | 34 | 50 | 200 | 174 | 155 | 46 | 10 | 1,9 | M10×1×12 | **N00 71800** |
| HSK-A63-D16 | **A06 34950** | 63 | 16 | 38 | 50 | 200 | 174 | 156 | 49 | 10 | 2,2 | M12×1×12 | **N00 71860** |
| HSK-A63-D18 | **A06 34960** | 63 | 18 | 40 | 50 | 200 | 174 | 157 | 49 | 10 | 2,3 | M12×1×12 | **N00 71860** |
| HSK-A63-D20 | **A06 34970** | 63 | 20 | 42 | 50 | 200 | 174 | 158 | 51 | 10 | 2,4 | M16×1×14 | **N00 71550** |

further HSK-size on request

**Tool shank tolerance:** h6 for Ø 6 - 32 mm

**Accessories expanding chuck:**
Adaptor sleeve


▶ 453

**Closed system:**
The system is fully sealed. No dirt, coolant. lubricants or chips can penetrate.

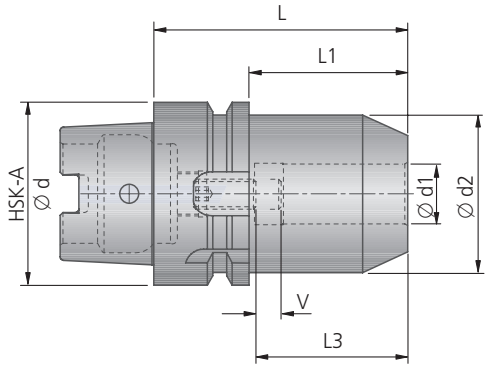
**rpm limit:**
Depending on the HSK size, all expanding chucks are applicable up to n = 50,000 rpm in its balanced version.

**Supply includes:**
Expanding chuck fitted complete, inclusive adjusting screw.
Please order coolant supply connection and key separately (chapter 8).

# HSK-A Expanding chuck

| machine adaptor | balancing note (chap. 8) | concentricity | coolant central | rotating tool | tool holder |
|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | pre-balanced Q6,3 15.000 min⁻¹ | < 3 µm | | | cylindrical shank · DIN 6535 HA · DIN 6535 HB · DIN 6535 HE · DIN 1835-B Weldon · DIN 1835-E Whistle Notch · DIN 6535 HE + DIN 6595 |

short design ■




| HSK-A DIN 69893 T1 Expanding chuck | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | |
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | L | L1 | L3 | V | kg | Article | Order No. |
| HSK-A63-D20 | **A06 34350** | 63 | 20 | 51,5 | 80 | 53,95 | 51 | 10 | 1,3 | M16×1x14 | **N00 71550** |

further HSK-size on request

**Tool shank tolerance:** h6 for Ø 6 - 32 mm

**Accessories expanding chuck:**
Adaptor sleeve

▸ 453

**Closed system:**
The system is fully sealed. No dirt, coolant. lubricants or chips can penetrate.

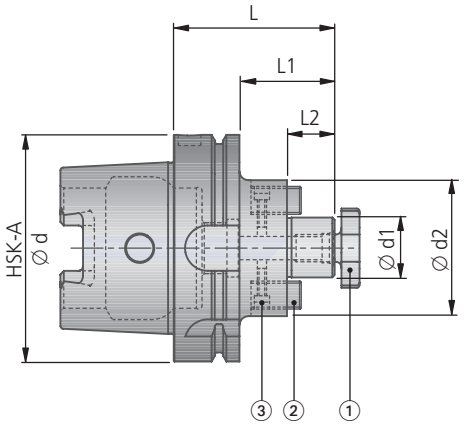
**rpm limit:**
Depending on the HSK size, all expanding chucks are applicable up to n = 50,000 rpm in its balanced version.

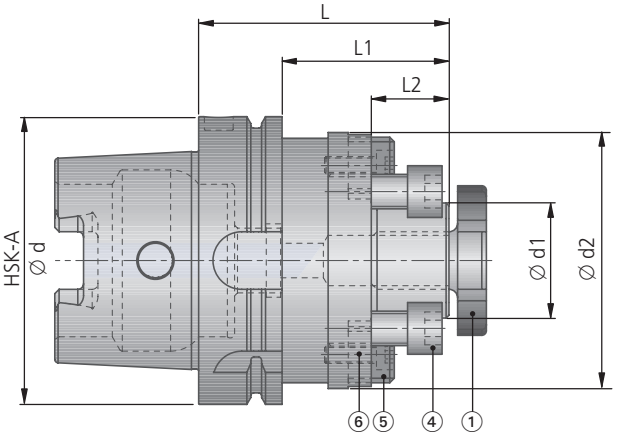
**Supply includes:**
Expanding chuck fitted complete, inclusive adjusting screw.
Please order coolant supply connection and key separately (chapter 8).

# KOMET® ISO 12164-1

## HSK-A Milling Cutter Arbor

| machine adaptor | location FAM | balancing note (chap. 8) | coolant central | rotating tool | tool holder FA | tool holder FAM |
|---|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | DIN 6357 | pre-balanced Q6,3 15.000 min⁻¹ | | | DIN 6358 | DIN 6357 |




| HSK-A DIN 69893 T1 FA / FAM | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | L | L1 | L2 | kg |
| HSK-A63-FA16 | **A06 33901** | 63 | 16 | 40 | 67 | 41 | 17 | 0,90 |
| HSK-A63-FA22 | **A06 33911** | 63 | 22 | 50 | 69 | 43 | 19 | 1,08 |
| HSK-A63-FA27 | **A06 33921** | 63 | 27 | 60 | 81 | 55 | 21 | 1,44 |
| HSK-A63-FA32 | **A06 33931** | 63 | 32 | 78 | 84 | 58 | 24 | 1,79 |
| HSK-A63-FA40* | **A06 33941** | 63 | 40 | 89 | 87 | 61 | 27 | 2,15 |
| HSK-A100-FA16 | **A06 53901** | 100 | 16 | 40 | 67 | 38 | 17 | 2,21 |
| HSK-A100-FA22 | **A06 53911** | 100 | 22 | 50 | 69 | 40 | 19 | 2,38 |
| HSK-A100-FA27 | **A06 53921** | 100 | 27 | 60 | 71 | 42 | 21 | 2,58 |
| HSK-A100-FA32 | **A06 53931** | 100 | 32 | 78 | 74 | 45 | 24 | 3,00 |
| HSK-A100-FA40* | **A06 53941** | 100 | 40 | 89 | 87 | 58 | 27 | 3,80 |
| HSK-A100-FA50 | **A06 53950** | 100 | 50 | 120 | 100 | 71 | 30 | 5,58 |
| HSK-A100-FAM60* | **A06 53960** | 100 | 60 | 129 | 110 | 81 | 40 | 5,99 |

* Size 40 and 60 with 4 additional screw-in threads for cutter heads with tool clamping to DIN 2079.

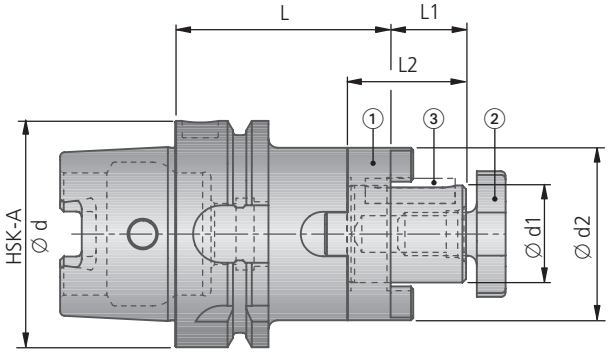
| for Article | Assembly parts | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cutter clamping screw DIN 6367 ① | | Allen key DIN 6368 for ① on request | | Drive key DIN 6367 ② | Clamping screw ③ | | Cylindrical screw ④ | | Key block DIN 2079 ⑤ | | Clamping screw DIN 912 ⑥ | |
| | Size | Order No. | Art. | Order No. | Order No. | Art. | Order No. | Art. | Order No. | Art. | Order No. | Art. | Order No. |
| ...-FA16 | M8 | **55062 00008** | 16 | **18701 80016** | **N12 20240** | M3x8 | **55011 03008** | | – | | – | | – |
| ...-FA22 | M10 | **55062 00010** | 22 | **18701 80022** | **N12 20250** | M4x12 | **55011 04012** | | – | | – | | – |
| ...-FA27 | M12 | **55062 00012** | 27 | **18701 80027** | **N12 20260** | M5x12 | **55011 05012** | | – | | – | | – |
| ...-FA32 | M16 | **55062 00016** | 32 | **18701 80032** | **N12 20270** | M5x20 | **55011 05020** | | – | | – | | – |
| ...-FA40 | M20 | **55062 00020** | 40 | **18701 80040** | – | | – | FA40 | **5501112040** | A40 | **56341 00001** | M6x18 | **55011 06018** |
| ...-FA50 | M24 | **55062 00024** | 50 | **18701 80050** | **N12 20230** | | – | | – | | – | | – |
| ...-FAM60 | | – | | – | – | | – | FA60 | **5501116050** | A50 | **56341 00003** | M12x25 | **55011 12025** |

**Supply includes:**
Combination milling cutter arbor fitted complete. Please order coolant supply connection and key separately (chapter 8).

# HSK-A Combination Milling Cutter Arbor

| machine adaptor | location | balancing note (chap. 8) | rotating tool | tool holder |
|---|---|---|---|---|
| HSK-A ISO 12164-1 | DIN 69882-2 | pre-balanced Q6,3 15.000 min⁻¹ | | DIN 6358 |

for milling cutters with longitudinal or cross slots ■




| HSK-A DIN 69893 T1 FAK | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | L | L1 | L2 | kg |
| HSK-A50-FAK16 | **A06 23751** | 50 | 16 | 32 | 50 | 17 | 27 | 0,62 |
| HSK-A50-FAK22 | **A06 23761** | 50 | 22 | 40 | 50 | 19 | 31 | 0,60 |
| HSK-A50-FAK27 | **A06 23771** | 50 | 27 | 48 | 65 | 21 | 33 | 1,05 |
| HSK-A50-FAK32 | **A06 23781** | 50 | 32 | 58 | 65 | 24 | 38 | 1,25 |
| HSK-A63-FAK16 | **A06 33750** | 63 | 16 | 32 | 60 | 17 | 27 | 0,96 |
| HSK-A63-FAK22 | **A06 33760** | 63 | 22 | 40 | 60 | 19 | 31 | 1,10 |
| HSK-A63-FAK27 | **A06 33770** | 63 | 27 | 48 | 60 | 21 | 33 | 1,22 |
| HSK-A63-FAK32 | **A06 33780** | 63 | 32 | 58 | 60 | 24 | 38 | 1,45 |
| HSK-A63-FAK40 | **A06 33790** | 63 | 40 | 70 | 70 | 27 | 41 | 2,10 |
| HSK-A100-FAK16 | **A06 53750** | 100 | 16 | 32 | 60 | 17 | 27 | 2,20 |
| HSK-A100-FAK22 | **A06 53760** | 100 | 22 | 40 | 60 | 19 | 31 | 2,48 |
| HSK-A100-FAK27 | **A06 53770** | 100 | 27 | 48 | 60 | 21 | 33 | 2,55 |
| HSK-A100-FAK32 | **A06 53780** | 100 | 32 | 58 | 60 | 24 | 38 | 2,80 |
| HSK-A100-FAK40 | **A06 53790** | 100 | 40 | 70 | 70 | 27 | 41 | 3,55 |
| HSK-A100-FAK50 | **A06 53800** | 100 | 50 | 90 | 80 | 30 | 46 | 5,00 |

| for Article | Assembly parts | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Driving ring DIN 6366 Part 1 ① | | Cutter clamping screw DIN 6367 ② | | Feather key DIN 6885 Part 1 ③ | | Allen key DIN 6368 for ② on request | |
| | Article | Order No. | Article | Order No. | Article | Order No. | Size | Order No. |
| HSK...FAK16 | 16x10 | **55237 00016** | M8 | **55062 00008** | A4x4x20 | **51305 04020** | 16 | **18701 80016** |
| HSK...FAK22 | 22x12 | **55237 00022** | M10 | **55062 00010** | A6x6x25 | **51305 06025** | 22 | **18701 80022** |
| HSK...FAK27 | 27x12 | **55237 00027** | M12 | **55062 00012** | A7x7x25 | **51305 07025** | 27 | **18701 80027** |
| HSK...FAK32 | 32x14 | **55237 00032** | M16 | **55062 00016** | A8x7x28 | **51305 08028** | 32 | **18701 80032** |
| HSK...FAK40 | 40x14 | **55237 00040** | M20 | **55062 00020** | A10x8x32 | **51305 10032** | 40 | **18701 80040** |
| HSK...FAK50 | 50x16 | **55237 00050** | M24 | **55062 00024** | A12x8x36 | **51305 12036** | 50 | **18701 80050** |

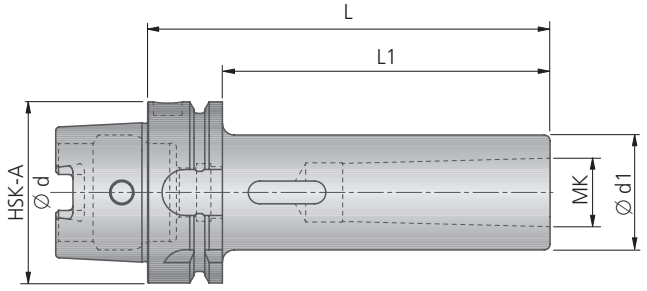
**Supply includes:**
Combination milling cutter arbor fitted complete. Please order coolant supply connection and key separately (chapter 8).

# KOMET® ISO 12164-1

## HSK-A Morse Taper

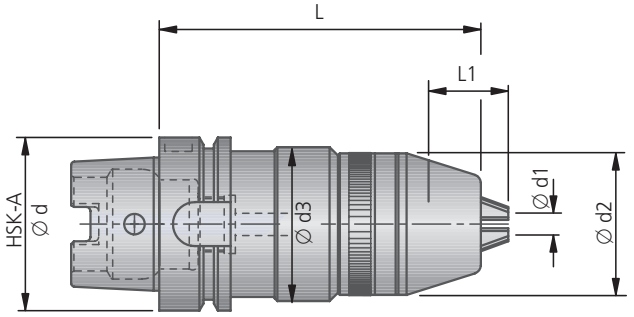
| machine adaptor | rotating tool | tool holder |
|---|---|---|
|  |  |  |

■ for holding tools with morse taper with tangs to DIN 228, Part 2 Form D




| HSK-A DIN 69893 T1 Morse taper | | | | | | | |
|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | Taper size MK | Ø d1 | L | L1 | kg |
| HSK-A63-MK1 | **A06 34010** | 63 | MK 1 | 25 | 100 | 74 | 0,86 |
| HSK-A63-MK2 | **A06 34020** | 63 | MK 2 | 32 | 120 | 94 | 1,08 |
| HSK-A63-MK3 | **A06 34030** | 63 | MK 3 | 40 | 140 | 114 | 1,81 |
| HSK-A63-MK4 | **A06 34040** | 63 | MK 4 | 48 | 160 | 134 | 2,33 |

| machine adaptor | balancing note (chap. 8) | concentricity | coolant central | rotating tool | tool holder |
|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | fine balanced Q2,5 20.000 min⁻¹ | < 15 µm | | | cylindrical shank |




| HSK-A DIN 69893 T1 NCB | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Article | | Order No. | HSK-A Ø d | Clamping range Ø d1 | Ø d2 | Ø d3 | L | Clamping depth L1 | kg |
| HSK-A 50 NCB | 0,5-13 | **A06 23620** | 50 | 0,5-13 | 49,5 | 56 | 117 | 29 | 1,47 |
| HSK-A 50 NCB | 3-16 | **A06 23610** | 50 | 3-16 | 52,0 | 56 | 117 | 29 | 1,54 |
| HSK-A 63 NCB | 0,5-13 | **A06 33620** | 63 | 0,5-13 | 49,5 | 56 | 117 | 29 | 1,82 |
| HSK-A 63 NCB | 3-16 | **A06 33610** | 63 | 3-16 | 52,0 | 56 | 117 | 29 | 1,89 |

**Supply includes:**
Adaptor fitted complete. Please order coolant supply connection and key separately (chapter 8).

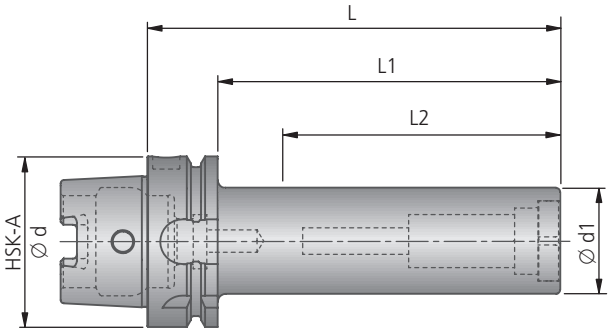
# KOMET® ISO 12164-1

## HSK-A Test Arbor

machine adaptor

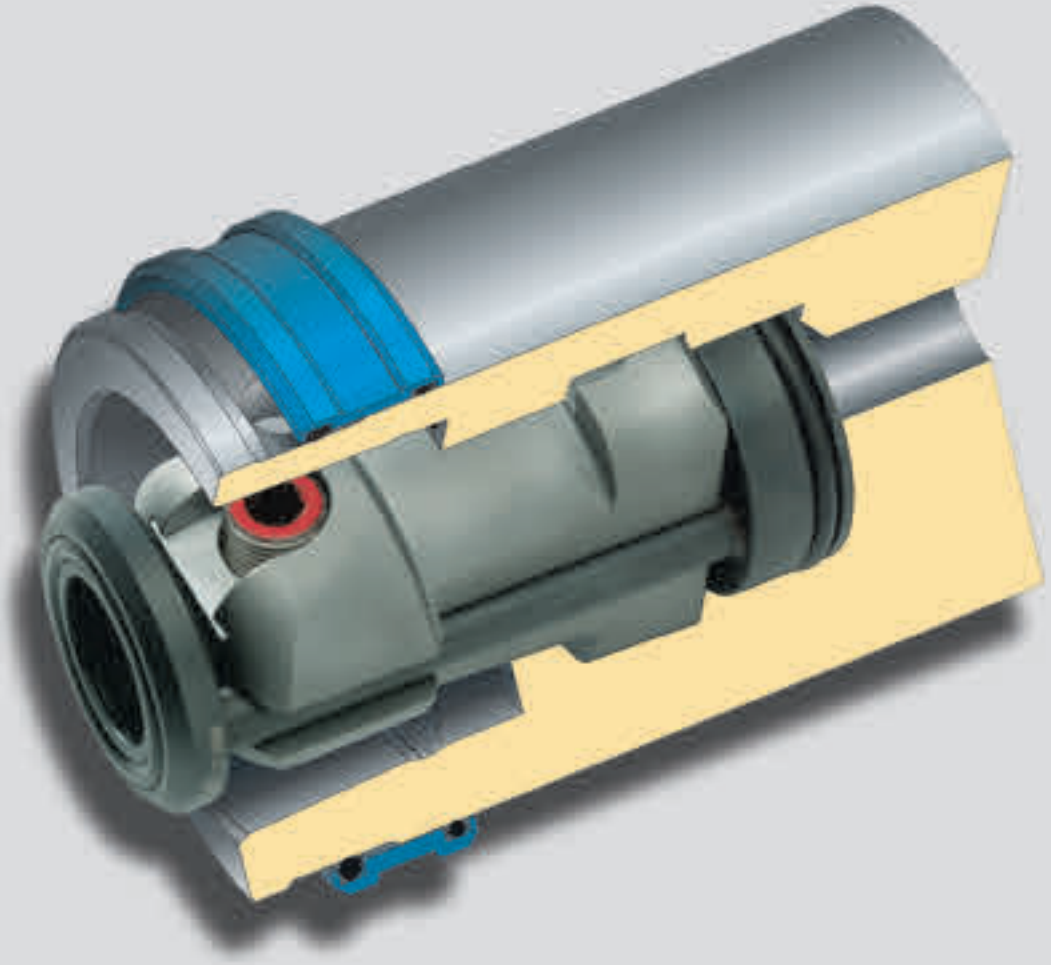



■ measuring arbors for checking machine geometry and concentricity of spindle.




| HSK-A DIN 69893 T1 Test arbor | | | | | | | |
|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | Ø d1 | L | L1 | useable length L2 | kg |
| HSK-A 50-D32/L200 | **A06 23480** | 50 | 32 | 236 | 210 | 200 | 1,90 |
| HSK-A 63-D40/L300 | **A06 33480** | 63 | 40 | 346 | 320 | 300 | 2,98 |
| HSK-A 100-D40/L300 | **A06 53480** | 100 | 40 | 349 | 320 | 300 | 4,70 |

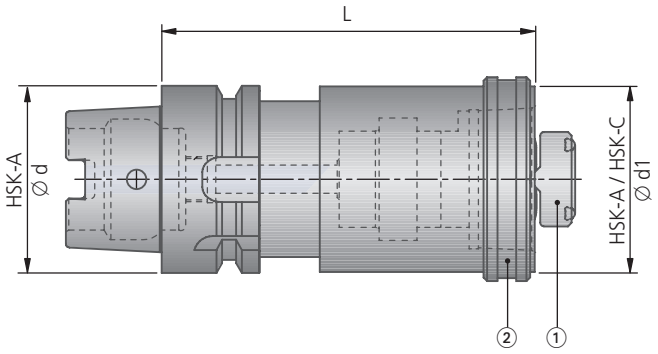
For more detailed information, see Chapter 8



# KOMET® ISO 12164-1

## HSK-A Extension KomLoc® HSK Clamping System K

| machine adaptor | balancing note (chap. 8) | coolant central | rotating tool | KomLoc® HSK clamping system | tool holder |
|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | pre-balanced Q6,3 15.000 min⁻¹ | | | System K | HSK-A ISO 12164-1 / HSK-C ISO 12164-1 |




| HSK-A DIN 69893 T1 Extension KomLoc® | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | HSK-A HSK-C Ø d1 | L | kg | Clamping device KomLoc® ① Order No. | Sealing ring, shifting ② Order No. |
| HSK-A63-V100 | **A06 34700** | 63 | 63 | 100 | 1,87 | **L07 01060** | **L07 01460** |
| HSK-A63-V140 | **A06 34710** | 63 | 63 | 140 | 2,93 | **L07 01060** | **L07 01460** |
| HSK-A100-V140 | **A06 54700*** | 100 | 100 | 140 | 5,95 | **L07 01080** | **L07 01480** |
| HSK-A100-V200 | **A06 54720** | 100 | 100 | 200 | 10,58 | **L07 01080** | **L07 01480** |

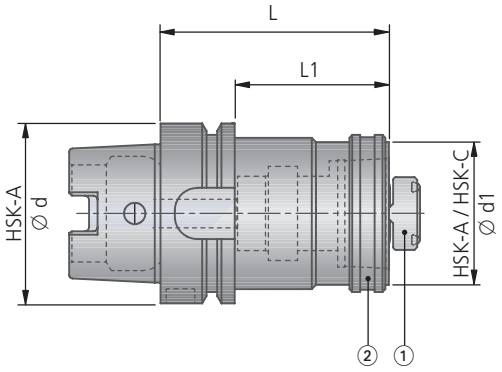
**Supply includes:**
Extension fitted complete. Please order coolant supply connection and key separately (chapter 8).

* on request


EP 1 056 563 and other patents and patent applications (KomLoc)

# HSK-A Reducing Adaptor KomLoc® HSK Clamping System K

| machine adaptor | balancing note (chap. 8) | coolant central | rotating tool | KomLoc® HSK clamping system | tool holder |
|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | pre-balanced Q6,3 15.000 min⁻¹ | | | System K | HSK-A ISO 12164-1 / HSK-C ISO 12164-1 |




| HSK-A DIN 69893 T1 Reducing Adaptor KomLoc® | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | HSK-A HSK-C Ø d1 | L | L1 | kg | Clamping device KomLoc® ① Order No. | Sealing ring, shifting ② Order No. |
| HSK-A63-HSK50 | **A06 34770** | 63 | 50 | 80 | 54 | 1,30 | **L07 01050** | **L07 01450** |
| HSK-A100-HSK50 | **A06 54770** | 100 | 50 | 90 | 61 | 2,76 | **L07 01050** | **L07 01450** |
| HSK-A100-HSK63 | **A06 54780** | 100 | 63 | 100 | 71 | 3,24 | **L07 01060** | **L07 01460** |
| HSK-A100-HSK80 | **A06 54790** | 100 | 80 | 120 | 91 | 4,89 | **L07 01070** | **L07 01470** |

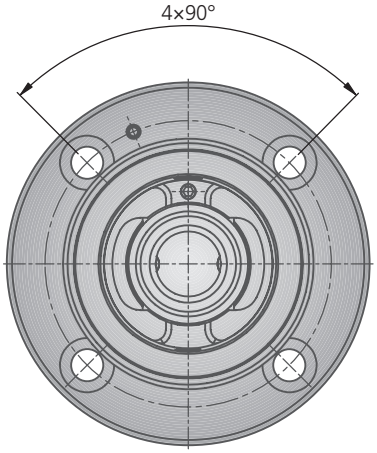
**Supply includes:**
Reducing fitted complete. Please order coolant supply connection and key separately (chapter 8).

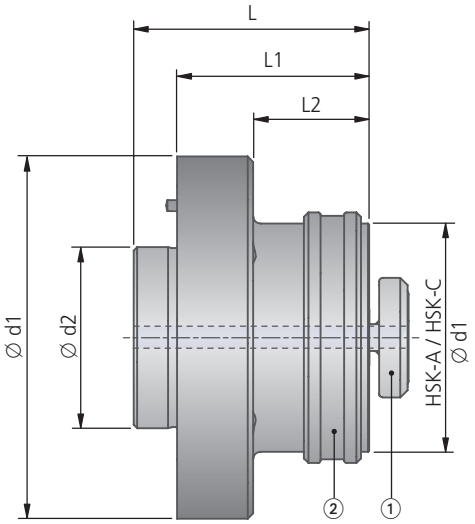
# KOMET® HSK-RVF Adaptor Flange

## KomLoc® HSK Clamping System K

| machine adaptor | coolant central | rotating tool | adjustable | KomLoc® HSK clamping system | tool holder |
|---|---|---|---|---|---|
| machine spindle | | | | System K | HSK-A ISO 12164-1 / HSK-C ISO 12164-1 |

■ can be radially adjusted on the machine spindle with adjusting screws



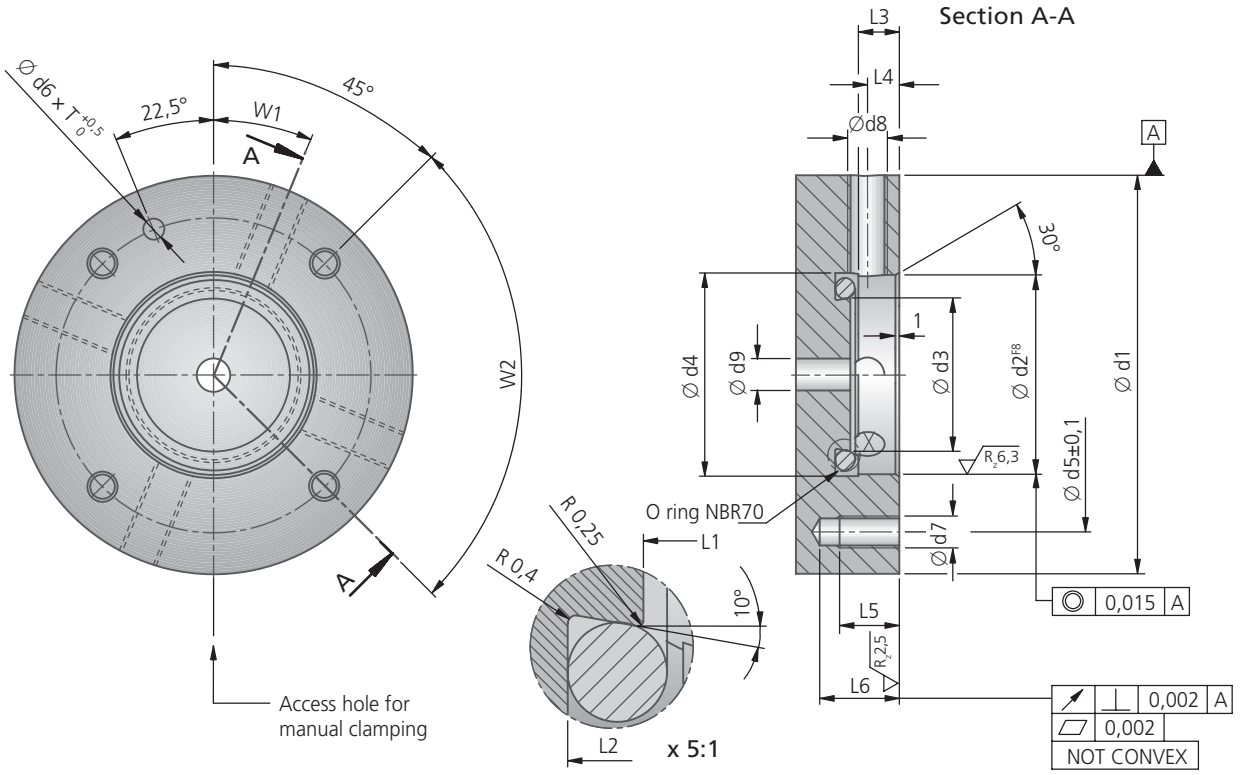




| HSK-RVF | | | | | | | | | Assembly parts | | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A HSK-C Ø d | Ø d1 | Ø d2 | L | L1 | L2 | kg | Clamping device KomLoc® ① Order No. | Sealing ring, shifting ② Order No. | Clamping screw DIN 912 Article | Order No. |
| HSK-40 RVF | **A08 51031** | 40 | 70 | 35 | 42,4 | 32,5 | 21 | 0,52 | **L07 01040** | **L07 01440** | M6×20-12,9 | – |
| HSK-50 RVF | **A08 61031** | 50 | 80 | 40 | 53 | 43 | 26 | 0,97 | **L07 01050** | **L07 01450** | M6×20-12,9 | – |
| HSK-63 RVF | **A08 71031** | 63 | 100 | 50 | 65 | 53 | 32 | 1,84 | **L07 01060** | **L07 01460** | M8×25-12,9 | – |
| HSK-80 RVF | **A08 81030** | 80 | 117 | 60 | 84,8 | 72,8 | 45 | 3,62 | **L07 01070** | **L07 01470** | M8×35-12,9 | **55011 08035** |

**Supply includes:**
Adaptor flange complete with KomLoc® clamping device and sealing ring. Please order accessories separately.



EP 1 056 563 and other patents and patent applications (KomLoc)




| Connection Dimensions | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| for adaptor flange | Ø d1 | Ø d2 | Ø d3 | Ø d4 | Ø d5 min | Ø d6 | Ø d7 | Ø d8 | Ø d9 | L1 | L2 | L3 min | L4 | L5 | L6 | T | W1 | W2 | O ring |
| A08 51031 | 70 | 35 | 28,5 | 36 | 53 | 5 | M6 | M8×1 | 5,0 | 10,3 | 12,4 | 8,3 | 7,0 | 14 | 18 | 3,5 | 0° | 4×90° | 28×3 |
| A08 61031 | 80 | 40 | 30,5 | 41 | 63 | 5 | M6 | M8×1 | 6,0 | 10,3 | 13,3 | 8,3 | 7,0 | 14 | 18 | 3,5 | 0° | 4×90° | 30×4 |
| A08 71031 | 100 | 50 | 38,5 | 51 | 79 | 5 | M8 | M10×1 | 8,0 | 12,3 | 16,1 | 10,3 | 8,0 | 15 | 20 | 3,5 | 0° | 4×90° | 38×5 |
| A08 81030 | 117 | 60 | 47,5 | 61 | 96 | 6 | M8 | M10×1 | 10,2 | 12,3 | 16,1 | 10,3 | 8,0 | 18 | 22 | 4,5 | 0° | 4×90° | 47×5 |

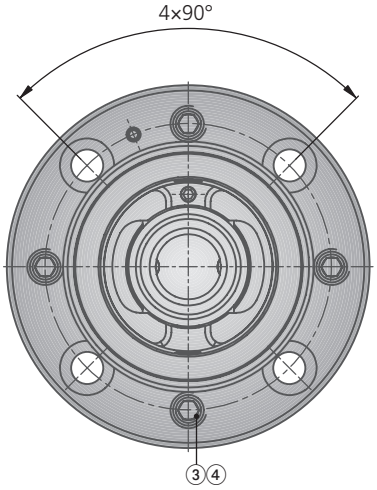
Please ask for current KOMET drawing No. N49 13470 for spindle production.

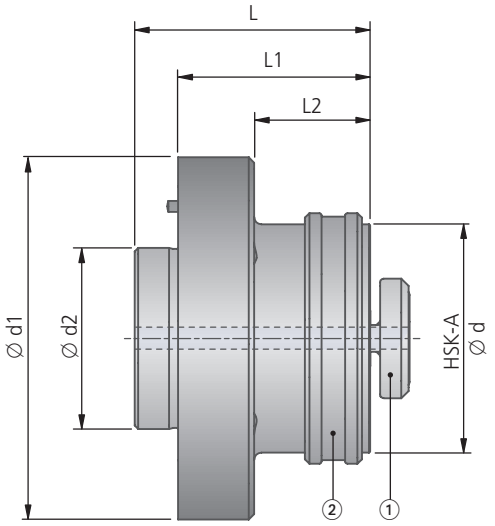
# KOMET® HSK-RVFW Adaptor Flange, adjustable

## KomLoc® HSK Clamping System K

| machine adaptor | coolant central | rotating tool | adjustable | adjustable | KomLoc® HSK clamping system | tool holder |
|---|---|---|---|---|---|---|
| machine spindle | | | | | System K | HSK-A ISO 12164-1 |

- can be radially adjusted on the machine spindle with adjusting screws
- can be precisely adjusted in face run-out by means of adjusting screw in adaptor flange

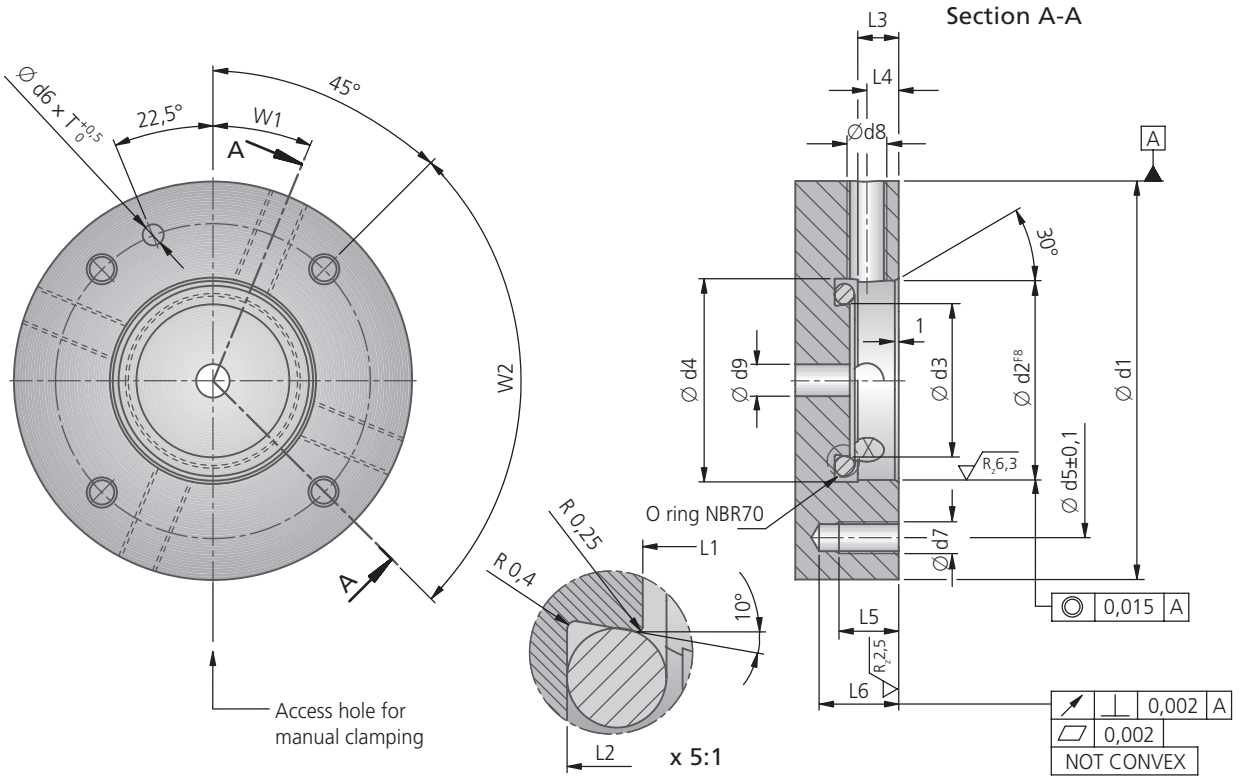



| HSK-RVFW | | | | | | | | | Assembly parts | | | | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | L | L1 | L2 | kg | Clamping device KomLoc® ① Order No. | Sealing ring, shifting ② Order No. | Disc ③ Order No. | Threaded pin ④ Order No. | Clamping screw DIN 912 Article | Order No. |
| HSK-40 RVFW | **A08 52030** | 40 | 70 | 35 | 42,4 | 32,5 | 21 | 0,52 | **L07 01040** | **L07 01440** | **L02 30960** | **N00 70250** | M6×20-12,9 | – |
| HSK-63 RVFW | **A08 72030** | 63 | 100 | 50 | 65 | 53 | 32 | 1,84 | **L07 01060** | **L07 01460** | **L02 30960** | **N00 70320** | M8×25-12,9 | – |
| HSK-80 RVFW | **A08 82030** | 80 | 117 | 60 | 84,8 | 72,8 | 45 | 3,62 | **L07 01070** | **L07 01470** | **L02 30960** | **N00 70330** | M8×35-12,9 | **55011 08035** |

**Supply includes:**
Adaptor flange complete with KomLoc® clamping device, sealing ring, disc and threaded pin.
Please order accessories separately.


EP 1 056 563 and other patents and patent applications (KomLoc)




| Connection dimensions | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| for adaptor flange | Ø d1 | Ø d2 | Ø d3 | Ø d4 | Ø d5 | Ø d6 | Ø d7 | Ø d8 | Ø d9 | L1 | L2 | L3 | L4 | L5 | L6 | T | W1 | W2 | O ring |
| A08 52030 | 70 | 35 | 28,5 | 36 | 53 | 5 | M6 | M8×1 | 5,0 | 10,3 | 12,4 | 8,3 | 7,0 | 16 | 20 | 3,5 | 0° | 4×90° | 28×3 |
| A08 72030 | 100 | 50 | 38,5 | 51 | 79 | 5 | M8 | M10×1 | 8,0 | 12,3 | 16,1 | 10,3 | 8,0 | 15 | 20 | 3,5 | 0° | 4×90° | 38×5 |
| A08 82030 | 117 | 60 | 47,5 | 61 | 96 | 6 | M8 | M10×1 | 10,2 | 12,3 | 16,1 | 10,3 | 8,0 | 18 | 22 | 4,5 | 0° | 4×90° | 47×5 |

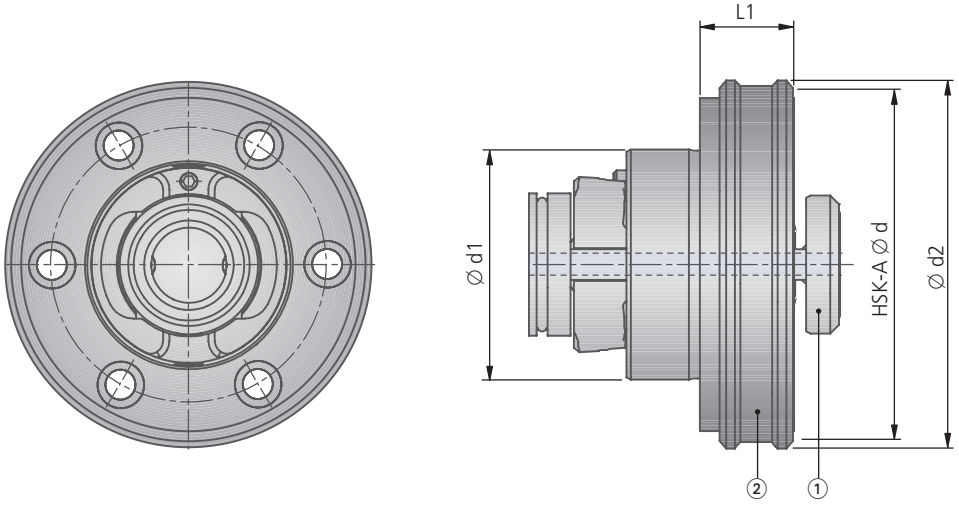
Please ask for current KOMET drawing No. N49 13470 for spindle production.

# KOMET® HSK-REF Built-in Flange

## KomLoc® HSK Clamping System K

| machine adaptor | coolant central | rotating tool | adjustable | KomLoc® HSK clamping system | tool holder |
|---|---|---|---|---|---|
| short spindle DIN 69002 | | | | System K | HSK-A ISO 12164-1 |

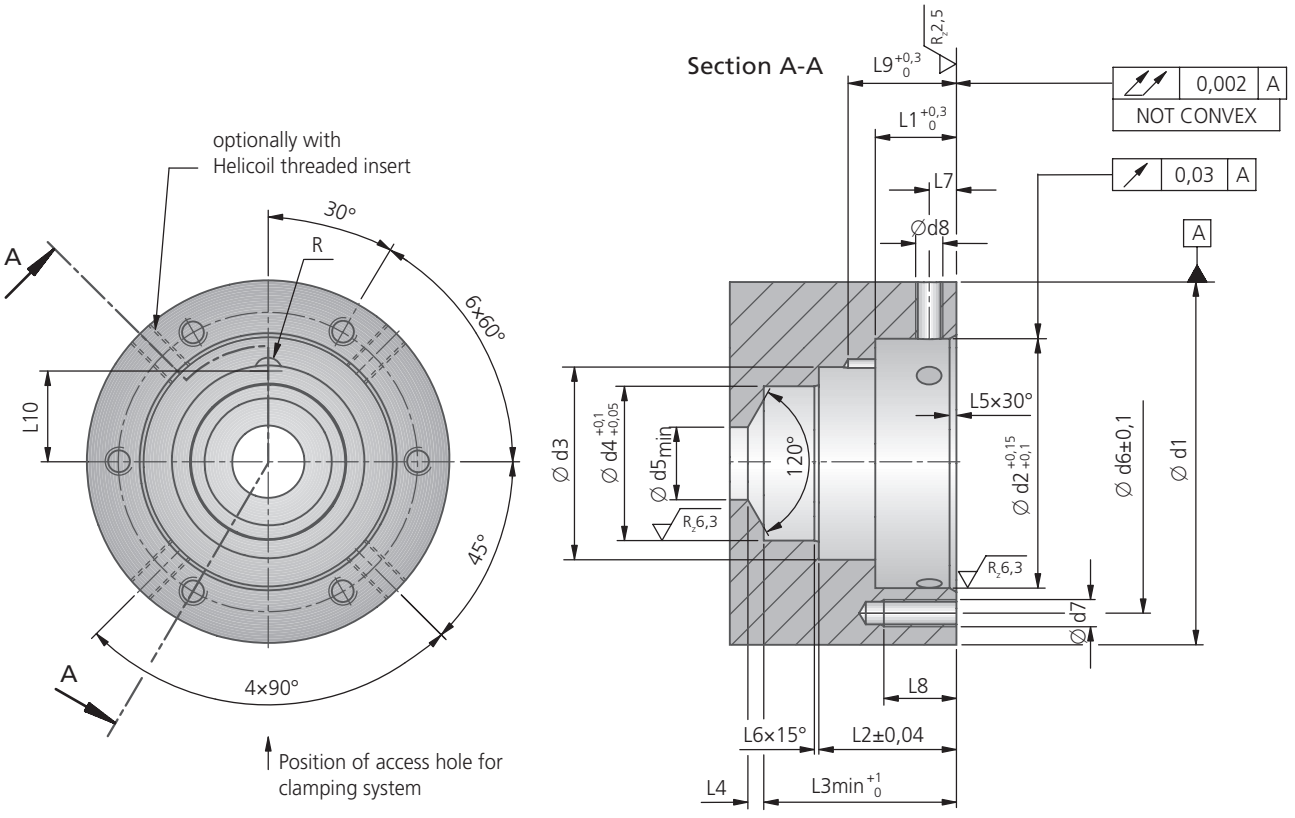
■ can be radially adjusted on the machine spindle with adjusting screw




| HSK-REF | | | | | | | Assembly parts | | | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | L1 | kg | Clamping device KomLoc® ① Order No. | Sealing ring, turning ② Order No. | Ball pressure screw Order No. | Clamping screw DIN 912 Article | Order No. |
| HSK-50 REF | **A08 61060** | 63 | 42 | 69,2 | 17,5 | 0,54 | **L07 01050** | **L07 01761** | **N10 30739** | M5×20 12.9 | **55011 05020** |
| HSK-63 REF | **A08 71060** | 80 | 55 | 88 | 22,5 | 1,12 | **L07 01060** | **L07 01771** | **N10 30740** | M6×30 12.9 | **55011 06030** |
| HSK-80 REF | **A08 81060** | 100 | 68 | 110 | 27,5 | 2,19 | **L07 01070** | **L07 01780** | **N10 30741** | M8×35 12.9 | **55011 08035** |
| HSK-100 REF | **A08 91060** | 125 | 88 | 137 | 30 | 4,10 | **L07 01080** | **L07 01790** | **N10 30742** | M10×1×40 12.9 | **55011 10042** |

**Supply includes:**
Built-in flange complete with KomLoc® clamping device, sealing ring and ball pressure screw.
Please order accessories separately.


EP 1 056 563 and other patents and patent applications (KomLoc)




| Connection dimensions | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| for built-in flange | Ø d1 | Ø d2 | Ød3$^{+0,5}$ | Ø d4 | Ø d5 min | Ø d6 | Ø d7 | Ø d8 | L1 | L2 | L3 min | L4 | L5 | L6 | L7 | L8 | L9 | L10 | R |
| A08 61060 | 63 | 42 | 33 | 26 | 10 | 52 | M5 | M5 | 15 | 24,75 | 35,5 | 3 | 1,5 | 1 | 5 | 12 | 18,4 | 15,5 | 2,5 |
| A08 71060 | 80 | 55 | 42,5 | 34 | 16 | 66 | M6 | M6 | 17,9 | 30,35 | 42,5 | 3,5 | 1,5 | 1 | 6 | 16 | 23,9 | 20 | 3 |
| A08 81060 | 100 | 68 | 52,8 | 42 | 16 | 82 | M8 | M8 | 24,3 | 40,2 | 57,3 | 4 | 2 | 1,5 | 8 | 18 | 32,9 | 24,8 | 3,5 |
| A08 91060 | 125 | 88 | 66 | 53 | 20 | 106 | M10×1 | M8 | 34,4 | 54,4 | 76 | 4,5 | 2 | 2 | 8 | 25 | 42,4 | 31,4 | 4,5 |

Please ask for current KOMET drawing No. N49 13460 for spindle production.

# KOMET®

## Taper Shanks



BENEFITS for you:

- The steep taper is the standardised form of a tool taper for clamping tools in the main spindle of a machine tool
- The steep taper is standardised in DIN 69871 part 1
- No self-locking (in contrast with the Morse taper), thereby making tool changes easier without clamping. This is particularly significant with automatic tool changes
- Small clamping travel, thereby short clamping time
- High torsional rigidity due to the short distance between the cutting edge and spindle bearing (short overall length)

## KOMET® Taper Shanks

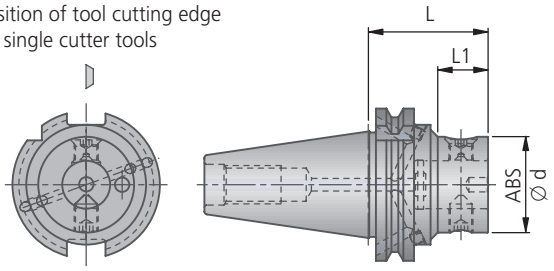

| | Page |
|---|---|
| **DIN 69871 AD/B** | |
| with ABS® / ABS® N connection | 430 – 432 |
| Eccentric adjusting device | 434 |
| Torsional dampener | 435 |
| Adaptor sleeve for KUB® drill | 444 |
| Adaptor sleeve Whistle Notch | 446 |
| Adaptor sleeve Weldon | 447 |
| Expanding chuck | 448 – 449 |
| **DIN 68971 AD** | |
| with ABS® / ABS® N connection | 431 |
| with ABS® connection (coolant ring) | 433 |
| Adaptor sleeve for KUB® drill (coolant ring) | 445 |
| **DIN 2080 A** | |
| with ABS® connection | 436 |
| **DIN 2080 B** | |
| with ABS® connection (coolant ring) | 437 |
| **JIS B 6339 (MAS 403 BT)** | |
| with ABS® connection | 438 – 439 |
| with ABS® connection (coolant ring) | 440 |
| Eccentric adjusting device | 441 |
| Torsional dampener | 442 |
| BIG-PLUS™ with ABS® connection | 443 |
| Adaptor sleeve for KUB® drill | 450 |
| Adaptor sleeve for KUB® drill (coolant ring) | 451 |
| Expanding chuck | 452 |

# KOMET® DIN 69871 AD/B

## Taper Shank with ABS® Connection

| machine adaptor | balancing note (chapter 8) | coolant central / collar | rotating tool | tool holder |
|---|---|---|---|---|
| DIN 69871 AD/B | pre-balanced Q6,3 8.000 min⁻¹ | | | ABS® |

Position of tool cutting edge on single cutter tools




| DIN 69871 AD/B (≙ ISO 7388/1) ABS® | | | | | | | Assembly parts |
|---|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | L | L1 | kg | Conversion kit Order No. |
| 40 | ABS25SK-AD/B40 | **A50 55120** | 25 | 50 | 19 | 0,99 | **L02 30920** |
| 40 | ABS32SK-AD/B40 | **A50 55130** | 32 | 50 | 19 | 1,05 | **L02 30920** |
| 40 | ABS40SK-AD/B40 | **A50 55140** | 40 | 50 | 19 | 1,07 | **L02 30920** |
| 40 | ABS50SK-AD/B40 | **A50 55150** | 50 | 50 | 30 | 1,10 | **L02 30920** |
| 40 | ABS63SK-AD/B40 | **A50 55160** | 63 | 90 | 70 | 2,05 | **L02 30920** |
| 45 | ABS40SK-AD/B45 | **A50 55240** | 40 | 60 | 20 | 2,10 | **L02 30930** |
| 45 | ABS50SK-AD/B45 | **A50 55250** | 50 | 60 | 25 | 2,10 | **L02 30930** |
| 45 | ABS63SK-AD/B45 | **A50 55260** | 63 | 60 | 40 | 2,25 | **L02 30930** |
| 45 | ABS80SK-AD/B45 | **A50 55270** | 80 | 100 | 80 | 3,75 | **L02 30930** |
| 50 | ABS25SK-AD/B50 | **A50 55320** | 25 | 60 | 20 | 3,17 | **L02 30940** |
| 50 | ABS32SK-AD/B50 | **A50 55330** | 32 | 60 | 20 | 3,24 | **L02 30940** |
| 50 | ABS40SK-AD/B50 | **A50 55340** | 40 | 60 | 20 | 3,30 | **L02 30940** |
| 50 | ABS50SK-AD/B50 | **A50 55350** | 50 | 60 | 22 | 3,30 | **L02 30940** |
| 50 | ABS63SK-AD/B50 | **A50 55360** | 63 | 60 | 29 | 3,37 | **L02 30940** |
| 50 | ABS80SK-AD/B50 | **A50 55370** | 80 | 70 | 50 | 3,91 | **L02 30940** |
| 50 | ABS100SK-AD/B50 | **A50 55380** | 100 | 115 | 95 | 6,72 | **L02 30940** |

**Supply includes:**
Taper shank in form B complete with seal, conversion kit (for form AD). Pull studs not included (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

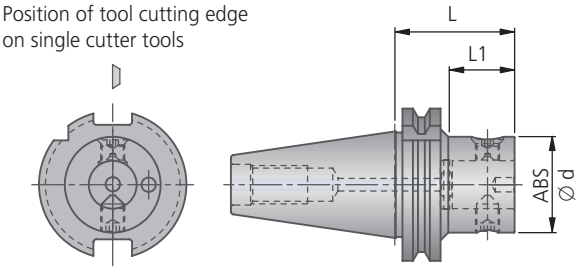


Patent applied for inside and outside Germany (ABS)

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |



Position of tool cutting edge on single cutter tools




| DIN 69871 AD (≙ ISO 7388/1) ABS® | | | | | | |
|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | L | L1 | kg |
| 40 | ABS 25 ISO400200 | **A50 00120** | 25 | 50 | 23 | 0,93 |
| 40 | ABS 32 ISO400200 | **A50 00130** | 32 | 50 | 23 | 0,99 |
| 40 | ABS 40 ISO400200 | **A50 00140** | 40 | 50 | 30 | 1,03 |
| 40 | ABS 50 ISO400200 | **A50 00150** | 50 | 50 | 30 | 1,15 |
| 40 | ABS 63 ISO400200 | **A50 00160** | 63 | 90 | 70 | 2,04 |
| 50 | ABS 25 ISO500200 | **A50 00320** | 25 | 60 | 31 | 2,81 |
| 50 | ABS 32 ISO500200 | **A50 00330** | 32 | 60 | 31 | 2,91 |
| 50 | ABS 40 ISO500200 | **A50 00340** | 40 | 60 | 31 | 3,02 |
| 50 | ABS 50 ISO500200 | **A50 00350** | 50 | 60 | 40 | 3,18 |
| 50 | ABS 63 ISO500200 | **A50 00360** | 63 | 60 | 40 | 3,35 |
| 50 | ABS 80 ISO500200 | **A50 00370** | 80 | 70 | 50 | 4,05 |
| 50 | ABS100 ISO500200 | **A50 00380** | 100 | 115 | 95 | 7,05 |
| 50 | ABS125 ISO500200 | **A50 00390** | 125 | 145 | – | 11,54 |

**Supply includes:**
Taper shank complete. Pull studs not included (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® DIN 69871 AD/B

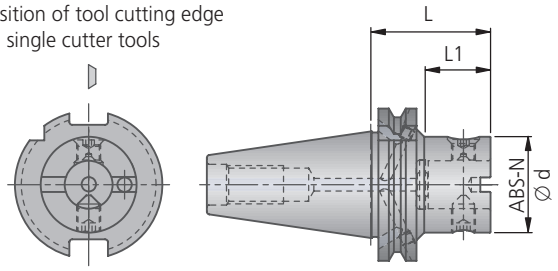
## Taper Shank with ABS® N Connection

| machine adaptor | coolant central / collar | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |





Position of tool cutting edge
on single cutter tools





| DIN 69871 AD/B ABS® N | | | | | | |
|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS-N Ø d | L | L1 | kg |
| 40 | ABS 50N-AD/B 40 | **A50 76150** | 50 | 50 | 30 | 1,10 |
| 40 | ABS 63N-AD/B 40 | **A50 76160** | 63 | 90 | 70 | 2,06 |
| 50 | ABS 50N-AD/B 50 | **A50 76350** | 50 | 60 | 22 | 3,32 |
| 50 | ABS 63N-AD/B 50 | **A50 76360** | 63 | 60 | 29 | 3,39 |
| 50 | ABS 80N-AD/B 50 | **A50 76370** | 80 | 70 | 50 | 3,92 |
| 50 | ABS 100N ISO500200 | **A50 00380.4000*** | 100 | 115 | 95 | 7,05 |
| 50 | ABS 125N ISO500200 | **A50 00390.4000*** | 125 | 145 | 125 | 11,54 |

* **Please note:** Coolant supply AD (central)

**Supply includes:**
Taper shank complete.
Pull studs not included (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

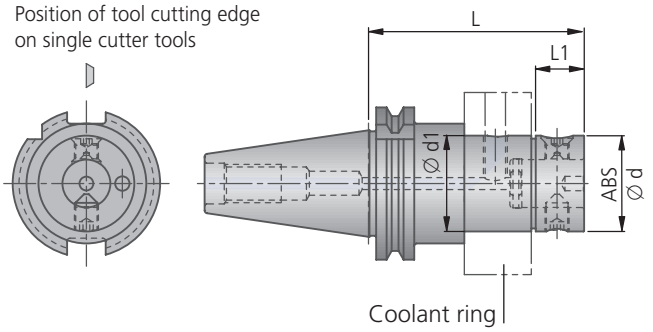


Patent applied for inside and outside Germany (ABS)

## Taper Shank with ABS® Connection for Coolant Ring

| machine adaptor | coolant central / coolant ring | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |






| DIN 69871 AD (≙ ISO 7388/1) ABS® | | | | | | | |
|---|---|---|---|---|---|---|---|
| SK | Article | Order No. | ABS Ø d | Coolant ring Ø d1 | L | L1 | kg |
| 40 | ABS50 ISO400200KR | **A50 00650** | 50 | 50 | 95 | 25 | 1,70 |
| 50 | ABS50 ISO500200KR | **A50 00850** | 50 | 50 | 100 | 28 | 3,84 |
| 50 | ABS63 ISO500200KR | **A50 00860** | 63 | 70 | 110 | 37 | 5,05 |
| 50 | ABS80 ISO500200KR | **A50 00870** | 80 | 80 | 110 | 37 | 5,60 |
| 50 | ABS100 ISO500200KR | **A50 00880** | 100 | 100 | 115 | 42 | 6,67 |

**Supply includes:**
Taper shank complete.
Pull studs not included (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

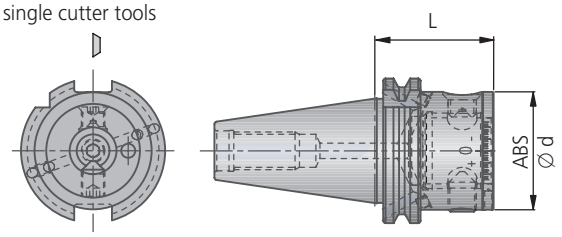
# KOMET® DIN 69871 AD/B

## Eccentric Adjusting Device with ABS® Connection

| machine adaptor | coolant central / collar | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
|   |  |  |  |   |

■ adjustment path ± 0.25 mm in the diameter

Position of tool cutting edge on single cutter tools




| DIN 69871 AD/B ABS® EXZ | | | | | | Accessory | Assembly parts |
|---|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | L | kg | Adjusting key Order No. | Conversion kit Order No. |
| 40 | ABS50-SK AD/B40 EXZ. | **A50 56150** | 50 | 50 | 1,10 | **18043 00028** | **L02 30920** |
| 40 | ABS63-SK AD/B40 EXZ. | **A50 56160** | 63 | 90 | 2,03 | **18043 00028** | **L02 30920** |
| 50 | ABS50-SK AD/B50 EXZ. | **A50 56350** | 50 | 60 | 3,33 | **18043 00028** | **L02 30940** |
| 50 | ABS63-SK AD/B50 EXZ. | **A50 56360** | 63 | 60 | 3,36 | **18043 00028** | **L02 30940** |

**Supply includes:**
Taper shank in form B complete with seal, conversion kit (for form AD). Pull studs not included (chapter 8).

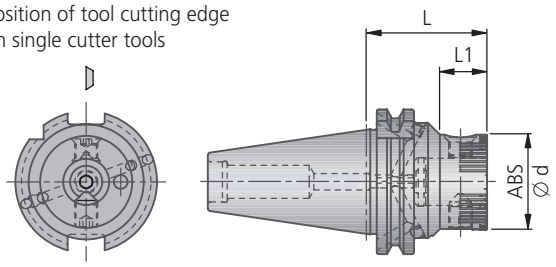
**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.



Patent applied for inside and outside Germany (ABS)

| machine adaptor | coolant central / collar | vibration dampening | rotating tool | tool holder |
|---|---|---|---|---|
| DIN 69871 AD/B | | | | ABS® |

Position of tool cutting edge on single cutter tools




| DIN 69871 AD/B ABS® TSD | | | | | | | Assembly parts |
|---|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | L | L1 | kg | Conversion kit Order No. |
| 40 | ABS50-ISO40-TSD | **A50 01351** | 50 | 50 | 30 | 1,07 | **L02 30920** |
| 40 | ABS63-ISO40-TSD | **A50 01361** | 63 | 90 | – | 2,00 | **L02 30930** |
| 50 | ABS50-ISO50-TSD | **A50 01451** | 50 | 60 | 40 | 3,30 | **L02 30920** |
| 50 | ABS63-ISO50-TSD | **A50 01461** | 63 | 60 | 40 | 3,40 | **L02 30930** |
| 50 | ABS80-ISO50-TSD | **A50 01470** | 80 | 70 | 50 | 3,84 | **L02 30940** |

**Supply includes:**
Taper shank in form B complete with seal, conversion kit (for form AD). Pull studs not included (chapter 8).

The torsional dampeners are designed for solid drills in line with the torque which is produced.

Recommended use: ...-ABS50-TSD for drill ∅ 14 - 44 mm
...-ABS63-TSD for drill ∅ 45 - 54 mm
...-ABS80-TSD for drill ∅ 55 - 81 mm

For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

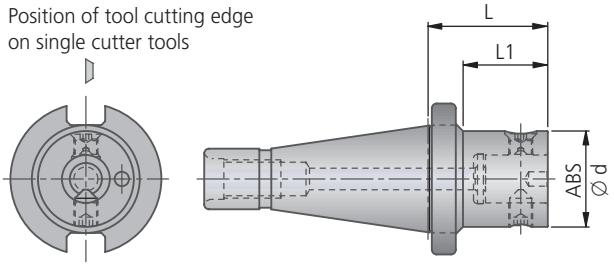
# KOMET® DIN 2080 A

## Taper Shank with ABS® Connection

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |








| DIN 2080 A ABS® | | | | | | |
|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | L | L1 | kg |
| 40 | ABS 25 ISO400000 | **A54 00120** | 25 | 50 | 38 | 0,88 |
| 40 | ABS 32 ISO400000 | **A54 00130** | 32 | 50 | 38 | 0,95 |
| 40 | ABS 40 ISO400000 | **A54 00140** | 40 | 50 | 38 | 1,04 |
| 40 | ABS 50 ISO400000 | **A54 00150** | 50 | 50 | 38 | 1,15 |
| 40 | ABS 63 ISO400000 | **A54 00160** | 63 | 70 | 58 | 1,81 |
| 50 | ABS 32 ISO500000 | **A54 00330** | 32 | 60 | 44 | 2,92 |
| 50 | ABS 40 ISO500000 | **A54 00340** | 40 | 60 | 44 | 3,03 |
| 50 | ABS 50 ISO500000 | **A54 00350** | 50 | 60 | 44 | 3,19 |
| 50 | ABS 63 ISO500000 | **A54 00360** | 63 | 60 | 44 | 3,46 |
| 50 | ABS 80 ISO500000 | **A54 00370** | 80 | 80 | 68 | 4,64 |
| 50 | ABS100 ISO500000 | **A54 00380** | 100 | 100 | 84 | 6,58 |

**Supply includes:**
Taper shank complete.

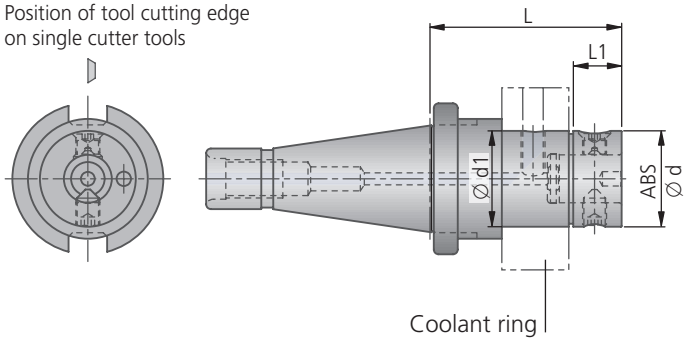


Patent applied for inside and outside Germany (ABS)

# Taper Shank with ABS® Connection for Coolant Ring

| machine adaptor | coolant central / coolant ring | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |






| DIN 2080 B ABS® | | | | | | | |
|---|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | Ø d1 | L | L1 | kg |
| 40 | ABS 50 ISO400010KR | **A54 10650** | 50 | 50 | 85 | 25 | 1,69 |
| 50 | ABS 50 ISO500010KR | **A54 10850** | 50 | 50 | 95 | 25 | 3,85 |
| 50 | ABS 63 ISO500010KR | **A54 10860** | 63 | 70 | 105 | 35 | 5,01 |
| 50 | ABS 80 ISO500010KR | **A54 10870** | 80 | 80 | 110 | 40 | 5,75 |
| 50 | ABS100 ISO500010KR | **A54 10880** | 100 | 100 | 125 | 55 | 7,73 |

**Supply includes:**
Taper shank complete.
Coolant ring not included (chapter 8).

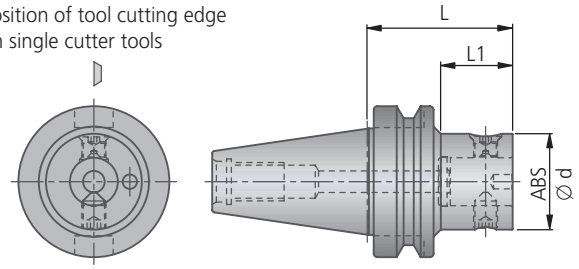
# KOMET® JIS B 6339 (MAS 403 BT)

## Taper Shank with ABS® Connection

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |



Position of tool cutting edge on single cutter tools




| JIS B 6339 AD ABS® | | | | | | |
|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | L | L1 | kg |
| 40 | ABS 25 ISO401500 | **A55 00120** | 25 | 60 | 25 | 1,09 |
| 40 | ABS 32 ISO401500 | **A55 00130** | 32 | 60 | 33 | 1,13 |
| 40 | ABS 40 ISO401500 | **A55 00140** | 40 | 60 | 33 | 1,21 |
| 40 | ABS 50 ISO401500 | **A55 00150** | 50 | 60 | 33 | 1,29 |
| 40 | ABS 63 ISO401500 | **A55 00160** | 63 | 70 | 43 | 1,68 |
| 50 | ABS 32 ISO501500 | **A55 00330** | 32 | 70 | 24 | 3,76 |
| 50 | ABS 40 ISO501500 | **A55 00340** | 40 | 70 | 24 | 3,86 |
| 50 | ABS 50 ISO501500 | **A55 00350** | 50 | 70 | 24 | 4,07 |
| 50 | ABS 63 ISO501500 | **A55 00360** | 63 | 80 | 37 | 4,33 |
| 50 | ABS 80 ISO501500 | **A55 00370** | 80 | 100 | 62 | 5,42 |
| 50 | ABS100 ISO501500 | **A55 00380** | 100 | 110 | 72 | 6,85 |

**Supply includes:**
Taper shank complete.
Pull studs not included (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.



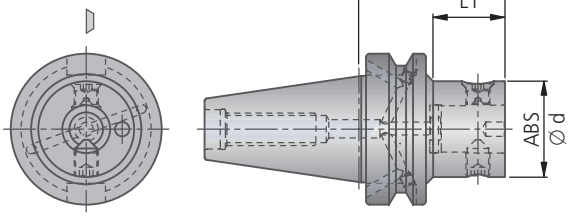
Patent applied for inside and outside Germany (ABS)

# KOMET® JIS B 6339 (MAS 403 BT)

## Taper Shank with ABS® Connection

| machine adaptor | coolant central / collar | rotating tool | tool holder |
|---|---|---|---|
|   |  |  |   |

Position of tool cutting edge on single cutter tools




| JIS B 6339 AD/B ABS® | | | | | | | Assembly parts |
|---|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | L | L1 | kg | Conversion kit Order No. |
| 40 | ABS50 JIS B6339 BT40 AD/B | **A55 55150** | 50 | 60 | 33 | 1,3 | **L02 30920** |
| 40 | ABS63 JIS B6339 BT40 AD/B | **A55 55160** | 63 | 70 | – | 1,7 | **L02 30920** |
| 50 | ABS50 JIS B6339 BT50 AD/B | **A55 55350** | 50 | 70 | 24 | 4,0 | **L02 30940** |
| 50 | ABS63 JIS B6339 BT50 AD/B | **A55 55360** | 63 | 80 | 37 | 4,3 | **L02 30940** |
| 50 | ABS80 JIS B6339 BT50 AD/B | **A55 55370** | 80 | 100 | 60 | 5,4 | **L02 30940** |
| 50 | ABS100 JIS B6339 BT50 AD/B | **A55 55380** | 100 | 110 | – | 6,8 | **L02 30940** |

**Supply includes:**
Taper shank in form B complete with seal, conversion kit (for form AD).
Pull studs not included (chapter 8).

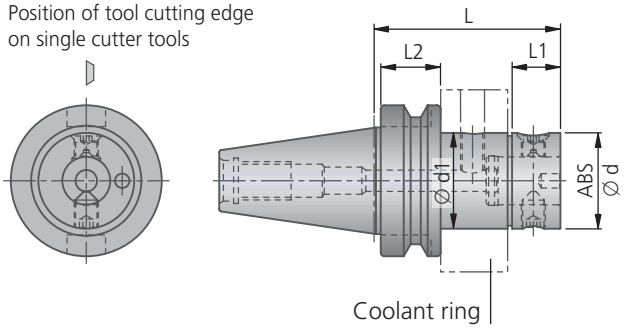
**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® JIS B 6339 (MAS 403 BT)

## Taper Shank with ABS® Connection for Coolant Ring

| machine adaptor | coolant central / coolant ring | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |




| JIS B 6339 AD ABS® | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | Ø d1 | L | L1 | L2 | kg |
| 40 | ABS40 ISO401510KR | **A55 10640** | 40 | 40 | 105 | 33 | 40 | 1,70 |
| 40 | ABS50 ISO401510KR | **A55 10650** | 50 | 50 | 105 | 33 | 40 | 3,84 |
| 50 | ABS50 ISO501510KR | **A55 10850** | 50 | 50 | 105 | 24 | 35 | 5,05 |
| 50 | ABS63 ISO501510KR | **A55 10860** | 63 | 70 | 115 | 29 | 35 | 5,60 |
| 50 | ABS80 ISO501510KR | **A55 10870** | 80 | 80 | 120 | 38 | 35 | 6,67 |

**Supply includes:**
Taper shank complete.
Coolant ring and pull studs not included (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.


Patent applied for inside and outside Germany (ABS)

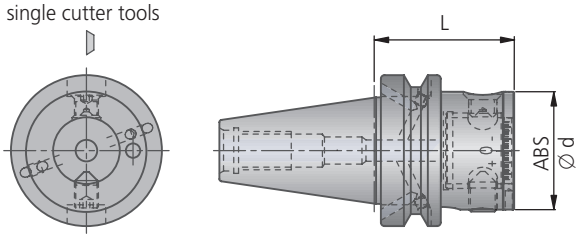
# KOMET® JIS B 6339 (MAS 403 BT)

## Eccentric Adjusting Device with ABS® Connection

| machine adaptor | coolant central / collar | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
|   |  |  |  |   |

adjustment path ± 0.25 mm in the diameter ■

Position of tool cutting edge on single cutter tools




| JIS B 6339 AD/B ABS® EXZ | | | | | | Accessory | Assembly parts |
|---|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | L | kg | Adjusting key Order No. | Conversion kit Order No. |
| 40 | ABS50 JIS B 6339 AD/B 40 EXZ. | **A55 56150** | 50 | 60 | 1,28 | **18043 00028** | **L02 30920** |
| 40 | ABS63 JIS B 6339 AD 40 EXZ. | **A55 56160** | 63 | 70 | 1,67 | **18043 00028** | – |
| 50 | ABS50 JIS B 6339 AD/B 50 EXZ. | **A55 56350** | 50 | 70 | 3,94 | **18043 00028** | **L02 30940** |
| 50 | ABS63 JIS B 6339 AD 50 EXZ. | **A55 56360** | 63 | 80 | 4,30 | **18043 00028** | – |

**Supply includes:**
Taper shank ABS50 in form B complete with seal, conversion kit (for form AD).
Taper shank ABS63 in form AD.
Pull studs not included (chapter 8).

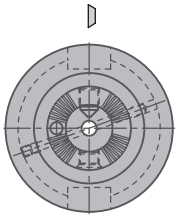
**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

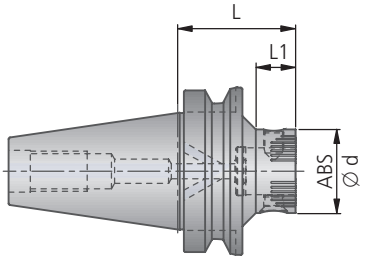
# KOMET® JIS B 6339 (MAS 403 BT)

## Torsional Dampener with ABS® Connection

| machine adaptor | coolant central / collar | vibration dampening | rotating tool | tool holder |
|---|---|---|---|---|
| JIS B 6339 | | | | ABS® |

Position of tool cutting edge on single cutter tools






| DIN 69871 AD/B ABS® TSD | | | | | | | Assembly parts |
|---|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | L | L1 | kg | Conversion kit Order No. |
| 40 | ISO40-ABS50-TSD | **A55 02150** | 50 | 60 | 33 | 1,2 | **L02 30920** |
| 40 | ISO40-ABS63-TSD | **A55 02160** | 63 | 70 | – | 1,6 | **L02 30920** |
| 50 | ISO50-ABS50-TSD | **A55 02350** | 50 | 70 | 24 | 3,9 | **L02 30940** |
| 50 | ISO50-ABS63-TSD | **A55 02360** | 63 | 80 | 37 | 4,2 | **L02 30940** |

**Supply includes:**
Taper shank in form B complete with seal, conversion kit (for form AD). Pull studs not included (chapter 8).

The torsional dampeners are designed for solid drills in line with the torque which is produced.

Recommended use: ...-ABS50-TSD for drill ∅ 14 - 44 mm
...-ABS63-TSD for drill ∅ 45 - 54 mm
...-ABS80-TSD for drill ∅ 55 - 81 mm

For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.



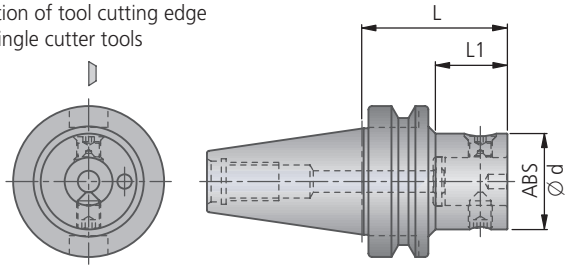
Patent applied for inside and outside Germany (ABS)

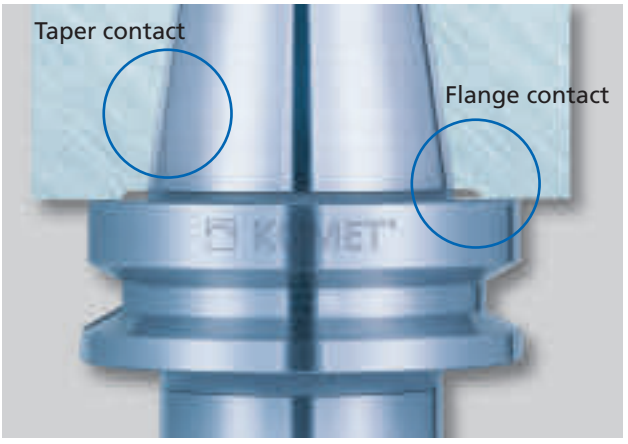
# BIG-PLUS™ Taper Shank with ABS® Connection

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |



Position of tool cutting edge on single cutter tools

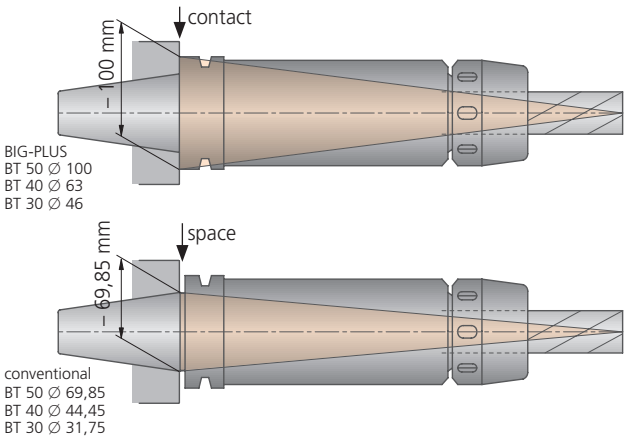



| JIS B 6339 AD ABS® | | | | | | |
|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | L | L1 | kg |
| 40 | ISO40 JIS B6339-BIG PLUS-ABS25 | A55 57121 | 25 | 60 | 25 | 1,09 |
| 40 | ISO40 JIS B6339-BIG PLUS-ABS32 | A55 57131 | 32 | 60 | 33 | 1,13 |
| 40 | ISO40 JIS B6339-BIG PLUS-ABS40 | A55 57141 | 40 | 60 | 33 | 1,21 |
| 40 | ISO40 JIS B6339-BIG PLUS-ABS50 | A55 57151 | 50 | 60 | 33 | 1,29 |
| 40 | ISO40 JIS B6339-BIG PLUS-ABS63 | A55 57161 | 63 | 70 | 43 | 1,68 |
| 50 | ISO50 JIS B6339-BIG PLUS-ABS32 | A55 57331 | 32 | 70 | 24 | 3,76 |
| 50 | ISO50 JIS B6339-BIG PLUS-ABS40 | A55 57341 | 40 | 70 | 24 | 3,86 |
| 50 | ISO50 JIS B6339-BIG PLUS-ABS50 | A55 57351 | 50 | 70 | 24 | 4,07 |
| 50 | ISO50 JIS B6339-BIG PLUS-ABS63 | A55 57361 | 63 | 80 | 37 | 4,33 |
| 50 | ISO50 JIS B6339-BIG PLUS-ABS80 | A55 57371 | 80 | 100 | 62 | 5,42 |
| 50 | ISO50 JIS B6339-BIG PLUS-ABS100 | A55 57381 | 100 | 110 | 72 | 6,85 |

**Supply includes:**
Taper shank complete. Pull studs not included (chapter 8).

## Increased contact diameter (example of BT 50)




## BIG-PLUS™ Spindle System

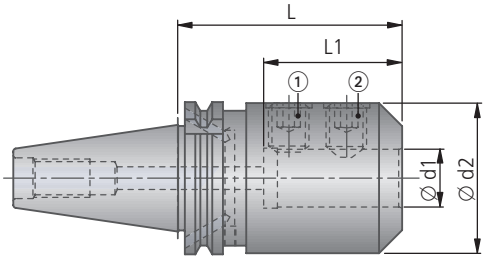
- The BIG-PLUS™ Spindle System offers simultaneous dual contact between the machine spindle face and toolholder flange face, as well as the machine spindle taper and long toolholder taper shank. This system is based on the most currently available standards for JIS-BT, DIN 69871 and CAT-V flange tooling.
- By having all tolerances strictly controlled by high tolerance gauges and measuring equipment, simultaneous dual contact of the face and taper is thus assured.
- In this way, the BIG-PLUS™ Spindle System skillfully utilizes the elastic deformation of the machine spindle to control the gauge line accuracy, which thus insures that dual contact of the face and taper is achieved.
- Existing accessories such as presetters, tooling fixtures and tooling storage systems can be used.
- The results in greatly extending the life of both the machine spindle and the toolholder.
- As a result of the dual contact which precisely positions the toolholder within 1 micron.

BIG-PLUS™ Spindle System licenced by BIG DAISHOWA.

# KOMET® DIN 69871 AD/B

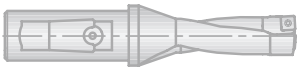
## Taper Shank for KUB® Drill (combination shank)

| machine adaptor | coolant central / collar | rotating tool | tool holder cylindrical shank (combination shank) |
|---|---|---|---|
|   |  |  |   |

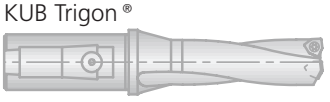



Tools with combination shank p.ex.:

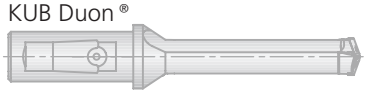
KUB Quatron®



KUB Trigon®



KUB Duon®



| DIN 69871 AD/B | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|
| ISO | Order No. | Ø d1 | Ø d2 | L | L1 | kg | Clamping screw ① Order No. | Clamping screw ② Order No. |
| 40 | **A05 13140** | 20 | 40 | 65 | 54 | 1,10 | **55051 12112** | **N00 60400** |
| 40 | **A05 13151** | 25 | 45 | 70 | 60 | 1,17 | **55051 12112** | **L02 30350** |
| 40 | **A05 13161** | 32 | 52 | 75 | 64 | 1,27 | **55051 12112** | **L02 30350** |
| 50 | **A05 13340** | 20 | 40 | 65 | 54 | 2,87 | **55051 12112** | **N00 60400** |
| 50 | **A05 13351** | 25 | 45 | 70 | 60 | 2,94 | **55051 12112** | **L02 30350** |
| 50 | **A05 13361** | 32 | 52 | 70 | 64 | 2,98 | **55051 12112** | **L02 30350** |
| 50 | **A05 13370** | 40 | 65 | 80 | 73 | 3,38 | **55051 16112** | **N00 60430** |

**Supply includes:**
Taper shank with assembly parts. Pull studs not included (chapter 8).

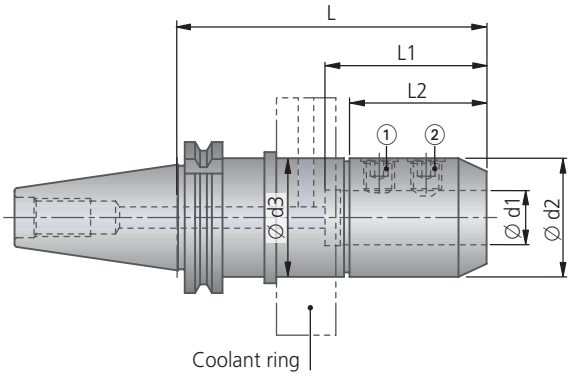
Because the threaded pin is offset against the tapered hole in cylindrical shank DIN 6595 Part 1, the solid drill shank is clamped against the contact surface of the toolholder.

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# Taper Shank for KUB® Drill (combination shank) for Coolant Ring

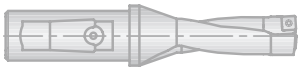
| machine adaptor | coolant central / coolant ring | rotating tool | tool holder KUB® drill |
|---|---|---|---|
|  |  |  |  |



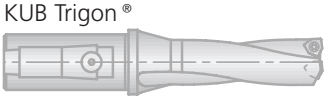



Tools with combination shank p.ex.:

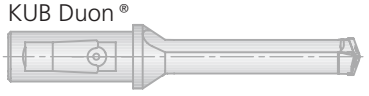
KUB Quatron®



KUB Trigon®



KUB Duon®



| DIN 69871 AD | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|
| ISO | Order No. | Ø d1 | Ø d2 | Coolant ring Ø d3 | L | L1 | L2 | kg | Clamping screw ① Order No. | Clamping screw ② Order No. |
| 40 | **A05 03140** | 20 | 50 | 50 | 115 | 65 | 43 | | **55051 12112** | **N00 60400** |
| 40 | **A05 03150** | 25 | 50 | 50 | 130 | 65 | 58 | 2,23 | **55051 12112** | **L02 30350** |
| 40 | **A05 03160** | 32 | 50 | 50 | 130 | 65 | 58 | 2,05 | **55051 12112** | **L02 30350** |
| 50 | **A05 03340** | 20 | 50 | 50 | 115 | 65 | 43 | | **55051 12112** | **N00 60400** |
| 50 | **A05 03350** | 25 | 50 | 50 | 130 | 65 | 58 | 4,18 | **55051 12112** | **L02 30350** |
| 50 | **A05 03360** | 32 | 50 | 50 | 130 | 65 | 58 | 4,05 | **55051 12112** | **L02 30350** |
| 50 | **A05 03370** | 40 | 70 | 70 | 140 | 73 | 67,5 | 5,63 | **55051 16112** | **N00 60430** |

**Supply includes:**
Taper shank with assembly parts.
Coolant ring and pull studs not included (chapter 8).

Because the threaded pin is offset against the tapered hole in cylindrical shank DIN 6595 Part 1, the solid drill shank is clamped against the contact surface of the toolholder.

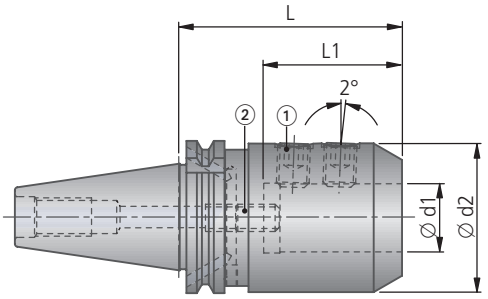
**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® DIN 69871 AD/B

## Taper Shank Whistle Notch

| machine adaptor | location | coolant central / collar | rotating tool | tool holder | |
|---|---|---|---|---|---|
| DIN 69871 AD/B | DIN 6359 part 2 form B | | | DIN 1835-E Whistle Notch | DIN 6535 HE |

- the robust and highly accurate location also enables solid carbide drills to be clamped
- the 2° tilt of the clamping screws prevents the tool from pulling out

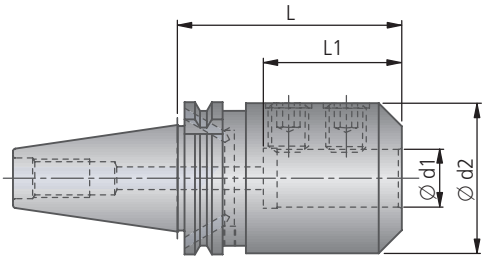



| DIN 69871 AD/B FWD | | | | | | | Assembly parts | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Clamping screw ① | | Adjusting screw ② |
| ISO | Order No. | Ø d1 | Ø d2 | L | L1 | kg | Order No. | Qty. | Order No. |
| 40 | A05 12071 | 6 | 25 | 50 | 36 | 0,98 | 51050 06010 | 1 | N00 71000 |
| 40 | A05 12081 | 8 | 28 | 50 | 36 | 1,00 | 51050 08010 | 1 | N00 71050 |
| 40 | A05 12091 | 10 | 35 | 50 | 40 | 1,05 | 51050 10012 | 1 | 51049 08016 |
| 40 | A05 12101 | 12 | 42 | 50 | 45 | 1,13 | 51050 12016 | 1 | 51049 10020 |
| 40 | A05 12111 | 14 | 44 | 50 | 45 | 1,15 | 51050 12016 | 1 | 51049 10020 |
| 40 | A05 12121 | 16 | 48 | 63 | 48 | 1,35 | 51050 14016 | 1 | 51049 12025 |
| 40 | A05 12131 | 18 | 50 | 63 | 48 | 1,40 | 51050 14016 | 1 | 51049 12025 |
| 40 | A05 12141 | 20 | 52 | 63 | 50 | 1,10 | 51050 16016 | 1 | 51049 16025 |
| 40 | A05 12151 | 25 | 65 | 100 | 56 | 2,20 | 51050 18220 | 2 | 51049 20035 |
| 40 | A05 12161 | 32 | 72 | 100 | 60 | 2,50 | 51050 20220 | 2 | 51049 20035 |
| 50 | A05 12271 | 6 | 25 | 63 | 36 | 2,75 | 51050 06010 | 1 | N00 71000 |
| 50 | A05 12281 | 8 | 28 | 63 | 36 | 2,80 | 51050 08010 | 1 | N00 71050 |
| 50 | A05 12291 | 10 | 35 | 63 | 40 | 2,90 | 51050 10012 | 1 | 51049 08016 |
| 50 | A05 12301 | 12 | 42 | 63 | 45 | 3,05 | 51050 12016 | 1 | 51049 10020 |
| 50 | A05 12311 | 14 | 44 | 63 | 45 | 3,10 | 51050 12016 | 1 | 51049 10020 |
| 50 | A05 12321 | 16 | 48 | 63 | 48 | 3,15 | 51050 14016 | 1 | 51049 12025 |
| 50 | A05 12331 | 18 | 50 | 63 | 48 | 3,20 | 51050 14016 | 1 | 51049 12025 |
| 50 | A05 12341 | 20 | 52 | 63 | 50 | 3,20 | 51050 16016 | 1 | 51049 16025 |
| 50 | A05 12351 | 25 | 65 | 80 | 56 | 3,95 | 51050 18220 | 2 | 51049 20035 |
| 50 | A05 12361 | 32 | 72 | 100 | 60 | 4,70 | 51050 20220 | 2 | 51049 20035 |

**Supply includes:**
Taper shank with assembly parts. Pull studs not included (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

| machine adaptor | location | coolant central / collar | rotating tool | tool holder |
|---|---|---|---|---|
| DIN 69871 AD/B | DIN 6359 part 2 form B | | | DIN1835-B Weldon |



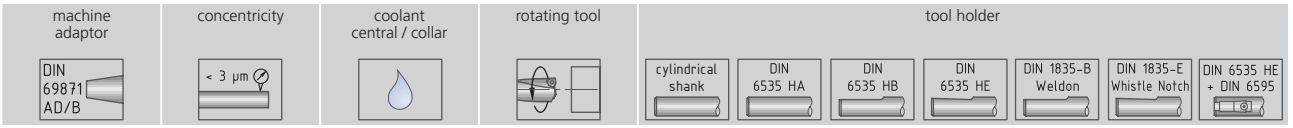

| DIN 69871 AD/B HWD | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Clamping screw | |
| ISO | Order No. | Ø d1 | Ø d2 | L | L1 | kg | Order No. | Piece |
| 40 | **A05 24070** | 6 | 25 | 50 | 37 | 0,98 | **51050 06010** | 1 |
| 40 | **A05 24080** | 8 | 28 | 50 | 37 | 1,00 | **51050 08010** | 1 |
| 40 | **A05 24090** | 10 | 35 | 50 | 41 | 1,05 | **51050 10012** | 1 |
| 40 | **A05 24100** | 12 | 42 | 50 | 46 | 1,13 | **51050 12016** | 1 |
| 40 | **A05 24110** | 14 | 44 | 50 | 46 | 1,15 | **51050 12016** | 1 |
| 40 | **A05 24120** | 16 | 48 | 63 | 49 | 1,35 | **51050 14016** | 1 |
| 40 | **A05 24130** | 18 | 50 | 63 | 49 | 1,40 | **51050 14016** | 1 |
| 40 | **A05 24140** | 20 | 52 | 63 | 51 | 1,31 | **51050 16016** | 1 |
| 40 | **A05 24150** | 25 | 65 | 100 | 59 | 2,20 | **51050 18220** | 2 |
| 40 | **A05 24160** | 32 | 72 | 100 | 63 | 2,50 | **51050 20220** | 2 |
| 50 | **A05 24270** | 6 | 25 | 63 | 37 | 2,75 | **51050 06010** | 1 |
| 50 | **A05 24280** | 8 | 28 | 63 | 37 | 2,80 | **51050 08010** | 1 |
| 50 | **A05 24290** | 10 | 35 | 63 | 41 | 2,90 | **51050 10012** | 1 |
| 50 | **A05 24300** | 12 | 42 | 63 | 46 | 3,05 | **51050 12016** | 1 |
| 50 | **A05 24310** | 14 | 44 | 63 | 46 | 3,10 | **51050 12016** | 1 |
| 50 | **A05 24320** | 16 | 48 | 63 | 49 | 3,15 | **51050 14016** | 1 |
| 50 | **A05 24330** | 18 | 50 | 63 | 49 | 3,20 | **51050 14016** | 1 |
| 50 | **A05 24340** | 20 | 52 | 63 | 51 | 3,20 | **51050 16016** | 1 |
| 50 | **A05 24350** | 25 | 65 | 80 | 59 | 3,95 | **51050 18220** | 1 |
| 50 | **A05 24360** | 32 | 72 | 100 | 63 | 4,70 | **51050 20220** | 2 |
| 50 | **A05 24370** | 40 | 80 | 100 | 73 | 4,90 | **51050 20220** | 2 |

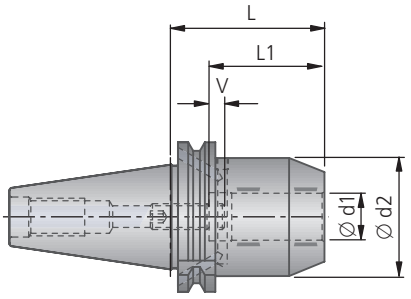
**Supply includes:**
Taper shank with assembly parts. Pull studs not included (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® DIN 69871 AD/B

## Expanding Chuck



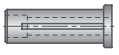




| DIN 69871 AD/B Expanding chuck | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Adjusting screw | |
| ISO | Order No. | Ø d1 | Ø d2 | L | L1 | V | kg | Article | Order No. |
| 40 | **A05 92051** | 20 | 49,5 | 64,5 | 51 | 10 | 1,65 | M16×1×14 | **N00 71550** |
| 50 | **A05 92171** | 32 | 72 | 81 | 61 | 10 | 3,90 | M16×1×14 | **N00 71550** |

**Tool shank tolerance:** h6 for ∅ 6 - 32 mm

**Supply includes:** Expanding chuck with assembly parts.
Pull studs not included (chapter 8).

**Accessories expanding chuck:**
Adaptor sleeve



▸ 453

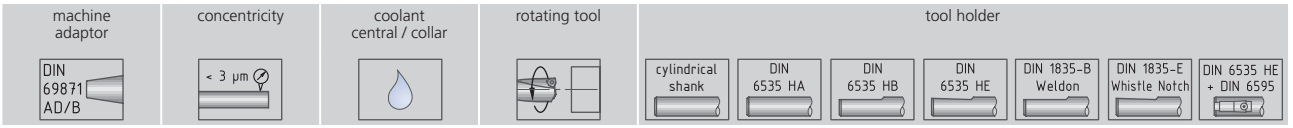
**Accuracy:**
Maximum long-term concentricity and repeatability of ≤ 3 µm. Evenly distributed application of the cutting edges, low wear and good operational safety. Tool life can often be increased more than four times.

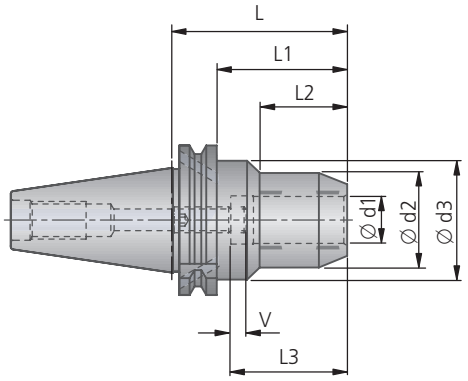
**Adaptor sleeve:**
Using adaptor sleeves several shank diameters can be clamped with one expanding chuck.

**Closed system:**
The system is fully sealed. No dirt, coolant lubricants or chips can penetrate.

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# Expanding Chuck




| DIN 69871 AD/B Expanding chuck | | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Adjusting screw | |
| ISO | Order No. | Ø d1 | Ø d2 | Ø d3 | L | L1 | L2 | L3 | V | kg | Article | Order No. |
| 40 | **A05 92090** | 12 | 32 | 49,5 | 80,5 | 61,5 | 31,5 | 46 | 10 | 1,4 | M10×1×12 | **N00 71800** |
| 40 | **A05 92100** | 16 | 38 | 49,5 | 80,5 | 61,5 | 33 | 49 | 10 | 1,4 | M12×1×12 | **N00 71860** |
| 40 | **A05 92110** | 20 | 42 | 49,5 | 80,5 | 61,5 | 34 | 51 | 10 | 1,4 | M16×1×14 | **N00 71550** |
| 40 | **A05 92120** | 25 | 55 | 66 | 80,5 | 61,5 | 22 | 57 | 10 | 1,8 | M16×1×14 | **N00 71550** |

**Tool shank tolerance:** h6 for ∅ 6 - 32 mm

**Supply includes:** Expanding chuck with assembly parts.
Pull studs not included (chapter 8).

**Accessories expanding chuck:**
Adaptor sleeve
▸ 453

**Accuracy:**
Maximum long-term concentricity and repeatability of ≤ 3 µm. Evenly distributed application of the cutting edges, low wear and good operational safety. Tool life can often be increased more than four times.

**Adaptor sleeve:**
Using adaptor sleeves several shank diameters can be clamped with one expanding chuck.

**Closed system:**
The system is fully sealed. No dirt, coolant lubricants or chips can penetrate.

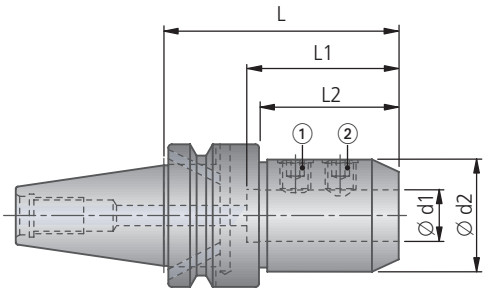
**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® JIS B 6339 (MAS 403 BT)

## Taper Shank for KUB® Drill (combination shank)

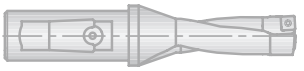
| machine adaptor | coolant central / collar | rotating tool | tool holder KUB® drill |
|---|---|---|---|
|  |  |  |  |



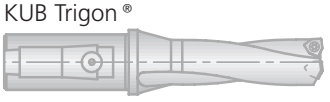




Tools with combination shank p.ex.:

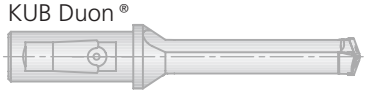
KUB Quatron®



KUB Trigon®



KUB Duon®



| JIS B 6339 AD/B | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|
| ISO | Order No. | Ø d1 | Ø d2 | L | L1 | L2 | kg | Clamping screw ① Order No. | Clamping screw ② Order No. |
| 40 | **A05 16140** | 20 | 40 | 70 | 54 | 43 | 1,22 | **55051 12112** | **N00 60400** |
| 40 | **A05 16150** | 25 | 45 | 75 | 59 | 48 | 1,29 | **55051 12112** | **L02 30350** |
| 40 | **A05 16160** | 32 | 52 | 80 | 64 | 53 | 1,40 | **55051 12112** | **L02 30350** |
| 50 | **A05 16340** | 20 | 40 | 80 | 54 | 42 | 3,80 | **55051 12112** | **N00 60400** |
| 50 | **A05 16350** | 25 | 45 | 85 | 59 | 47 | 3,88 | **55051 12112** | **L02 30350** |
| 50 | **A05 16360** | 32 | 52 | 90 | 64 | 52 | 3,98 | **55051 12112** | **L02 30350** |
| 50 | **A05 16370** | 40 | 65 | 100 | 73 | 62 | 4,38 | **55051 16112** | **N00 60430** |

**Supply includes:**
Taper shank with assembly parts. Pull studs not included (chapter 8).

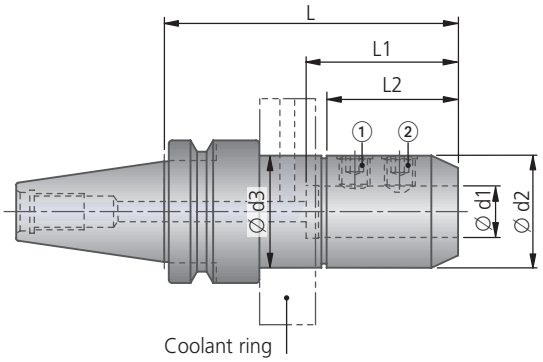
Because the threaded pin is offset against the tapered hole in cylindrical shank DIN 6595 Part 1, the solid drill shank is clamped against the contact surface of the toolholder.

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® JIS B 6339 (MAS 403 BT)

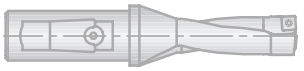
## Taper Shank for KUB® Drill (combination shank) for Coolant Ring

| machine adaptor | coolant central / coolant ring | rotating tool | tool holder KUB® drill |
|---|---|---|---|
|   |  |  |   |

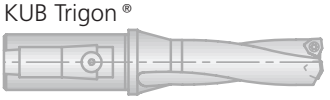



Tools with combination shank p.ex.:

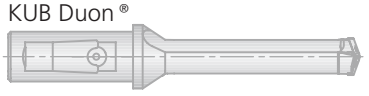
KUB Quatron®



KUB Trigon®



KUB Duon®



| JIS B 6339 AD | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|
| ISO | Order No. | Ø d1 | Ø d2 | Coolant ring Ø d3 | L | L1 | L2 | kg | Clamping screw ① Order No. | Clamping screw ② Order No. |
| 40 | **A05 06140** | 20 | 50 | 50 | 115 | 65 | 43 | | **55051 12112** | **N00 60400** |
| 40 | **A05 06150** | 25 | 50 | 50 | 130 | 65 | 58 | 2,38 | **55051 12112** | **L02 30350** |
| 40 | **A05 06160** | 32 | 50 | 50 | 130 | 66 | 58 | 2,23 | **55051 12112** | **L02 30350** |
| 50 | **A05 06340** | 20 | 50 | 50 | 125 | 66 | 44 | | **55051 12112** | **N00 60400** |
| 50 | **A05 06350** | 25 | 50 | 50 | 140 | 66 | 59 | 5,60 | **55051 12112** | **L02 30350** |
| 50 | **A05 06360** | 32 | 50 | 50 | 140 | 66 | 59 | 5,68 | **55051 12112** | **L02 30350** |
| 50 | **A05 06370** | 40 | 70 | 70 | 145 | 73 | 63,5 | 6,42 | **55051 16112** | **N00 60430** |

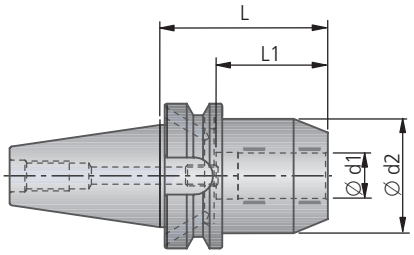
**Supply includes:**
Taper shank with assembly parts.
Coolant ring and pull studs not included (chapter 8).

Because the threaded pin is offset against the tapered hole in cylindrical shank DIN 6595 Part 1, the solid drill shank is clamped against the contact surface of the toolholder.

# KOMET® JIS B 6339 (MAS 403 BT)

## Expanding Chuck

| machine adaptor | concentricity | coolant central / collar | rotating tool | tool holder |
|---|---|---|---|---|
| JIS B 6339 | ≤ 3 µm | | | cylindrical shank; DIN 6535 HA; DIN 6535 HB; DIN 6535 HE; DIN 1835-B Weldon; DIN 1835-E Whistle Notch; DIN 6535 HE + DIN 6595 |




| JIS B 6339 AD/B Expanding chuck | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Adjusting screw | |
| ISO | Order No. | Ø d1 | Ø d2 | L | L1 | kg | Article | Order No. |
| 40 | **A05 92351** | 20 | 49,5 | 72,5 | 51 | 1,65 | M16×1×14 | **N00 71550** |
| 50 | **A05 92471** | 32 | 72,0 | 90,0 | 61 | 3,90 | M16×1×14 | **N00 71550** |

**Tool shank tolerance:** h6 for ∅ 6 - 32 mm

**Supply includes:** Expanding chuck with assembly parts.
Pull studs not included (chapter 8).

**Accuracy:**
Maximum long-term concentricity and repeatability of ≦ 3 µm. Evenly distributed application of the cutting edges, low wear and good operational safety. Tool life can often be increased more than four times.

**Adaptor sleeve:**
Using adaptor sleeves several shank diameters can be clamped with one expanding chuck.

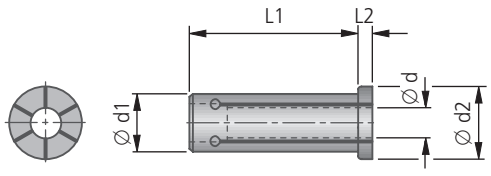
**Closed system:**
The system is fully sealed. No dirt, coolant lubricants or chips can penetrate.

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

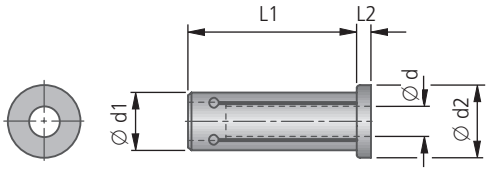
# KOMET® Adaptor Sleeve

## for Expanding Chuck

with slotted collar
for peripheral cooling




with closed collar
for internal coolant supply




| Adaptor sleeve | | | | | | |
|---|---|---|---|---|---|---|
| Order No. | Ø d | Ø d1 | Ø d2 | L1 | L2 | kg |
| L01 13291 | 3 | 12 | 19 | 45 | 2 | 0,1 |
| L01 13301 | 4 | | | | | |
| L01 13311 | 5 | | | | | |
| L01 13321 | 6 | | | | | |
| L01 13331 | 8 | | | | | |
| L01 13261 | 3 | 20 | 29 | 50,5 | 2 | 0,1 |
| L01 13271 | 4 | | | | | |
| L01 13281 | 5 | | | | | |
| L01 13201 | 6 | | | | | |
| L01 13211 | 8 | | | | | |
| L01 13221 | 10 | | | | | |
| L01 13231 | 12 | | | | | |
| L01 13241 | 14 | | | | | |
| L01 13251 | 16 | | | | | |
| L01 13501 | 6 | 32 | 39 | 60,5 | 3 | 0,3 |
| L01 13511 | 8 | | | | | |
| L01 13521 | 10 | | | | | |
| L01 13531 | 12 | | | | | |
| L01 13541 | 14 | | | | | |
| L01 13551 | 16 | | | | | |
| L01 13561 | 18 | | | | | |
| L01 13571 | 20 | | | | | |
| L01 13581 | 25 | | | | | |

| Adaptor sleeve | | | | | | |
|---|---|---|---|---|---|---|
| Order No. | Ø d | Ø d1 | Ø d2 | L1 | L2 | kg |
| L01 14291 | 3 | 12 | 19 | 45 | 2 | 0,1 |
| L01 14301 | 4 | | | | | |
| L01 14311 | 5 | | | | | |
| L01 14321 | 6 | | | | | |
| L01 14331 | 8 | | | | | |
| L01 14261 | 3 | 20 | 29 | 50,5 | 2 | 0,1 |
| L01 14271 | 4 | | | | | |
| L01 14281 | 5 | | | | | |
| L01 14201 | 6 | | | | | |
| L01 14211 | 8 | | | | | |
| L01 14221 | 10 | | | | | |
| L01 14231 | 12 | | | | | |
| L01 14241 | 14 | | | | | |
| L01 14251 | 16 | | | | | |
| L01 14501 | 6 | 32 | 39 | 60,5 | 3 | 0,3 |
| L01 14511 | 8 | | | | | |
| L01 14521 | 10 | | | | | |
| L01 14531 | 12 | | | | | |
| L01 14541 | 14 | | | | | |
| L01 14551 | 16 | | | | | |
| L01 14561 | 18 | | | | | |
| L01 14571 | 20 | | | | | |
| L01 14581 | 25 | | | | | |


KOMET
ABS® 80

In tooling systems, the tool adapter is an important element between the tool and machine. It must be able to transfer the machining forces safely. Moreover, tool adapters greatly influence the quality of the machining result. They also contribute to a cost efficient machining process.

KOMET ABS® connections form a modular coupling system for rotating and stationary tools. The interface system is designed according to the modular principle. In this way, users can quickly and cheaply make use of modular metal cutting tools, extensions or adaptors.

Since its launch by KOMET® in 1981, the system has become established globally. It has fully developed components for each requirement.

BENEFITS for you:

- Better transmission of power
- Optimum machining result
- Achieves better cutting values
- Less noise during production

## KOMET ABS®

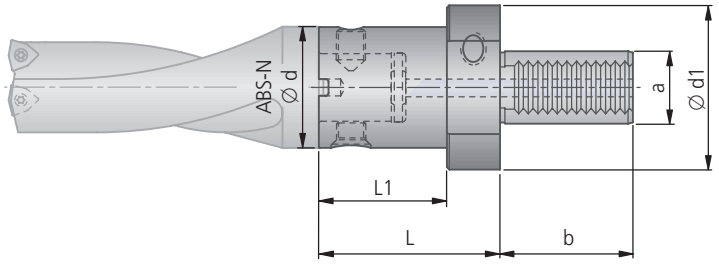

| | Page |
|---|---|
| **Spindle adaptor flange** | |
| with ABS® connection | 458 |
| **VDI adaptor** | |
| with ABS® connection | 456 |
| Torsional dampener | 457 |
| **Cylindrical adaptor** | |
| TC adaptor | 459 |
| Damping element HMD | 471 |
| **PSC adaptor** | |
| with ABS® connection | 460 |
| **ABS® adaptor** | |
| Adjustment device MV | 461 |
| Eccentric adjusting device | 462 |
| Torsional dampener | 463 |
| Reducer | 464 – 465 |
| Extension | 466 – 467 |
| Lightweight Extension / Reducer | 468 – 469 |
| Damping element HMD | 470 |
| Adaptor sleeve Whistle Notch | 472 – 473 |
| Adaptor sleeve Weldon | 474 – 475 |
| Adaptor HTR | 476 |
| Adaptor HMK | 477 |
| Tapping chuck | 478 – 479 |
| Collet holder | 480 – 481 |
| Expanding chuck | 482 – 483 |
| Short drill chuck NCB | 484 |
| Milling cutter arbor FA | 485 |
| Milling cutter arbor FAM | 486 |
| Combination milling cutter arbor FAM | 487 |

# KOMET ABS® N NC

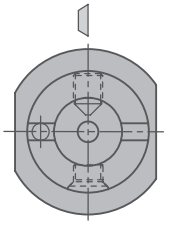
## Adaptor with ABS® N Connection

| machine adaptor | coolant central | stationary tool | tool holder |
|---|---|---|---|
| NC20 DIN 69880 | | | ABS® N |

■ for KUB® drill




Cutter position
for L. H. cutting
KUB® Drills



| NC..20 ABS® N | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS-N Ø d | L | L1 | a | b | Ø d1 | kg |
| ABS50N-NC3020 | A01 11152 | 50 | 60 | 38 | 30 | 55 | 68 | 1,33 |
| ABS40N-NC4020 | A01 11242 | 40 | 50 | 25 | 40 | 63 | 83 | 1,70 |
| ABS50N-NC4020 | A01 11252 | 50 | 60 | 38 | 40 | 63 | 83 | 1,89 |
| ABS63N-NC4020 | A01 11262 | 63 | 70 | 48 | 40 | 63 | 83 | 2,35 |
| ABS80N-NC4020 | A01 11271 | 80 | 75 | 53 | 40 | 63 | 83 | 2,97 |
| ABS50N-NC5020 | A01 11352 | 50 | 65 | 35 | 50 | 78 | 98 | 3,06 |
| ABS63N-NC5020 | A01 11362 | 63 | 75 | 45 | 50 | 78 | 98 | 3,51 |
| ABS80N-NC5020 | A01 11372 | 80 | 75 | 45 | 50 | 78 | 98 | 3,86 |
| ABS50N-NC6020 | A01 11452 | 50 | 65 | 35 | 60 | 94 | 123 | 4,82 |
| ABS63N-NC6020 | A01 11462 | 63 | 75 | 45 | 60 | 94 | 123 | 5,24 |
| ABS80N-NC6020 | A01 11472 | 80 | 75 | 45 | 60 | 94 | 123 | 5,61 |
| ABS100N-NC6020 | A01 11482 | 100 | 90 | 60 | 60 | 94 | 123 | 7,00 |

**Note:**
When adjusting the KUB® drill in + X direction, use this adaptor.



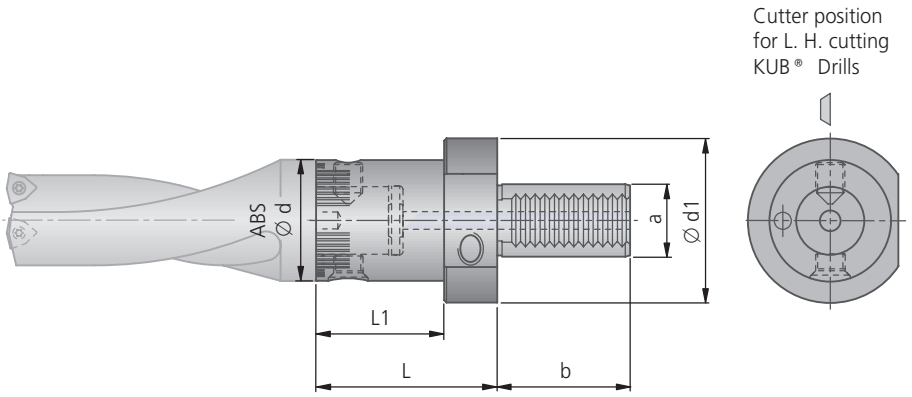
Patent applied for inside and outside Germany (ABS)

# KOMET ABS® NC TSD

## Torsional Dampener with ABS® Connection for KUB® Drill

| machine adaptor | coolant central | vibration dampening | stationary tool | tool holder |
|---|---|---|---|---|
| NC20 DIN 69880 | | | | ABS® |

for KUB® drill ■




| NC..20 ABS® TSD | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | L | L1 | a | b | Ø d1 | kg |
| NC4020 ABS50-TSD | **A01 14251** | 50 | 60 | 38 | 40 | 63 | 83 | 1,89 |
| NC4020 ABS63-TSD | **A01 14261** | 63 | 70 | 48 | 40 | 63 | 83 | 2,35 |
| NC5020 ABS50-TSD | **A01 14351** | 50 | 65 | 35 | 50 | 78 | 98 | 3,06 |
| NC5020 ABS63-TSD | **A01 14361** | 63 | 75 | 45 | 50 | 78 | 98 | 3,51 |
| NC5020 ABS80-TSD | **A01 14370** | 80 | 75 | 45 | 50 | 78 | 98 | 3,86 |

The torsional dampeners are designed for solid drills in line with the torque which is produced.
Recommended use:

...-ABS50-TSD for drill ∅ 14 - 44 mm
...-ABS63-TSD for drill ∅ 45 - 54 mm
...-ABS80-TSD for drill ∅ 55 - 81 mm

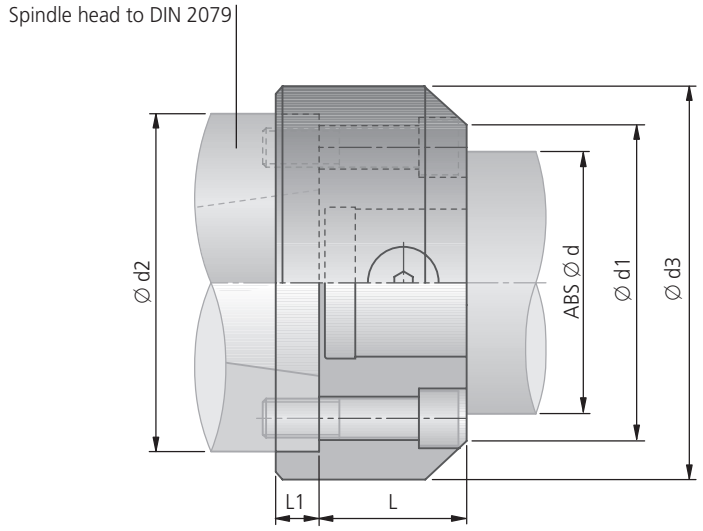
For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).

# KOMET ABS®

## Spindle Adaptor Flange with ABS® Connection

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
| spindle head DIN 2079 | | | ABS® |

■ this adaptor flange does not have key slots. Drive keys on spindle head must be removed.




| DIN 2079 ABS® | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ISO | Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | kg |
| 30 | ABS32 VFS30 | **A01 01130** | 32 | 70 | 69,83 | 90 | 24 | 11 | 1,14 |
| 30 | ABS40 VFS30 | **A01 01140** | 40 | 70 | 69,83 | 90 | 28 | 11 | 1,24 |
| 30 | ABS50 VFS30 | **A01 01150** | 50 | 70 | 69,83 | 90 | 32 | 11 | 1,42 |
| 30 | ABS63 VFS30 | **A01 01160** | 63 | 70 | 69,83 | 90 | 40 | 11 | 1,71 |
| 40 | ABS40 VFS40 | **A01 01240** | 40 | 80 | 88,88 | 110 | 28 | 12 | 2,02 |
| 40 | ABS50 VFS40 | **A01 01250** | 50 | 80 | 88,88 | 110 | 32 | 12 | 2,15 |
| 40 | ABS63 VFS40 | **A01 01260** | 63 | 80 | 88,88 | 110 | 40 | 12 | 2,60 |
| 40 | ABS80 VFS40 | **A01 01270** | 80 | 100 | 88,88 | 110 | 44 | 12 | 2,74 |
| 50 | ABS50 VFS50 | **A01 01450** | 50 | 120 | 128,57 | 150 | 32 | 17 | 4,57 |
| 50 | ABS63 VFS50 | **A01 01460** | 63 | 120 | 128,57 | 150 | 40 | 17 | 5,22 |
| 50 | ABS80 VFS50 | **A01 01470** | 80 | 120 | 128,57 | 150 | 44 | 17 | 5,65 |
| 50 | ABS100 VFS50 | **A01 01480** | 100 | 120 | 128,57 | 150 | 56 | 17 | 6,52 |
| 50 | ABS125 VFS50 | **A01 01490** | 125 | 140 | 128,57 | 160 | 72 | 17 | 9,24 |

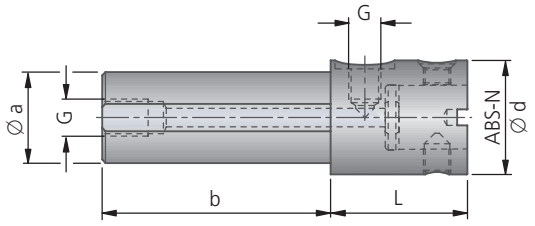
**Supply includes:**
Adaptor mounted complete.



Patent applied for inside and outside Germany (ABS)

## Adaptor with ABS® N Connection

| machine adaptor | coolant central | stationary tool | tool holder |
|---|---|---|---|
| Cylindrical shank | | | ABS® N |



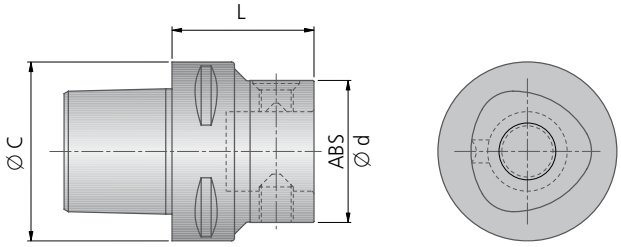

| ABS® N TC | | | | | | | |
|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS-N Ø d | L | Ø a | b | G | kg |
| ABS50N-TC40 | A01 15450 | 50 | 60 | 40 | 100 | G3/8" | 1,67 |
| ABS63N-TC40 | A01 15460 | 63 | 65 | 40 | 100 | G3/8" | 2,25 |
| ABS50N-TC50 | A01 15550 | 50 | 60 | 50 | 120 | G3/8" | 2,50 |
| ABS63N-TC50 | A01 15560 | 63 | 65 | 50 | 120 | G3/8" | 3,10 |
| ABS80N-TC50 | A01 15570 | 80 | 70 | 50 | 120 | G3/8" | 3,94 |
| ABS50N-TC60 | A01 15650 | 50 | 60 | 60 | 120 | G3/8" | 3,35 |
| ABS63N-TC60 | A01 15660 | 63 | 65 | 60 | 120 | G3/8" | 3,87 |
| ABS80N-TC60 | A01 15670 | 80 | 70 | 60 | 120 | G3/8" | 4,84 |
| ABS50N-TC80 | A01 15750 | 50 | 60 | 80 | 160 | G3/8" | 6,87 |
| ABS63N-TC80 | A01 15760 | 63 | 65 | 80 | 160 | G3/8" | 7,41 |
| ABS80N-TC80 | A01 15770 | 80 | 70 | 80 | 160 | G3/8" | 8,25 |
| ABS100N-TC80 | A01 15780 | 100 | 90 | 80 | 160 | G3/8" | 10,38 |

We supply other shank versions on request.

# KOMET® ISO 26623

## PSC Adaptor with ABS® Connection

| machine adaptor | coolant central | stationary tool | tool holder |
|---|---|---|---|
|   |  |  |   |




| PSC interface ABS® | | | | | |
|---|---|---|---|---|---|
| Article | Order No. | Ø C | ABS Ø d | L | kg |
| PSC C5 / ABS50 | **A69 05050** | 50 | 50 | 50 | 0,95 |
| PSC C6 / ABS50 | **A69 06050** | 63 | 50 | 50 | 1,00 |
| PSC C6 / ABS63 | **A69 06060** | 63 | 63 | 60 | 1,34 |
| PSC C8 / ABS50 | **A69 08050** | 80 | 50 | 50 | 1,76 |
| PSC C8 / ABS63 | **A69 08060** | 80 | 63 | 60 | 2,11 |
| PSC C8 / ABS80 | **A69 08070** | 80 | 80 | 80 | 2,99 |

Other adaptors with connections for specific manufacturers can be supplied on request.

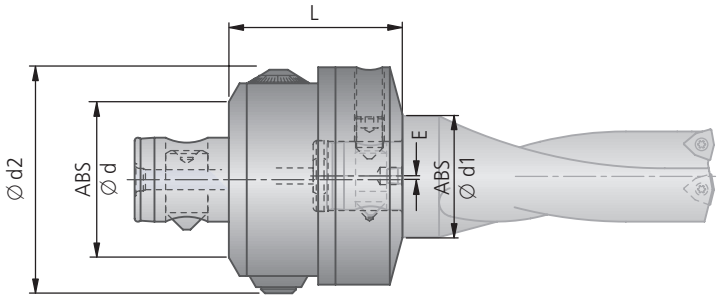


Patent applied for inside and outside Germany (ABS)

# KOMET ABS® MV

## Adjustment Device with ABS® Connection

| machine adaptor | coolant central | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
|  |  |  |  |  |




| ABS® MV | | | | | | | |
|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | ABS Ø d1 | Ø d2 | L | E | kg |
| ABS50 / 50-MV | M01 00000 | 50 | 50 | 70 | 57 | 1,5 | 1,49 |
| ABS63 / 50-MV | M01 00010 | 63 | 50 | 88 | 70 | 1,5 | 3,01 |
| ABS63 / 63-MV | M01 00020 | 63 | 63 | 88 | 70 | 1,5 | 2,89 |

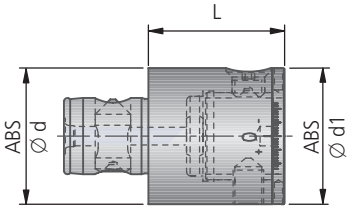
- Accurate adjustment with micro-adjustable spindle.
- Maximum adjustment range 3 mm on diameter.
- Scale divisions 1 division 0.02 mm on diameter.
- Rigid clamping of head after adjustment achieved by means of 4 clamping screws on face.
- **Note:** A seal cannot be used in the ABS® hole with the M01 adjustment device.

# KOMET ABS®

## Eccentric Adjusting Device with ABS® Connection

| machine adaptor | coolant central | adjustable | rotating tool | tool holder |
|---|---|---|---|---|
|  |  |  |  |  |

■ adjustment path ± 0.25 mm in the diameter




| ABS® EXZ | | | | | | |
|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | ABS Ø d1 | L | kg | Adjusting key Order No. |
| ABS50-V50 EXZ. | **A20 00620** | 50 | 50 | 50 | 0,71 | **1804300028** |
| ABS63-V60 EXZ. | **A20 00630** | 63 | 63 | 60 | 1,33 | **1804300028** |

**Supply includes:**
Eccentric adjusting device with adjusting key.

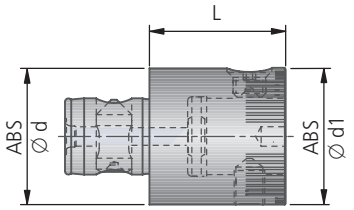


Patent applied for inside and outside Germany (ABS)

# KOMET ABS® TSD

## Torsional Dampener with ABS® Connection

| machine adaptor | coolant central | vibration dampening | rotating tool | tool holder |
|---|---|---|---|---|
|  |  |  |  |  |




| ABS® TSD | | | | | |
|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | ABS Ø d1 | L | kg |
| ABS50-V50-TSD | A20 00651 | 50 | 50 | 50 | 0,69 |
| ABS63-V60-TSD | A20 00661 | 63 | 63 | 60 | 1,32 |
| ABS80-V70-TSD | A20 00670 | 80 | 80 | 70 | 2,5 |

**Supply includes:**
Torsional dampener with sealing disc (chapter 8)

The torsional dampeners are designed for solid drills in line with the torque which is produced.
Recommended use:

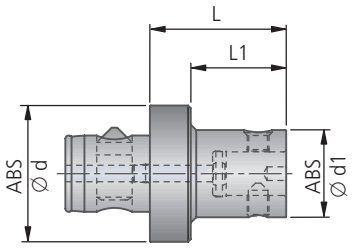
...-ABS50-TSD for drill ∅ 14 - 44 mm
...-ABS63-TSD for drill ∅ 45 - 54 mm
...-ABS80-TSD for drill ∅ 55 - 81 mm

For drill heads V464 with larger diameters we recommend the use of appropriate reducers (available on request).

# KOMET ABS® R

## Reducer with ABS® Connection

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |




| ABS® R | | | | | | |
|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | ABS Ø d1 | L | L1 | kg |
| ABS 32-R 25 | A20 10120 | 32 | 25 | 40 | 30 | 0,18 |
| ABS 40-R 32 | A20 10230 | 40 | 32 | 40 | 28 | 0,30 |
| ABS 40-R 25 | A20 10220 | 40 | 25 | 40 | 28 | 0,26 |
| ABS 50-R 40 | A20 10340 | 50 | 40 | 50 | 35 | 0,62 |
| ABS 50-R 32 | A20 10330 | 50 | 32 | 50 | 35 | 0,53 |
| ABS 50-R 25 | A20 10320 | 50 | 25 | 50 | 35 | 0,47 |
| ABS 63-R 50 | A20 10450 | 63 | 50 | 60 | 40 | 1,15 |
| ABS 63-R 40 | A20 10440 | 63 | 40 | 60 | 40 | 1,05 |
| ABS 63-R 32 | A20 10430 | 63 | 32 | 60 | 40 | 0,94 |
| ABS 63-R 25 | A20 10420 | 63 | 25 | 60 | 40 | 0,86 |
| ABS 80-R 63 | A20 10560 | 80 | 63 | 60 | 35 | 2,01 |
| ABS 80-R 50 | A20 10550 | 80 | 50 | 60 | 35 | 1,85 |
| ABS 80-R 40 | A20 10540 | 80 | 40 | 60 | 35 | 1,76 |
| ABS 80-R 32 | A20 10530 | 80 | 32 | 60 | 35 | 1,67 |
| ABS100-R 80 | A20 10670 | 100 | 80 | 80 | 50 | 4,11 |
| ABS100-R 63 | A20 10660 | 100 | 63 | 80 | 50 | 3,70 |
| ABS100-R 50 | A20 10650 | 100 | 50 | 80 | 50 | 3,35 |
| ABS125-R100 | A20 10780 | 125 | 100 | 100 | 50 | 8,56 |
| ABS125-R 80 | A20 10770 | 125 | 80 | 100 | 50 | 8,01 |
| ABS125-R 63 | A20 10760 | 125 | 63 | 100 | 50 | 7,62 |
| ABS125-R 50 | A20 10750 | 125 | 50 | 100 | 50 | 7,42 |

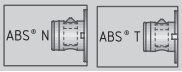
**Supply includes:**
Reducer mounted complete.

Other lengths available on request



Patent applied for inside and outside Germany (ABS)

# Reducer with ABS® N / ABS® T Connection

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |





| ABS® N R | | | | | | |
|---|---|---|---|---|---|---|
| Article | Order No. | ABS-N Ø d | ABS-N Ø d1 | L | L1 | kg |
| ABS 50N-R 40 | A20 20340 | 50 | 40 | 50 | 35 | 0,62 |
| ABS 50N-R 32 | A20 20330 | 50 | 32 | 50 | 35 | 0,53 |
| ABS 50N-R 25 | A20 20320 | 50 | 25 | 50 | 35 | 0,47 |
| ABS 63N-R 50 | A20 20450 | 63 | 50 | 60 | 40 | 1,15 |
| ABS 63N-R 40 | A20 20440 | 63 | 40 | 60 | 40 | 1,05 |
| ABS 80N-R 63 | A20 20560 | 80 | 63 | 60 | 35 | 2,01 |
| ABS 80N-R 50 | A20 20550 | 80 | 50 | 60 | 35 | 1,85 |
| ABS 80N-R 40 | A20 20540 | 80 | 40 | 60 | 35 | 1,76 |
| ABS100N-R 80 | A20 20670 | 100 | 80 | 80 | 50 | 4,11 |
| ABS100N-R 63 | A20 20660 | 100 | 63 | 80 | 50 | 3,70 |
| ABS100N-R 50 | A20 20650 | 100 | 50 | 80 | 50 | 3,35 |

| ABS® T R | | | | | | |
|---|---|---|---|---|---|---|
| Article | Order No. | ABS-T Ø d | ABS-N Ø d1 | L | L1 | kg |
| ABS 63T-R50 | A20 21450 | 63 | 50 | 60 | 21 | |
| ABS 80T-R63 | A20 21560 | 80 | 63 | 60 | 22 | |

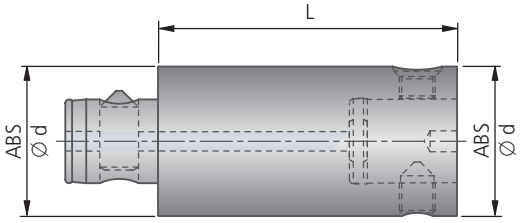
**Supply includes:**
Reducer mounted complete.

Other lengths available on request

# KOMET ABS® V

## Extension with ABS® Connection

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |




| ABS® V | | | | |
|---|---|---|---|---|
| Article | Order No. | ABS Ø d | L | kg |
| ABS 25-V60 | A20 00220 | 25 | 60 | 0,22 |
| ABS 25-V45 | A20 00020 | 25 | 45 | 0,16 |
| ABS 32-V70 | A20 00230 | 32 | 70 | 0,42 |
| ABS 32-V50 | A20 00030 | 32 | 50 | 0,29 |
| ABS 32-V35 | A20 00530 | 32 | 35 | 0,20 |
| ABS 40-V90 | A20 00240 | 40 | 90 | 0,84 |
| ABS 40-V60 | A20 00040 | 40 | 60 | 0,52 |
| ABS 40-V40 | A20 00540 | 40 | 40 | 0,36 |
| ABS 50-V150 | A20 00150 | 50 | 150 | 2,22 |
| ABS 50-V100 | A20 00250 | 50 | 100 | 1,46 |
| ABS 50-V65 | A20 00050 | 50 | 65 | 0,94 |
| ABS 50-V50 | A20 00550 | 50 | 50 | 0,71 |
| ABS 63-V190 | A20 00160 | 63 | 190 | 4,47 |
| ABS 63-V125 | A20 00260 | 63 | 125 | 2,94 |
| ABS 63-V85 | A20 00060 | 63 | 85 | 1,97 |
| ABS 63-V60 | A20 00560 | 63 | 60 | 1,37 |
| ABS 80-V240 | A20 00170 | 80 | 240 | 9,18 |
| ABS 80-V125 | A20 00270 | 80 | 125 | 4,71 |
| ABS 80-V85 | A20 00070 | 80 | 85 | 3,15 |
| ABS 80-V70 | A20 00570 | 80 | 70 | 2,58 |
| ABS100-V160 | A20 00280 | 100 | 160 | 9,47 |
| ABS100-V125 | A20 00080 | 100 | 125 | 7,36 |
| ABS100-V85 | A20 00580 | 100 | 85 | 4,95 |
| ABS125-V200 | A20 00290 | 125 | 200 | 18,96 |
| ABS125-V160 | A20 00090 | 125 | 160 | 15,13 |

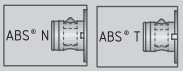
**Supply includes:**
Extension mounted complete.



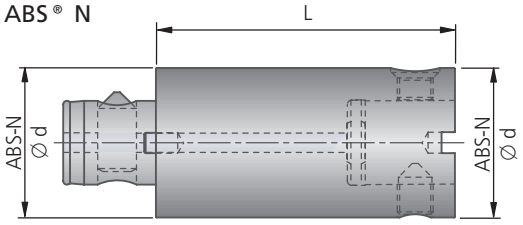
Patent applied for inside and outside Germany (ABS)

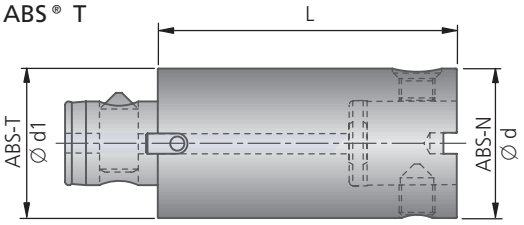
# KOMET ABS® N V / ABS® T V

## Extension with ABS® N / ABS® T Connection

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
|  |  |  |  |






| ABS® N V / ABS® T V | | | | | |
|---|---|---|---|---|---|
| Article | Order No. | ABS-N Ø d | ABS-T Ø d1 | L | kg |
| ABS 32N-V35 | A20 05830 | 32 | | 35 | 0,20 |
| ABS 40N-V90 | A20 05640 | 40 | | 90 | 0,84 |
| ABS 40N-V60 | A20 05440 | 40 | | 60 | 0,52 |
| ABS 40N-V40 | A20 05840 | 40 | | 40 | 0,36 |
| ABS 50T-V150 | A20 05751 | 50 | 50 | 150 | 2,22 |
| ABS 50T-V100 | A20 05652 | 50 | 50 | 100 | 1,46 |
| ABS 50N-V65 | A20 05450 | 50 | | 65 | 0,94 |
| ABS 50N-V50 | A20 05850 | 50 | | 50 | 0,71 |
| ABS 63T-V190 | A20 05760 | 63 | 63 | 190 | 4,47 |
| ABS 63T-V125 | A20 05661 | 63 | 63 | 125 | 2,94 |
| ABS 63N-V85 | A20 05460 | 63 | | 85 | 1,97 |
| ABS 63N-V60 | A20 05860 | 63 | | 60 | 1,37 |
| ABS 80T-V240 | A20 05770 | 80 | 80 | 240 | 9,18 |
| ABS 80T-V125 | A20 05671 | 80 | 80 | 125 | 4,71 |
| ABS 80N-V85 | A20 05470 | 80 | | 85 | 3,15 |
| ABS 80N-V70 | A20 05870 | 80 | | 70 | 2,58 |
| ABS100N-V160 | A20 05680 | 100 | | 160 | 9,47 |
| ABS100N-V125 | A20 05480 | 100 | | 125 | 7,36 |
| ABS100N-V85 | A20 05880 | 100 | | 85 | 4,95 |

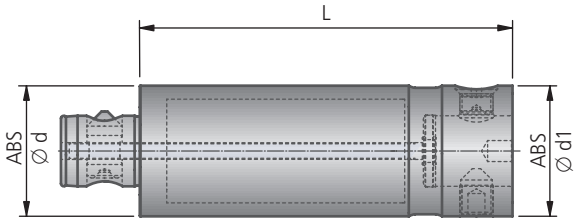
**Supply includes:**
Extension mounted complete.

**Note:**
For optimum torque drive we recommend the use of ABS® T extensions.

# KOMET ABS® V LB

## Lightweight Extension with ABS® Connection

| machine adaptor | coolant central | lightweight | rotating tool | tool holder |
|---|---|---|---|---|
|  |  |  |  |  |




| ABS® V LB | | | | | |
|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | ABS Ø d1 | L | kg |
| ABS63-V125-LB | A20 01060 | 63 | 63 | 125 | 1,90 |
| ABS63-V190-LB | A20 01160 | 63 | 63 | 190 | 2,60 |
| ABS80-V170-LB | A20 01070 | 80 | 80 | 170 | 4,00 |
| ABS80-V240-LB | A20 01170 | 80 | 80 | 240 | 5,30 |
| ABS100-V200-LB | A20 01080 | 100 | 100 | 200 | 7,30 |
| ABS100-V300-LB | A20 01180 | 100 | 100 | 300 | 9,70 |

**Supply includes:**
Extension mounted complete.

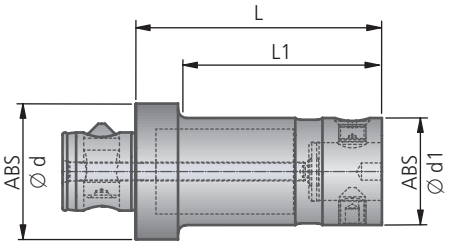


Patent applied for inside and outside Germany (ABS)

# KOMET ABS® R LB

## Lightweight Reducer with ABS® Connection

| machine adaptor | coolant central | lightweight | rotating tool | tool holder |
|---|---|---|---|---|
|  |  |  |  |  |




| ABS® R LB | | | | | | |
|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | ABS Ø d1 | L | L1 | kg |
| ABS80-R63-LB | A20 11560 | 80 | 63 | 145 | 120 | 2,80 |
| ABS100-R80-LB | A20 11670 | 100 | 80 | 160 | 130 | 5,00 |

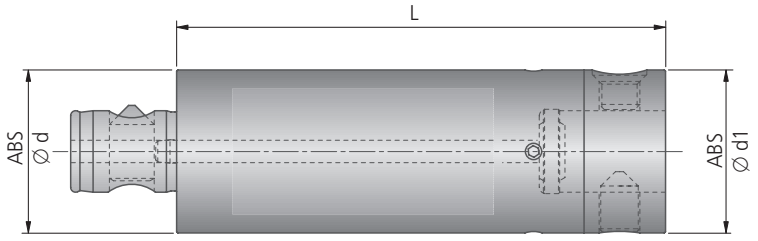
**Supply includes:**
Reducer mounted complete.

# KOMET ABS® V HMD

## Damping Element with ABS® Connection

| machine adaptor | vibration dampening | coolant central | rotating tool | stationary tool | tool holder |
|---|---|---|---|---|---|
|  |  |  |  |  |  |

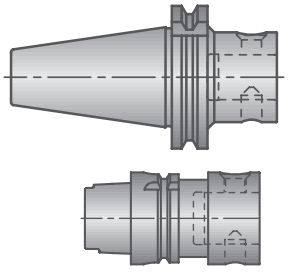
- reduction in undesirable vibration in the tool
- suitable for shrink fits




| ABS® V HMD | | | | | |
|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | ABS Ø d1 | L | kg |
| ABS 40-V120-HMD | A20 01240 | 40 | 40 | 120 | 1,5 |
| ABS 50-V150-HMD | A20 01250 | 50 | 50 | 150 | 2,8 |
| ABS 63-V190-HMD | A20 01260 | 63 | 63 | 190 | 5,8 |
| ABS 80-V240-HMD | A20 01270 | 80 | 80 | 240 | 11,6 |

**Supply includes:**
Extension mounted complete.

**Please note:**
HMD extension not suitable for continuous drilling.

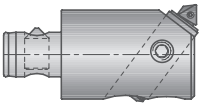


ABS40
ABS50
ABS63
ABS80



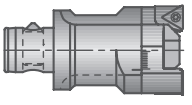
Adjustable Head

ABS40
ABS50
ABS63
ABS80



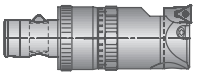
TwinKom® G01

ABS40
ABS50
ABS63
ABS80



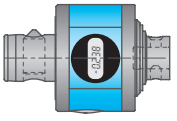
MicroKom® M03Speed

ABS40
ABS50
ABS63



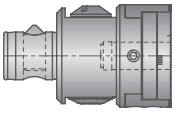
MicroKom® M04

ABS50



MicroKom® *hi.flex*

ABS50





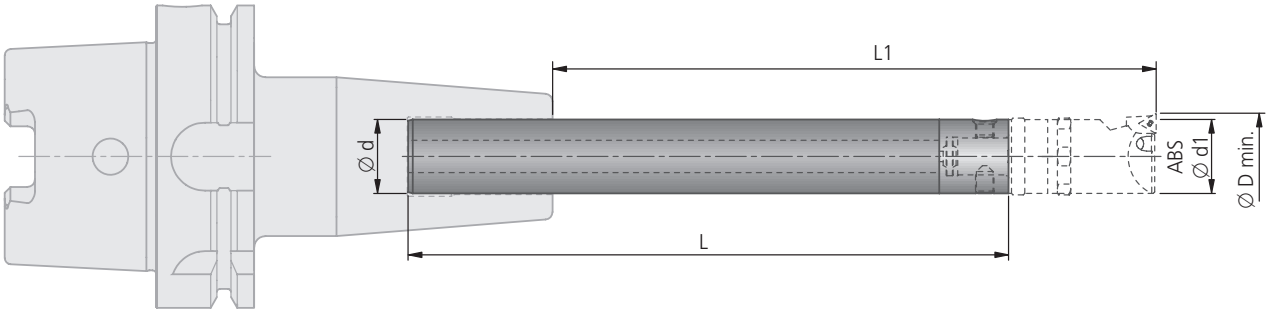
Patent applied for inside and outside Germany (ABS)

# KOMET ABS® V HMD

## Damping Element with ABS® Connection

| machine adaptor | vibration dampening | coolant central | rotating tool | stationary tool | tool holder |
|---|---|---|---|---|---|
| cylindrical shank | | | | | ABS® |

reduction in undesirable vibration in the tool ■
suitable for shrink fits ■




| ABS® V HMD | | | | | | | |
|---|---|---|---|---|---|---|---|
| Article | Order No. | Cylindrical shank Ø d | ABS Ø d1 | Ø $D_{min.}$ | L | L1 | kg |
| ABS 25-V150-HMD | **A20 01220***1 | 25 | 25 | 26 | 160 | 150 * | 0,84 |
| ABS 25-V175-HMD | **A20 01320***2 | 25 | 25 | 26 | 185 | 175 * | 0,98 |
| ABS 25-V200-HMD | **A20 01420***3 | 25 | 25 | 26 | 210 | 200 * | 1,13 |
| ABS 32-V200-HMD | **A20 01230***1 | 32 | 32 | 38 | 200 | 200 * | 1,74 |
| ABS 32-V230-HMD | **A20 01330***2 | 32 | 32 | 38 | 230 | 230 * | 2,03 |
| ABS 32-V260-HMD | **A20 01430***3 | 32 | 32 | 38 | 260 | 260 * | 2,31 |

**Supply includes:**
Extension mounted complete.

* dimension inclusive of M03..... or B30.... Boring heads
*1 suitable for steel, cast and non ferrous metals
*2 suitable for cast and non ferrous metals
*3 only for non ferrous metals

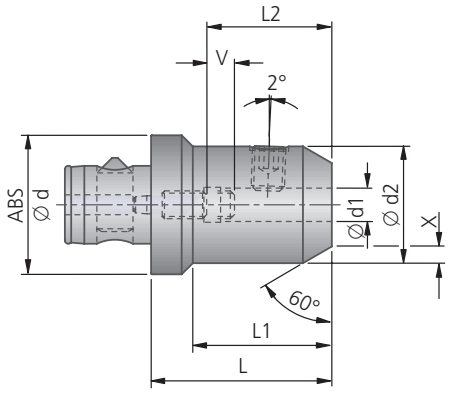
**Please note:**
HMD extension not suitable for continuous drilling.

# KOMET ABS® FWD

## Adaptor Sleeve Whistle Notch

| machine adaptor | concentricity | coolant central through screw | rotating tool | tool holder |
|---|---|---|---|---|
| ABS® | ≦ 10µm | | | DIN1835-E Whistle Notch / DIN6535HE |

■ the 2° tilt of the clamping screws prevents the tool from pulling out




Tool restriction X for:
Ø 6 = 5 mm Ø 12 = 6 mm
Ø 8 = 4 mm Ø 16 = 6 mm
Ø 10 = 5 mm Ø 20 = 6 mm

| ABS® FWD | | | | | | | | | | Assembly parts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Clamping screw | | Adjusting screw |
| Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | L | L1 | L2 | V | kg | Order No. | Qty. | Order No. |
| ABS25 FWD6 | A30 10601 | 25 | 6 | 25 | 55 | – | 36 | 10 | 0,21 | 51050 06010 | 1 | N00 71000 |
| ABS25 FWD...* | A30 10 ..1 | 25 | 6,1–6,4 | 25 | 55 | – | 36 | 10 | 0,21 | 51050 06010 | 1 | N00 71000 |
| ABS25 FWD...* | A30 10 ..1 | 25 | 6,5–7,9 | 25 | 55 | – | 36 | 10 | 0,21 | 51050 06010 | 1 | N00 71050 |
| ABS25 FWD8 | A30 10801 | 25 | 8 | 28 | 55 | – | 36 | 10 | 0,25 | 51050 08010 | 1 | N00 71050 |
| ABS25 FWD...* | A30 10 ..1 | 25 | 8,1–8,4 | 28 | 55 | – | 36 | 10 | 0,25 | 51050 08010 | 1 | N00 71050 |
| ABS25 FWD...* | A30 10 ..1 | 25 | 8,5–9,9 | 28 | 55 | – | 36 | 10 | 0,25 | 51050 08010 | 1 | N00 71100 |
| ABS25 FWD10 | A30 11001 | 25 | 10 | 35 | 60 | – | 40 | 10 | 0,41 | 51050 10012 | 1 | N00 71100 |
| ABS25 FWD...* | A30 1 ... 1 | 25 | 10,1–10,4 | 35 | 60 | – | 40 | 8 | 0,41 | 51050 10012 | 1 | N00 71100 |
| ABS25 FWD...* | A30 1 ... 1 | 25 | 10,5–11,9 | 35 | 60 | – | 40 | 8 | 0,41 | 51050 10012 | 1 | N00 71200 |
| ABS32 FWD6 | A30 20601 | 32 | 6 | 25 | 55 | 40 | 36 | 10 | 0,25 | 51050 06010 | 1 | N00 71000 |
| ABS32 FWD...* | A30 20 ..1 | 32 | 6,1–6,4 | 25 | 55 | 40 | 36 | 10 | 0,25 | 51050 06010 | 1 | N00 71000 |
| ABS32 FWD...* | A30 20 ..1 | 32 | 6,5–7,9 | 25 | 55 | 40 | 36 | 10 | 0,25 | 51050 06010 | 1 | N00 71050 |
| ABS32 FWD8 | A30 20801 | 32 | 8 | 28 | 55 | 40 | 36 | 10 | 0,29 | 51050 08010 | 1 | N00 71050 |
| ABS32 FWD...* | A30 20 ..1 | 32 | 8,1–8,4 | 28 | 55 | 40 | 36 | 10 | 0,29 | 51050 08010 | 1 | N00 71050 |
| ABS32 FWD...* | A30 20 ..1 | 32 | 8,5–9,9 | 28 | 55 | 40 | 36 | 10 | 0,29 | 51050 08010 | 1 | N00 71110 |
| ABS32 FWD10 | A30 21001 | 32 | 10 | 35 | 60 | – | 40 | 10 | 0,43 | 51050 10012 | 1 | N00 71110 |
| ABS32 FWD...* | A30 2 ... 1 | 32 | 10,1–10,4 | 35 | 60 | – | 40 | 10 | 0,43 | 51050 10012 | 1 | N00 71110 |
| ABS32 FWD...* | A30 2 ... 1 | 32 | 10,5–11,9 | 35 | 60 | – | 40 | 10 | 0,43 | 51050 10012 | 1 | N00 71210 |
| ABS32 FWD12 | A30 21201 | 32 | 12 | 42 | 65 | – | 45 | 10 | 0,65 | 51050 12016 | 1 | N00 71210 |
| ABS32 FWD...* | A30 2 ... 1 | 32 | 12,1–12,4 | 42 | 65 | – | 45 | 10 | 0,65 | 51050 12016 | 1 | N00 71210 |
| ABS32 FWD...* | A30 2 ... 1 | 32 | 12,5–14 | 42 | 65 | – | 45 | 10 | 0,65 | 51050 12016 | 1 | N00 71300 |
| ABS40 FWD6 | A30 30601 | 40 | 6 | 25 | 55 | 35 | 36 | 10 | 0,34 | 51050 06010 | 1 | N00 71000 |
| ABS40 FWD...* | A30 30 ..1 | 40 | 6,1–6,4 | 25 | 55 | 35 | 36 | 10 | 0,34 | 51050 06010 | 1 | N00 71000 |
| ABS40 FWD...* | A30 30 ..1 | 40 | 6,5–7,9 | 25 | 55 | 35 | 36 | 10 | 0,34 | 51050 06010 | 1 | N00 71050 |
| ABS40 FWD8 | A30 30801 | 40 | 8 | 28 | 55 | 35 | 36 | 10 | 0,38 | 51050 08010 | 1 | N00 71050 |
| ABS40 FWD...* | A30 30 ..1 | 40 | 8,1–8,4 | 28 | 55 | 35 | 36 | 10 | 0,38 | 51050 08010 | 1 | N00 71050 |
| ABS40 FWD...* | A30 30 ..1 | 40 | 8,5–9,9 | 28 | 55 | 35 | 36 | 10 | 0,38 | 51050 08010 | 1 | N00 71120 |

▲

Please enter drilling diameter:
Example Ø 7,2 mm = A30 10**72**1
Ø 10,6 mm = A30 1**1061**

**Please note:**
For all adaptor sleeves marked with * the clamping diameter d1 varies from DIN 1835 E.
All dimensions corredpond to the next standardised clamping diameter d1 downwards.

**Supply includes:** Adaptor sleeve with assembly parts.



Patent applied for inside and outside Germany (ABS)

## Adaptor Sleeve Whistle Notch

| ABS® FWD | | | | | | | | | | Assembly parts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Clamping screw | | Adjusting screw |
| Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | L | L1 | L2 | V | kg | Order No. | Qty. | Order No. |
| ABS40 FWD10 | A30 31001 | 40 | 10 | 35 | 60 | 45 | 40 | 10 | 0,48 | 51050 10012 | 1 | N00 71120 |
| ABS40 FWD...* | A30 3 ... 1 | 40 | 10,1–10,4 | 35 | 60 | 45 | 40 | 10 | 0,48 | 51050 10012 | 1 | N00 71120 |
| ABS40 FWD...* | A30 3 ... 1 | 40 | 10,5–11,9 | 35 | 60 | 45 | 40 | 10 | 0,48 | 51050 10012 | 1 | N00 71220 |
| ABS40 FWD12 | A30 31201 | 40 | 12 | 42 | 65 | – | 45 | 10 | 0,68 | 51050 12016 | 1 | N00 71220 |
| ABS40 FWD...* | A30 3 ... 1 | 40 | 12,1–12,4 | 42 | 65 | – | 45 | 10 | 0,68 | 51050 12016 | 1 | N00 71220 |
| ABS40 FWD...* | A30 3 ... 1 | 40 | 12,5–15,9 | 42 | 65 | – | 45 | 10 | 0,68 | 51050 12016 | 1 | N00 71310 |
| ABS40 FWD16 | A30 31601 | 40 | 16 | 48 | 70 | – | 48 | 10 | 0,91 | 51050 14016 | 1 | N00 71400 |
| ABS40 FWD...* | A30 3 ... 1 | 40 | 16,1–19,9 | 48 | 70 | – | 48 | 10 | 0,91 | 51050 14016 | 1 | N00 71400 |
| ABS50 FWD6 | A30 40601 | 50 | 6 | 25 | 55 | 30 | 36 | 10 | 0,53 | 51050 06010 | 1 | N00 71000 |
| ABS50 FWD...* | A30 40 ..1 | 50 | 6,1–6,4 | 25 | 55 | 30 | 36 | 10 | 0,53 | 51050 06010 | 1 | N00 71000 |
| ABS50 FWD...* | A30 40 ..1 | 50 | 6,5–7,9 | 25 | 55 | 30 | 36 | 10 | 0,53 | 51050 06010 | 1 | N00 71050 |
| ABS50 FWD8 | A30 40801 | 50 | 8 | 28 | 55 | 30 | 36 | 10 | 0,57 | 51050 08010 | 1 | N00 71050 |
| ABS50 FWD...* | A30 40 ..1 | 50 | 8,1–8,4 | 28 | 55 | 30 | 36 | 10 | 0,57 | 51050 08010 | 1 | N00 71050 |
| ABS50 FWD...* | A30 40 ..1 | 50 | 8,5–9,9 | 28 | 55 | 30 | 36 | 10 | 0,57 | 51050 08010 | 1 | N00 71120 |
| ABS50 FWD10 | A30 41001 | 50 | 10 | 35 | 60 | 40 | 40 | 10 | 0,66 | 51050 10012 | 1 | N00 71130 |
| ABS50 FWD...* | A30 4 ... 1 | 50 | 10,1–10,4 | 35 | 60 | 40 | 40 | 10 | 0,66 | 51050 10012 | 1 | N00 71130 |
| ABS50 FWD...* | A30 4 ... 1 | 50 | 10,5–11,9 | 35 | 60 | 40 | 40 | 10 | 0,66 | 51050 10012 | 1 | N00 71230 |
| ABS50 FWD12 | A30 41201 | 50 | 12 | 42 | 65 | 50 | 45 | 10 | 0,81 | 51050 12016 | 1 | N00 71230 |
| ABS50 FWD...* | A30 4 ... 1 | 50 | 12,1–12,4 | 42 | 65 | 50 | 45 | 10 | 0,81 | 51050 12016 | 1 | N00 71230 |
| ABS50 FWD...* | A30 4 ... 1 | 50 | 12,5–15,9 | 42 | 65 | 50 | 45 | 10 | 0,81 | 51050 12016 | 1 | N00 71320 |
| ABS50 FWD16 | A30 41601 | 50 | 16 | 48 | 70 | 55 | 48 | 10 | 1,01 | 51050 14016 | 1 | N00 71410 |
| ABS50 FWD...* | A30 4 ... 1 | 50 | 16,1–19,9 | 48 | 70 | 55 | 48 | 10 | 1,01 | 51050 14016 | 1 | N00 71410 |
| ABS50 FWD20 | A30 42002 | 50 | 20 | 52 | 75 | – | 50 | 10 | 1,20 | 51050 16016 | 1 | N00 71500 |
| ABS50 FWD...* | A30 4 ... 2 | 50 | 20,1–24,9 | 52 | 75 | – | 50 | 10 | 1,20 | 51050 16016 | 1 | N00 71500 |
| ABS50 FWD25* | A30 42502 | 50 | 25 | 52 | 75 | – | 50 | 10 | 1,13 | 51050 16016 | 1 | N00 71500 |
| ABS63 FWD10 | A30 51001 | 63 | 10 | 35 | 60 | 35 | 40 | 10 | 0,96 | 51050 10012 | 1 | N00 71130 |
| ABS63 FWD...* | A30 5 ... 1 | 63 | 10,1–10,4 | 35 | 60 | 35 | 40 | 10 | 0,96 | 51050 10012 | 1 | N00 71130 |
| ABS63 FWD...* | A30 5 ... 1 | 63 | 10,5–11,9 | 35 | 60 | 35 | 40 | 10 | 0,96 | 51050 10012 | 1 | N00 71230 |
| ABS63 FWD12 | A30 51201 | 63 | 12 | 42 | 65 | 45 | 45 | 10 | 1,08 | 51050 12016 | 1 | N00 71230 |
| ABS63 FWD...* | A30 5 ... 1 | 63 | 12,1–12,4 | 42 | 65 | 45 | 45 | 10 | 1,08 | 51050 12016 | 1 | N00 71230 |
| ABS63 FWD...* | A30 5 ... 1 | 63 | 12,5–15,9 | 42 | 65 | 45 | 45 | 10 | 1,08 | 51050 12016 | 1 | N00 71320 |
| ABS63 FWD16 | A30 51601 | 63 | 16 | 48 | 70 | 50 | 48 | 10 | 1,27 | 51050 14016 | 1 | N00 71410 |
| ABS63 FWD...* | A30 5 ... 1 | 63 | 16,1–19,9 | 48 | 70 | 50 | 48 | 10 | 1,27 | 51050 14016 | 1 | N00 71410 |
| ABS63 FWD20 | A30 52001 | 63 | 20 | 52 | 75 | 55 | 50 | 10 | 1,43 | 51050 16016 | 1 | N00 71500 |
| ABS63 FWD...* | A30 5 ... 1 | 63 | 20,1–24,9 | 52 | 75 | 55 | 50 | 10 | 1,43 | 51050 16016 | 1 | N00 71500 |
| ABS63 FWD25 | A30 52501 | 63 | 25 | 65 | 80 | – | 56 | 10 | 2,00 | 51050 18220 | 2 | N00 71500 |
| ABS63 FWD...* | A30 5 ... 1 | 63 | 25,1–28 | 65 | 80 | – | 56 | 10 | 2,00 | 51050 18220 | 2 | N00 71500 |
| ABS80 FWD16 | A30 61601 | 80 | 16 | 48 | 70 | 50 | 48 | 10 | 1,80 | 51050 14016 | 1 | N00 71430 |
| ABS80 FWD...* | A30 6 ... 1 | 80 | 16,1–19,9 | 48 | 70 | 50 | 48 | 10 | 1,80 | 51050 14016 | 1 | N00 71430 |
| ABS80 FWD20 | A30 62001 | 80 | 20 | 52 | 75 | 52 | 50 | 10 | 1,98 | 51050 16016 | 1 | N00 71520 |
| ABS80 FWD...* | A30 6 ... 1 | 80 | 20,1–24,9 | 52 | 75 | 52 | 50 | 10 | 1,98 | 51050 16016 | 1 | N00 71520 |
| ABS80 FWD25 | A30 62501 | 80 | 25 | 65 | 80 | 60 | 58 | 10 | 2,50 | 51050 18220 | 2 | N00 71600 |
| ABS80 FWD...* | A30 6 ... 1 | 80 | 25,1–28 | 65 | 80 | 60 | 58 | 10 | 2,50 | 51050 18220 | 2 | N00 71600 |
| ABS80 FWD...* | A30 6 ... 1 | 80 | 28,1–31,9 | 72 | 90 | 70 | 60 | 10 | 2,50 | 51050 20220 | 2 | N00 71650 |
| ABS80 FWD32 | A30 63201 | 80 | 32 | 72 | 90 | 70 | 60 | 10 | 3,02 | 51050 20220 | 2 | N00 71650 |

▲

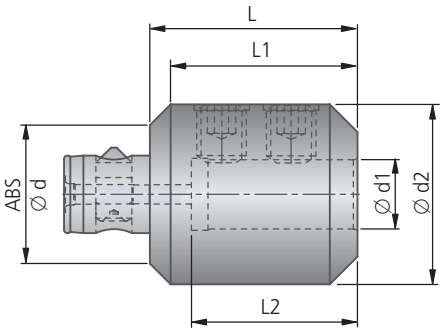
Please enter drilling diameter:
Example Ø 25,1 mm = A30 62511
Ø 31,9 mm = A30 63191

**Please note:**
For all adaptor sleeves marked with * the clamping diameter d1 varies from DIN 1835 E.
All dimensions corredpond to the next standardised clamping diameter d1 downwards.

# KOMET ABS® HWD

## Adaptor Sleeve Weldon

| machine adaptor | concentricity | coolant central | rotating tool | tool holder |
|---|---|---|---|---|
| ABS® | ≤10µm | | | DIN 1835-B Weldon / DIN 1835 T1 A + B |




| ABS® HWD | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Clamping screw | |
| Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | L | L1 | L2 | kg | Order No. | Piece |
| ABS50-HWD6 | A32 40010 | 50 | 6 | 25 | 45 | 27 | 40 | 0,51 | 51050 06010 | 1 |
| ABS50-HWD8 | A32 40020 | 50 | 8 | 28 | 45 | 27 | 40 | 0,49 | 51050 08010 | 1 |
| ABS50-HWD10 | A32 40030 | 50 | 10 | 35 | 55 | 37 | 44 | 0,62 | 51050 10012 | 1 |
| ABS50-HWD12 | A32 40040 | 50 | 12 | 42 | 65 | 50 | 49 | 0,81 | 51050 12016 | 1 |
| ABS50-HWD14 | A32 40080 | 50 | 14 | 44 | 65 | 50 | 49 | 0,85 | 51050 12016 | 1 |
| ABS50-HWD16 | A32 40050 | 50 | 16 | 48 | 65 | 50 | 52 | 0,94 | 51050 14016 | 1 |
| ABS50-HWD18 | A32 40090 | 50 | 18 | 50 | 65 | – | 52 | 0,98 | 51050 14016 | 1 |
| ABS50-HWD20 | A32 40060 | 50 | 20 | 52 | 65 | – | 54 | 1,03 | 51050 16016 | 1 |
| ABS50-HWD25 | A32 40070 | 50 | 25 | 65 | 75 | – | 60 | 1,70 | 51050 18220 | 2 |
| ABS63-HWD10 | A32 50030 | 63 | 10 | 35 | 55 | 37 | 44 | 0,88 | 51050 10012 | 1 |
| ABS63-HWD12 | A32 50040 | 63 | 12 | 42 | 65 | 50 | 49 | 1,02 | 51050 12016 | 1 |
| ABS63-HWD14 | A32 50100 | 63 | 14 | 44 | 65 | 50 | 49 | 1,06 | 51050 12016 | 1 |
| ABS63-HWD16 | A32 50050 | 63 | 16 | 48 | 65 | 50 | 52 | 1,15 | 51050 14016 | 1 |
| ABS63-HWD18 | A32 50110 | 63 | 18 | 50 | 65 | 50 | 52 | 1,21 | 51050 14016 | 1 |
| ABS63-HWD20 | A32 50060 | 63 | 20 | 52 | 65 | 45 | 54 | 1,26 | 51050 16016 | 1 |
| ABS63-HWD25 | A32 50070 | 63 | 25 | 65 | 75 | – | 60 | 1,86 | 51050 18220 | 2 |
| ABS63-HWD32 | A32 50080 | 63 | 32 | 72 | 80 | – | 64 | 2,25 | 51050 20220 | 2 |
| ABS80-HWD16 | A32 60050 | 80 | 16 | 48 | 65 | 45 | 52 | 1,51 | 51050 14016 | 1 |
| ABS80-HWD18 | A32 60110 | 80 | 18 | 50 | 65 | 45 | 52 | 1,81 | 51050 14016 | 1 |
| ABS80-HWD20 | A32 60060 | 80 | 20 | 52 | 65 | 45 | 54 | 1,84 | 51050 16016 | 1 |
| ABS80-HWD25 | A32 60070 | 80 | 25 | 65 | 75 | 55 | 60 | 2,41 | 51050 18220 | 2 |
| ABS80-HWD32 | A32 60080 | 80 | 32 | 72 | 80 | 66 | 64 | 2,62 | 51050 20220 | 2 |

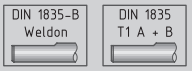
**Supply includes:** Adaptor sleeve with assembly parts.

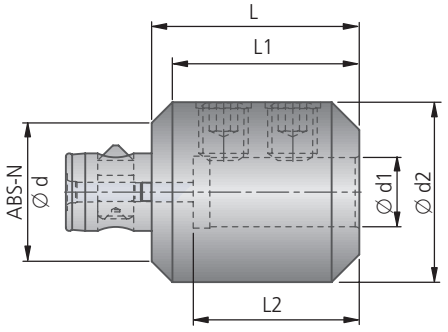


Patent applied for inside and outside Germany (ABS)

# KOMET ABS® N HWD

## Adaptor Sleeve Weldon

| machine adaptor | concentricity | coolant central | rotating tool | tool holder |
|---|---|---|---|---|
|   |   |  |  |   |



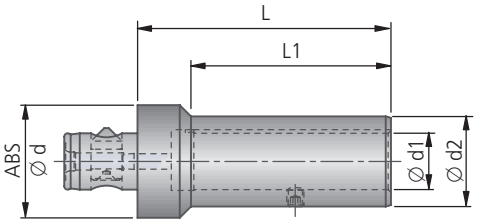

| ABS® N HWD | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS-N Ø d | Ø d1 | Ø d2 | L | L1 | L2 | kg | Clamping screw Order No. | Piece |
| ABS50N-HWD16 | **A32 40250** | 50 | 16 | 48 | 65 | 50 | 52 | 0,94 | **51050 14016** | 1 |
| ABS50N-HWD20 | **A32 40260** | 50 | 20 | 52 | 65 | – | 54 | 1,03 | **51050 16016** | 1 |
| ABS50N-HWD25 | **A32 40270** | 50 | 25 | 65 | 75 | – | 60 | 1,70 | **51050 18220** | 2 |
| ABS63N-HWD16 | **A32 50250** | 63 | 16 | 48 | 65 | 50 | 52 | 1,15 | **51050 14016** | 1 |
| ABS63N-HWD20 | **A32 50260** | 63 | 20 | 52 | 65 | 45 | 54 | 1,26 | **51050 16016** | 1 |
| ABS63N-HWD25 | **A32 50270** | 63 | 25 | 65 | 75 | – | 60 | 1,86 | **51050 18220** | 2 |
| ABS63N-HWD32 | **A32 50280** | 63 | 32 | 72 | 80 | – | 64 | 2,25 | **51050 20220** | 2 |

**Supply includes:** Adaptor sleeve with assembly parts.

# KOMET ABS® HTR

## Adaptor

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
|   |  |  |   |




| ABS® HTR | | | | | | | |
|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | L | L1 | kg |
| ABS50-HTR28 | **A34 04030** | 50 | 28 | 40 | 100 | 88 | 0,75 |
| ABS63-HTR28 | **A34 05030** | 63 | 28 | 40 | 100 | 85 | 1,01 |
| ABS63-HTR36 | **A34 05040** | 63 | 36 | 50 | 125 | 110 | 1,42 |

**Supply includes:**
Adaptor with clamping screw.



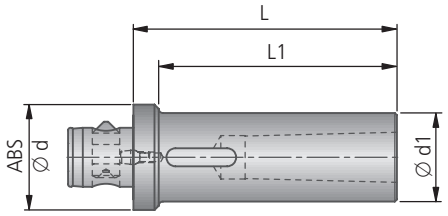
Patent applied for inside and outside Germany (ABS)

# KOMET ABS® HMK

## Adaptor

| machine adaptor | rotating tool | tool holder |
|---|---|---|
|   |  |   |

without central coolant supply ■
adaptor sleeves with central coolant supply available on request ■




| ABS® HMK | | | | | | | |
|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | Ø d1 | Internal taper DIN 228 | L | L1 | kg |
| ABS50-HMK1 | **A34 14020** | 50 | 20 | MK 1 | 90 | 78 | 0,45 |
| ABS50-HMK2 | **A34 14030** | 50 | 30 | MK 2 | 105 | 93 | 0,69 |
| ABS50-HMK3 | **A34 14040** | 50 | 36 | MK 3 | 125 | 113 | 0,96 |
| ABS63-HMK4 | **A34 15050** | 63 | 48 | MK 4 | 150 | 135 | 1,86 |

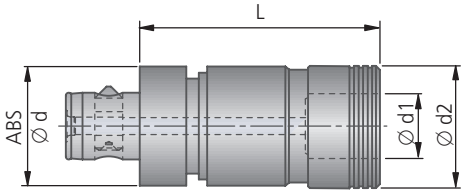
**Supply includes:**
Adaptor with assembly parts.

# KOMET ABS® GWF

## Tapping Chuck

| machine adaptor | coolant central up to 50 bar | rotating tool | tool holder tap holder |
|---|---|---|---|
|  |  |  |  |






| ABS® GWF | | | | | | | |
|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | L | Length compensation pressure and tension | kg |
| ABS 32-GWF19-IK | **A34 32060** | 32 | 19 | 39 | 69 | 7,5 | 0,46 |
| ABS 40-GWF19-IK | **A34 33060** | 40 | 19 | 39 | 73 | 7,5 | 0,55 |
| ABS 50-GWF19-IK | **A34 34060** | 50 | 19 | 39 | 72 | 7,5 | 0,68 |
| ABS 50-GWF31-IK | **A34 34070** | 50 | 31 | 60 | 98 | 10,0 | 1,50 |
| ABS 63-GWF31-IK | **A34 35070** | 63 | 31 | 60 | 111 | 10,0 | 1,65 |
| ABS 63-GWF48-IK | **A34 35080** | 63 | 48 | 86 | 160 | 17,5 | 4,70 |
| ABS100-GWF60-IK | **A34 37100** | 100 | 60 | 107 | 195 | 20,0 | 10,00 |

**Supply includes:**
Tapping chuck with assembly parts.

Tapping chucks with tension adjustment on request.

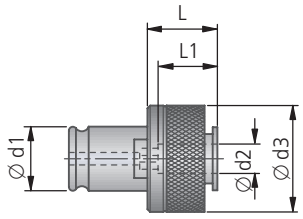


Patent applied for inside and outside Germany (ABS)

# KOMET® Tap Holder

## for Tapping Chuck

■ with safety coupling
■ for location of taps

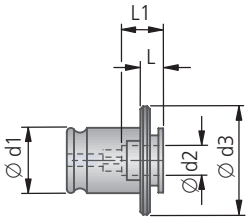



* Please state shank diameter d2 required
Example: tap M3.5 · shank d2 = **3,55** mm
Order No. A34 911100**355**

**Tap holder WES**

| for taps | Article | Order No. | d1 | d3 | L | L1 |
|---|---|---|---|---|---|---|
| M 3 | WES 1 B (M3) | A34 91100..* | 19 | 32 | 25 | 17 |
| M 3,5 | WES 1 B (M3,5) | A34 91110..* | 19 | 32 | 25 | 17 |
| M 4 | WES 1 B (M4) | A34 91120..* | 19 | 32 | 25 | 17 |
| M 4,5 | WES 1 B (M4,5) | A34 91130..* | 19 | 32 | 25 | 17 |
| M 5 | WES 1 B (M5) | A34 91140..* | 19 | 32 | 25 | 17 |
| M 6 | WES 1 B (M6) | A34 91150..* | 19 | 32 | 25 | 17 |
| M 8 | WES 1 B (M8) | A34 91160..* | 19 | 32 | 25 | 17 |
| M 10 | WES 1 B (M10) | A34 91170..* | 19 | 32 | 25 | 17 |
| M 12 | WES 1 B (M12) | A34 91180..* | 19 | 32 | 25 | 17 |
| M 8 | WES 2 B (M8) | A34 92160..* | 31 | 50 | 34 | 30 |
| M 10 | WES 2 B (M10) | A34 92170..* | 31 | 50 | 34 | 30 |
| M 12 | WES 2 B (M12) | A34 92180..* | 31 | 50 | 34 | 30 |
| M 14 | WES 2 B (M14) | A34 92190..* | 31 | 50 | 34 | 30 |
| M 16 | WES 2 B (M16) | A34 92200..* | 31 | 50 | 34 | 30 |
| M 18 | WES 2 B (M18) | A34 92210..* | 31 | 50 | 34 | 30 |
| M 20 | WES 2 B (M20) | A34 92220..* | 31 | 50 | 34 | 30 |
| M 14 | WES 3 B (M14) | A34 93190..* | 48 | 72 | 45 | 44 |
| M 16 | WES 3 B (M16) | A34 93200..* | 48 | 72 | 45 | 44 |
| M 18 | WES 3 B (M18) | A34 93210..* | 48 | 72 | 45 | 44 |
| M 20 | WES 3 B (M20) | A34 93220..* | 48 | 72 | 45 | 44 |
| M 22 | WES 3 B (M22) | A34 93230..* | 48 | 72 | 45 | 44 |
| M 24 | WES 3 B (M24) | A34 93240..* | 48 | 72 | 45 | 44 |
| M 27 | WES 3 B (M27) | A34 93250..* | 48 | 72 | 45 | 44 |
| M 30 | WES 3 B (M30) | A34 93260..* | 48 | 72 | 45 | 44 |
| M 33 | WES 3 B (M33) | A34 93270..* | 48 | 72 | 45 | 44 |
| M 22 | WES 4 B (M22) | A34 94230..* | 60 | 95 | 68 | 71 |
| M 24 | WES 4 B (M24) | A34 94240..* | 60 | 95 | 68 | 71 |
| M 27 | WES 4 B (M27) | A34 94250..* | 60 | 95 | 68 | 71 |
| M 30 | WES 4 B (M30) | A34 94260..* | 60 | 95 | 68 | 71 |
| M 33 | WES 4 B (M33) | A34 94270..* | 60 | 95 | 68 | 71 |
| M 36 | WES 4 B (M36) | A34 94280..* | 60 | 95 | 68 | 71 |
| M 39 | WES 4 B (M39) | A34 94290..* | 60 | 95 | 68 | 71 |
| M 42 | WES 4 B (M42) | A34 94300..* | 60 | 95 | 68 | 71 |
| M 45 | WES 4 B (M45) | A34 94310..* | 60 | 95 | 68 | 71 |
| M 48 | WES 4 B (M48) | A34 94320..* | 60 | 95 | 68 | 71 |

■ for location of taps




* Please state shank diameter d2 required
Example: tap M3.5 · shank d2 = **3,55** mm
Order No. A34 961100**355**

**Tap holder WE**

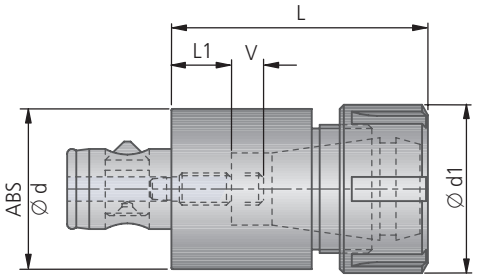
| for taps | Article | Order No. | d1 | d3 | L | L1 |
|---|---|---|---|---|---|---|
| M 3 | WE 1 (M3) | A34 96100..* | 19 | 30 | 7 | 17 |
| M 3,5 | WE 1 (M3,5) | A34 96110..* | 19 | 30 | 7 | 17 |
| M 4 | WE 1 (M4) | A34 96120..* | 19 | 30 | 7 | 17 |
| M 4,5 | WE 1 (M4,5) | A34 96130..* | 19 | 30 | 7 | 17 |
| M 5 | WE 1 (M5) | A34 96140..* | 19 | 30 | 7 | 17 |
| M 6 | WE 1 (M6) | A34 96150..* | 19 | 30 | 7 | 17 |
| M 8 | WE 1 (M8) | A34 96160..* | 19 | 30 | 7 | 17 |
| M 10 | WE 1 (M10) | A34 96170..* | 19 | 30 | 7 | 17 |
| M 12 | WE 1 (M12) | A34 96180..* | 19 | 30 | 7 | 17 |
| M 8 | WE 2 (M8) | A34 97160..* | 31 | 48 | 11 | 30 |
| M 10 | WE 2 (M10) | A34 97170..* | 31 | 48 | 11 | 30 |
| M 12 | WE 2 (M12) | A34 97180..* | 31 | 48 | 11 | 30 |
| M 14 | WE 2 (M14) | A34 97190..* | 31 | 48 | 11 | 30 |
| M 16 | WE 2 (M16) | A34 97200..* | 31 | 48 | 11 | 30 |
| M 18 | WE 2 (M18) | A34 97210..* | 31 | 48 | 11 | 30 |
| M 20 | WE 2 (M20) | A34 97220..* | 31 | 48 | 11 | 30 |
| M 14 | WE 3 (M14) | A34 98190..* | 48 | 70 | 14 | 44 |
| M 16 | WE 3 (M16) | A34 98200..* | 48 | 70 | 14 | 44 |
| M 18 | WE 3 (M18) | A34 98210..* | 48 | 70 | 14 | 44 |
| M 20 | WE 3 (M20) | A34 98220..* | 48 | 70 | 14 | 44 |
| M 22 | WE 3 (M22) | A34 98230..* | 48 | 70 | 14 | 44 |
| M 24 | WE 3 (M24) | A34 98240..* | 48 | 70 | 14 | 44 |
| M 27 | WE 3 (M27) | A34 98250..* | 48 | 70 | 14 | 44 |
| M 30 | WE 3 (M30) | A34 98260..* | 48 | 70 | 14 | 44 |
| M 33 | WE 3 (M33) | A34 98270..* | 48 | 70 | 14 | 44 |
| M 22 | WE 4 (M22) | A34 99230..* | 60 | 92 | 42 | 71 |
| M 24 | WE 4 (M24) | A34 99240..* | 60 | 92 | 42 | 71 |
| M 27 | WE 4 (M27) | A34 99250..* | 60 | 92 | 42 | 71 |
| M 30 | WE 4 (M30) | A34 99260..* | 60 | 92 | 42 | 71 |
| M 33 | WE 4 (M33) | A34 99270..* | 60 | 92 | 42 | 71 |
| M 36 | WE 4 (M36) | A34 99280..* | 60 | 92 | 42 | 71 |
| M 39 | WE 4 (M39) | A34 99290..* | 60 | 92 | 42 | 71 |
| M 42 | WE 4 (M42) | A34 99300..* | 60 | 92 | 42 | 71 |
| M 45 | WE 4 (M45) | A34 99310..* | 60 | 92 | 42 | 71 |
| M 48 | WE 4 (M48) | A34 99320..* | 60 | 92 | 42 | 71 |

# KOMET ABS® SZV

## Collet Holder

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
| ABS® | | | Cylindrical shank |

- high concentricity with ground thread on holder and clamping nut
- axial adjustment




| ABS® SZV | | | | | | | Accessories | Assembly parts | | | Accessories | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Hook spanner | Adjusting screw ⑤ short with hole | | | Adjusting screw short without hole | | long with hole | |
| Article | Order No. | ABS Ø d | Ø d1 | Clamping range for collet L | L1 | kg | Order No. | Article | Order No. | V | Order No. | V | Order No. | V |
| ABS25 SZV/ER16 | A33 11120 | 25 | 28 | 36,5–40,1 | 9 | 0,12 | L05 02020 | M5 | N00 71900 | 4 | N00 71910 | 4 | N00 71020 | 8 |
| ABS32 SZV/ER20 | A33 12130 | 32 | 34 | 49–52,5 | 14 | 0,26 | L05 02030 | M6 | N00 71070 | 8 | N00 71940 | 8 | N00 71050 | 10 |
| ABS40 SZV/ER25 | A33 13141 | 40 | 42 | 58,5–62 | 16 | 0,50 | L05 02040 | M8×1 | N00 71970 | 8 | N00 71980 | 8 | N00 71150 | 15 |
| ABS50 SZV/ER32 | A33 14151 | 50 | 50 | 65,8–69,3 | 18 | 0,86 | L05 02050 | M10×1 | N00 71280 | 6 | N00 71240 | 10 | N00 71250 | 15 |
| ABS63 SZV/ER40 | A33 15161 | 63 | 63 | 74,8–78,3 | 23 | 1,58 | L05 02060 | M12×1 | N00 71320 | 8 | N00 71340 | 15 | N00 71350 | 20 |
| ABS80 SZV/ER50 | A33 16171 | 80 | 78 | 92,3–99,3 | 27 | 3,22 | L05 02070 | M16×1 | N00 71520 | 8 | – | | – | |

| | Assembly parts | Accessories | | |
|---|---|---|---|---|
| | Collet nut ① | Collet nut ② for washer | Collet nut ③ with friction bearings | Collet nut ④ with friction bearings for washer |
| for size | Order No. | Order No. | Order No. | Order No. |
| ER16 | 51200 00316 | 51200 00416 | 52807 03016 | 52807 01016 |
| ER20 | 51200 00320 | 51200 00420 | 52807 03020 | 52807 01020 |
| ER25 | 51200 00325 | 51200 00425 | 52807 03025 | 52807 01025 |
| ER32 | 51200 00332 | 51200 00432 | 52807 03032 | 52807 01032 |
| ER40 | 51200 00340 | 51200 00440 | 52807 03040 | 52807 01040 |

**Supply includes:**
Collet holder with adjusting screw ⑤ and collet nut ①.
Please order accessories separately.

**Washer**
for collet nuts ② and ④



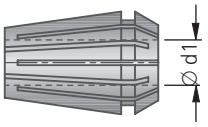

| Article | Order No. | optional from Ø d1 | Clamping range increasing by |
|---|---|---|---|
| DS/ER 16... | 52806 16... | 3 – 10 | 0,5 mm |
| DS/ER 20... | 52806 20... | 3 – 13 | 0,5 mm |
| DS/ER 25... | 52806 25... | 3 – 16 | 0,5 mm |
| DS/ER 32... | 52806 32... | 3 – 20 | 0,5 mm |
| DS/ER 40... | 52806 33... | 3 – 26 | 0,5 mm |

Please state diameter required d1 , e.g. : ▲
**035** → Ø 3,5 mm≙d1 3,5–3,0 mm
**090** → Ø 9,0 mm≙d1 9,0–8,5 mm
**260** → Ø 26,0 mm≙d1 26,0–25,5 mm

**Note:** The washers can be used up to a coolant pressure of 100 bar.


Patent applied for inside and outside Germany (ABS)

Note:
[1] Tool shank diameter d1 must not be greater than collet nominal dimension d1 (risk of fracture)



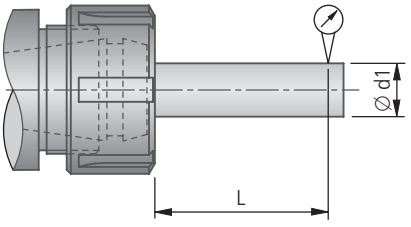

| for collet holder | Order No. | [1] optional from Ø d1 | Clamping range |
|---|---|---|---|
| ABS.. SZV/ER16 | **A33 52000...** | 3 – 10 | 1 mm |
| ABS.. SZV/ER20 | **A33 53000...** | 3 – 13 | 1 mm |
| ABS.. SZV/ER25 | **A33 54000...** | 3 – 16 | 1 mm |
| ABS.. SZV/ER32 | **A33 55000...** | 3 – 20 | 1 mm |
| ABS.. SZV/ER40 | **A33 56000...** | 3 – 26 | 1 mm |

Please state diameter ▲
required d1, e. g.: **0300** for Ø 3,0 mm
**2600** for Ø 26,0 mm

| high precision | | | |
|---|---|---|---|
| for collet holder | Order No. | [1] optional from Ø d1 | Clamping range |
| ABS.. SZV/ER16 | **A33 52010...** | 3 – 10 | from diameter 3 mm in 0.5 mm stages |
| ABS.. SZV/ER20 | **A33 53010...** | 3 – 13 | |
| ABS.. SZV/ER25 | **A33 54010...** | 3 – 16 | |
| ABS.. SZV/ER32 | **A33 55010...** | 3 – 20 | |
| ABS.. SZV/ER40 | **A33 56010...** | 3 – 26 | |

Please state diameter ▲
required d1, e. g.: **0300** for Ø 3,0 mm
**2650** for Ø 26,5 mm

## Concentricity of Collets

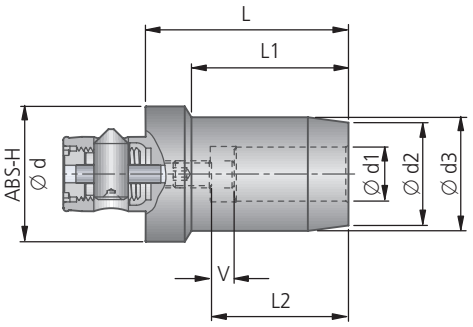


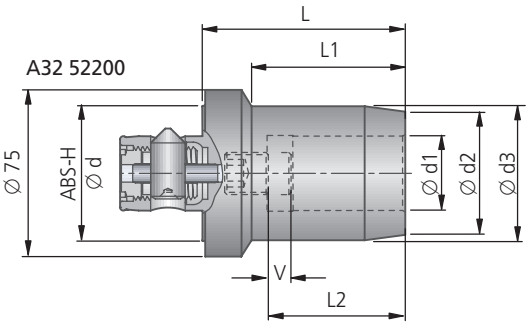

| L | Ø d1 | Accuracy of concentricity to collets and collet holder | Accuracy of concentricity (higher precision) to collets and collet holder |
|---|---|---|---|
| 6 | 1,0 – 1,6 | 0,015 | 0,010 |
| 10 | 1,6 – 3,0 | 0,015 | 0,010 |
| 16 | 3,0 – 6,0 | 0,015 | 0,010 |
| 25 | 6,0 – 10,0 | 0,015 | 0,010 |
| 40 | 10,0 – 18,0 | 0,020 | 0,015 |
| 50 | 18,0 – 26,0 | 0,020 | 0,015 |

# KOMET ABS® H

## Expanding Chuck

| machine adaptor | concentricity | coolant central | rotating tool | tool holder |
|---|---|---|---|---|
| ABS®H | ≤ 3 µm | | | cylindrical shank · DIN 6535 HA · DIN 6535 HB · DIN 6535 HE · DIN 1835-B Weldon · DIN 1835-E Whistle Notch · DIN 6535 HE + DIN 6595 |




| ABS® H | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | |
| Order No. | ABS-H Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | L2 | V | kg | Article | Order No. |
| A32 32050 | 40 | 6 | 22 | 26 | 55 | 36,5 | 37 | 10 | 0,59 | M5×12 | N00 71020 |
| A32 32060 | 40 | 8 | 24 | 28 | 60 | 42 | 37 | 10 | 0,42 | M6×12 | N00 71070 |
| A32 32070 | 40 | 10 | 26 | 30 | 65 | 47,5 | 41 | 10 | 0,46 | M8×1×12 | N00 71730 |
| A32 32080 | 40 | 12 | 28 | 32 | 65 | 48 | 46 | 10 | 0,43 | M10×1×12 | N00 71800 |
| A32 42110 | 50 | 6 | 22 | 26 | 55 | 33,5 | 37 | 10 | 0,53 | M5×12 | N00 71020 |
| A32 42120 | 50 | 8 | 24 | 28 | 55 | 34 | 37 | 10 | 0,60 | M6×12 | N00 71070 |
| A32 42130 | 50 | 10 | 26 | 30 | 65 | 45 | 41 | 10 | 0,56 | M8×1×12 | N00 71730 |
| A32 42140 | 50 | 12 | 28 | 32 | 65 | 45,5 | 46 | 10 | 0,61 | M10×1×12 | N00 71800 |
| A32 42150 | 50 | 14 | 30 | 34 | 65 | 46 | 46 | 10 | 0,60 | M10×1×12 | N00 71800 |
| A32 42160 | 50 | 16 | 34 | 38 | 70 | 52 | 49 | 10 | 0,80 | M10×1×12 | N00 71800 |
| A32 42170 | 50 | 18 | 36 | 40 | 70 | 52,5 | 49 | 10 | 0,85 | M10×1×12 | N00 71800 |
| A32 42101 | 50 | 20 | 38 | 42 | 75 | 58 | 51 | 10 | 0,90 | M16×1×16 | N00 71540 |
| A32 52180 | 63 | 20 | 38 | 42 | 78 | 56 | 51 | 10 | 1,15 | M16×1×16 | N00 71540 |
| A32 52190 | 63 | 25 | 53 | 57 | 85 | 60 | 57 | 10 | | M16×1×16 | N00 71540 |
| A32 52200 | 63 | 32 | 60 | 64 | 90 | 61 | 61 | 10 | 2,10 | M16×1×16 | N00 71540 |

**Tool shank tolerance:** h6 for ∅ 6 - 32 mm

**Supply includes:** Expanding chuck fitted complete with adjusting screw.

- **Axial adjustment:** Adjustment is by means of the ABS-H spigot with an hexagonal key.
- **Coolant:** Internal central coolant onto cutting edge.
- **ABS-H connection:** ABS-H, the ABS variation for use where greater concentricity is required, is fully compatible with the ABS standard programme. During the clamping operation, the design of the ABS-H compensates for play in the connection.
- **Closed system:** The system is fully sealed. No dirt, coolant lubricants or chips can penetrate.
- **Accuracy:** Maximum long-term concentricity and repeatability of ≤ 3 µm. Because of evenly distributed application of the cutting edges, low wear and good operational safety. Tool life can often be increased more than four times
- **Adaptor sleeve:** Using adaptor sleeves several shank diameters can be clamped with one expanding chuck.
- **Spindle speed:** from 15000 $min^{-1}$ we recommend that the chuck be balanced before using with clamped tool.
- **no maintenance**

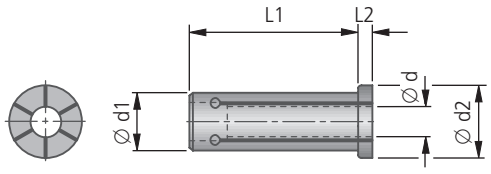


EP 0 615 478 and other patents and patent applications (ABS-H)

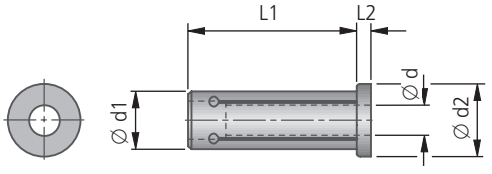
# KOMET® Adaptor Sleeve

## for Expanding Chuck

with slotted collar
for peripheral cooling




with closed collar
for internal coolant supply



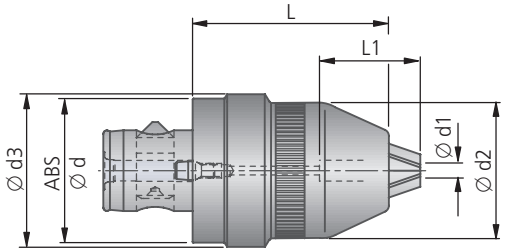

| Adaptor sleeve | | | | | | |
|---|---|---|---|---|---|---|
| Order No. | Ø d | Ø d1 | Ø d2 | L1 | L2 | kg |
| L01 13291 | 3 | 12 | 19 | 45 | 2 | 0,1 |
| L01 13301 | 4 | | | | | |
| L01 13311 | 5 | | | | | |
| L01 13321 | 6 | | | | | |
| L01 13331 | 8 | | | | | |
| L01 13261 | 3 | 20 | 29 | 50,5 | 2 | 0,1 |
| L01 13271 | 4 | | | | | |
| L01 13281 | 5 | | | | | |
| L01 13201 | 6 | | | | | |
| L01 13211 | 8 | | | | | |
| L01 13221 | 10 | | | | | |
| L01 13231 | 12 | | | | | |
| L01 13241 | 14 | | | | | |
| L01 13251 | 16 | | | | | |
| L01 13501 | 6 | 32 | 39 | 60,5 | 3 | 0,3 |
| L01 13511 | 8 | | | | | |
| L01 13521 | 10 | | | | | |
| L01 13531 | 12 | | | | | |
| L01 13541 | 14 | | | | | |
| L01 13551 | 16 | | | | | |
| L01 13561 | 18 | | | | | |
| L01 13571 | 20 | | | | | |
| L01 13581 | 25 | | | | | |

| Adaptor sleeve | | | | | | |
|---|---|---|---|---|---|---|
| Order No. | Ø d | Ø d1 | Ø d2 | L1 | L2 | kg |
| L01 14291 | 3 | 12 | 19 | 45 | 2 | 0,1 |
| L01 14301 | 4 | | | | | |
| L01 14311 | 5 | | | | | |
| L01 14321 | 6 | | | | | |
| L01 14331 | 8 | | | | | |
| L01 14261 | 3 | 20 | 29 | 50,5 | 2 | 0,1 |
| L01 14271 | 4 | | | | | |
| L01 14281 | 5 | | | | | |
| L01 14201 | 6 | | | | | |
| L01 14211 | 8 | | | | | |
| L01 14221 | 10 | | | | | |
| L01 14231 | 12 | | | | | |
| L01 14241 | 14 | | | | | |
| L01 14251 | 16 | | | | | |
| L01 14501 | 6 | 32 | 39 | 60,5 | 3 | 0,3 |
| L01 14511 | 8 | | | | | |
| L01 14521 | 10 | | | | | |
| L01 14531 | 12 | | | | | |
| L01 14541 | 14 | | | | | |
| L01 14551 | 16 | | | | | |
| L01 14561 | 18 | | | | | |
| L01 14571 | 20 | | | | | |
| L01 14581 | 25 | | | | | |

# KOMET ABS® NCB

## Short Drill Chuck

| machine adaptor | concentricity | balancing note (chapter 8) | coolant central | rotating tool | tool holder |
|---|---|---|---|---|---|
|   |   |   |  |  |   |




| ABS® NCB | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | Clamping range Ø d1 | Ø d2 | Ø d3 | L | Clamping depth L1 | kg |
| ABS50-NCB1 | A34 24030 | 50 | 0,5-13 | 49 | 57,5 | 95 | 29 | 1,56 |
| ABS50-NCB2 | A34 24040 | 50 | 3-16 | 52 | 57,5 | 95 | 29 | 1,60 |

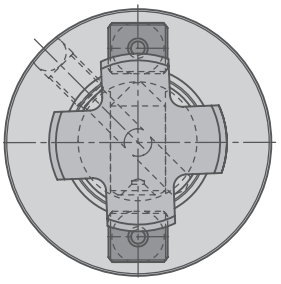
**Supply includes:**
Short drill chuck with ZETTL allen key.

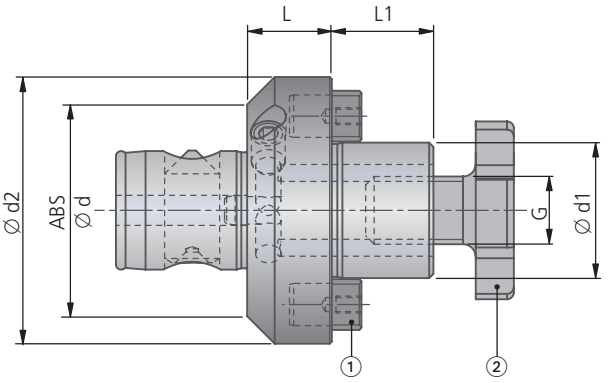
- clamping with original ZETTL allen key only
- the maximum permissible spindle speed for short drill chuck is **6500 min**$^{-1}$ for **pre-balanced** design
- on request: for **fine balanced** version (Q2.5), the maximum spindle speed is **20 000 min**$^{-1}$
- higher clamping force (also suitable for milling)



Patent applied for inside and outside Germany (ABS)

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
| ABS® | | | DIN 6358 |






| ABS® FA | | | | | | | | | Assembly parts | | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | L | L1 | G | kg | Drive key ① Order No. | Cutter clamping screw ② DIN 6367 Order No. Article | Allen key DIN 6368 on request Order No. Article |
| ABS50-FA16* | A40 24023 | 50 | 16 | 50 | 20 | 17 | M 8 | 0,48 | A40 24020.12 | 55062 00008 M8 | 18701 80016 SW16 |
| ABS50-FA22 | A40 24034 | 50 | 22 | 50 | 20 | 19 | M10 | 0,51 | N12 20120 | 55062 00010 M10 | 18701 80022 SW 22 |
| ABS50-FA27 | A40 24043 | 50 | 27 | 50 | 20 | 21 | M12 | 0,57 | N12 20140 | 55062 00012 M12 | 18701 80027 SW 27 |
| ABS50-FA32 | A40 24053 | 50 | 32 | 63 | 20 | 24 | M16 | 0,80 | N10 20170 | 55062 00016 M16 | 18701 80032 SW 32 |
| ABS63-FA22 | A40 25032 | 63 | 22 | 63 | 22 | 19 | M10 | 0,84 | N12 20120 | 55062 00010 M10 | 18701 80022 SW 22 |
| ABS63-FA27 | A40 25042 | 63 | 27 | 63 | 22 | 21 | M12 | 0,90 | N12 20140 | 55062 00012 M12 | 18701 80027 SW 27 |
| ABS63-FA32 | A40 25052 | 63 | 32 | 63 | 22 | 24 | M16 | 0,99 | N10 20170 | 55062 00016 M16 | 18701 80032 SW 32 |
| ABS63-FA40 | A40 25062 | 63 | 40 | 80 | 22 | 27 | M20 | 1,41 | N12 20200 | 55062 00020 M20 | 18701 80040 SW 40 |
| ABS80-FA27 | A40 26042 | 80 | 27 | 80 | 25 | 21 | M12 | 1,59 | N12 20140 | 55062 00012 M12 | 18701 80027 SW 27 |
| ABS80-FA32 | A40 26052 | 80 | 32 | 80 | 25 | 24 | M16 | 1,68 | N10 20170 | 55062 00016 M16 | 18701 80032 SW 32 |
| ABS80-FA40 | A40 26062 | 80 | 40 | 80 | 25 | 27 | M20 | 1,85 | N12 20200 | 55062 00020 M20 | 18701 80040 SW 40 |
| ABS100-FA32 | A40 27052 | 100 | 32 | 100 | 25 | 24 | M16 | | N10 20170 | 55062 00016 M16 | 18701 80032 SW 32 |
| ABS100-FA40 | A40 27062 | 100 | 40 | 100 | 25 | 27 | M20 | | N12 20200 | 55062 00020 M20 | 18701 80040 SW 40 |

* without internal coolant supply

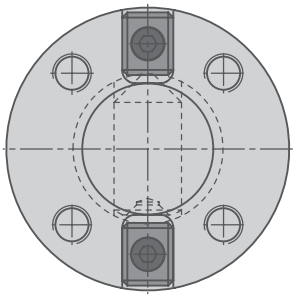
**Supply includes:**
Milling cutter adaptor with assembly parts. Please order accessories separately.

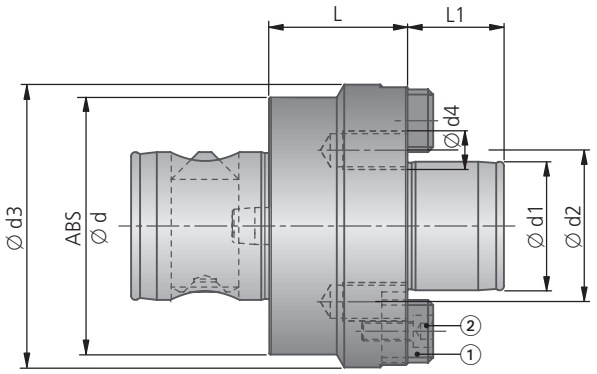
# KOMET ABS® FAM

## Milling Cutter Arbor

| machine adaptor | rotating tool | tool holder |
|---|---|---|
|  |  |  |

■ for cutter heads with internal bore location






| ABS® FAM | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | Ø d3 | Ø d4 | L | L1 | kg | Key block DIN 2079 ① Order No. Article | Clamping screw DIN 912 ② Order No. Article |
| ABS 80-FAM40 | **A40 16062** | 80 | 40 | 66,7 | 88 | M12 | 43 | 30 | 2,60 | **56341 00001** A40 | **55011 06016** M 6×16 |
| ABS100-FAM40 | **A40 17062** | 100 | 40 | 66,7 | 88 | M12 | 38 | 30 | 3,50 | **56341 00001** A40 | **55011 06016** M 6×16 |
| ABS100-FAM60 | **A40 17072** | 100 | 60 | 101,6 | 130 | M16 | 56 | 40 | 6,50 | **56341 00003** A50 | **55011 12025** M 12×25 |

**Supply includes:**
Milling cutter adaptor with assembly parts.

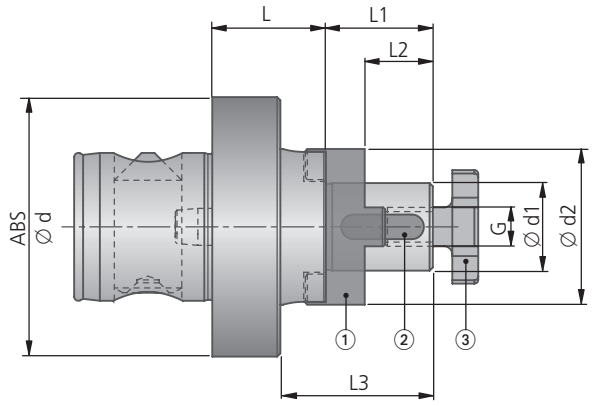


Patent applied for inside and outside Germany (ABS)

# Combination Milling Cutter Arbor

| machine adaptor | rotating tool | tool holder |
|---|---|---|
|  |  |  |

for milling cutters with longitudinal or cross slots ■




| ABS® FAK | | | | | | | | | | | Assembly parts | | | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | L | L1 | L2 | L3 | G | kg | Driving ring DIN 6366 Part 1 ① Order No. Article | Feather key DIN 6885 Part 1 ② Order No. Article | Cutter clamping screw DIN 6367 ③ Order No. Article | Allen key DIN 6368 on request Order No. Article |
| ABS 50-FAK16 | **A40 04022** | 50 | 16 | 32 | 22 | 27 | 17 | 39 | M 8 | 0,46 | **55237 00016** 16×10 | **51305 04020** A4×4×20 | **55062 00008** M8 | **18701 80016** SW16 |
| ABS 50-FAK22 | **A40 04032** | 50 | 22 | 40 | 22 | 31 | 19 | 43 | M10 | 0,59 | **55237 00022** 22×12 | **51305 06025** A6×6×25 | **55062 00010** M10 | **18701 80022** SW22 |
| ABS 63-FAK16 | **A40 05021** | 63 | 16 | 32 | 26 | 27 | 17 | 42 | M 8 | 1,0 | **55237 00016** 16×10 | **51305 04020** A4×4×20 | **55062 00008** M8 | **18701 80016** SW16 |
| ABS 63-FAK22 | **A40 05031** | 63 | 22 | 40 | 26 | 31 | 19 | 46 | M10 | 1,15 | **55237 00022** 22×12 | **51305 06025** A6×6×25 | **55062 00010** M10 | **18701 80022** SW22 |
| ABS 63-FAK27 | **A40 05041** | 63 | 27 | 48 | 26 | 33 | 21 | 48 | M12 | 1,25 | **55237 00027** 27×12 | **51305 07025** A7×7×25 | **55062 00012** M12 | **18701 80027** SW27 |
| ABS 80-FAK22 | **A40 06031** | 80 | 22 | 40 | 33 | 31 | 19 | 51 | M10 | 1,8 | **55237 00022** 22×12 | **51305 06025** A6×6×25 | **55062 00010** M10 | **18701 80022** SW22 |
| ABS 80-FAK27 | **A40 06041** | 80 | 27 | 48 | 33 | 33 | 21 | 53 | M12 | 1,9 | **55237 00027** 27×12 | **51305 07025** A7×7×25 | **55062 00012** M12 | **18701 80027** SW27 |
| ABS 80-FAK32 | **A40 06051** | 80 | 32 | 58 | 33 | 38 | 24 | 58 | M16 | 2,3 | **55237 00032** 32×14 | **51305 08028** A8×7×28 | **55062 00016** M16 | **18701 80032** SW32 |
| ABS 80-FAK40 | **A40 06061** | 80 | 40 | 70 | 33 | 41 | 27 | 61 | M20 | 2,75 | **55237 00040** 40×14 | **51305 10032** A10×8×32 | **55062 00020** M20 | **18701 80040** SW40 |

**Supply includes:**
Milling cutter adaptor with assembly parts. Please order accessories separately.

# KOMET®

## Shrink Fit Technology THERMOGRIP®




**BENEFITS for you:**

- Rapid thermal expansion and shrinkage
- Maximum clamping forces can be achieved
- Longer tool life and spindle life
- Good surfaces due to high rigidity produced by tool clamping
- Good bending and radial rigidity even with long overhangs
- Narrow chuck design
- Clamping for solid carbide and HSS tools for shank tolerance h6, < ∅ 6 h5 to DIN 6335 and DIN 1835 possible with the same chucks
- By using a special heat resistant steel and a special heat treatment process the chucks have particularly good durability and stable form
- Chuck concentricity ≦ 3 µm
- Used for extremely high spindle speeds



KOMET®

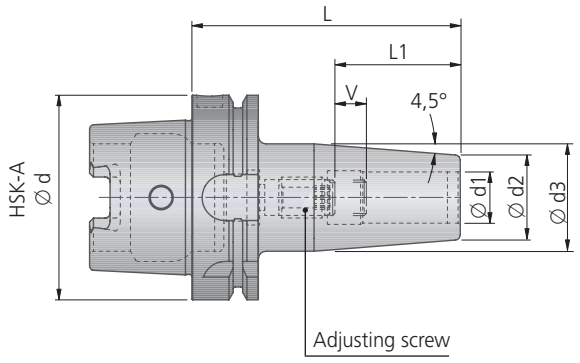
| KOMET® THERMOGRIP | Page |
|---|---|
| **HSK-A adaptor** | |
| short design | 490 / 492 |
| long design | 491 / 493 |
| **HSK-E adaptor** | 494 |
| **Cylindrical adaptor** | |
| Extension / Reducer | 495 |
| **Taper shank** | |
| DIN 69871-1 AD | 496 – 497 |
| DIN 69871-1 AD/B | 498 – 499 |
| JIS B 6339 (MAS 403 BT) | 500 – 501 |
| **ABS® adaptor** | 502 |
| **Measuring adaptor** | 503 |
| **Technical information** | 504 – 505 |

# KOMET® ISO 12164-1

## HSK-A Thermal Expansion Chuck THERMOGRIP

| machine adaptor | location | balancing note (chapter 8) | coolant central | rotating tool | tool holder |
|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | DIN 69882-8 | pre-balanced Q6,3 18.000 min⁻¹ | | | DIN 1835 A · DIN 1835-B Weldon · DIN 6535 A · DIN 6535 HB · DIN 6535 HE |

■ short design




| HSK-A DIN 69893 T1 Thermogrip® | | | | | | | | | | Assembly parts: Adjusting screw | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. |
| HSK-A32-T3 | **A06 06010** | 32 | 3 | 15 | 20 | 65 | 20 | 5 | | M6 / SW3 | **55051 06008** |
| HSK-A32-T4 | **A06 06020** | 32 | 4 | 15 | 20 | 65 | 20 | 5 | | M6 / SW3 | **55051 06008** |
| HSK-A32-T5 | **A06 06030** | 32 | 5 | 15 | 20 | 65 | 20 | 5 | | M6 / SW3 | **55051 06008** |
| HSK-A32-T6 | **A06 06040** | 32 | 6 | 21 | 27 | 70 | 36 | 10 | | M5 / SW2,5 | **N00 72000** |
| HSK-A32-T8 | **A06 06050** | 32 | 8 | 21 | 27 | 70 | 36 | 10 | | M6 / SW3 | **N00 72010** |
| HSK-A32-T10 | **A06 06061** | 32 | 10 | 24 | 32 | 70 | 42 | 10 | | M8×1 / SW4 | **N00 72050** |
| HSK-A32-T12 | **A06 06071** | 32 | 12 | 24 | 32 | 75 | 47 | 5 | | M10×1 / SW5 | **N00 72060** |
| HSK-A40-T6 | **A06 16040** | 40 | 6 | 21 | 27 | 80 | 36 | 10 | 0,38 | M5 / SW2,5 | **N00 72000** |
| HSK-A40-T8 | **A06 16050** | 40 | 8 | 21 | 27 | 80 | 36 | 10 | 0,38 | M6 / SW3 | **N00 72010** |
| HSK-A40-T10 | **A06 16061** | 40 | 10 | 24 | 32 | 80 | 42 | 10 | 0,45 | M8×1 / SW4 | **N00 72050** |
| HSK-A40-T12 | **A06 16071** | 40 | 12 | 24 | 32 | 90 | 47 | 10 | 0,49 | M10×1 / SW5 | **N00 72060** |
| HSK-A40-T14 | **A06 16081** | 40 | 14 | 27 | 34 | 90 | 47 | 10 | | M10×1 / SW5 | **N00 72060** |
| HSK-A40-T16 | **A06 16091** | 40 | 16 | 27 | 34 | 90 | 50 | 10 | 0,52 | M12×1 / SW6 | **N00 72070** |
| HSK-A50-T6 | **A06 26040** | 50 | 6 | 21 | 27 | 80 | 36 | 10 | 0,56 | M5 / SW2,5 | **N00 72000** |
| HSK-A50-T8 | **A06 26050** | 50 | 8 | 21 | 27 | 80 | 36 | 10 | | M6 / SW3 | **N00 72010** |
| HSK-A50-T10 | **A06 26061** | 50 | 10 | 24 | 32 | 85 | 42 | 10 | 0,64 | M8×1 / SW4 | **N00 72050** |
| HSK-A50-T12 | **A06 26071** | 50 | 12 | 24 | 32 | 90 | 47 | 10 | 0,65 | M10×1 / SW5 | **N00 72060** |
| HSK-A50-T14 | **A06 26081** | 50 | 14 | 27 | 34 | 90 | 47 | 10 | | M10×1 / SW5 | **N00 72060** |
| HSK-A50-T16 | **A06 26091** | 50 | 16 | 27 | 34 | 95 | 50 | 10 | | M12×1 / SW6 | **N00 72070** |
| HSK-A50-T18 | **A06 26101** | 50 | 18 | 33 | 42 | 95 | 50 | 10 | | M12×1 / SW6 | **N00 72070** |
| HSK-A50-T20 | **A06 26111** | 50 | 20 | 33 | 42 | 100 | 52 | 10 | | M16×1 / SW8 | **N00 72080** |
| HSK-A63-T6 | **A06 36040** | 63 | 6 | 21 | 27 | 80 | 36 | 10 | 0,80 | M5 / SW2,5 | **N00 72000** |
| HSK-A63-T8 | **A06 36050** | 63 | 8 | 21 | 27 | 80 | 36 | 10 | 0,80 | M6 / SW3 | **N00 72010** |
| HSK-A63-T10 | **A06 36061** | 63 | 10 | 24 | 32 | 85 | 42 | 10 | 0,90 | M8×1 / SW4 | **N00 72050** |
| HSK-A63-T12 | **A06 36071** | 63 | 12 | 24 | 32 | 90 | 47 | 10 | 0,90 | M10×1 / SW5 | **N00 72060** |
| HSK-A63-T14 | **A06 36081** | 63 | 14 | 27 | 34 | 90 | 47 | 10 | 0,98 | M10×1 / SW5 | **N00 72060** |
| HSK-A63-T16 | **A06 36091** | 63 | 16 | 27 | 34 | 95 | 50 | 10 | 0,90 | M12×1 / SW6 | **N00 72070** |
| HSK-A63-T18 | **A06 36101** | 63 | 18 | 33 | 42 | 95 | 50 | 10 | 1,14 | M12×1 / SW6 | **N00 72070** |
| HSK-A63-T20 | **A06 36111** | 63 | 20 | 33 | 42 | 100 | 52 | 10 | 1,18 | M16×1 / SW8 | **N00 72080** |
| HSK-A63-T25 | **A06 36121** | 63 | 25 | 44 | 53 | 115 | 58 | 10 | 1,73 | M16×1 / SW8 | **N00 72080** |
| HSK-A63-T32 | **A06 36131** | 63 | 32 | 44 | 53 | 120 | 58 | 10 | 1,66 | M16×1 / SW8 | **N00 72080** |

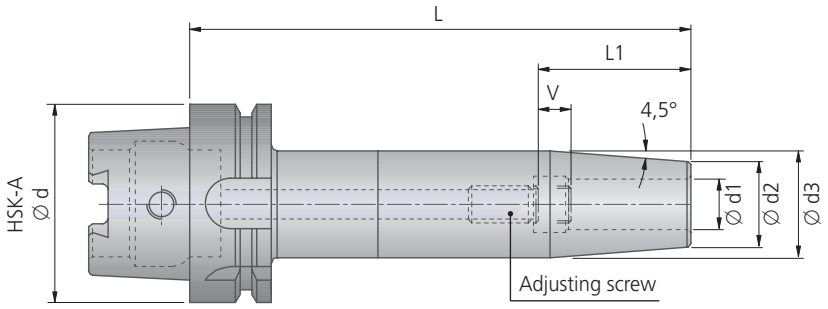
**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

**Supply includes:**
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

# HSK-A Thermal Expansion Chuck THERMOGRIP®

| machine adaptor | balancing note (chapter 8) | coolant central | rotating tool | tool holder |
|---|---|---|---|---|
| HSK-A ISO 12164-1 | pre-balanced Q6,3 18.000 min⁻¹ | | | DIN 1835 A; DIN 1835-B Weldon; DIN 6535 A; DIN 6535 HB; DIN 6535 HE |

long design ■




| HSK-A DIN 69893 T1 Thermogrip® | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | |
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. |
| HSK-A63-T6-120 | **A06 36240** | 63 | 6 | 21 | 27 | 120 | 36 | 10 | 1,09 | M5/SW2,5 | **N00 72000** |
| HSK-A63-T8-120 | **A06 36250** | 63 | 8 | 21 | 27 | 120 | 36 | 10 | 1,08 | M6/SW3 | **N00 72010** |
| HSK-A63-T10-120 | **A06 36261** | 63 | 10 | 24 | 32 | 120 | 42 | 10 | 1,20 | M8×1/SW4 | **N00 72050** |
| HSK-A63-T12-120 | **A06 36271** | 63 | 12 | 24 | 32 | 120 | 47 | 10 | 1,21 | M10×1/SW5 | **N00 72060** |
| HSK-A63-T14-120 | **A06 36281** | 63 | 14 | 27 | 34 | 120 | 47 | 10 | 1,25 | M10×1/SW5 | **N00 72060** |
| HSK-A63-T16-120 | **A06 36291** | 63 | 16 | 27 | 34 | 120 | 50 | 10 | 1,22 | M12×1/SW6 | **N00 72070** |
| HSK-A63-T6-160 | **A06 36440** | 63 | 6 | 21 | 32 | 160 | 36 | 10 | 1,37 | M5/SW2,5 | **N00 72000** |
| HSK-A63-T8-160 | **A06 36450** | 63 | 8 | 21 | 32 | 160 | 36 | 10 | 1,36 | M6/SW3 | **N00 72010** |
| HSK-A63-T10-160 | **A06 36461** | 63 | 10 | 24 | 34 | 160 | 42 | 10 | 1,49 | M8×1/SW4 | **N00 72050** |
| HSK-A63-T12-160 | **A06 36471** | 63 | 12 | 24 | 34 | 160 | 47 | 10 | 1,48 | M10×1/SW5 | **N00 72060** |
| HSK-A63-T14-160 | **A06 36481** | 63 | 14 | 27 | 42 | 160 | 47 | 10 | 1,72 | M10×1/SW5 | **N00 72060** |
| HSK-A63-T16-160 | **A06 36491** | 63 | 16 | 27 | 42 | 160 | 50 | 10 | 1,70 | M12×1/SW6 | **N00 72070** |
| HSK-A63-T18-160 | **A06 36501** | 63 | 18 | 33 | 51 | 160 | 50 | 10 | 1,87 | M12×1/SW6 | **N00 72070** |
| HSK-A63-T20-160 | **A06 36511** | 63 | 20 | 33 | 51 | 160 | 52 | 10 | 1,83 | M16×1/SW8 | **N00 72080** |
| HSK-A63-T25-160 | **A06 36521** | 63 | 25 | 44 | 53 | 160 | 58 | 10 | 2,50 | M16×1/SW8 | **N00 72080** |
| HSK-A63-T32-160 | **A06 36531** | 63 | 32 | 44 | 53 | 160 | 58 | 10 | 2,36 | M16×1/SW8 | **N00 72080** |

**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

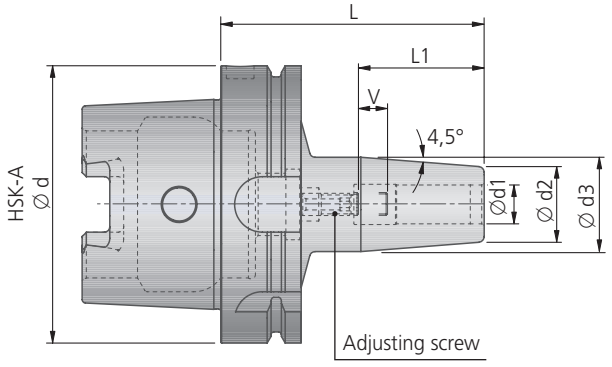
**Supply includes:**
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

# KOMET® ISO 12164-1

## HSK-A Thermal Expansion Chuck THERMOGRIP

| machine adaptor | location | balancing note (chapter 8) | coolant central | rotating tool | tool holder |
|---|---|---|---|---|---|
| HSK-A ISO 12164-1 | DIN 69882-8 | pre-balanced Q6,3 12.000 min⁻¹ | | | DIN 1835 A; DIN 1835-B Weldon; DIN 6535 A; DIN 6535 HB; DIN 6535 HE |

■ short design




| HSK-A DIN 69893 T1 Thermogrip® | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | |
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. |
| HSK-A100-T6 | **A06 56040** | 100 | 6 | 21 | 27 | 85 | 36 | 10 | 2,16 | M5 / SW2,5 | **N00 72000** |
| HSK-A100-T8 | **A06 56050** | 100 | 8 | 21 | 27 | 85 | 36 | 10 | 2,15 | M6 / SW3 | **N00 72010** |
| HSK-A100-T10 | **A06 56061** | 100 | 10 | 24 | 32 | 90 | 42 | 10 | 2,24 | M8×1 / SW4 | **N00 72050** |
| HSK-A100-T12 | **A06 56071** | 100 | 12 | 24 | 32 | 95 | 47 | 10 | 2,26 | M10×1 / SW5 | **N00 72060** |
| HSK-A100-T14 | **A06 56081** | 100 | 14 | 27 | 34 | 95 | 47 | 10 | 2,31 | M10×1 / SW5 | **N00 72060** |
| HSK-A100-T16 | **A06 56091** | 100 | 16 | 27 | 34 | 100 | 50 | 10 | 2,32 | M12×1 / SW6 | **N00 72070** |
| HSK-A100-T18 | **A06 56101** | 100 | 18 | 33 | 42 | 100 | 50 | 10 | 2,48 | M12×1 / SW6 | **N00 72070** |
| HSK-A100-T20 | **A06 56111** | 100 | 20 | 33 | 42 | 105 | 52 | 10 | 2,49 | M16×1 / SW8 | **N00 72080** |
| HSK-A100-T25 | **A06 56121** | 100 | 25 | 44 | 53 | 115 | 58 | 10 | 3,01 | M16×1 / SW8 | **N00 72080** |
| HSK-A100-T32 | **A06 56131** | 100 | 32 | 44 | 53 | 120 | 58 | 10 | 2,93 | M16×1 / SW8 | **N00 72080** |

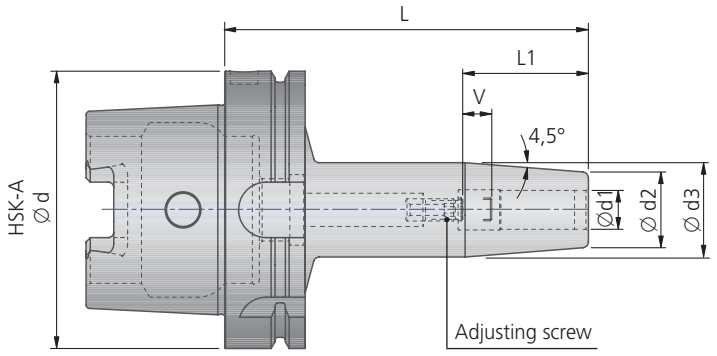
**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

**Supply includes:**
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

# HSK-A Thermal Expansion Chuck THERMOGRIP®

| machine adaptor | balancing note (chapter 8) | coolant central | rotating tool | tool holder |
|---|---|---|---|---|
| HSK-A ISO 12164-1 | pre-balanced Q6,3 12.000 min⁻¹ | | | DIN 1835 A · DIN 1835-B Weldon · DIN 6535 A · DIN 6535 HB · DIN 6535 HE |

long design ■




| HSK-A DIN 69893 T1 Thermogrip® | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | |
| Article | Order No. | HSK-A Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. |
| HSK-A100-T6-120 | **A06 56240** | 100 | 6 | 21 | 27 | 120 | 36 | 10 | 2,33 | M5/SW2,5 | **N00 72000** |
| HSK-A100-T8-120 | **A06 56250** | 100 | 8 | 21 | 27 | 120 | 36 | 10 | 2,34 | M6/SW3 | **N00 72010** |
| HSK-A100-T10-120 | **A06 56261** | 100 | 10 | 24 | 32 | 120 | 42 | 10 | 2,50 | M8×1/SW4 | **N00 72050** |
| HSK-A100-T12-120 | **A06 56271** | 100 | 12 | 24 | 32 | 120 | 47 | 10 | 2,44 | M10×1/SW5 | **N00 72060** |
| HSK-A100-T14-120 | **A06 56281** | 100 | 14 | 27 | 34 | 120 | 47 | 10 | 2,50 | M10×1/SW5 | **N00 72060** |
| HSK-A100-T16-120 | **A06 56291** | 100 | 16 | 27 | 34 | 120 | 50 | 10 | 2,50 | M12×1/SW6 | **N00 72070** |
| HSK-A100-T6-160 | **A06 56440** | 100 | 6 | 21 | 32 | 160 | 36 | 10 | 2,60 | M5/SW2,5 | **N00 72000** |
| HSK-A100-T8-160 | **A06 56450** | 100 | 8 | 21 | 32 | 160 | 36 | 10 | 2,50 | M6/SW3 | **N00 72010** |
| HSK-A100-T10-160 | **A06 56461** | 100 | 10 | 24 | 34 | 160 | 42 | 10 | 2,70 | M8×1/SW4 | **N00 72050** |
| HSK-A100-T12-160 | **A06 56471** | 100 | 12 | 24 | 34 | 160 | 47 | 10 | 2,70 | M10×1/SW5 | **N00 72060** |
| HSK-A100-T14-160 | **A06 56481** | 100 | 14 | 27 | 42 | 160 | 47 | 10 | 3,00 | M10×1/SW5 | **N00 72060** |
| HSK-A100-T16-160 | **A06 56491** | 100 | 16 | 27 | 42 | 160 | 50 | 10 | 3,00 | M12×1/SW6 | **N00 72070** |
| HSK-A100-T18-160 | **A06 56501** | 100 | 18 | 33 | 51 | 160 | 50 | 10 | 3,10 | M12×1/SW6 | **N00 72070** |
| HSK-A100-T20-160 | **A06 56511** | 100 | 20 | 33 | 51 | 160 | 52 | 10 | 3,10 | M16×1/SW8 | **N00 72080** |
| HSK-A100-T25-160 | **A06 56521** | 100 | 25 | 44 | 60 | 160 | 58 | 10 | 3,80 | M16×1/SW8 | **N00 72080** |
| HSK-A100-T32-160 | **A06 56531** | 100 | 32 | 44 | 60 | 160 | 58 | 10 | 3,70 | M16×1/SW8 | **N00 72080** |

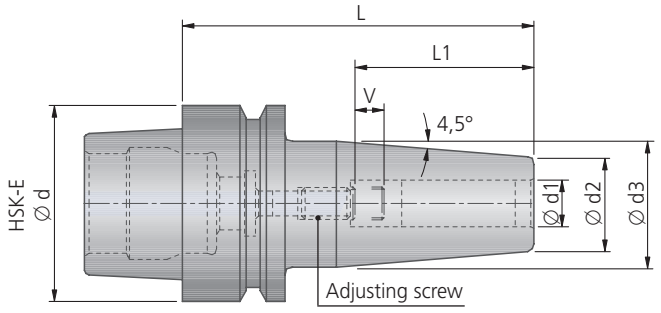
**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

**Supply includes:**
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

# KOMET® DIN 69893 T5

## HSK-E Thermal Expansion Chuck THERMOGRIP®

| machine adaptor | balancing note (chapter 8) | coolant central | rotating tool | tool holder |
|---|---|---|---|---|
| HSK-E DIN 69893-5 | pre-balanced Q5,2 25.000 min⁻¹ | | | DIN 1835 A · DIN 1835-B Weldon · DIN 6535 A · DIN 6535 HB · DIN 6535 HE |




| HSK-E DIN 69893 T5 Thermogrip® | | | | | | | | | | Assembly parts Adjusting screw | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK-E Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. |
| HSK-E 32-T 3 | **A10 16010** | 32 | 3 | 15 | 20 | 60 | 20 | 5 | | M6/SW3 | **55051 06008** |
| HSK-E 32-T 4 | **A10 16020** | 32 | 4 | 15 | 20 | 60 | 20 | 5 | | M6/SW3 | **55051 06008** |
| HSK-E 32-T 6 | **A10 16040** | 32 | 6 | 21 | 26 | 70 | 36 | 10 | 0,28 | M5/SW2,5 | **N00 72000** |
| HSK-E 32-T 8 | **A10 16050** | 32 | 8 | 21 | 26 | 70 | 36 | 10 | | M6/SW3 | **N00 72010** |
| HSK-E 32-T10 | **A10 16061** | 32 | 10 | 24 | 29,5 | 70 | 42 | 10 | | M8×1/SW4 | **N00 72050** |
| HSK-E 32-T12 | **A10 16071** | 32 | 12 | 24 | 29,5 | 70 | 47 | 10 | | M10×1/SW5 | **N00 72060** |
| HSK-E 40-T 3 | **A10 26010** | 40 | 3 | 15 | 20 | 60 | 20 | 5 | 0,24 | M6/SW3 | **55051 06008** |
| HSK-E 40-T 4 | **A10 26020** | 40 | 4 | 15 | 20 | 60 | 20 | 5 | | M6/SW3 | **55051 06008** |
| HSK-E 40-T 6 | **A10 26040** | 40 | 6 | 21 | 27 | 80 | 36 | 10 | 0,39 | M5/SW2,5 | **N00 72000** |
| HSK-E 40-T 8 | **A10 26050** | 40 | 8 | 21 | 27 | 80 | 36 | 10 | 0,39 | M6/SW3 | **N00 72010** |
| HSK-E 40-T10 | **A10 26061** | 40 | 10 | 24 | 32 | 80 | 42 | 10 | 0,44 | M8×1/SW4 | **N00 72050** |
| HSK-E 40-T12 | **A10 26071** | 40 | 12 | 24 | 32 | 90 | 47 | 10 | 0,48 | M10×1/SW5 | **N00 72060** |
| HSK-E 40-T14 | **A10 26081** | 40 | 14 | 27 | 34 | 90 | 47 | 10 | | M10×1/SW5 | **N00 72060** |
| HSK-E 40-T16 | **A10 26091** | 40 | 16 | 27 | 34 | 90 | 50 | 10 | | M12×1/SW6 | **N00 72070** |
| HSK-E 50-T 3 | **A10 36010** | 50 | 3 | 15 | 20 | 80 | 20 | 5 | | M6/SW3 | **55051 06008** |
| HSK-E 50-T 4 | **A10 36020** | 50 | 4 | 15 | 20 | 80 | 20 | 5 | | M6/SW3 | **55051 06008** |
| HSK-E 50-T 5 | **A10 36030** | 50 | 5 | 15 | 20 | 80 | 20 | 5 | | M6/SW3 | **55051 06008** |
| HSK-E 50-T 6 | **A10 36040** | 50 | 6 | 21 | 27 | 80 | 36 | 10 | 0,57 | M5/SW2,5 | **N00 72000** |
| HSK-E 50-T 8 | **A10 36050** | 50 | 8 | 21 | 27 | 80 | 36 | 10 | 0,66 | M6/SW3 | **N00 72010** |
| HSK-E 50-T10 | **A10 36061** | 50 | 10 | 24 | 32 | 85 | 42 | 10 | 0,68 | M8×1/SW4 | **N00 72050** |
| HSK-E 50-T12 | **A10 36071** | 50 | 12 | 24 | 32 | 90 | 47 | 10 | | M10×1/SW5 | **N00 72060** |
| HSK-E 50-T14 | **A10 36081** | 50 | 14 | 27 | 34 | 90 | 47 | 10 | | M10×1/SW5 | **N00 72060** |
| HSK-E 50-T16 | **A10 36091** | 50 | 16 | 27 | 34 | 95 | 50 | 10 | | M12×1/SW6 | **N00 72070** |
| HSK-E 50-T18 | **A10 36101** | 50 | 18 | 33 | 42 | 95 | 50 | 10 | | M12×1/SW6 | **N00 72070** |
| HSK-E 50-T20 | **A10 36111** | 50 | 20 | 33 | 42 | 100 | 52 | 10 | | M16×1/SW8 | **N00 72080** |
| HSK-E 63-T 6 | **A10 46040** | 63 | 6 | 21 | 27 | 80 | 36 | 10 | | M5/SW2,5 | **N00 72000** |
| HSK-E 63-T 8 | **A10 46050** | 63 | 8 | 21 | 27 | 80 | 36 | 10 | | M6/SW3 | **N00 72010** |
| HSK-E 63-T10 | **A10 46060** | 63 | 10 | 24 | 32 | 85 | 42 | 10 | | M8×1/SW4 | **N00 72050** |
| HSK-E 63-T12 | **A10 46070** | 63 | 12 | 24 | 32 | 90 | 47 | 10 | | M10×1/SW5 | **N00 72060** |
| HSK-E 63-T14 | **A10 46080** | 63 | 14 | 27 | 34 | 90 | 47 | 10 | | M10×1/SW5 | **N00 72060** |
| HSK-E 63-T16 | **A10 46090** | 63 | 16 | 27 | 34 | 95 | 50 | 10 | | M12×1/SW6 | **N00 72070** |
| HSK-E 63-T20 | **A10 46110** | 63 | 20 | 33 | 42 | 100 | 52 | 10 | | M16×1/SW8 | **N00 72080** |

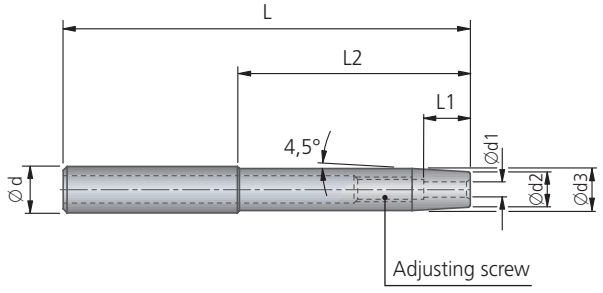
**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

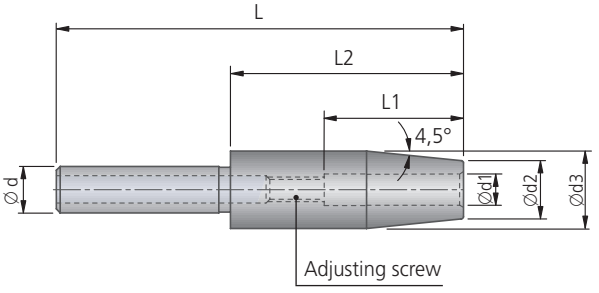
**Supply includes:**

Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

| machine adaptor | coolant central | rotating tool | tool holder |
|---|---|---|---|
| cylindrical shank | | | DIN 1835 A; DIN 1835-B Weldon; DIN 6535 A; DIN 6535 HB; DIN 6535 HE |

to extended and reduce to smaller diameters




| Extension / Reducer Thermogrip® | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | |
| Article | Order No. | Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | L2 | kg | Article | Order No. |
| D12-T 3 | A21 02001 | 12 | 3 | 9 | 12 | 107 | 20 | 60 | | M6/SW3 | 55051 06008 |
| D12-T 4 | A21 02011 | 12 | 4 | 9 | 12 | 107 | 20 | 60 | | M6/SW3 | 55051 06008 |
| D12-T 5 | A21 02021 | 12 | 5 | 9 | 12 | 107 | 25 | 60 | | M6/SW3 | 55051 06008 |
| D12-T 6 | A21 02031 | 12 | 6 | 15 | 19 | 107 | 36 | 60 | | M5/SW2,5 | N00 72000 |
| D12-T 8 | A21 02041 | 12 | 8 | 15 | 19 | 107 | 36 | 60 | | M6/SW3 | N00 72010 |
| D16-T 3 | A21 04001 | 16 | 3 | 9 | 15 | 110 | 20 | 60 | | M6/SW3 | 55051 06008 |
| D16-T 4 | A21 04011 | 16 | 4 | 9 | 15 | 110 | 20 | 60 | | M6/SW3 | 55051 06008 |
| D16-T 5 | A21 04021 | 16 | 5 | 9 | 15 | 110 | 25 | 60 | | M6/SW3 | 55051 06008 |
| D16-T 6 | A21 04031 | 16 | 6 | 15 | 20 | 110 | 36 | 60 | | M5/SW2,5 | N00 72000 |
| D16-T 8 | A21 04041 | 16 | 8 | 15 | 20 | 110 | 36 | 60 | | M6/SW3 | N00 72010 |
| D20-T 3 | A21 06001 | 20 | 3 | 9 | 15 | 112 | 20 | 60 | | M6/SW3 | 55051 06008 |
| D20-T 4 | A21 06011 | 20 | 4 | 9 | 15 | 112 | 20 | 60 | | M6/SW3 | 55051 06008 |
| D20-T 5 | A21 06021 | 20 | 5 | 9 | 15 | 112 | 25 | 60 | | M6/SW3 | 55051 06008 |
| D20-T 6 | A21 06031 | 20 | 6 | 15 | 19,5 | 112 | 36 | 60 | | M5/SW2,5 | N00 72000 |
| D20-T 8 | A21 06041 | 20 | 8 | 15 | 19,5 | 112 | 36 | 60 | | M6/SW3 | N00 72010 |
| D20-T10 | A21 06052 | 20 | 10 | 20 | 27 | 112 | 42 | 60 | | M8×1/SW4 | N00 72050 |
| D20-T12 | A21 06062 | 20 | 12 | 20 | 27 | 112 | 47 | 60 | | M10×1/SW5 | N00 72060 |
| D25-T14 | A21 07071 | 25 | 14 | 24 | 32 | 118 | 47 | 60 | | M10×1/SW5 | N00 72060 |
| D25-T16 | A21 07081 | 25 | 16 | 24 | 32 | 118 | 50 | 60 | | M12×1/SW6 | N00 72070 |

**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

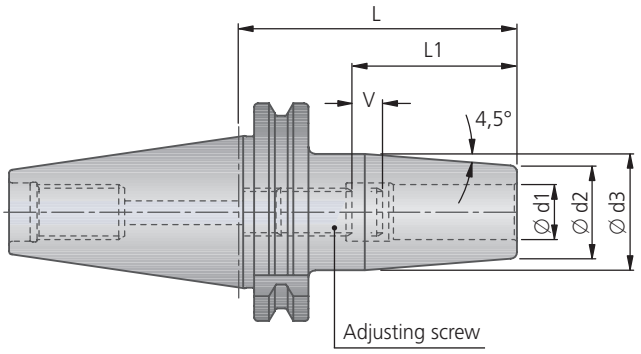
**Supply includes:**
Extension / Reducer with adjusting screw.

# KOMET® DIN 69871 AD

## Taper shank THERMOGRIP®

| machine adaptor | balancing note (chapter 8) | coolant central | rotating tool | tool holder |
|---|---|---|---|---|
|   |   |  |  |   |

■ short design




| DIN 69871 AD Thermogrip® | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | |
| ISO | Article | Order No. | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. |
| 40 | ISO40 DIN69871AD-T3 | **A25 06010** | 3 | 15 | 20 | 80 | 20 | 5 | | M6/SW3 | **55051 06008** |
| 40 | ISO40 DIN69871AD-T4 | **A25 06020** | 4 | 15 | 20 | 80 | 20 | 5 | | M6/SW3 | **55051 06008** |
| 40 | ISO40 DIN69871AD-T5 | **A25 06030** | 5 | 15 | 20 | 80 | 25 | 5 | | M6/SW3 | **55051 06008** |
| 40 | ISO40 DIN69871AD-T6 | **A25 36040** | 6 | 21 | 27 | 80 | 36 | 10 | 0,99 | M5/SW2,5 | **N00 72000** |
| 40 | ISO40 DIN69871AD-T8 | **A25 36050** | 8 | 21 | 27 | 80 | 36 | 10 | 0,98 | M6/SW3 | **N00 72010** |
| 40 | ISO40 DIN69871AD-T10 | **A25 36061** | 10 | 24 | 32 | 80 | 42 | 10 | 1,06 | M8×1/SW4 | **N00 72050** |
| 40 | ISO40 DIN69871AD-T12 | **A25 36071** | 12 | 24 | 32 | 80 | 47 | 10 | 1,05 | M10×1/SW5 | **N00 72060** |
| 40 | ISO40 DIN69871AD-T14 | **A25 36081** | 14 | 27 | 34 | 80 | 47 | 10 | 1,09 | M10×1/SW5 | **N00 72060** |
| 40 | ISO40 DIN69871AD-T16 | **A25 36091** | 16 | 27 | 34 | 80 | 50 | 10 | 1,07 | M12×1/SW6 | **N00 72070** |
| 40 | ISO40 DIN69871AD-T18 | **A25 36101** | 18 | 33 | 42 | 80 | 50 | 10 | 1,24 | M12×1/SW6 | **N00 72070** |
| 40 | ISO40 DIN69871AD-T20 | **A25 36111** | 20 | 33 | 42 | 80 | 52 | 10 | 1,18 | M16×1/SW8 | **N00 72080** |
| 40 | ISO40 DIN69871AD-T25 | **A25 36121** | 25 | 44 | 53 | 100 | 58 | 10 | 1,73 | M16×1/SW8 | **N00 72080** |

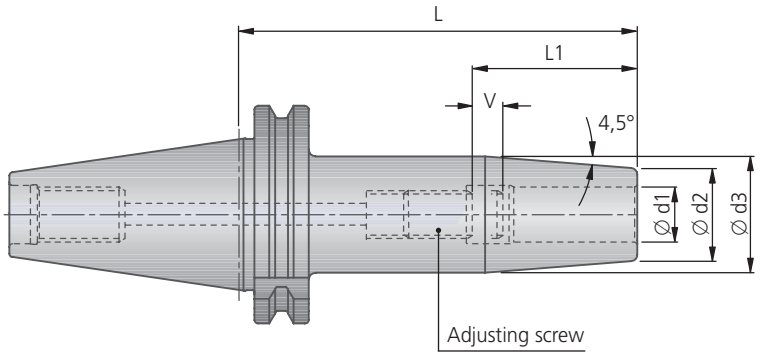
**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

**Supply includes:**
Thermal expansion chuck fitted complete. Pull studs not included (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

| machine adaptor | balancing note (chapter 8) | coolant central | rotating tool | tool holder |
|---|---|---|---|---|
| DIN 69871 AD | pre-balanced Q6,3 15.000 min$^{-1}$ | | | DIN 1835 A; DIN 1835-B Weldon; DIN 6535 A; DIN 6535 HB; DIN 6535 HE |

long design ■




| DIN 69871 AD Thermogrip® | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | |
| ISO | Article | Order No. | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. |
| 40 | ISO40 DIN69871AD-T6-160 | **A25 36440** | 6 | 21 | 32 | 160 | 36 | 10 | | M5/SW2,5 | **N00 72000** |
| 40 | ISO40 DIN69871AD-T8-160 | **A25 36450** | 8 | 21 | 32 | 160 | 36 | 10 | | M6/SW3 | **N00 72010** |
| 40 | ISO40 DIN69871AD-T10-160 | **A25 36461** | 10 | 24 | 34 | 160 | 42 | 10 | | M8×1/SW4 | **N00 72050** |
| 40 | ISO40 DIN69871AD-T12-160 | **A25 36471** | 12 | 24 | 34 | 160 | 47 | 10 | | M10×1/SW5 | **N00 72060** |
| 40 | ISO40 DIN69871AD-T14-160 | **A25 36481** | 14 | 27 | 42 | 160 | 47 | 10 | | M10×1/SW5 | **N00 72060** |
| 40 | ISO40 DIN69871AD-T16-160 | **A25 36491** | 16 | 27 | 42 | 160 | 50 | 10 | | M12×1/SW6 | **N00 72070** |
| 40 | ISO40 DIN69871AD-T18-160 | **A25 36501** | 18 | 33 | 42 | 160 | 50 | 10 | | M12×1/SW6 | **N00 72070** |
| 40 | ISO40 DIN69871AD-T20-160 | **A25 36511** | 20 | 33 | 42 | 160 | 52 | 10 | | M16×1/SW8 | **N00 72080** |

**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

**Supply includes:**
Thermal expansion chuck fitted complete. Pull studs not included (chapter 8).

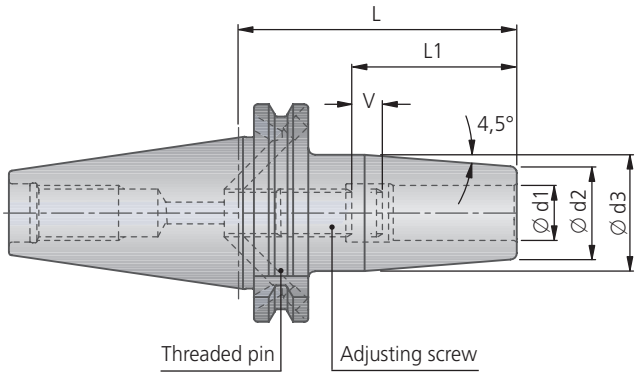
**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® DIN 69871 AD/B

## Thermal Expansion Chuck THERMOGRIP®

| machine adaptor | balancing note (chapter 8) | coolant central / collar | rotating tool | tool holder |
|---|---|---|---|---|
| DIN 69871 AD/B | pre-balanced Q6,3 15.000 min⁻¹ | | | DIN 1835 A; DIN 1835-B Weldon; DIN 6535 A; DIN 6535 HB; DIN 6535 HE |

■ short design




| DIN 69871 AD/B Thermogrip® | | | | | | | | | | Assembly parts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | | Threaded pin |
| ISO | Article | Order No. | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. | Order No. Article |
| 40 | ISO40 DIN69871AD/B-T6 | A25 06041 | 6 | 21 | 27 | 80 | 36 | 10 | 1,01 | M5 / SW2,5 | N00 72000 | N00 70140 M5×5 |
| 40 | ISO40 DIN69871AD/B-T8 | A25 06051 | 8 | 21 | 27 | 80 | 36 | 10 | 1,00 | M6 / SW3 | N00 72010 | |
| 40 | ISO40 DIN69871AD/B-T10 | A25 06061 | 10 | 24 | 32 | 80 | 42 | 10 | 1,07 | M8×1 / SW4 | N00 72050 | |
| 40 | ISO40 DIN69871AD/B-T12 | A25 06071 | 12 | 24 | 32 | 80 | 47 | 10 | 1,05 | M10×1 / SW5 | N00 72060 | |
| 40 | ISO40 DIN69871AD/B-T14 | A25 06081 | 14 | 27 | 34 | 80 | 47 | 10 | 1,10 | M10×1 / SW5 | N00 72060 | |
| 40 | ISO40 DIN69871AD/B-T16 | A25 06091 | 16 | 27 | 34 | 80 | 50 | 10 | 1,07 | M12×1 / SW6 | N00 72070 | |
| 40 | ISO40 DIN69871AD/B-T18 | A25 06101 | 18 | 33 | 42 | 80 | 50 | 10 | 1,21 | M12×1 / SW6 | N00 72070 | |
| 40 | ISO40 DIN69871AD/B-T20 | A25 06111 | 20 | 33 | 42 | 80 | 52 | 10 | 1,17 | M16×1 / SW8 | N00 72080 | |
| 40 | ISO40 DIN69871AD/B-T25 | A25 06121 | 25 | 44 | 53 | 100 | 58 | 10 | 1,73 | M16×1 / SW8 | N00 72080 | |
| 50 | ISO50 DIN69871AD/B-T6 | A25 26040 | 6 | 21 | 27 | 80 | 36 | 10 | 1,95 | M5 / SW2,5 | N00 72000 | N00 70140 M5×5 |
| 50 | ISO50 DIN69871AD/B-T8 | A25 26050 | 8 | 21 | 27 | 80 | 36 | 10 | 2,80 | M6 / SW3 | N00 72010 | |
| 50 | ISO50 DIN69871AD/B-T10 | A25 26061 | 10 | 24 | 32 | 80 | 42 | 10 | 2,82 | M8×1 / SW4 | N00 72050 | |
| 50 | ISO50 DIN69871AD/B-T12 | A25 26071 | 12 | 24 | 32 | 80 | 47 | 10 | 2,85 | M10×1 / SW5 | N00 72060 | |
| 50 | ISO50 DIN69871AD/B-T14 | A25 26081 | 14 | 27 | 34 | 80 | 47 | 10 | 2,85 | M10×1 / SW5 | N00 72060 | |
| 50 | ISO50 DIN69871AD/B-T16 | A25 26091 | 16 | 27 | 34 | 80 | 50 | 10 | 2,85 | M12×1 / SW6 | N00 72070 | |
| 50 | ISO50 DIN69871AD/B-T18 | A25 26101 | 18 | 33 | 42 | 80 | 50 | 10 | 2,90 | M12×1 / SW6 | N00 72070 | |
| 50 | ISO50 DIN69871AD/B-T20 | A25 26111 | 20 | 33 | 42 | 80 | 52 | 10 | 2,95 | M16×1 / SW8 | N00 72080 | |
| 50 | ISO50 DIN69871AD/B-T25 | A25 26121 | 25 | 44 | 53 | 90 | 58 | 10 | 3,00 | M16×1 / SW8 | N00 72080 | |
| 50 | ISO50 DIN69871AD/B-T32 | A25 26131 | 32 | 44 | 53 | 90 | 58 | 10 | 3,33 | M16×1 / SW8 | N00 72080 | |

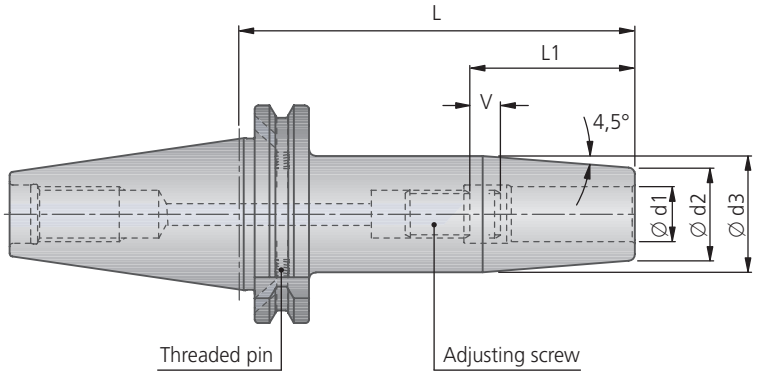
**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

**Supply includes:**
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

| machine adaptor | balancing note (chapter 8) | coolant central / collar | rotating tool | tool holder |
|---|---|---|---|---|
| DIN 69871 AD/B | pre-balanced Q6,3 15.000 min⁻¹ | | | DIN 1835 A · DIN 1835-B Weldon · DIN 6535 A · DIN 6535 HB · DIN 6535 HE |

long design ■




| DIN 69871 AD/B Thermogrip® | | | | | | | | | | Assembly parts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | | Threaded pin |
| ISO | Article | Order No. | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. | Order No. Article |
| 40 | ISO40 DIN69871AD/B-T6-120 | **A25 06240** | 6 | 21 | 27 | 120 | 36 | 10 | | M5/SW2,5 | **N00 72000** | |
| 40 | ISO40 DIN69871AD/B-T8-120 | **A25 06250** | 8 | 21 | 27 | 120 | 36 | 10 | | M6/SW3 | **N00 72010** | |
| 40 | ISO40 DIN69871AD/B-T10-120 | **A25 06261** | 10 | 24 | 32 | 120 | 42 | 10 | | M8×1/SW4 | **N00 72050** | |
| 40 | ISO40 DIN69871AD/B-T12-120 | **A25 06271** | 12 | 24 | 32 | 120 | 47 | 10 | | M10×1/SW5 | **N00 72060** | **N00 70140** M5×5 |
| 40 | ISO40 DIN69871AD/B-T14-120 | **A25 06281** | 14 | 27 | 34 | 120 | 47 | 10 | | M10×1/SW5 | **N00 72060** | |
| 40 | ISO40 DIN69871AD/B-T16-120 | **A25 06291** | 16 | 27 | 34 | 120 | 50 | 10 | | M12×1/SW6 | **N00 72070** | |
| 40 | ISO40 DIN69871AD/B-T18-120 | **A25 06301** | 18 | 33 | 42 | 120 | 50 | 10 | | M12×1/SW6 | **N00 72070** | |
| 40 | ISO40 DIN69871AD/B-T20-120 | **A25 06311** | 20 | 33 | 42 | 120 | 52 | 10 | | M16×1/SW8 | **N00 72080** | |
| 50 | ISO50 DIN69871AD/B-T6-120 | **A25 26240** | 6 | 21 | 27 | 120 | 36 | 10 | | M5/SW2,5 | **N00 72000** | |
| 50 | ISO50 DIN69871AD/B-T8-120 | **A25 26250** | 8 | 21 | 27 | 120 | 36 | 10 | | M6/SW3 | **N00 72010** | |
| 50 | ISO50 DIN69871AD/B-T10-120 | **A25 26261** | 10 | 24 | 32 | 120 | 42 | 10 | | M8×1/SW4 | **N00 72050** | |
| 50 | ISO50 DIN69871AD/B-T12-120 | **A25 26271** | 12 | 24 | 32 | 120 | 47 | 10 | | M10×1/SW5 | **N00 72060** | **N00 70140** M5×5 |
| 50 | ISO50 DIN69871AD/B-T14-120 | **A25 26281** | 14 | 27 | 34 | 120 | 47 | 10 | | M10×1/SW5 | **N00 72060** | |
| 50 | ISO50 DIN69871AD/B-T16-120 | **A25 26291** | 16 | 27 | 34 | 120 | 50 | 10 | | M12×1/SW6 | **N00 72070** | |
| 50 | ISO50 DIN69871AD/B-T18-120 | **A25 26301** | 18 | 33 | 42 | 120 | 50 | 10 | | M12×1/SW6 | **N00 72070** | |
| 50 | ISO50 DIN69871AD/B-T20-120 | **A25 26311** | 20 | 33 | 42 | 120 | 52 | 10 | | M16×1/SW8 | **N00 72080** | |

**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

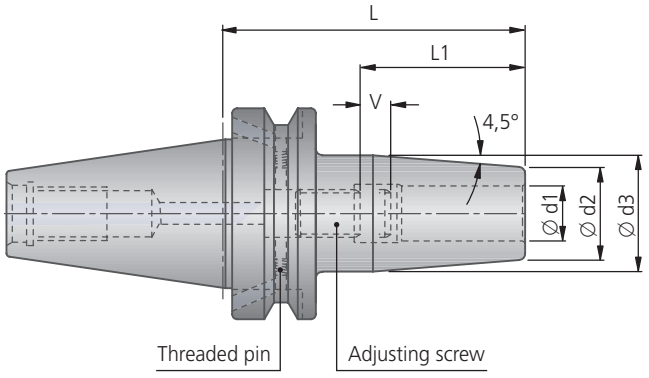
**Supply includes:**
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET® JIS B 6339 (MAS 403 BT)

## Thermal Expansion Chuck THERMOGRIP®

| machine adaptor | balancing note (chapter 8) | coolant central / collar | rotating tool | tool holder |
|---|---|---|---|---|
| JIS B 6339 | pre-balanced Q6,3 15.000 min⁻¹ | | | DIN 1835 A; DIN 1835-B Weldon; DIN 6535 A; DIN 6535 HB; DIN 6535 HE |



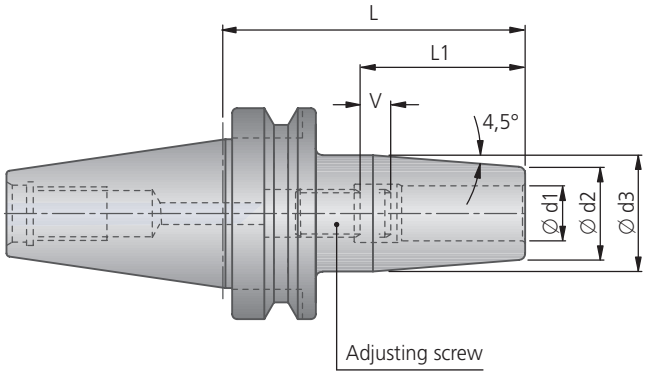

| JIS B 6339 (MAS 403 BT) Thermogrip® | | | | | | | | | | Assembly parts | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | | Threaded pin |
| ISO | Article | Order No. | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. | Order No. Article |
| 40 | ISO40 JIS B 6339AD/B-T6 | **A25 86040** | 6 | 20 | 27 | 90 | 36 | 10 | 1,15 | M5/SW2,5 | **N00 72000** | **N00 70140** M5×5 |
| 40 | ISO40 JIS B 6339AD/B-T8 | **A25 86050** | 8 | 20 | 27 | 90 | 36 | 10 | 1,15 | M6/SW3 | **N00 72010** | |
| 40 | ISO40 JIS B 6339AD/B-T10 | **A25 86061** | 10 | 24 | 32 | 90 | 42 | 10 | 1,22 | M8×1/SW4 | **N00 72050** | |
| 40 | ISO40 JIS B 6339AD/B-T12 | **A25 86071** | 12 | 24 | 32 | 90 | 47 | 10 | 1,21 | M10×1/SW5 | **N00 72060** | |
| 40 | ISO40 JIS B 6339AD/B-T14 | **A25 86081** | 14 | 27 | 34 | 90 | 47 | 10 | 1,26 | M10×1/SW5 | **N00 72060** | |
| 40 | ISO40 JIS B 6339AD/B-T16 | **A25 86091** | 16 | 27 | 34 | 90 | 50 | 10 | 1,23 | M12×1/SW6 | **N00 72070** | |
| 40 | ISO40 JIS B 6339AD/B-T18 | **A25 86101** | 18 | 33 | 42 | 90 | 50 | 10 | 1,38 | M12×1/SW6 | **N00 72070** | |
| 40 | ISO40 JIS B 6339AD/B-T20 | **A25 86111** | 20 | 33 | 42 | 90 | 52 | 10 | 1,35 | M16×1/SW8 | **N00 72080** | |
| 40 | ISO40 JIS B 6339AD/B-T25 | **A25 86121** | 25 | 44 | 53 | 100 | 58 | 10 | 1,79 | M16×1/SW8 | **N00 72080** | |
| 40 | ISO40 JIS B 6339AD/B-T32 | **A25 86131** | 32 | 44 | 53 | 100 | 58 | 10 | 1,7 | M16×1/SW8 | **N00 72080** | |

**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

**Supply includes:**
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

| machine adaptor | balancing note (chapter 8) | coolant central | rotating tool | tool holder |
|---|---|---|---|---|
| JIS B 6339 | pre-balanced Q6,3 15.000 min⁻¹ | | | DIN 1835 A; DIN 1835-B Weldon; DIN 6535 A; DIN 6535 HB; DIN 6535 HE |




| JIS B 6339 (MAS 403 BT) Thermogrip® | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | |
| ISO | Article | Order No. | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. |
| 50 | ISO50 JIS B 6339AD-T6-100 | **A25 96040** | 6 | 21 | 27 | 100 | 36 | 10 | | M5/SW2,5 | **N00 72000** |
| 50 | ISO50 JIS B 6339AD-T8-100 | **A25 96050** | 8 | 21 | 27 | 100 | 36 | 10 | | M6/SW3 | **N00 72010** |
| 50 | ISO50 JIS B 6339AD-T10-100 | **A25 96061** | 10 | 24 | 32 | 100 | 42 | 10 | | M8×1/SW4 | **N00 72050** |
| 50 | ISO50 JIS B 6339AD-T12-100 | **A25 96071** | 12 | 24 | 32 | 100 | 47 | 10 | | M10×1/SW5 | **N00 72060** |
| 50 | ISO50 JIS B 6339AD-T14-100 | **A25 96081** | 14 | 27 | 34 | 100 | 47 | 10 | | M10×1/SW5 | **N00 72060** |
| 50 | ISO50 JIS B 6339AD-T16-100 | **A25 96091** | 16 | 27 | 34 | 100 | 50 | 10 | | M12×1/SW6 | **N00 72070** |
| 50 | ISO50 JIS B 6339AD-T18-100 | **A25 96101** | 18 | 33 | 42 | 100 | 50 | 10 | | M12×1/SW6 | **N00 72070** |
| 50 | ISO50 JIS B 6339AD-T20-100 | **A25 96111** | 20 | 33 | 42 | 100 | 52 | 10 | | M16×1/SW8 | **N00 72080** |

**Tool shank tolerances:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

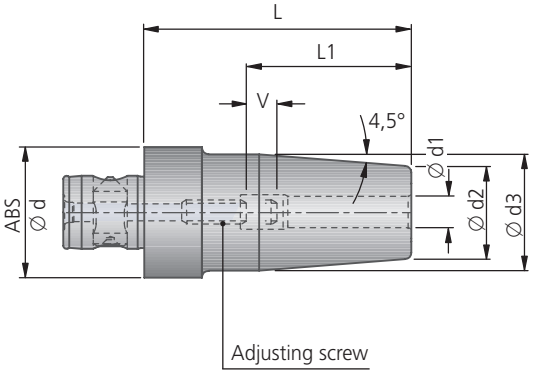
**Supply includes:**
Thermal expansion chuck fitted complete. Please order coolant supply connection and key separately (chapter 8).

**Note:** With coolant supply through spindle, use pull stud with through hole. To close off central coolant hole, use pull stud without through hole.

# KOMET ABS®

## Thermal Expansion Chuck THERMOGRIP

| machine adaptor | balancing note (chapter 8) | coolant central | rotating tool | tool holder |
|---|---|---|---|---|
| ABS® | pre-balanced Q6,3 15.000 min⁻¹ | | | DIN 1835 A · DIN 1835-B Weldon · DIN 6535 A · DIN 6535 HB · DIN 6535 HE |




| ABS® Thermogrip® | | | | | | | | | | Assembly parts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Adjusting screw | |
| Article | Order No. | ABS Ø d | Ø d1 | Ø d2 | Ø d3 | L | L1 | V | kg | Article | Order No. |
| ABS32-T6 | A32 26040 | 32 | 6 | 21 | 27 | 70 | 36 | 10 | 0,32 | M5 / SW2,5 | N00 72000 |
| ABS32-T8 | A32 26050 | 32 | 8 | 21 | 27 | 70 | 36 | 10 | 0,30 | M6 / SW3 | N00 72010 |
| ABS32-T10 | A32 26061 | 32 | 10 | 24 | 32 | 70 | 42 | 10 | 0,37 | M8×1 / SW4 | N00 72050 |
| ABS32-T12 | A32 26071 | 32 | 12 | 24 | 32 | 80 | 47 | 10 | 0,40 | M10×1 / SW5 | N00 72060 |
| ABS40-T6 | A32 36040 | 40 | 6 | 21 | 27 | 70 | 36 | 10 | 0,40 | M5 / SW2,5 | N00 72000 |
| ABS40-T8 | A32 36050 | 40 | 8 | 21 | 27 | 70 | 36 | 10 | 0,39 | M6 / SW3 | N00 72010 |
| ABS40-T10 | A32 36061 | 40 | 10 | 24 | 32 | 70 | 42 | 10 | 0,44 | M8×1 / SW4 | N00 72050 |
| ABS40-T12 | A32 36071 | 40 | 12 | 24 | 32 | 80 | 47 | 10 | 0,48 | M10×1 / SW5 | N00 72060 |
| ABS40-T14 | A32 36081 | 40 | 14 | 27 | 34 | 80 | 47 | 10 | 0,53 | M10×1 / SW5 | N00 72060 |
| ABS40-T16 | A32 36091 | 40 | 16 | 27 | 34 | 90 | 50 | 10 | 0,58 | M12×1 / SW6 | N00 72070 |
| ABS50-T6 | A32 46040 | 50 | 6 | 21 | 27 | 75 | 36 | 10 | 0,64 | M5 / SW2,5 | N00 72000 |
| ABS50-T8 | A32 46050 | 50 | 8 | 21 | 27 | 75 | 36 | 10 | 0,63 | M6 / SW3 | N00 72010 |
| ABS50-T10 | A32 46061 | 50 | 10 | 24 | 32 | 80 | 42 | 10 | 0,70 | M8×1 / SW4 | N00 72050 |
| ABS50-T12 | A32 46071 | 50 | 12 | 24 | 32 | 80 | 47 | 10 | 0,68 | M10×1 / SW5 | N00 72060 |
| ABS50-T14 | A32 46081 | 50 | 14 | 27 | 34 | 80 | 47 | 10 | 0,73 | M10×1 / SW5 | N00 72060 |
| ABS50-T16 | A32 46091 | 50 | 16 | 27 | 34 | 85 | 50 | 10 | 0,71 | M12×1 / SW6 | N00 72070 |
| ABS50-T18 | A32 46101 | 50 | 18 | 33 | 42 | 85 | 50 | 10 | 0,89 | M12×1 / SW6 | N00 72070 |
| ABS50-T20 | A32 46111 | 50 | 20 | 33 | 42 | 90 | 52 | 10 | 0,90 | M16×1 / SW8 | N00 72080 |
| ABS63-T6 | A32 56040 | 63 | 6 | 21 | 27 | 80 | 36 | 10 | 0,96 | M5 / SW2,5 | N00 72000 |
| ABS63-T8 | A32 56050 | 63 | 8 | 21 | 27 | 80 | 36 | 10 | 0,95 | M6 / SW3 | N00 72010 |
| ABS63-T10 | A32 56061 | 63 | 10 | 24 | 32 | 80 | 42 | 10 | 1,00 | M8×1 / SW4 | N00 72050 |
| ABS63-T12 | A32 56071 | 63 | 12 | 24 | 32 | 85 | 47 | 10 | 1,02 | M10×1 / SW5 | N00 72060 |
| ABS63-T14 | A32 56081 | 63 | 14 | 27 | 34 | 85 | 47 | 10 | 1,07 | M10×1 / SW5 | N00 72060 |
| ABS63-T16 | A32 56091 | 63 | 16 | 27 | 34 | 85 | 50 | 10 | 1,05 | M12×1 / SW6 | N00 72070 |
| ABS63-T18 | A32 56101 | 63 | 18 | 33 | 42 | 90 | 50 | 10 | 1,25 | M12×1 / SW6 | N00 72070 |
| ABS63-T20 | A32 56111 | 63 | 20 | 33 | 42 | 90 | 52 | 10 | 1,21 | M16×1 / SW8 | N00 72080 |
| ABS63-T25 | A32 56121 | 63 | 25 | 44 | 53 | 95 | 58 | 10 | 1,61 | M16×1 / SW8 | N00 72080 |
| ABS63-T32 | A32 56131 | 63 | 32 | 44 | 53 | 95 | 58 | 10 | 1,44 | M16×1 / SW8 | N00 72080 |

**Tool shank tolerance:** h5 for shanks < ∅ 6 mm; h6 for shanks ≥ ∅ 6 mm

**Supply includes:** Thermal expansion chuck fitted complete.

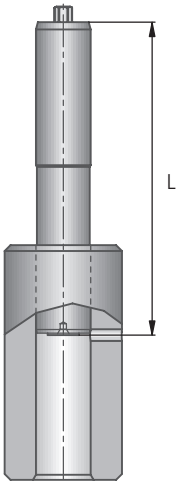


Patent applied for inside and outside Germany (ABS)

# KOMET® Measuring Adaptor

## for Thermal Expansion Chuck

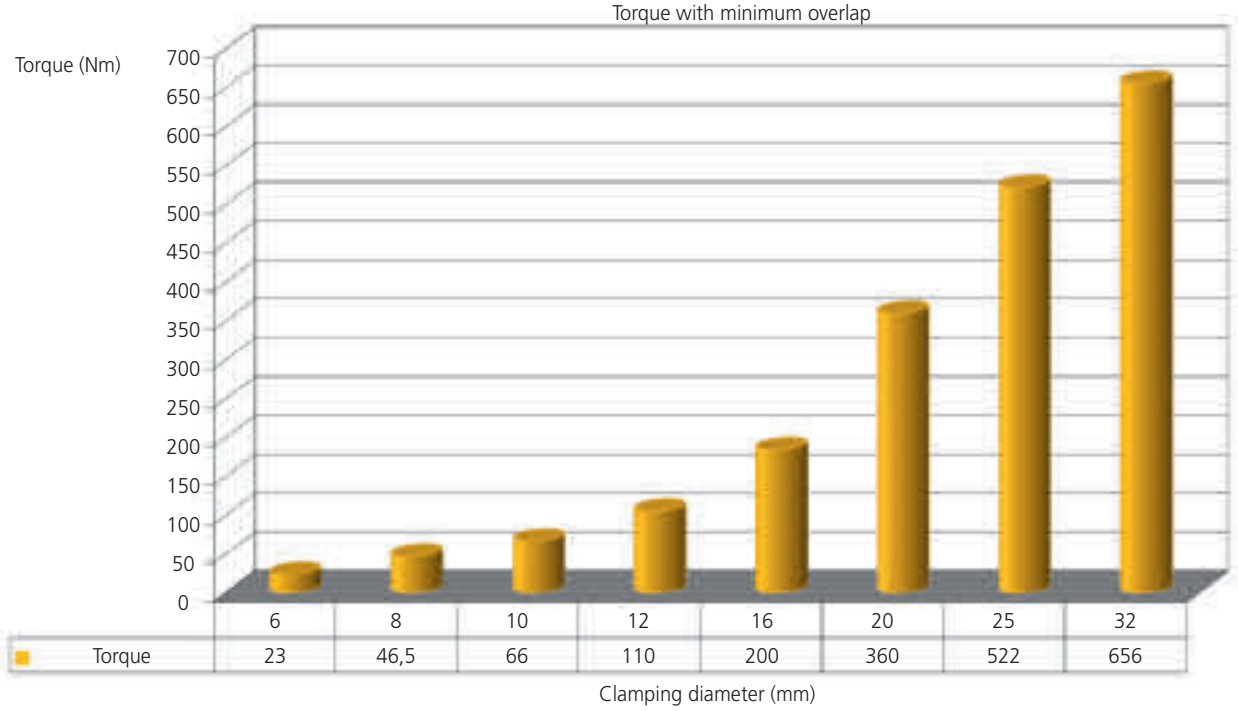
for length setting in cold state




| Article | Order No. | Description | SW | L |
|---|---|---|---|---|
| TM 6 | L05 09430 | Measuring adaptor TM 6 | 2,5 | 80 |
| TM 8 | L05 09440 | Measuring adaptor TM 8 | 3 | 80 |
| TM 10 | L05 09450 | Measuring adaptor TM 10 | 4 | 80 |
| TM 12 | L05 09461 | Measuring adaptor TM 12 | 5 | 80 |
| TM 14 | L05 09471 | Measuring adaptor TM 14 | 5 | 80 |
| TM 16 | L05 09480 | Measuring adaptor TM 16 | 6 | 80 |
| TM 18 | L05 09490 | Measuring adaptor TM 18 | 6 | 80 |
| TM 20 | L05 09500 | Measuring adaptor TM 20 | 8 | 80 |
| TM 25 | L05 09510 | Measuring adaptor TM 25 | 8 | 80 |
| TM 32 | L05 09520 | Measuring adaptor TM 32 | 8 | 80 |

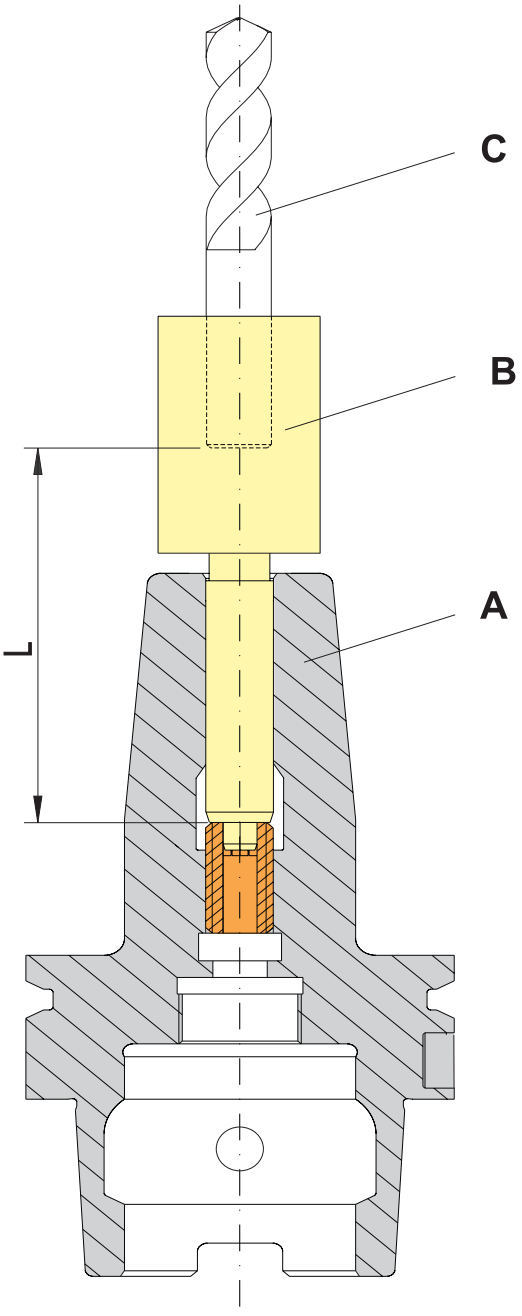
| for Thermogrip® thermal expansion chuck Ø 12 mm and 14 mm with M8 / SW4 set screw | | | | |
|---|---|---|---|---|
| Article | Order No. | Description | SW | L |
| TM 12 | L05 09460 | Measuring adaptor TM 12 | 4 | 80 |
| TM 14 | L05 09470 | Measuring adaptor TM 14 | 4 | 80 |

## Torque transmission for thermal expansion connection



## Length setting the tools

The length setting is carried out before the thermal expansion process using a measuring adaptor (B). This is inserted into the chuck (A) with the tool (C); by turning the adaptor, the tool length is defined with an adjustment screw, allowing for the dimension L. Finally the adaptor is removed and the tool fitted by thermal expansion.



## Insert Seatings


UKS


UZV, UZ, UV

Short clamp holder UKS
Boring tool UZV, UZ, UV


WVU, WVP


FLEW

Adjustable insert seating
WVU, WVP
Insert flat bed seating FLEW

### Micro-adjustable cartridges


FZ


FF


M31

You can obtain KOMET Kometric® seatings from us for fitting into tools. The KOMET Kometric® system offers a tried and tested range of efficient and economic insert seatings and fine boring cartridges.

This chapter contains the necessary information for fitting these elements. They have been designed so that they are easy to fit, versatile to use and require minimum space.

**BENEFITS for you:**

- Uncomplicated installation and versatile use, even in the smallest areas
- The use of special tools makes it possible to combine several machining tasks in one work step
- The same quality at reduced production costs

## KOMET Kometric®

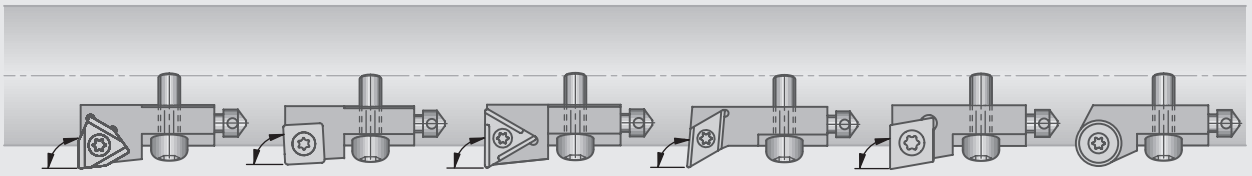

| | Page |
|---|---|
| **Programme Summary** | 508 – 509 |
| **Semi-finished Head** | 510 – 511 |
| **Short Clamp Holder UKS** | |
| for machining steel | 512 – 545 |
| for machining aluminium | 594 – 596 |
| **Adjustable Insert Seating WVU, WVP** | |
| for machining steel | 548 – 563 |
| **Insert Flat Bed Seating FLWE** | |
| for machining steel | 546 – 547 |
| for machining aluminium | 597 |
| **Boring Tool UZV, UZ, UV** | |
| for machining steel | 570 – 583 |
| **Micro-adjustable Cartridge FZ, FF** | |
| for machining steel | 586 – 592 |
| for machining aluminium | 598 – 599 |
| **Micro-adjustable Cartridge M31** | |
| for machining steel | 584 – 585 |
| for machining aluminium | 600 – 601 |
| **Insert Seating UWU, UWE** | 564 – 569 |
| **Chamfering Cartridge** | 593 |

# Programme Summary – Insert Seatings Kometric®

## for Machining Steel

### Short Clamp Holder UKS

Page 514 – 523 | 524 | 525 – 531 | 532 – 534 | 536 | 535



κ = 93° · 90° · 75° · 60° · 45° · 45°II · 30° · 30° I · 15° · 0°

κ = 87° · 75° · 45°

κ = 90° · 75° · 60° · 45° · 30° · 15° · 0°

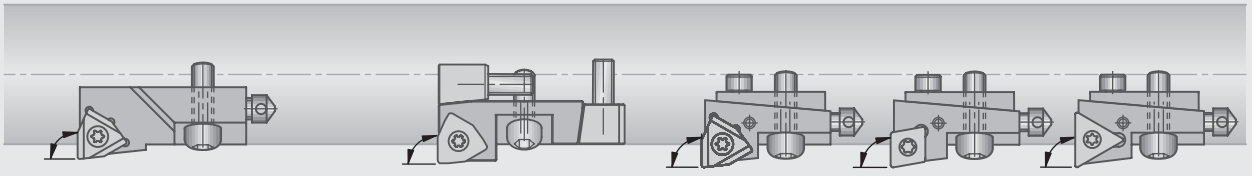
κ = 107,5° · 95° · 5°

κ = 90°

for round insert

### Short Clamp Holder to ISO standard | with Power insert | with wedge adjustment

Page 537 – 538 | 540 – 541 | 543 – 545



κ = 90° · 45°

κ = 90° · 75°

κ = 90°

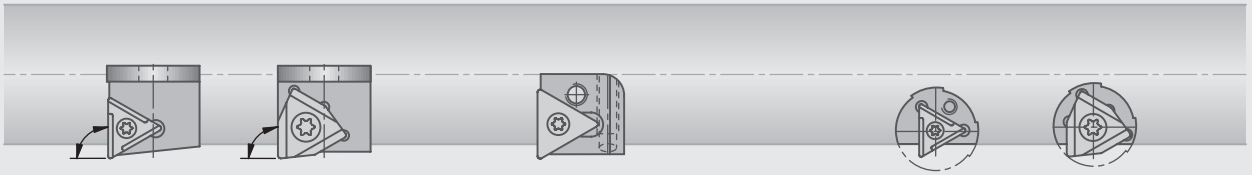
κ = 90°

κ = 90°

### Adjustable Insert Seating | Insert Flat Bed Seating | Insert Seating

WVU | WVP | FLWE | UWU, UWE

Page 557 – 563 | 550 – 556 | 547 | 564 – 565



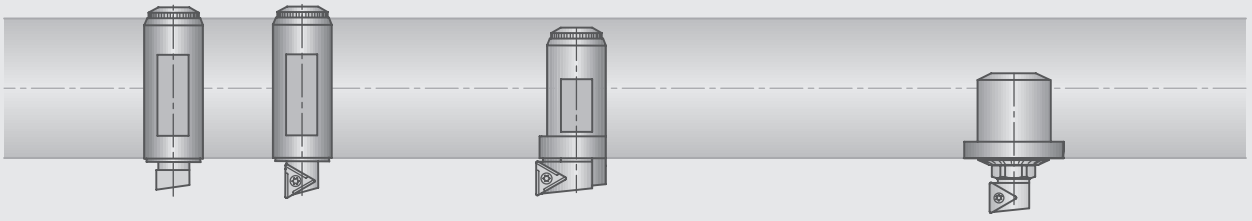
κ = 90° · 75° · 60° · 45° · 30° · 15° · 0°

κ = 90°

### Micro-adjustable Cartridge radial and angled mounting

FZ | FF | M31

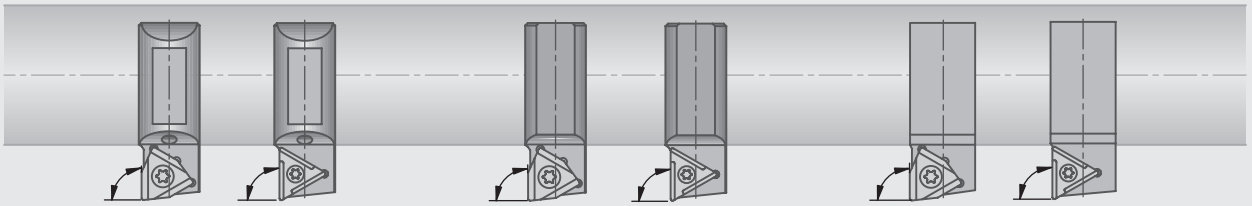
Page 586 – 590 | 591 | 584 – 585



### Boring Tool

UZV | UZ | UV

Page 571 – 577 | 579 – 581 | 582 – 583

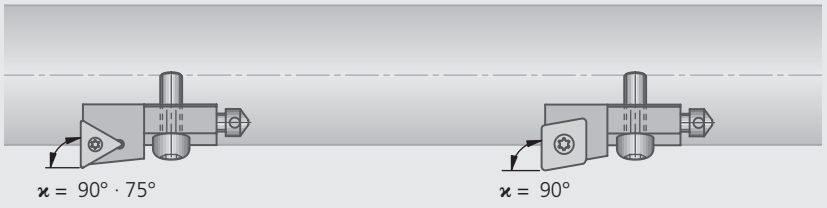


κ = 90° · 75° · 60° · 45° · 30° · 15° · 0°

κ = 90° · 53° · 45°

κ = 90° · 53°

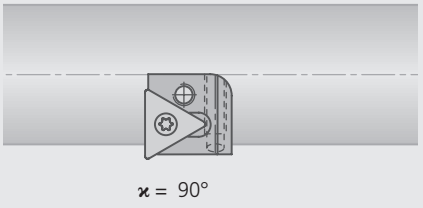
Short Clamp Holder UKS
Page 595 – 596




594

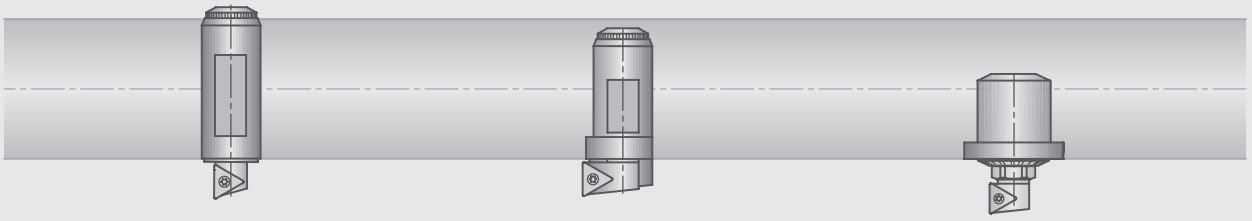



Insert Flat Bed Seating FLEW
597




Micro-adjustable Cartridge radial and angled mounting

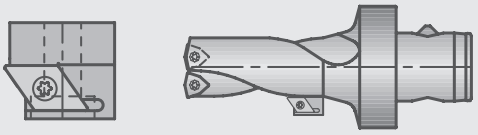
| | FZ | FF | M31 |
|---|---|---|---|
| Page | 598 | 599 | 600 – 601 |



Semi-finished Head
510 – 511



Chamfering Cartridge
593



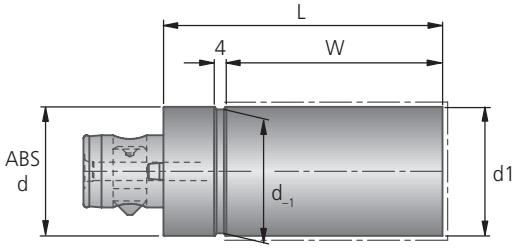
Boring bars with adjustable
KOMET Kometric® insert seatings.



# KOMET ABS® HK

## ABS® Semi-finished Heads

■ ABS® connection area hardened and ground




— · — · — soft zone for further machining

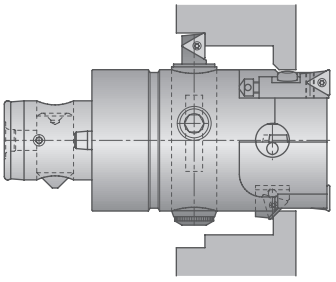
| ABS® HK | | | | | | |
|---|---|---|---|---|---|---|
| Article | Order No. | ABS Ø d | Ø d1 | L | W | kg |
| ABS 25-HK | B10 01011 | 25 | 26 | 70 | 51 | 0,30 |
| ABS 32-HK | B10 02011 | 32 | 33 | 80 | 61 | 0,57 |
| ABS 40-HK | B10 03011 | 40 | 41 | 100 | 78 | 1,10 |
| ABS 50-HK | B10 04011 | 50 | 51 | 120 | 95 | 2,02 |
| ABS 63-HK | B10 05011 | 63 | 64 | 150 | 120 | 4,08 |
| ABS 80-HK | B10 06011 | 80 | 81 | 180 | 141 | 7,76 |
| ABS 100-HK | B10 07011 | 100 | 101 | 200 | 154 | 13,48 |

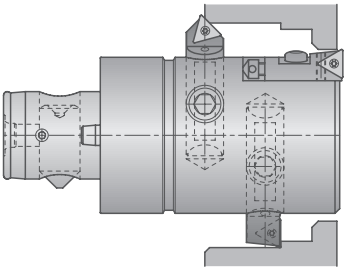
As all heavy-duty tools are completely hardened, semi-finished heads should only be used where there is no alternative. These semi-finished heads are hardened and ground on the connecting faces only and are soft at the front, i. e. not heat-treated. Further machining of semi-finished heads can only be carried out in the area marked W.

Note:
Subsequent hardening of semi-finished heads can cause distortion and deviations in the dimensions; under these circumstances function and quality cannot be guaranteed.

## Fitting KOMET Kometric® insert seatings yourself

Example of semi-finished heads from ABS® HK in conjunction with Kometric® insert seatings



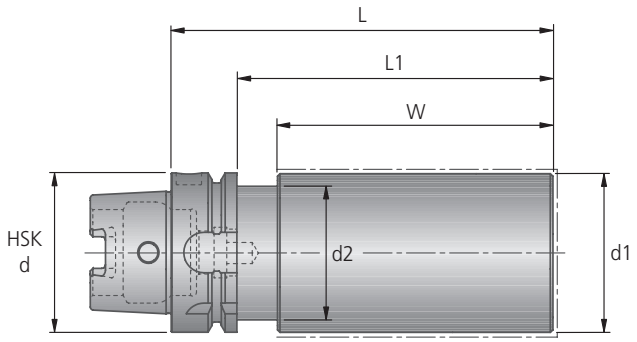




Patent applied for inside and outside Germany (ABS)

# HSK-A Semi-finished Heads

HSK connection area hardened and ground ■



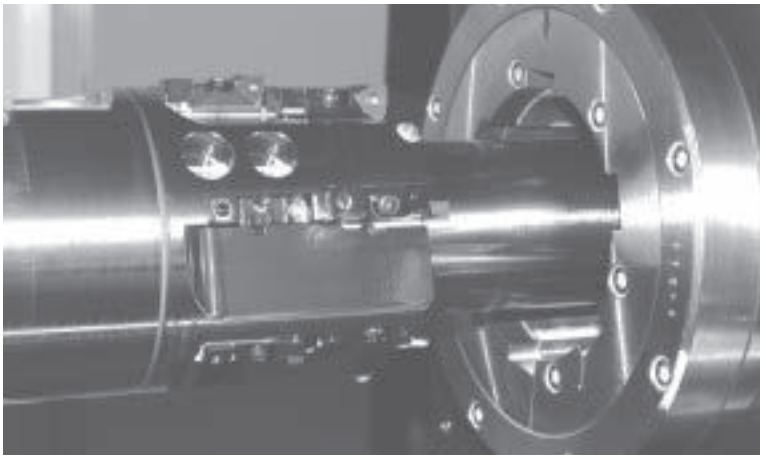

— · — · — soft zone for further machining

| HSK-A DIN 69893 T1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Article | Order No. | HSK Ø d | Ø d1 | Ø d2 | L | L1 | W | kg |
| HSK-A63-63x200 | **A06 33650** | 63 | 63 | 53 | 200 | 174 | 158 | 4,87 |
| HSK-A100-100x250 | **A06 53650** | 100 | 100 | 85 | 250 | 221 | 205 | 14,38 |

**Supply includes:**
Semi-finished head complete fitted. Please order coolant supply connection and key separately (see chapter 8).

As all heavy-duty tools are completely hardened, semi-finished heads should only be used where there is no alternative. These semi-finished heads are hardened and ground on the connecting faces only and are soft at the front, i. e. not heat-treated. Further machining of semi-finished heads can only be carried out in the area marked W.

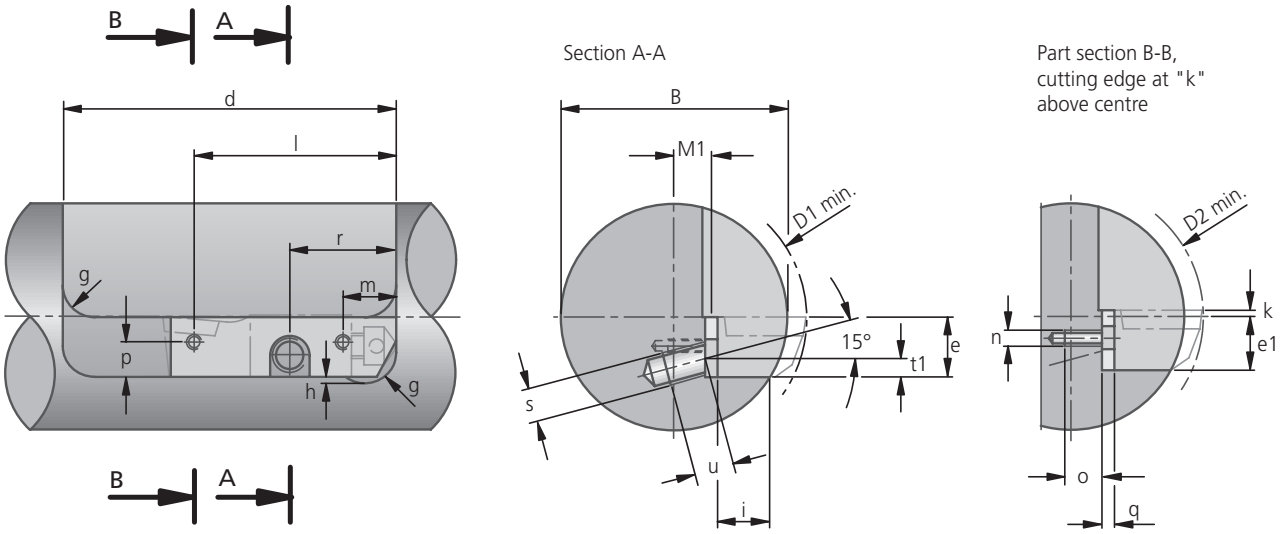
**Note:**
Subsequent hardening of semi-finished heads can cause distortion and deviations in the dimensions; under these circumstances function and quality cannot be guaranteed.



## Mounting Dimensions

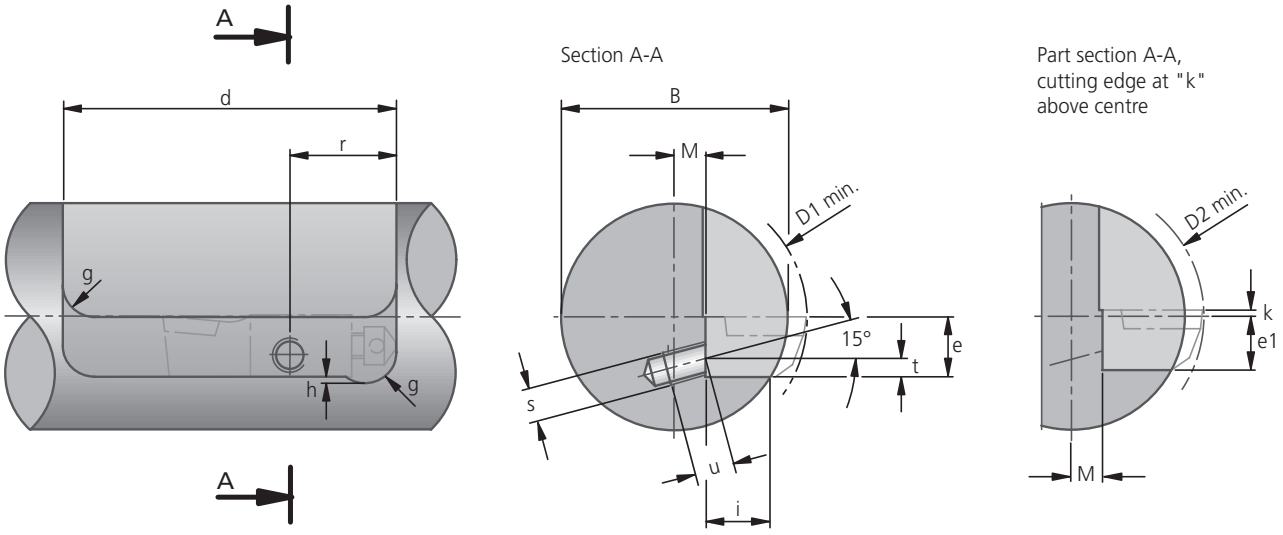


### Axial Mounting with shim plate



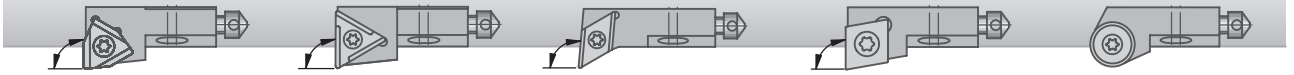

$B = 2\sqrt{e^2 + (M1 + q + i)^2}$ $M1 = \frac{D}{2} - f - q$ (Dimension f: see following pages)

### Axial mounting without shim plate




$B = 2\sqrt{e^2 + (M + i)^2}$ $M = \frac{D}{2} - f$ (Dimension f: see following pages)

## Mounting Dimensions



$\varkappa$ = 93° · 90° · 75°
60° · 45° · 45°II
30° · 30° I
15° · 0°

$\varkappa$ = 90° · 75°
60° · 45°
30° · 15° · 0°

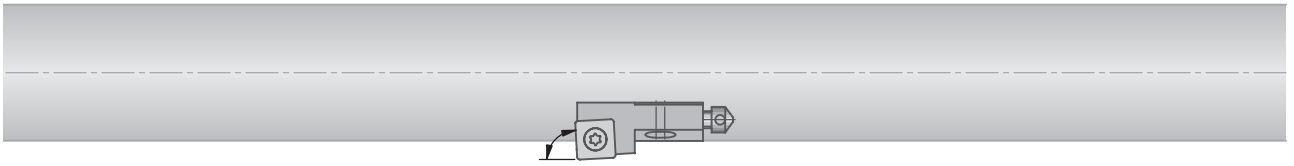
$\varkappa$ = 107°
95°
5°

$\varkappa$ = 90°

for round insert

| Short clamp holder size | Boring bar | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ø D1 min. for | | | | | | | | | | | | | Ø D2 min. for | | | | | | | | | | | | | |
| | $\varkappa$ = 107° | $\varkappa$ = 95° | $\varkappa$ = 93° | $\varkappa$ = 90° | $\varkappa$ = 75° | $\varkappa$ = 60° | $\varkappa$ = 45° | $\varkappa$ = 45°II | $\varkappa$ = 30° | $\varkappa$ = 30°I | $\varkappa$ = 15° | $\varkappa$ = 5° | $\varkappa$ = 0° | round insert | $\varkappa$ = 107° | $\varkappa$ = 95° | $\varkappa$ = 93° | $\varkappa$ = 90° | $\varkappa$ = 75° | $\varkappa$ = 60° | $\varkappa$ = 45° | $\varkappa$ = 45°II | $\varkappa$ = 30° | $\varkappa$ = 30°I | $\varkappa$ = 15° | $\varkappa$ = 5° | $\varkappa$ = 0° | round insert |
| UKS6 | 24 | | | | | | | 20 | 20 | 24 | 20 | | 24 | | 16 | | | | | | | 16 | 16 | 16 | 16 | | 16 | |
| UKS8 | 33 | | | | | | | 22 | 24 | 33 | 26 | | 33 | | 25 | | | | | | | 18 | 20 | 25 | 22 | | 25 | |
| UKS10 | 36 | | | | | | | 26 | 26 | 36 | 36 | | 36 | | 28 | | | | | | | 22 | 22 | 28 | 32 | | 28 | |
| UKS16 | 56 | | | | | | | 56 | 64 | 56 | 60 | | 56 | | 40 | | | | | | | 46 | 52 | 40 | 40 | | 40 | |
| UKS20 | 68 | | | | | | | 74 | 78 | 68 | 80 | | 68 | | 52 | | | | | | | 52 | 58 | 52 | 52 | | 52 | |

| Short clamp holder size | Holder mounting | | | | | | | Location thread | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | without shim plate | | | | | with shim plate | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | 93° 45°II 30° 0° | Dimension l for $\varkappa$ = ...° | | | | | | 107° 95° 5° | round insert | | | | | | |
| | d | e | e1 | g | h | i | k | r | s | t | t1 | u | | 90° | 75° | 60° | 45° | 30°I | 15° | | | m | n | o | p | q |
| UKS6 | 33 | 5,8 | 4,8 | 3 | 0,5 | 4 | 1 | 12 | M3 | 2,5 | 2 | 7 | – | – | 24 | 23,5 | – | – | – | – | – | 7 | M2 | 6 | 3 | 2 |
| UKS8-804/706 | 43 | 7,6 | 6,6 | 4 | 1 | 6 | 1 | 17 | M4 | 3,2 | 2,7 | 6,5 | 28 | 28 | 28 | 32 | 28 | 28 | 28 | – | – | 7 | M2 | 6 | 4 | 2 |
| UKS8-802/708 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UKS8-818 | | | | | | 7 | | | | | | | | | | | | | | | | | | | | | |
| UKS8-8C1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UKS8-CC06 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UKS10 | 53 | 9,6 | 8,6 | 5 | 1 | 8,4 | 1 | 17 | M5 | 3,5 | 3 | 8,5 | 31,5 | 32 | 33,5 | 38 | 37,5 | 33,5 | – | – | 32,5 | 8,5 | M2 | 6 | 5 | 2 |
| UKS16 | 70 | 15,6 | 13,6 | 8 | 1 | 10,5 | 2 | 25 | M6 | 6,5 | 6 | 10 | 44,5 | 45 | 46 | 50 | 49 | 46 | – | – | 43,5 | 14 | M3 | 8 | 8 | 2 |
| UKS20 | 82 | 19,6 | 17,1 | 10 | 1 | 13 | 2,5 | 27 | M8 | 8,5 | 8 | 12 | 49 | 51,5 | 55 | 55 | 57 | 50 | – | – | 49 | 16 | M3 | 8 | 10 | 2 |



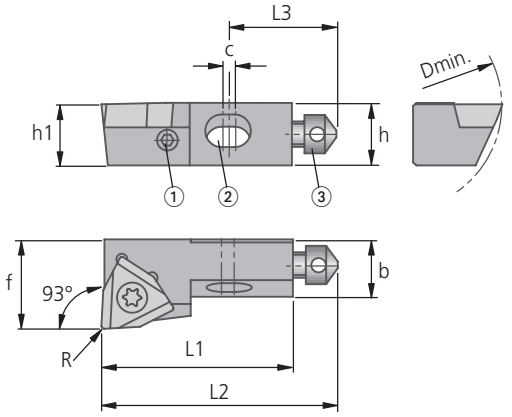
$\varkappa$ = 87° · 75° · 45°

| Short clamp holder size | Boring bar | | Holder mounting | | | | | | | Location thread | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | without shim plate | | | | | with shim plate | | | | | | | | |
| | D1 min. | D2 min. | d | e | e1 | g | h | i | k | r | s | t | t1 | u | Dimension l for $\varkappa$ 87° | 75° | 45° | m | n | o | p | q |
| UKS8 | 33 | 25 | 43 | 7,6 | 6,6 | 4 | 1 | 7 | 1 | 17 | M4 | 3,2 | 2,7 | 6,5 | 28 | 28 | 28 | 7 | M2 | 6 | 4 | 2 |
| UKS10 | 36 | 28 | 53 | 9,6 | 8,6 | 5 | 1 | 8,4 | 1 | 17 | M5 | 3,5 | 3 | 8,5 | 32 | 33,5 | 37,5 | 8,5 | M2 | 6 | 5 | 2 |
| UKS16 | 56 | 40 | 70 | 15,6 | 13,6 | 8 | 1 | 10,5 | 2 | 25 | M6 | 6,5 | 6 | 10 | 45 | 46 | 49 | 14 | M3 | 8 | 8 | 2 |

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 93°$

## P M K N S H for insert W01 / W29

- R.H. short clamp holder as shown with left or neutral insert
- L.H. short clamp holder in mirror image with right or neutral insert
- mounting instruction see page 512 – 513




| Article<br>cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-802-93 L 38 | **D40 50011** | 7,6 | 8 | 25 | 32 | 17 | 7,5 | 2 | 11 | 10,99 | 10,97 | 0,009 | UKS8-5-75L | **L02 21310** | **55023 00206** M2×6 DIN965 |
| UKS10-801-93 R 38 | **D40 55020** | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 14 | 13,99 | 13,97 | 0,017 | UKS10-5-0R | **L02 20920** | **55023 00206** M2×6 DIN965 |
| UKS10-801-93 L 38 | **D40 50020** | | | | | | | | | | | | UKS10-5-0L | **L02 21920** | |
| UKS16-810-93 R 48 | **D40 55040** | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | 18 | 17,99 | 17,97 | 0,048 | UKS16-5-0R | **L02 20940** | **55021 03008** M3×8 DIN7991 |
| UKS16-810-93 L 48 | **D40 50040** | | | | | | | | | | | | UKS16-5-0L | **L02 21940** | |

| for short clamp holder | Insert: W01 L.H. (radial rake 06 = 6° 12 = 12°) | W01 R.H. (radial rake 36 = 6° 42 = 12°) | W01 neutral | W29 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| UKS8-802-93 L 38 | | W01 24..0.02.. | W01 24600... | W29 24000.04.. | **N00 57511** S/M2,5×7,2-8IP 1,28 Nm | **L05 00830** 8IP | – | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS10-801-93 R 38 | W01 34..0.02.. | | W01 34600... | W29 34000.04.. | **N00 57521** S/M3,5×7,3-10IP 2,8 Nm | **L05 00850** 10IP | **55054 04008** M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS10-801-93 L 38 | | W01.34..0.02.. | | | | | | | |
| UKS16-810-93 R 48 | W01 42..0.02.. | | W01 42600... | W29 42000.04.. | **N00 57531** S/M4,5×9-15IP 6,25 Nm | **L05 00860** 15IP | **55054 05012** M5×12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12-4 |
| UKS16-810-93 L 48 | | W01 42..0.02.. | | | | | | | |

For further details on inserts see chapter 7

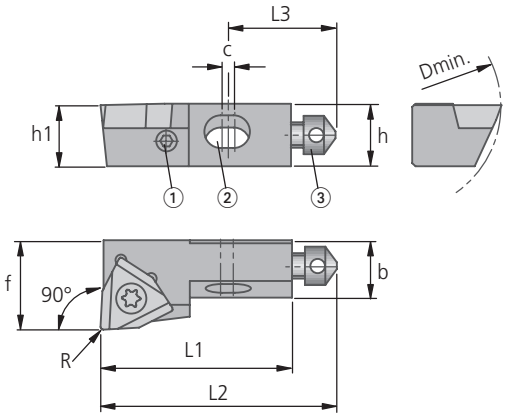
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 90°$

## for insert W01 / W29 P M K N S H

R.H. short clamp holder as shown with left or neutral insert ■
L.H. short clamp holder in mirror image with right or neutral insert ■
mounting instruction see page 512 – 513 ■




| Article<br>cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-810-90 R 23 | D40 55160 | 5,8 | 6 | 20 | 24,5 | 12 | 4,5 | 1 | – | 6,98 | – | 0,003 | UKS6-5-90R | L02 20200 | 55023 00206<br>M2×6 DIN965 |
| UKS8-818-90 R 32 | D40 55170 | 7,6 | 8 | 25 | 32 | 17 | 7,5 | 2 | – | 10,98 | – | 0,003 | UKS8-5-75R | L02 20310 | 55023 00206<br>M2×6 DIN965 |
| UKS8-802-90 R 38 | D40 55111 | 7,6 | 8 | 25 | 32 | 17 | 7,5 | 2 | 11 | 10,98 | 10,93 | 0,01 | UKS8-5-75R | L02 20310 | 55023 00206<br>M2×6 DIN965 |
| UKS10-801-90 R 38 | D40 55120 | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 14 | 13,98 | 13,93 | 0,017 | UKS10-5-90R | L02 20220 | 55023 00206<br>M2×6 DIN965 |
| UKS10-801-90 L 38 | D40 50120 | | | | | | | | | | | | UKS10-5-90L | L02 21220 | |
| UKS16-810-90 R 48 | D40 55140 | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | 17 | 17,98 | 17,93 | 0,05 | UKS16-5-90R | L02 20240 | 55021 03008<br>M3×8 DIN7991 |
| UKS16-810-90 L 48 | D40 50140 | | | | | | | | | | | | UKS16-5-90L | L02 21240 | |
| UKS20-820-90 R 53 | D40 55150 | 19,6 | 20 | 47 | 57 | 27 | 15 | 2 | – | 21,95 | 21,95 | 0,089 | UKS20-5-90R | L02 20250 | 55021 03008<br>M3×8 DIN7991 |

| for short clamp holder | Insert: W01 L.H. (radial rake 06 = 6° / 12 = 12°) | W01 R.H. (radial rake 36 = 6° / 42 = 12°) | W01 neutral | W29 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| UKS6-810-90 R 23 | | | | W29 10000.04.. | N00 56041<br>S/M2×4,3-6IP<br>0,62 Nm | L05 00810<br>6IP | 55054 03005<br>M3×5 | L02 30111<br>UKS6-3<br>1,9 Nm | L02 30010<br>UKS6-4 |
| UKS8-818-90 R 32 | | | | W29 18000.04.. | N00 57553<br>S/M2,2×5,5-6IP<br>1,01 Nm | L05 00810<br>6IP | 55054 03005<br>M3×5 | L02 30121*<br>UKS8-3<br>4,1 Nm | L02 30020<br>UKS8-4 |
| UKS8-802-90 R 38 | W01 24..0.02.. | | W01 24600.. | W29 24000.04.. | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP | – | L02 30121*<br>UKS8-3<br>4,1 Nm | L02 30020<br>UKS8-4 |
| UKS10-801-90 R 38 | W01 34..0.02.. | | W01 34600... | W29 34000.04.. | N00 57521<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP | 55054 04008<br>M4×8 | L02 30130<br>UKS10-3<br>8,5 Nm | L02 30020<br>UKS8-4 |
| UKS10-801-90 L 38 | | W01.34..0.02.. | | | | | | | |
| UKS16-810-90 R 48 | W01 42..0.02.. | | W01 42600... | W29 42000.04.. | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP | 55054 05012<br>M5×12 | L02 30140<br>UKS12-3<br>14 Nm | L02 30030<br>UKS12-4 |
| UKS16-810-90 L 48 | | W01 42..0.02.. | | | | | | | |
| UKS20-820-90 R 53 | W01 50..0.04.. | | W01 50600... | W29 50000.04.. | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP | 55054 05014<br>M5×14 | L02 30160<br>UKS20-3<br>35 Nm | L02 30030<br>UKS12-4 |

For further details on inserts see chapter 7

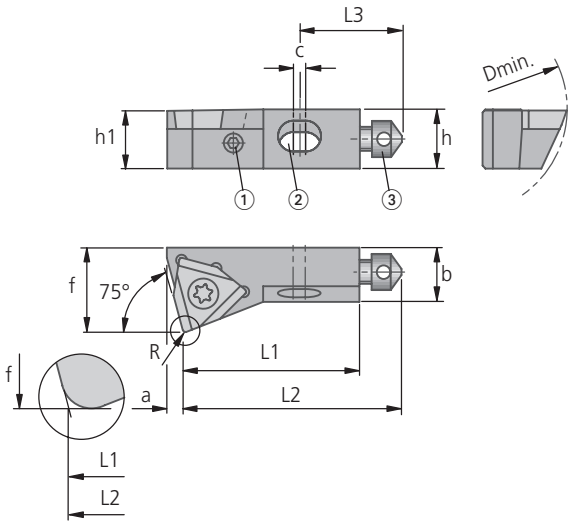
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 75°$

P M K N S H for insert W01 / W29

- R.H. short clamp holder as shown with left or neutral insert
- mounting instruction see page 512 – 513




| Article cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | a | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (2,5 / grinding allowance 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-818-75 R 32 | **D40 55270** | 7,6 | 8 | 25 | 32 | 17 | 7,5 | 2 | 1 | – | 10,94 | – | 0,003 | UKS8-5-75R | **L02 20310** | **55023 00206** M2×6 DIN965 |
| UKS8-802-75 R 38 | **D40 55211** | 7,6 | 8 | 25 | 32 | 17 | 7,5 | 2 | 1 | 11 | 10,94 | 10,8 | 0,01 | UKS8-5-75R | **L02 20310** | **55023 00206** M2×6 DIN965 |
| UKS10-801-75 R 38 | **D40 55220** | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 3 | 14 | 13,94 | 13,8 | 0,017 | UKS10-5-75R | **L02 20320** | **55023 00206** M2×6 DIN965 |
| UKS16-810-75 R 48 | **D40 55240** | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | 3,5 | 18 | 17,94 | 17,8 | 0,052 | UKS16-5-75R | **L02 20340** | **55021 03008** M3×8 DIN7991 |

| for short clamp holder | Insert: W01 L.H. (radial rake 06 = 6° 12 = 12°) | W01 neutral | W29 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS8-818-75 R 32 | | | **W29 18000.04..** | **N00 57553** S/M2,2×5,5-6IP 1,01 Nm | **L05 00810** 6IP | 55054 03005 M3×5 | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS8-802-75 R 38 | **W01 24..0.02..** | **W01 24600...** | **W29 24000.04..** | **N00 57511** S/M2,5×7,2-8IP 1,28 Nm | **L05 00830** 8IP | – | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS10-801-75 R 38 | **W01 34..0.02..** | **W01 34600...** | **W29 34000.04..** | **N00 57521** S/M3,5×7,3-10IP 2,8 Nm | **L05 00850** 10IP | 55054 04008 M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS16-810-75 R 48 | **W01 42..0.02..** | **W01 42600...** | **W29 42000.04..** | **N00 57531** S/M4,5×9-15IP 6,25 Nm | **L05 00860** 15IP | 55054 05012 M5×12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12-4 |

For further details on inserts see chapter 7

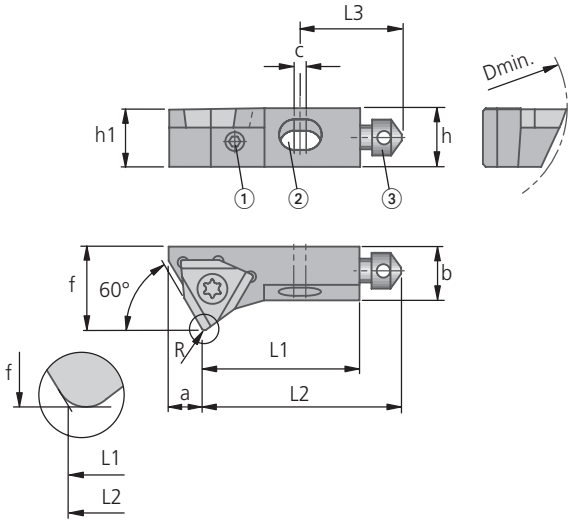
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 60°$

## for insert W01 / W29 P M K N S H

R.H. short clamp holder as shown with left or neutral insert ■
mounting instruction see page 512 – 513 ■




| Article cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | a | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (2,5 grinding allowance 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-810-60 R 23 | **D40 55360** | 5,8 | 6 | 20 | 24,5 | 12 | 4,5 | 1 | 3 | – | 6,9 | – | 0,003 | UKS6-5-60R | **L02 20400** | **55023 00206** M2×6 DIN965 |
| UKS8-802-60 R 38 | **D40 55311** | 7,6 | 8 | 25 | 32 | 17 | 7,5 | 2 | 4,5 | 11 | 10,9 | 10,72 | 0,011 | UKS8-5-60R | **L02 20410** | **55023 00206** M2×6 DIN965 |
| UKS10-801-60 R 38 | **D40 55320** | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 6 | 14 | 13,9 | 13,72 | 0,018 | UKS10-5-60R | **L02 20420** | **55023 00206** M2×6 DIN965 |
| UKS16-810-60 R 48 | **D40 55340** | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | 7 | 18 | 17,9 | 17,72 | 0,057 | UKS16-5-60R | **L02 20440** | **55021 03008** M3×8 DIN7991 |

| for short clamp holder | Insert: W01 L.H. (radial rake 06 = 6° 12 = 12°) | W01 neutral | W29 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS6-810-60 R 23 | | | **W29 10000.04..** | **N00 56041** S/M2×4,3-6IP 0,62 Nm | **L05 00810** 6IP | 55054 03005 M3×5 | **L02 30111** UKS6-3 1,9 Nm | **L02 30010** UKS6-4 |
| UKS8-802-60 R 38 | **W01 24..0.02..** | **W01 24600...** | **W29 24000.04..** | **N00 57511** S/M2,5×7,2-8IP 1,28 Nm | **L05 00830** 8IP | – | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS10-801-60 R 38 | **W01 34..0.02..** | **W01 34600...** | **W29 34000.04..** | **N00 57521** S/M3,5×7,3-10IP 2,8 Nm | **L05 00850** 10IP | 55054 04008 M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS16-810-60 R 48 | **W01 42..0.02..** | **W01 42600...** | **W29 42000.04..** | **N00 57531** S/M4,5×9-15IP 6,25 Nm | **L05 00860** 15IP | 55054 05012 M5×12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12-4 |

For further details on inserts see chapter 7

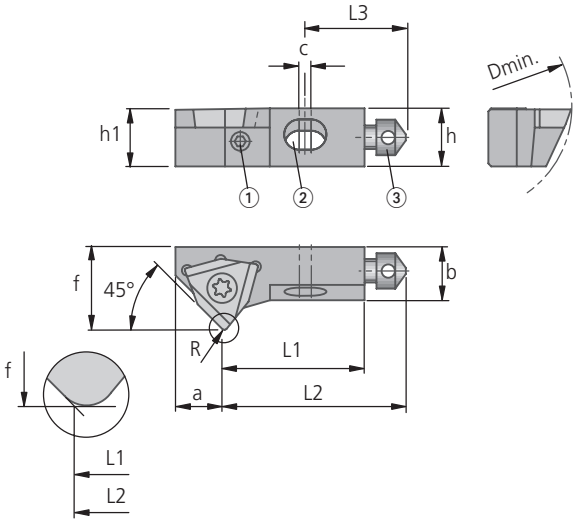
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 45°$

## for insert W01 / W29

- R.H. short clamp holder as shown with left or neutral insert
- L.H. short clamp holder in mirror image with right or neutral insert
- mounting instruction see page 512 – 513




| Article cutting form | Order No. | h1 | h | L1 | L2 | L3 | b | c | a | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-810-45 R 23 | **D40 55460** | 5,8 | 6 | 15 | 19,5 | 12 | 4,5 | 1 | 4 | – | 6,9 | – | 0,003 | UKS6-5-90R | **L02 20200** | **55023 00206** M2×6 DIN965 |
| UKS8-802-45 R 38 | **D40 55411** | 7,6 | 8 | 19,5 | 26,5 | 17 | 7,5 | 2 | 6,5 | 11 | 10,9 | 10,71 | 0,008 | UKS8-5-75R | **L02 20310** | **55023 00206** M2×6 DIN965 |
| UKS10-801-45 R 38 | **D40 55420** | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 9 | 14 | 13,9 | 13,71 | 0,026 | UKS10-5-45R | **L02 20520** | **55023 00206** M2×6 DIN965 |
| UKS10-801-45 L 38 | **D40 50420** | | | | | | | | | | | | | UKS10-5-45L | **L02 21520** | |
| UKS16-810-45 R 48 | **D40 55440** | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | 10 | 17 | 17,9 | 17,71 | 0,064 | UKS16-5-45R | **L02 20540** | **55021 03008** M3×8 DIN7991 |

| for short clamp holder | Insert: W01 L.H. (radial rake 06 = 6° / 12 = 12°) | W01 R.H. (radial rake 36 = 6° / 42 = 12°) | W01 neutral | W29 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| UKS6-810-45 R 23 | | | | **W29 10000.04..** | **N00 56041** S/M2×4,3-6IP 0,62 Nm | **L05 00810** 6IP | – | **L02 30111** UKS6-3 1,9 Nm | **L02 30010** UKS6-4 |
| UKS8-802-45 R 38 | **W01 24..0.02..** | | **W01 24600...** | **W29 24000.04..** | **N00 57511** S/M2,5×7,2-8IP 1,28 Nm | **L05 00830** 8IP | – | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS10-801-45 R 38 | **W01 34..0.02..** | | **W01 34600...** | **W29 34000.04..** | **N00 57521** S/M3,5×7,3-10IP 2,8 Nm | **L05 00850** 10IP | **55054 04008** M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS10-801-45 L 38 | | **W01.34..0.02..** | | | | | | | |
| UKS16-810-45 R 48 | **W01 42..0.02..** | | **W01 42600...** | **W29 42000.04..** | **N00 57531** S/M4,5×9-15IP 6,25 Nm | **L05 00860** 15IP | **55054 05012** M5×12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12-4 |

For further details on inserts see chapter 7

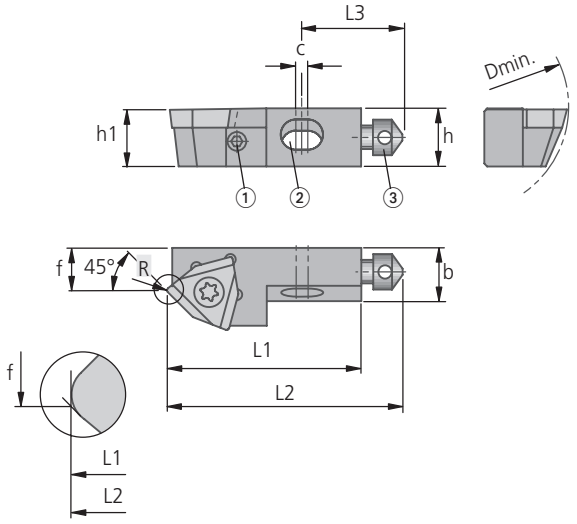
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa$ = 45° II

## for insert W01 / W29 P M K N S H

R.H. short clamp holder as shown with right or neutral insert ■
mounting instruction see page 512 – 513 ■




| Article<br>cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-802-II-45R38 | **D40 55511** | 7,6 | 8 | 26 | 33 | 17 | 7,5 | 2 | 5,6 | 5,7 | 5,89 | 0,009 | UKS8-5-75R | **L02 20310** | **55023 00206**<br>M2×6 DIN965 |
| UKS10-801-II-45R38 | **D40 55520** | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 7,1 | 7,2 | 7,39 | 0,018 | UKS10-5-0R | **L02 20920** | **55023 00206**<br>M2×6 DIN965 |
| UKS16-810-II-45R38 | **D40 55540** | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | 9,6 | 9,7 | 9,89 | 0,05 | UKS16-5-0R | **L02 20940** | **55021 03008**<br>M3×8 DIN7991 |

| for short clamp holder | Insert: W01 R.H. (radial rake 36 = 6° 42 = 12° ▽▽) | W01 neutral | W29 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS8-802-II-45R38 | **W01 24..0.02..** | **W01 24600...** | **W29 24000.04..** | **N00 57511**<br>S/M2,5×7,2-8IP<br>1,28 Nm | **L05 00830**<br>8IP | – | **L02 30121***<br>UKS8-3<br>4,1 Nm | **L02 30020**<br>UKS8-4 |
| UKS10-801-II-45R38 | **W01 34..0.02..** | **W01 34600...** | **W29 34000.04..** | **N00 57521**<br>S/M3,5×7,3-10IP<br>2,8 Nm | **L05 00850**<br>10IP | **55054 04008**<br>M4×8 | **L02 30130**<br>UKS10-3<br>8,5 Nm | **L02 30020**<br>UKS8-4 |
| UKS16-810-II-45R38 | **W01 42..0.02..** | **W01 42600...** | **W29 42000.04..** | **N00 57531**<br>S/M4,5×9-15IP<br>6,25 Nm | **L05 00860**<br>15IP | **55054 05012**<br>M5×12 | **L02 30140**<br>UKS12-3<br>14 Nm | **L02 30030**<br>UKS12-4 |

For further details on inserts see chapter 7

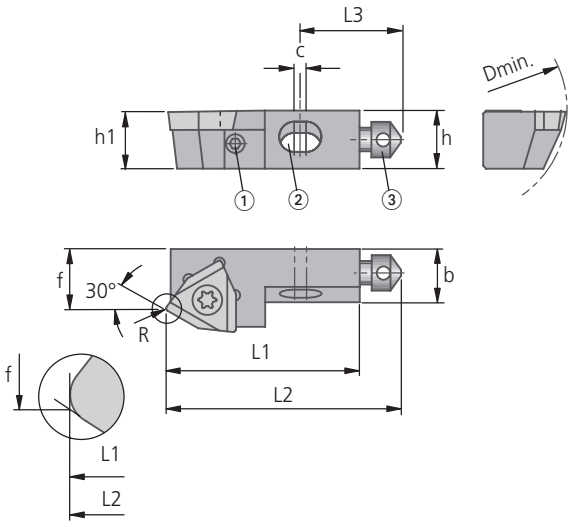
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 30°$

P M K N S H for insert W01 / W29

- R.H. short clamp holder as shown with right or neutral insert
- mounting instruction see page 512 – 513




| Article<br>cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (2,5 / grinding allowance 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-802-30 R 38 | **D40 55611** | 7,6 | 8 | 26 | 33 | 17 | 7,5 | 2 | 8,05 | 8,11 | 8,21 | 0,009 | UKS8-5-75R | **L02 20310** | **55023 00206**<br>M2×6 DIN965 |
| UKS10-801-30 R 38 | **D40 55620** | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 10,05 | 10,11 | 10,21 | 0,009 | UKS10-5-0R | **L02 20920** | **55023 00206**<br>M2×6 DIN965 |
| UKS16-810-30 R 48 | **D40 55640** | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | 13,05 | 13,11 | 13,21 | 0,052 | UKS16-5-0R | **L02 20940** | **55021 03008**<br>M3×8 DIN7991 |

| for short clamp holder | Insert: W01 R.H. (radial rake 36 = 6° 42 = 12° ▽▽) | W01 neutral | W29 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS8-802-30 R 38 | **W01 24..0.02..** | **W01 24600...** | **W29 24000.04..** | **N00 57511**<br>S/M2,5×7,2-8IP<br>1,28 Nm | **L05 00830**<br>8IP | – | **L02 30121***<br>UKS8-3<br>4,1 Nm | **L02 30020**<br>UKS8-4 |
| UKS10-801-30 R 38 | **W01 34..0.02..** | **W01 34600...** | **W29 34000.04..** | **N00 57521**<br>S/M3,5×7,3-10IP<br>2,8 Nm | **L05 00850**<br>10IP | **55054 04008**<br>M4×8 | **L02 30130**<br>UKS10-3<br>8,5 Nm | **L02 30020**<br>UKS8-4 |
| UKS16-810-30 R 48 | **W01 42..0.02..** | **W01 42600...** | **W29 42000.04..** | **N00 57531**<br>S/M4,5×9-15IP<br>6,25 Nm | **L05 00860**<br>15IP | **55054 05012**<br>M5×12 | **L02 30140**<br>UKS12-3<br>14 Nm | **L02 30030**<br>UKS12-4 |

For further details on inserts see chapter 7

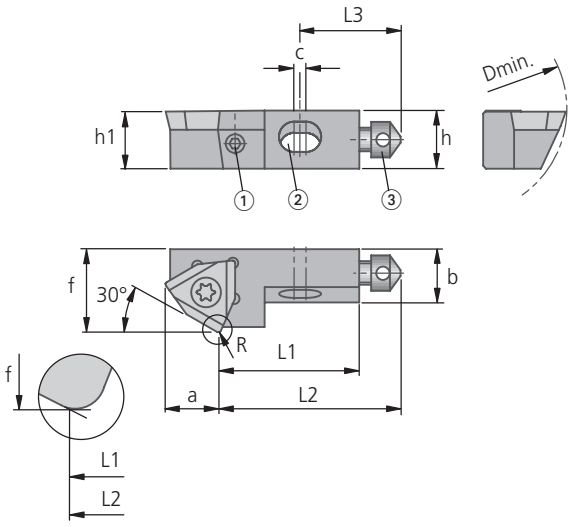
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa$ = 30° I

## for insert W01 / W29 P M K N S H

R.H. short clamp holder as shown with left or neutral insert ■
mounting instruction see page 512 – 513 ■




| Article cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | a | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (2,5 grinding allowance 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-802-I-30R38 | **D40 55711** | 7,6 | 8 | 19,5 | 26,5 | 17 | 7,5 | 2 | 8 | 11 | 10,92 | 10,75 | 0,01 | UKS8-5-75R | **L02 20310** | **55023 00206** M2×6 DIN965 |
| UKS10-801-I-30R38 | **D40 55720** | 9,6 | 10 | 24 | 31 | 17 | 9 | 2 | 9,38 | 14 | 13,92 | 13,75 | 0,017 | UKS10-5-75R | **L02 20320** | **55023 00206** M2×6 DIN965 |
| UKS16-810-I-30R48 | **D40 55740** | 15,6 | 16 | 34 | 42 | 25 | 12 | 2 | 11 | 18 | 17,92 | 17,75 | 0,045 | UKS16-5-75R | **L02 20340** | **55021 03008** M3×8 DIN7991 |

| for short clamp holder | Insert: W01 L.H. (radial rake 06 = 6° 12 = 12° ▽▽) | W01 neutral | W29 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS8-802-I-30R38 | **W01 24..0.02..** | **W01 24600...** | **W29 24000.04..** | **N00 57511** S/M2,5×7,2-8IP 1,28 Nm | **L05 00830** 8IP | – | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS10-801-I-30R38 | **W01 34..0.02..** | **W01 34600...** | **W29 34000.04..** | **N00 57521** S/M3,5×7,3-10IP 2,8 Nm | **L05 00850** 10IP | **55054 04008** M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS16-810-I-30R48 | **W01 42..0.02..** | **W01 42600...** | **W29 42000.04..** | **N00 57531** S/M4,5×9-15IP 6,25 Nm | **L05 00860** 15IP | **55054 05012** M5×12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12-4 |

For further details on inserts see chapter 7

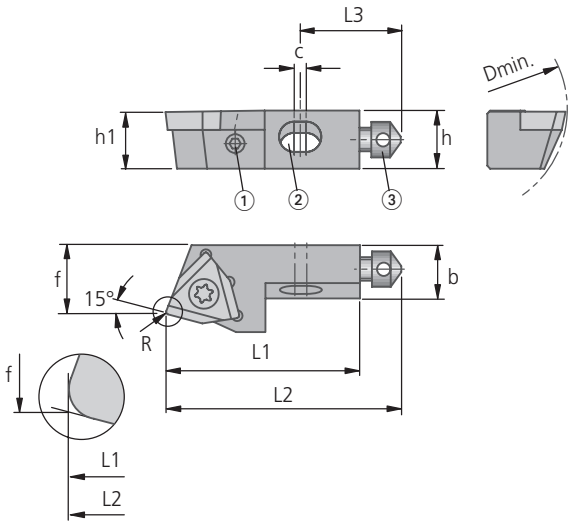
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 15°$

P M K N S H for insert W01 / W29

- R.H. short clamp holder as shown with right or neutral insert
- L.H. short clamp holder in mirror image with left or neutral insert
- mounting instruction see page 512 – 513




| Article cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-802-15 R 38 | **D40 55811** | 7,6 | 8 | 26 | 33 | 17 | 7,5 | 2 | 9,52 | 9,54 | 9,57 | 0,01 | UKS8-5-75R | **L02 20310** | **55023 00206** M2×6 DIN965 |
| UKS10-801-15 R 38 | **D40 55820** | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 12,02 | 12,04 | 12,07 | 0,017 | UKS10-5-15R | **L02 20720** | **55023 00206** M2×6 DIN965 |
| UKS10-801-15 L 38 | **D40 50820** | | | | | | | | | | | | UKS10-5-15L | **L02 21720** | |
| UKS16-810-15 R 48 | **D40 55840** | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | 15,52 | 15,54 | 15,57 | 0,048 | UKS16-5-15R | **L02 20740** | **55021 03008** M3×8 DIN7991 |
| UKS16-810-15 L 48 | **D40 50840** | | | | | | | | | | | | UKS16-5-15L | **L02 21740** | |

| for short clamp holder | Insert: W01 L.H. (radial rake 06 = 6° 12 = 12°) | W01 R.H. (radial rake 36 = 6° 42 = 12°) | W01 neutral | W29 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| UKS8-802-15 R 38 | | **W01 24..0.02..** | **W01 24600...** | **W29 24000.04..** | **N00 57511** S/M2,5×7,2-8IP 1,28 Nm | **L05 00830** 8IP | – | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS10-801-15 R 38 | | **W01.34..0.02..** | **W01 34600...** | **W29 34000.04..** | **N00 57521** S/M3,5×7,3-10IP 2,8 Nm | **L05 00850** 10IP | **55054 04008** M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS10-801-15 L 38 | **W01 34..0.02..** | | | | | | | | |
| UKS16-810-15 R 48 | | **W01 42..0.02..** | **W01 42600...** | **W29 42000.04..** | **N00 57531** S/M4,5×9-15IP 6,25 Nm | **L05 00860** 15IP | **55054 05012** M5×12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12-4 |
| UKS16-810-15 L 48 | **W01 42..0.02..** | | | | | | | | |

For further details on inserts see chapter 7

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

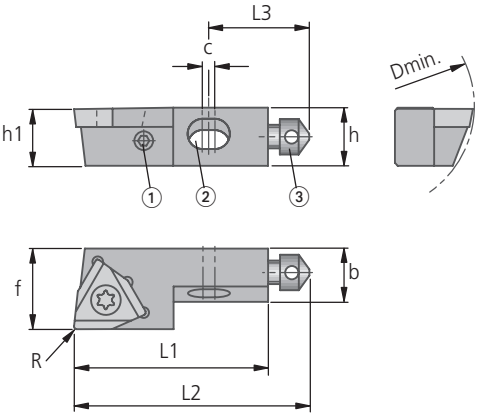
* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 0°$

## for insert W01 / W29

P M K N S H

R.H. short clamp holder as shown with right or neutral insert ■
L.H. short clamp holder in mirror image with left or neutral insert ■
mounting instruction see page 512 – 513 ■




| Article<br>cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-802-0 R 38 | D40 55911 | 7,6 | 8 | 26 | 33 | 17 | 7,5 | 2 | 11 | 11 | 11 | 0,008 | UKS8-5-75R | L02 20310 | 55023 00206<br>M2×6 DIN965 |
| UKS10-801-0 R 38 | D40 55920 | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 14 | 14 | 14 | 0,016 | UKS10-5-0R | L02 20920 | 55023 00206<br>M2×6 DIN965 |
| UKS10-801-0 L 38 | D40 50920 | | | | | | | | | | | | UKS10-5-0L | L02 21920 | |
| UKS16-810-0 R 48 | D40 55940 | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | 18 | 18 | 18 | 0,048 | UKS16-5-0R | L02 20940 | 55021 03008<br>M3×8 DIN7991 |
| UKS16-810-0 L 48 | D40 50940 | | | | | | | | | | | | UKS16-5-0L | L02 21940 | |

| for short clamp holder | Insert: W01 L.H. (radial rake 06 = 6° 12 = 12°) | W01 R.H. (radial rake 36 = 6° 42 = 12°) | W01 neutral | W29 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| UKS8-802-0 R 38 | | W01 24..0.02.. | W01 24600... | W29 24000.04.. | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP | – | L02 30121*<br>UKS8-3<br>4,1 Nm | L02 30020<br>UKS8-4 |
| UKS10-801-0 R 38 | | W01.34..0.02.. | W01 34600... | W29 34000.04.. | N00 57521<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP | 55054 04008<br>M4×8 | L02 30130<br>UKS10-3<br>8,5 Nm | L02 30020<br>UKS8-4 |
| UKS10-801-0 L 38 | W01 34..0.02.. | | | | | | | | |
| UKS16-810-0 R 48 | | W01 42..0.02.. | W01 42600... | W29 42000.04.. | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP | 55054 05012<br>M5×12 | L02 30140<br>UKS12-3<br>14 Nm | L02 30030<br>UKS12-4 |
| UKS16-810-0 L 48 | W01 42..0.02.. | | | | | | | | |

For further details on inserts see chapter 7

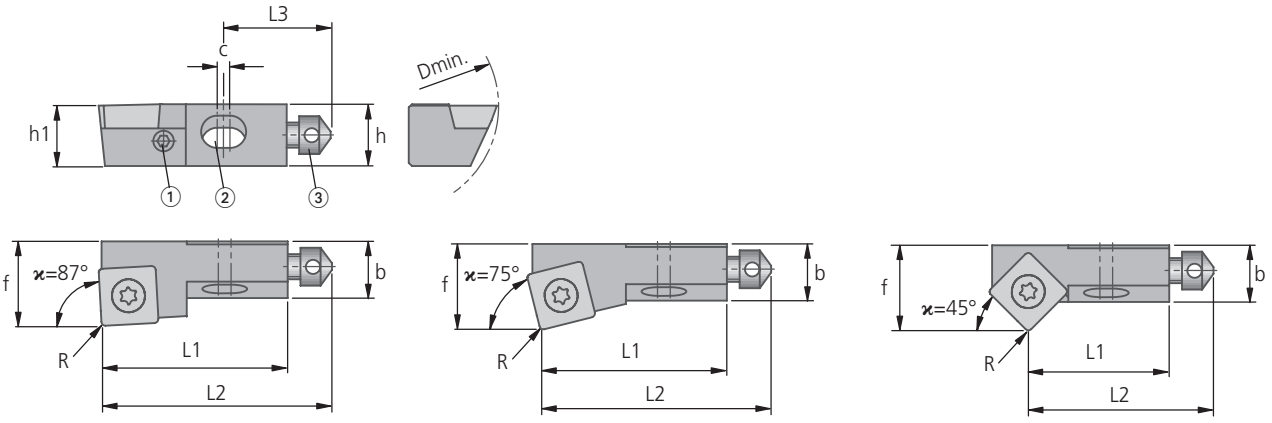
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa$ = 87° / 75°/ 45°

P M K N S H for insert W83

- R.H. short clamp holder as shown with neutral insert
- mounting instruction see page 512 – 513




| Article cutting form ▼ | Order No. | $\varkappa$ | h1 | h | L1 | L2 | L3 | b | c | R | ISO dim. f | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Accessories: Shim plate Order No. | Accessories: Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8 SOEX060306 87 R | **D40 06700** | 87° | | | 25 | 32 | | | | | 11 | 0,014 | | | |
| UKS8 SOEX060306 75 R | **D40 06710** | 75° | 7,6 | 8 | 25 | 32 | 17 | 7,5 | 2 | 0,6 | 10,94 | 0,013 | UKS8-5-75R | **L02 20310** | **55023 00206** M2×6 DIN965 |
| UKS8 SOEX060306 45 R | **D40 06720** | 45° | | | 19,5 | 26,5 | | | | | 10,9 | 0,012 | | | |
| UKS10 SOEX090408 87 R | **D40 06800** | 87° | | | 30 | 37 | | | | | 14 | 0,025 | UKS10-5-90R | **L02 20220** | |
| UKS10 SOEX07T308 75 R | **D40 06810** | 75° | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 0,8 | 13,94 | 0,024 | UKS10-5-75R | **L02 20320** | **55023 00206** M2×6 DIN965 |
| UKS10 SOEX07T308 45 R | **D40 06820** | 45° | | | 25 | 32 | | | | | 13,9 | 0,023 | UKS10-5-45R | **L02 20520** | |
| UKS16 SOEX120508 87 R | **D40 06901** | 87° | | | | | | | | | 18 | 0,066 | UKS16-5-90R | **L02 20240** | |
| UKS16 SOEX120508 75 R | **D40 06911** | 75° | 15,6 | 15,7 | 42 | 50 | 25 | 12 | 2 | 0,8 | 17,94 | 0,066 | UKS16-5-75R | **L02 20340** | **55021 03008** M3×8 DIN7991 |
| UKS16 SOEX120508 45 R | **D40 06921** | 45° | | | | | | | | | 17,9 | 0,076 | UKS16-5-45R | **L02 20540** | |

| for short clamp holder | Insert W83 | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Assembly parts: Location screw ② Order No. Article | Assembly parts: Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|
| UKS8 ... R | **W83 18...** | **N00 57553** S/M2,2×5,5-6IP 1,01 Nm | **L05 00810** 6IP | – | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS10 ... 87 R | **W83 32...** | **N00 57261** S3575-15IP 2,8 Nm | **L05 00860** 15IP | – | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS10 ... 75 R | **W83 23...** | **N00 57571** S/M2,5×6,3-8IP 1,28 Nm | **L05 00830** 8IP | – | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS10 ... 45 R | **W83 23...** | **N00 57571** S/M2,5×6,3-8IP 1,28 Nm | **L05 00830** 8IP | – | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS16 ... R | **W83 44...** | **N00 57301** S45100-20IP 6,25 Nm | **L05 00870** 20IP | **55054 05012** M5x12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12 |

For further details on inserts see chapter 7

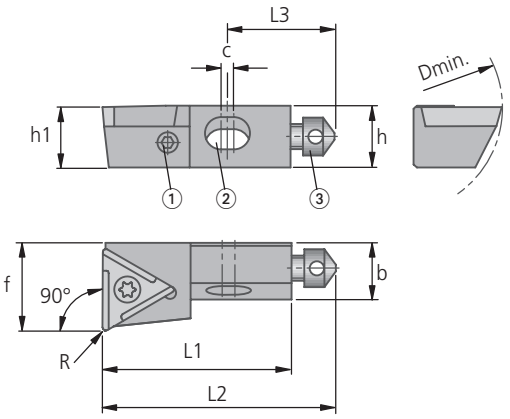
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 90°$

## for insert W30 / W57 P M K N S H

R.H. short clamp holder as shown with left or neutral insert ■
L.H. short clamp holder in mirror image with right or neutral insert ■
mounting instruction see page 512 – 513 ■




| Article cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,3 | R0,4 | R0,5 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-803-90 R | D40 05160 | 5,8 | 6 | 20 | 24,5 | 12 | 4,5 | 1 | 7,08 | 7 | 6,93 | – | – | 0,003 | UKS6-5-90R | L02 20200 | 55023 00206 M2×6 DIN965 |
| UKS6-803-90 L | D40 00160 | | | | | | | | | | | | | | UKS6-5-90L | L02 21200 | |
| UKS8-804-90 R | D40 05170 | 7,6 | 8 | 25 | 32 | 17 | 6,5 | 2 | 10,14 | – | 10 | – | 9,7 | 0,008 | UKS8-5-75R | L02 20310 | 55023 00206 M2×6 DIN965 |
| UKS8-804-90 L | D40 00170 | | | | | | | | | | | | | | UKS8-5-75L | L02 21310 | |
| UKS10-805-90 R | D40 05180 | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 14,23 | – | 14,08 | 14 | 13,78 | 0,017 | UKS10-5-90R | L02 20220 | 55023 00206 M2×6 DIN965 |
| UKS10-805-90 L | D40 00180 | | | | | | | | | | | | | | UKS10-5-90L | L02 21220 | |
| UKS20-806-90 R | D40 05190 | 19,6 | 20 | 47 | 57 | 27 | 15 | 2 | – | – | 22,3 | – | 22 | 0,092 | UKS20-5-90R | L02 20250 | 55021 03008 M3×8 DIN7991 |
| UKS20-806-90 L | D40 00190 | | | | | | | | | | | | | | UKS20-5-90L | L02 21250 | |
| UKS10-T4-90 R | D40 07130 | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | – | – | 14,08 | – | 13,78 | 0,05 | UKS10-5-90R | L02 20220 | 55023 00206 M2×6 DIN965 |
| UKS16-T5-90 R | D40 07140 | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | – | – | – | 18,22 | 18 | 0,06 | UKS16-5-90R | L02 20240 | 55021 03008 M3×8 DIN7991 |

| for short clamp holder | Insert: W30 L.H. (radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°) | Insert: W30 R.H. (radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°) | Insert: W57 / W59 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS6-803-90 R | W30 04..0.03.. | | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62Nm | L05 00810 6IP | 55054 03005 M3×5 | L02 30111 UKS6-3 1,9 Nm | L02 30010 UKS6-4 |
| UKS6-803-90 L | | W30 04..0.03.. | | | | | | |
| UKS8-804-90 R | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP | 55054 03005 M3×5 | L02 30121* UKS8-3 4,1 Nm | L02 30020 UKS8-4 |
| UKS8-804-90 L | | W30 14..0.04.. | | | | | | |
| UKS10-805-90 R | W30 26..0.05.. | | W57 26140.04.. | N00 56211 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP | 55054 04008 M4×8 | L02 30130 UKS10-3 8,5 Nm | L02 30020 UKS8-4 |
| UKS10-805-90 L | | W30 26..0.05.. | | | | | | |
| UKS20-806-90 R | W30 44..0.08.. | | | N00 56411 S/M5×13,4-20IP 6,25 Nm | L05 00870 20IP | 55054 05014 M5×14 | L02 30160 UKS20-3 35 Nm | L02 30030 UKS12-4 |
| UKS20-806-90 L | | W30 44..0.08.. | | | | | | |
| UKS10-T4-90 R | | | W59 18050.04.. | N00 56651 S2560-8IP 1,28 Nm | L05 00830 8IP | 55054 04008 M4×8 | L02 30130 UKS10-3 8,5 Nm | L02 30020 UKS8-4 |
| UKS16-T5-90 R | | | W59 32050.08.. | N00 56771 S35102-10IP 2,8 Nm | L05 00850 10IP | 55054 05012 M5×12 | L02 30140 UKS12-3 14 Nm | L02 30030 UKS12-4 |

For further details on inserts see chapter 7

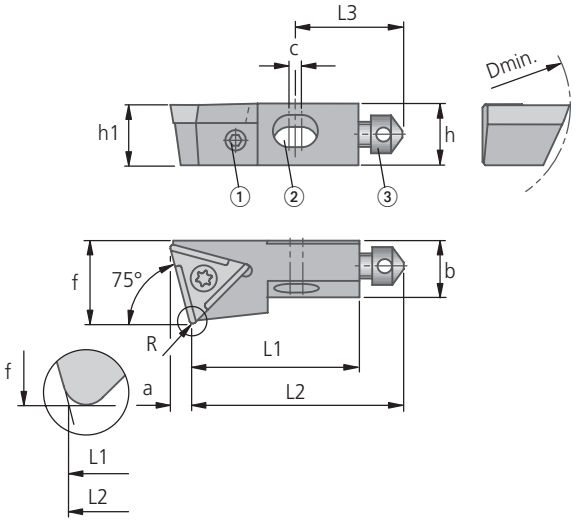
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 75°$

## for insert W30 / W57

- R.H. short clamp holder as shown with left or neutral insert
- L.H. short clamp holder in mirror image with right or neutral insert
- mounting instruction see page 512 – 513




| Article cutting form | Order No. | h1 | h | L1 | L2 | L3 | b | c | a | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-803-75 R | D40 05260 | 5,8 | 6 | 20 | 24,5 | 12 | 4,5 | 1 | 1 | 7,1 | 7 | 6,91 | 0,003 | UKS6-5-75R | L02 20300 | 55023 00206 M2×6 DIN965 |
| UKS6-803-75 L | D40 00260 | | | | | | | | | | | | | UKS6-5-75L | L02 21300 | |
| UKS8-804-75 R | D40 05270 | 7,6 | 8 | 25 | 32 | 17 | 6,5 | 2 | 1,5 | 10,18 | – | 10 | 0,009 | UKS8-5-75R | L02 20310 | 55023 00206 M2×6 DIN965 |

| for short clamp holder | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS6-803-75 R | W30 04..0.03.. | | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62Nm | L05 00810 6IP | 55054 03005 M3×5 | L02 30111 UKS6-3 1,9 Nm | L02 30010 UKS6-4 |
| UKS6-803-75 L | | W30 04..0.03.. | | | | | | |
| UKS8-804-75 R | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP | 55054 03005 M3×5 | L02 30121* UKS8-3 4,1 Nm | L02 30020 UKS8-4 |

For further details on inserts see chapter 7

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

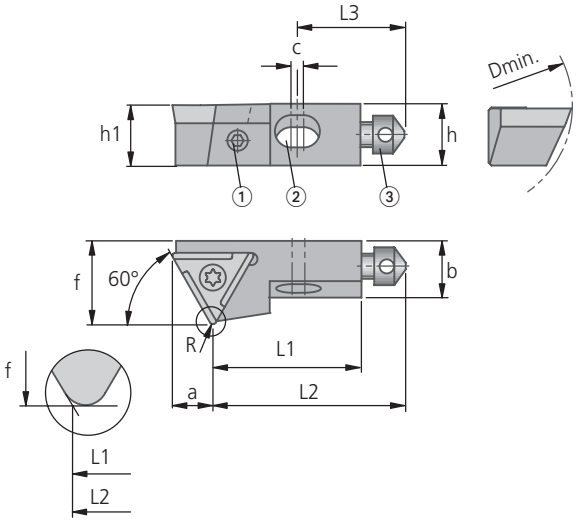
* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 60°$

## for insert W30 / W57

P M K N S H

R.H. short clamp holder as shown with left or neutral insert ■
mounting instruction see page 512 – 513 ■




| Article cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | a | ISO dimension f for radius R0,2 | R0,3 | R0,4 | R0,8 | kg | Accessories: Shim plate (2,5 / grinding allowance 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-803-60 R | **D40 05360** | 5,8 | 6 | 20 | 24,5 | 12 | 4,5 | 1 | 3,6 | 7,1 | 7 | 6,9 | – | 0,003 | UKS6-5-60R | **L02 20400** | **55023 00206** M2×6 DIN965 |
| UKS8-804-60 R | **D40 05370** | 7,6 | 8 | 25 | 32 | 17 | 6,5 | 2 | 4,8 | 10,2 | – | 10 | 9,6 | 0,01 | UKS8-5-60R | **L02 20410** | **55023 00206** M2×6 DIN965 |

| for short clamp holder | Insert: W30 L.H. (radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°) | Insert: W57 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|
| UKS6-803-60 R | **W30 04..0.03..** | **W57 04140.04..** | **N00 56031** S/M2×4,9-6IP 0,62Nm | **L05 00810** 6IP | 55054 03005 M3×5 | **L02 30111** UKS6-3 1,9 Nm | **L02 30010** UKS6-4 |
| UKS8-804-60 R | **W30 14..0.04..** | **W57 14140.04..** | **N00 56111** S/M2,6×6,2-8IP 1,28 Nm | **L05 00830** 8IP | 55054 03005 M3×5 | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |

For further details on inserts see chapter 7

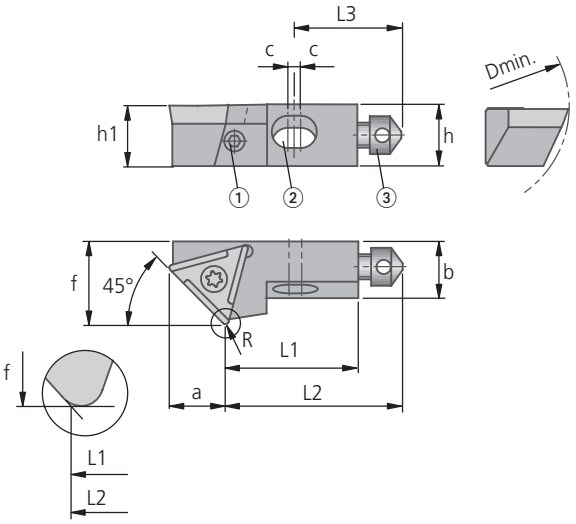
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 45°$

## P M K N S H for insert W30 / W57

- R.H. short clamp holder as shown with left or neutral insert
- L.H. short clamp holder in mirror image with right or neutral insert
- mounting instruction see page 512 – 513




| Article cutting form | Order No. | h1 | h | L1 | L2 | L3 | b | c | a | ISO dimension f for radius R0,2 | R0,3 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-803-45 R | D40 05460 | 5,8 | 6 | 15 | 19,5 | 12 | 4,5 | 1 | 5 | 7,1 | 7 | 6,91 | – | 0,003 | UKS6-5-90R | L02 20200 | 55023 00206 M2×6 DIN965 |
| UKS8-804-45 R | D40 05470 | 7,6 | 8 | 19,5 | 26,5 | 17 | 6,5 | 2 | 6,5 | 10,18 | – | 10 | 9,62 | 0,007 | UKS8-5-75R | L02 20310 | 55023 00206 M2×6 DIN965 |
| UKS8-804-45 L | D40 00470 | | | | | | | | | | | | | | UKS8-5-75L | L02 21310 | |

| for short clamp holder | Insert: W30 L.H. (radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°) | Insert: W30 R.H. (radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°) | Insert: W57 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS6-803-45 R | W30 04..0.03.. | | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62Nm | L05 00810 6IP | 55054 03004 M3×4 | L02 30111 UKS6-3 1,9 Nm | L02 30010 UKS6-4 |
| UKS8-804-45 R | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP | 55054 03005 M3×5 | L02 30121* UKS8-3 4,1 Nm | L02 30020 UKS8-4 |
| UKS8-804-45 L | | W30 14..0.04.. | | | | | | |

For further details on inserts see chapter 7

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

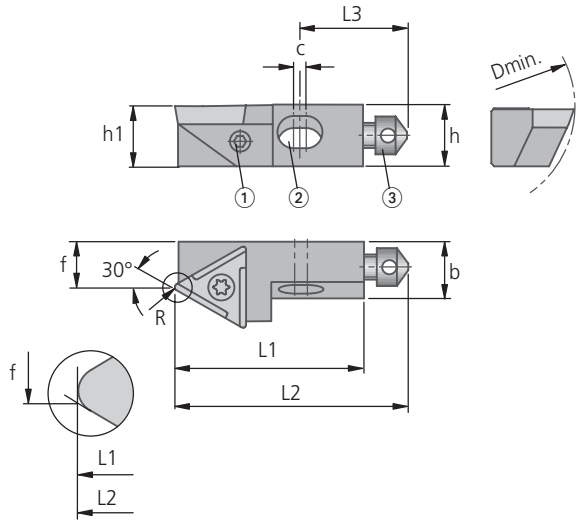
* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 30°$

## for insert W30 / W57

P M K N S H

R.H. short clamp holder as shown with right or neutral insert ■
L.H. short clamp holder in mirror image with left or neutral insert ■
mounting instruction see page 512 – 513 ■




| Article<br>cutting form ▾ | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,3 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-803-30 R | D40 05660 | 5,8 | 6 | 20 | 24,5 | 12 | 4,5 | 1 | 3,62 | 3,67 | 3,73 | – | 0,003 | UKS6-5-90R | L02 20200 | 55023 00206 M2×6 DIN965 |
| UKS6-803-30 L | D40 00660 | | | | | | | | | | | | | UKS6-5-90L | L02 21200 | |
| UKS8-804-30 R | D40 05670 | 7,6 | 8 | 26 | 33 | 17 | 6,5 | 2 | 5,12 | – | 5,23 | 5,46 | 0,008 | UKS8-5-75R | L02 20310 | 55023 00206 M2×6 DIN965 |
| UKS8-804-30 L | D40 00670 | | | | | | | | | | | | | UKS8-5-75L | L02 21310 | |

| for short clamp holder | Insert: W30 L.H. (radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°) | W30 R.H. (radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°) | W57 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS6-803-30 R | | W30 04..0.03.. | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62Nm | L05 00810 6IP | 55054 03005 M3×5 | L02 30111 UKS6-3 1,9 Nm | L02 30010 UKS6-4 |
| UKS6-803-30 L | W30 04..0.03.. | | | | | | | |
| UKS8-804-30 R | | W30 14..0.04.. | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP | 55054 03005 M3×5 | L02 30121* UKS8-3 4,1 Nm | L02 30020 UKS8-4 |
| UKS8-804-30 L | W30 14..0.04.. | | | | | | | |

For further details on inserts see chapter 7

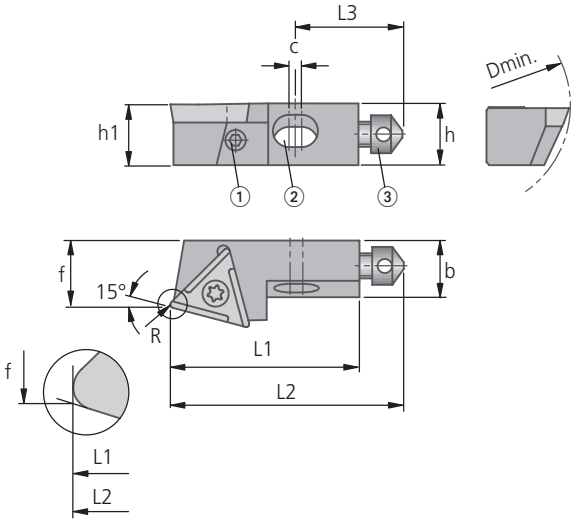
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa$ = 15°

P M K N S H for insert W30 / W57

- R.H. short clamp holder as shown with right or neutral insert
- L.H. short clamp holder in mirror image with left or neutral insert
- mounting instruction see page 512 – 513




| Article cutting form | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,3 | R0,4 | R0,8 | kg | Accessories: Shim plate Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-803-15 R | D40 05860 | 5,8 | 6 | 20 | 24,5 | 12 | 4,5 | 1 | 5,05 | 5,07 | 5,1 | – | 0,003 | UKS6-5-90R | L02 20200 | 55023 00206 M2×6 DIN965 |
| UKS6-803-15 L | D40 00860 | | | | | | | | | | | | | UKS6-5-90L | L02 21200 | |
| UKS8-804-15 R | D40 05870 | 7,6 | 8 | 26 | 33 | 17 | 6,5 | 2 | 7,55 | – | 7,6 | 7,7 | 0,008 | UKS8-5-75R | L02 20310 | 55023 00206 M2×6 DIN965 |
| UKS8-804-15 L | D40 00870 | | | | | | | | | | | | | UKS8-5-75L | L02 21310 | |

| for short clamp holder | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS6-803-15 R | | W30 04..0.03.. | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62Nm | L05 00810 6IP | 55054 03005 M3×5 | L02 30111 UKS6-3 1,9 Nm | L02 30010 UKS6-4 |
| UKS6-803-15 L | W30 04..0.03.. | | | | | | | |
| UKS8-804-15 R | | W30 14..0.04.. | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP | 55054 03005 M3×5 | L02 30121* UKS8-3 4,1 Nm | L02 30020 UKS8-4 |
| UKS8-804-15 L | W30 14..0.04.. | | | | | | | |

For further details on inserts see chapter 7

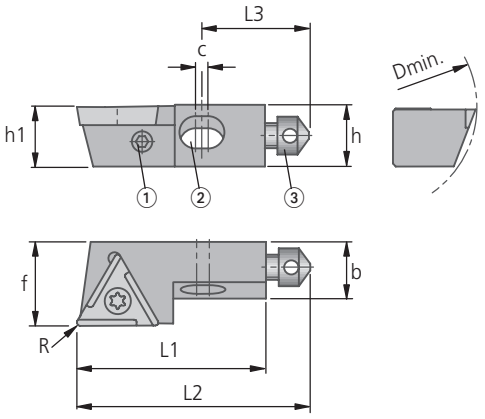
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 0°$

## for insert W30 / W57 P M K N S H

R.H. short clamp holder as shown with right or neutral insert ■
L.H. short clamp holder in mirror image with left or neutral insert ■
mounting instruction see page 512 – 513 ■




| Article<br>cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dim. f | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Accessories: Shim plate Order No. | Accessories: Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-803-0 R | D40 05960 | 5,8 | 6 | 20 | 24,5 | 12 | 4,5 | 1 | 7 | 0,004 | UKS6-5-90R | L02 20200 | 55023 00206 M2×6 DIN965 |
| UKS6-803-0 L | D40 00960 | | | | | | | | | | UKS6-5-90L | L02 21200 | |
| UKS8-804-0 R | D40 05970 | 7,6 | 8 | 25 | 32 | 17 | 6,5 | 2 | 10 | 0,008 | UKS8-5-75R | L02 20310 | 55023 00206 M2×6 DIN965 |
| UKS8-804-0 L | D40 00970 | | | | | | | | | | UKS8-5-75L | L02 21310 | |
| UKS10-805-0 R | D40 05980 | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 14 | 0,015 | UKS10-5-0R | L02 20920 | 55023 00206 M2×6 DIN965 |

| for short clamp holder | Insert: W30 L.H. (radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°) | Insert: W30 R.H. (radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°) | Insert: W57 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Assembly parts: Location screw ② Order No. Article | Assembly parts: Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS6-803-0 R | | W30 04..0.03.. | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62Nm | L05 00810 6IP | 55054 03005 M3×5 | L02 30111 UKS6-3 1,9 Nm | L02 30010 UKS6-4 |
| UKS6-803-0 L | W30 04..0.03.. | | | | | | | |
| UKS8-804-0 R | | W30 14..0.04.. | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP | 55054 03005 M3×5 | L02 30121* UKS8-3 4,1 Nm | L02 30020 UKS8-4 |
| UKS8-804-0 L | W30 14..0.04.. | | | | | | | |
| UKS10-805-0 R | | W30 26..0.05.. | W57 26140.04.. | N00 56211 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP | 55054 04008 M4×8 | L02 30130 UKS10-3 8,5 Nm | L02 30020 UKS8-4 |

For further details on inserts see chapter 7

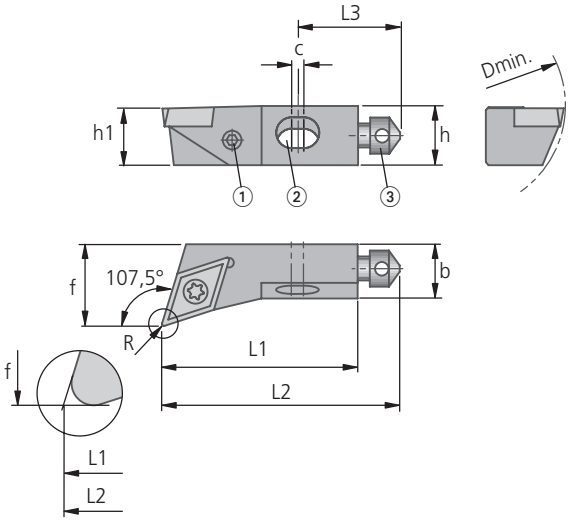
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa$ = 107,5°

P M K N S H for insert W79

- R.H. short clamp holder as shown, insert for this with peripheral chipbreaker
- L.H. short clamp holder in mirror image
- mounting instruction see page 512 – 513




| Article cutting form | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-8C1-107R | D40 06010 | 7,6 | 8 | 25 | 32 | 17 | 7,5 | 2 | 11,11 | 11 | – | 0,008 | | UKS8-5-107R | L02 20010 | 55023 00206 M2×6 DIN965 |
| UKS8-8C1-107L | D40 01010 | | | | | | | | | | | | | UKS8-5-107L | L02 21010 | |
| UKS10-8C1-107R | D40 06020 | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 14,11 | 14 | – | 0,015 | | UKS10-5-107R | L02 20720 | 55023 00206 M2×6 DIN965 |
| UKS10-8C1-107L | D40 01020 | | | | | | | | | | | | | UKS10-5-107L | L02 21720 | |
| UKS16-8C2-107R | D40 06040 | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | – | 18,21 | 18 | 0,044 | | UKS16-5-107R | L02 20040 | 55021 03008 M3×8 DIN7991 |
| UKS16-8C2-107L | D40 01040 | | | | | | | | | | | | | UKS16-5-107L | L02 21040 | |

| for short clamp holder | Insert W79 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|
| UKS8-8C1-107R | W79 18060.04.. | N00 56651 S2560-8IP 1,28Nm | L05 00830 8IP | 55054 03005 M3×5 | L02 30121* UKS8-3 4,1 Nm | L02 30020 UKS8-4 |
| UKS8-8C1-107L | | | | | | |
| UKS10-8C1-107R | W79 18060.04.. | N00 56651 S2560-8IP 1,28Nm | L05 00830 8IP | 55054 04008 M4×8 | L02 30130 UKS10-3 8,5 Nm | L02 30020 UKS8-4 |
| UKS10-8C1-107L | | | | | | |
| UKS16-8C2-107R | W79 32060.08.. | N00 56751 S3574-10IP 2,8Nm | L05 00850 10IP | 55054 05012 M5×12 | L02 30140 UKS12-3 14 Nm | L02 30030 UKS12-4 |
| UKS16-8C2-107L | | | | | | |

For further details on inserts see chapter 7

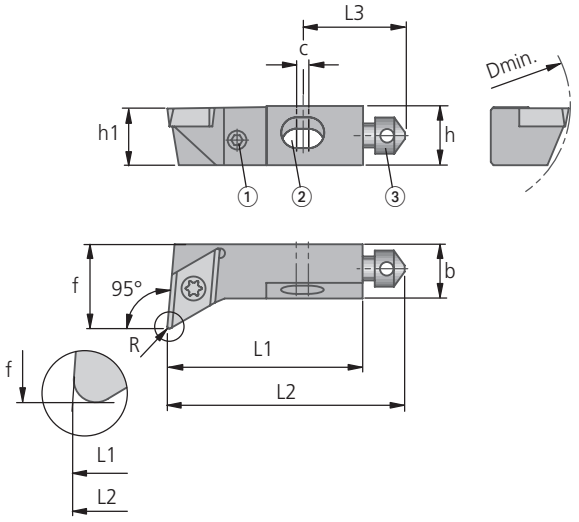
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 95°$

## for insert W60 / W79 P M K N S H

R.H. short clamp holder as shown with left or neutral insert ■
L.H. short clamp holder in mirror image with right or neutral insert ■
mounting instruction see page 512 – 513 ■




| Article cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-8C1-95R | D40 06110 | 7,6 | 8 | 25 | 32 | 17 | 7,5 | 2 | 12,17 | 12 | – | 0,009 | UKS8-5-95R | L02 20110 | 55023 00206 M2×6 DIN965 |
| UKS8-8C1-95L | D40 01110 | | | | | | | | | | | | UKS8-5-95L | L02 21110 | |
| UKS10-8C1-95R | D40 06120 | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 14,17 | 14 | – | 0,016 | UKS10-5-95R | L02 20120 | 55023 00206 M2×6 DIN965 |
| UKS10-8C1-95L | D40 01120 | | | | | | | | | | | | UKS10-5-95L | L02 21120 | |
| UKS16-8C2-95R | D40 06140 | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | – | 18,33 | 18 | 0,046 | UKS16-5-95R | L02 20140 | 55021 03008 M3×8 DIN7991 |
| UKS16-8C2-95L | D40 01140 | | | | | | | | | | | | UKS16-5-95L | L02 21140 | |

| for short clamp holder | Insert: W60 L.H. (radial rake 06 = 6° / 12 = 12° / ▽▽ 20 = 20°) | W60 R.H. (radial rake 36 = 6° / 42 = 12° / ▽▽ 50 = 20°) | W79 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS8-8C1-95R | W60 18..0.04.. | | W79 18060.02.. | N00 56651 S2560-8IP 1,28Nm | L05 00830 8IP | 55054 03005 M3×5 | L02 30121* UKS8-3 4,1 Nm | L02 30020 UKS8-4 |
| UKS8-8C1-95L | | W60 18..0.04.. | | | | | | |
| UKS10-8C1-95R | W60 18..0.04.. | | W79 18060.02.. | N00 56651 S2560-8IP 1,28Nm | L05 00830 8IP | 55054 04008 M4×8 | L02 30130 UKS10-3 8,5 Nm | L02 30020 UKS8-4 |
| UKS10-8C1-95L | | W60 18..0.04.. | | | | | | |
| UKS16-8C2-95R | W60 32..0.08.. | | W79 32060.02.. | N00 56751 S3574-10IP 2,8 Nm | L05 00850 10IP | 55054 05012 M5×12 | L02 30140 UKS12-3 14 Nm | L02 30030 UKS12-4 |
| UKS16-8C2-95L | | W60 32..0.08.. | | | | | | |

For further details on inserts see chapter 7

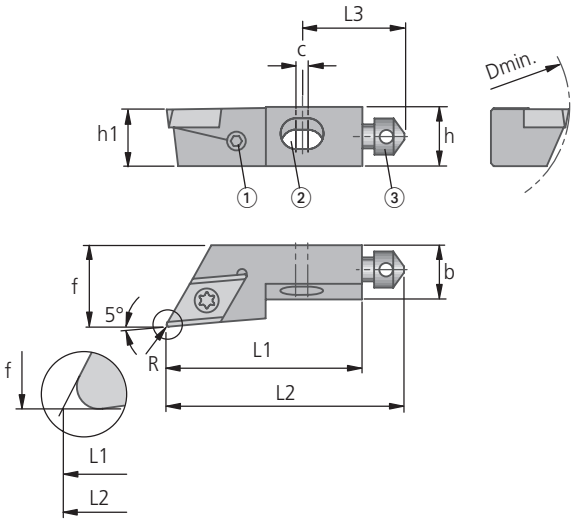
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 5°$

P M K N S H for insert W60 / W79

- R.H. short clamp holder as shown with right or neutral insert
- L.H. short clamp holder in mirror image with left or neutral insert
- mounting instruction see page 512 – 513



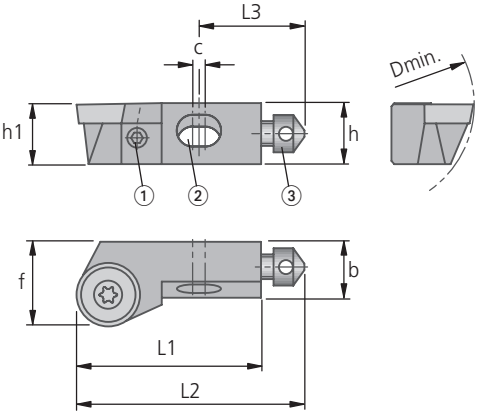

| Article cutting form ▼ | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-8C1-5R | D40 06210 | 7,6 | 8 | 25 | 32 | 17 | 7,5 | 2 | 11,03 | 11 | – | 0,007 | UKS8-5-5R | L02 20810 | 55023 00206 M2×6 DIN965 |
| UKS8-8C1-5L | D40 01210 | | | | | | | | | | | | UKS8-5-5L | L02 21810 | |
| UKS10-8C1-5R | D40 06220 | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 14,03 | 14 | – | 0,014 | UKS10-5-5R | L02 20820 | 55023 00206 M2×6 DIN965 |
| UKS10-8C1-5L | D40 01220 | | | | | | | | | | | | UKS10-5-5L | L02 21820 | |
| UKS16-8C2-5R | D40 06240 | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | – | 18,06 | 18 | 0,041 | UKS16-5-5R | L02 20840 | 55021 03008 M3×8 DIN7991 |
| UKS16-8C2-5L | D40 01240 | | | | | | | | | | | | UKS16-5-5L | L02 21840 | |

| for short clamp holder | Insert: W60 L.H. (radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°) | W60 R.H. (radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20°) | W79 neutral | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS8-8C1-5R | | W60 18..0.04.. | W79 18060.02.. | N00 56651 S2560-8IP 1,28Nm | L05 00830 8IP | 55054 03005 M3×5 | L02 30121* UKS8-3 4,1 Nm | L02 30020 UKS8-4 |
| UKS8-8C1-5L | W60 18..0.04.. | | | | | | | |
| UKS10-8C1-5R | | W60 18..0.04.. | W79 18060.02.. | N00 56651 S2560-8IP 1,28Nm | L05 00830 8IP | 55054 04008 M4×8 | L02 30130 UKS10-3 8,5 Nm | L02 30020 UKS8-4 |
| UKS10-8C1-5L | W60 18..0.04.. | | | | | | | |
| UKS16-8C2-5R | | W60 32..0.08.. | W79 32060.02.. | N00 56751 S3574-10IP 2,8 Nm | L05 00850 10IP | 55054 05012 M5×12 | L02 30140 UKS12-3 14 Nm | L02 30030 UKS12-4 |
| UKS16-8C2-5L | W60 32..0.08.. | | | | | | | |

For further details on inserts see chapter 7

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.




| Article | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dim. f | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Accessories: Shim plate Order No. | Accessories: Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-705-Rd-R | **D40 06500** | 5,8 | 6 | 20 | 24,5 | 12 | 4,5 | 1 | 7 | 0,003 | UKS6-5-90R | **L02 20200** | **55023 00206** M2×6 DIN965 |
| UKS8-706-Rd-R | **D40 06510** | 7,6 | 8 | 25 | 32 | 17 | 6,5 | 2 | 10 | 0,008 | UKS8-5-107R | **L02 20010** | **55023 00206** M2×6 DIN965 |
| UKS8-708-Rd-R | **D40 06520** | | | | | | 7,5 | | 11 | 0,009 | | | |
| UKS10-710-Rd-R | **D40 06530** | 9,6 | 10 | 30 | 37 | 17 | 9 | 2 | 14 | 0,015 | UKS10-5-0R | **L02 20920** | **55023 00206** M2×6 DIN965 |
| UKS16-712-Rd-R | **D40 06551** | 15,6 | 16 | 42 | 50 | 25 | 12 | 2 | 18 | 0,046 | UKS16-5-0R | **L02 20940** | **55021 03008** M3×8 DIN7991 |

| for short clamp holder | Insert | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Assembly parts: Location screw ② Order No. Article | Assembly parts: Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|
| UKS6-705-Rd-R | RCMT 05 02 M0 | **N00 56591** S2247-6IP 1,01Nm | **L05 00810** 6IP | **55054 03005** M3×5 | **L02 30111** UKS6-3 1,9 Nm | **L02 30010** UKS6-4 |
| UKS8-706-Rd-R | RCMT 06 02 M0 | **N00 56651** S2560-8IP 1,28Nm | **L05 00830** 8IP | **55054 03005** M3×5 | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS8-708-Rd-R | RCMT 08 03 M0 | **N00 57341** S3066-9IP 2,5Nm | **L05 00840** 9IP | **55054 03005** M3×5 | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS10-710-Rd-R | RCMT 10 T3 M0 | **N00 56751** S3574-10IP 2,8Nm | **L05 00850** 10IP | **55054 04008** M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS16-712-Rd-R | RCMT 12 04 M0 | **N00 57271** S3585-15IP 2,8Nm | **L05 00860** 15IP | **55054 05012** M5×12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12-4 |

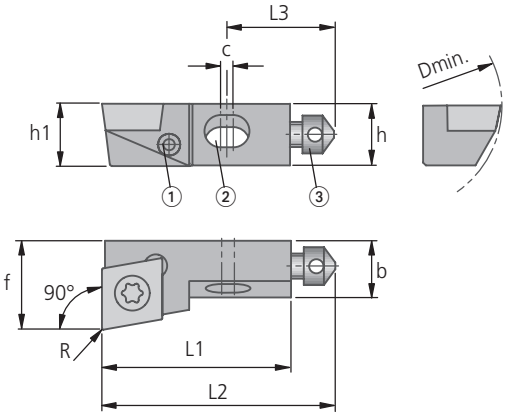
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 90°$

P M K N S H for insert C85 / CCMT

■ mounting instruction see page 512 – 513




| Article | Order No. | h1 | h | L1 | L2 | L3 | b | c | ISO dim. f | kg | Accessories: Shim plate Article | Accessories: Shim plate Order No. | Accessories: Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-CC06-90R | **D40 06600** | 7,6 | 7,8 | 25 | 32 | 17 | 7,5 | 2 | 11 | 0,013 | UKS8-5-90R | **L02 20310** | **55023 00206** M2×6 DIN965 |
| UKS10-CC09-90R | **D40 06610** | 9,6 | 9,8 | 30 | 37 | 17 | 9 | 2 | 14 | 0,022 | UKS10-5-90R | **L02 20220** | **55023 00206** M2×6 DIN965 |
| UKS16-CC09-90R | **D40 06630** | 15,6 | 15,8 | 42 | 50 | 25 | 12 | 2 | 18 | 0,063 | UKS16-5-90R | **L02 20240** | **55021 03008** M3×8 DIN7991 |
| UKS20-CC12-90R | **D40 06640** | 19,6 | 19,8 | 47 | 57 | 27 | 15 | 2 | 22 | 0,111 | UKS20-5-90R | **L02 20250** | **55021 03008** M3×8 DIN7991 |

| for short clamp holder | Insert | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① Order No. Article | Assembly parts: Location screw ② Order No. Article | Assembly parts: Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|
| UKS8-CC06-90R | CCMT 06 02 04 | **N00 56651** S2560-8IP 1,28Nm | **L05 00830** 8IP | **55054 03005** M3×5 | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS10-CC09-90R | CCMT 09 T3 04 | **N00 56751** S3574-10IP 2,8Nm | **L05 00850** 10IP | **55054 04008** M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS16-CC09-90R | CCMT 09 T3 04 | **N00 56751** S3574-10IP 2,8Nm | **L05 00850** 10IP | **55054 05012** M5×12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12-4 |
| UKS20-CC12-90R | CCMT 12 04 04 | **N00 56851** S45111-20IP 6,25Nm | **L05 00870** 20IP | **55054 05014** M5×14 | **L02 30160** UKS20-3 35 Nm | **L02 30030** UKS12-4 |

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

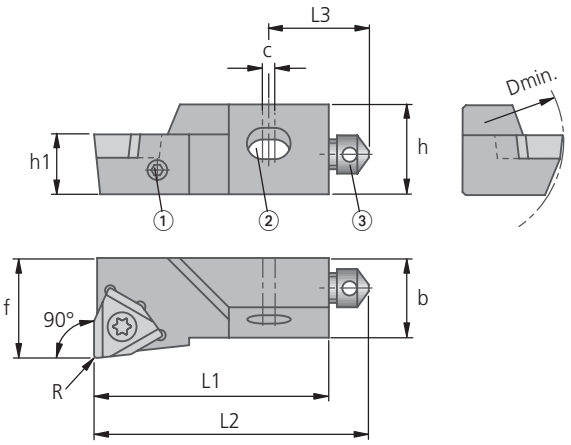
* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 90°$

## for insert W01 / W29

P M K N S H

R.H. short clamp holder as shown with left or neutral insert ■
mounting instruction see page 539 ■
to ISO standard ■




| Article | Order No. | D min. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SWFOR 10CA-06-38 | **D40 58000** | 40 | 10 | 14 | 42 | 50 | 20 | 9 | 2 | 14 | 13,98 | 13,93 | 0,028 |
| SWFOR 12CA-07-48 | **D40 58010** | 50 | 12 | 18 | 47 | 55 | 20 | 16 | 2 | 20 | 19,98 | 19,93 | 0,071 |

| for short clamp holder | Insert W01 L.H. | Insert W01 neutral | Insert W29 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| SWFOR 10CA-06-38 | **W01 34060.02..** | **W01 34600...** | **W29 34000.04..** | **N00 57521** S/M3,5x7,3-10IP 2,8 Nm | **L05 00850** 10IP | **55054 04008** M4x8 | **L02 30140** UKS12-3 14 Nm | **L02 30020** UKS8-4 |
| SWFOR 12CA-07-48 | **W01 42060.02..** | **W01 42600...** | **W29 42000.04..** | **N00 57531** S/M4,5x9-15IP 6,25 Nm | **L05 00860** 15IP | **55054 05012** M5x12 | **55011 06020** | **L02 30030** UKS12-4 |

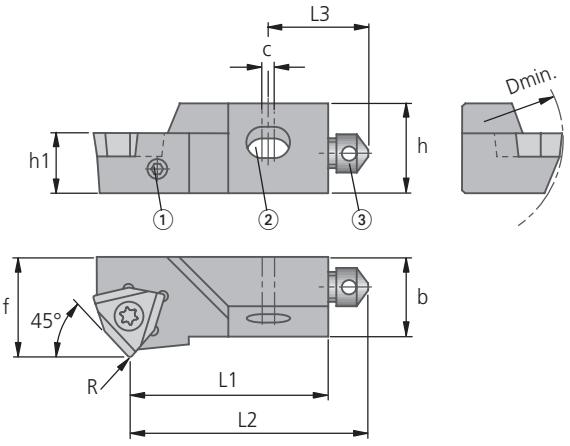
For further details on inserts see chapter 7

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 45°$

P M K N S H for insert W01 / W29

- R.H. short clamp holder as shown with left or neutral insert
- mounting instruction see page 539
- to ISO standard



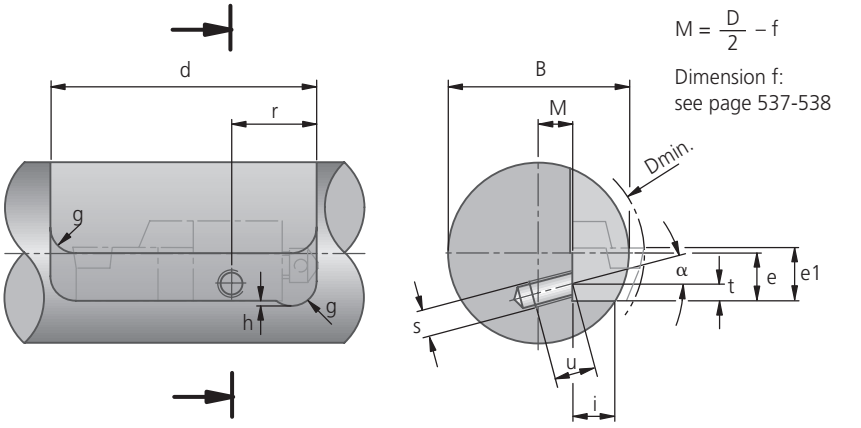

| Article | Order No. | D min. | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SWSOR 10CA-06-38 | **D40 58400** | 40 | 10 | 14 | 36 | 44 | 20 | 9 | 2 | 14 | 13,9 | 13,71 | 0,028 |

| for short clamp holder | Insert W01 L.H. | Insert W01 neutral | Insert W29 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| SWSOR 10CA-06-38 | **W01 34060.02..** | **W01 34600...** | **W29 34000.04..** | **N00 57521** S/M3,5x7,3-10IP 2,8 Nm | **L05 00850** 10IP | **55054 04008** M4x8 | **L02 30140** UKS12-3 14 Nm | **L02 30020** UKS8-4 |

For further details on inserts see chapter 7

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

## Mounting Dimensions




$B = 2\sqrt{e^2 + (M + i)^2}$

$M = \frac{D}{2} - f$

Dimension f:
see page 537-538

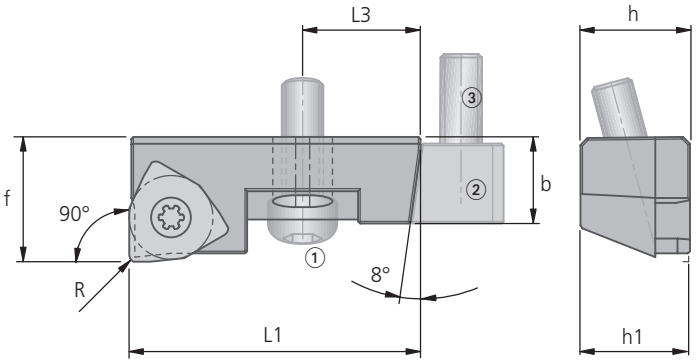
| Short clamp holder **size** | Holder mounting | | | | | | |
|---|---|---|---|---|---|---|---|
| | **D** min. | **d** | **e** | **e1** | **g** | **h** | **i** |
| 10CA | 40 | 60 | 9 | 10 | 4 | 1 | 9 |
| 12CA | 50 | 65 | 11 | 12 | 5 | 1 | 13 |

| Short clamp holder **size** | Location thread | | | | |
|---|---|---|---|---|---|
| | **r** | **s** | **t** | **α** | **u** |
| 10CA | 20 | M6 | 5 | 20° | 12 |
| 12CA | 20 | M6 | 6 | 20° | 12 |

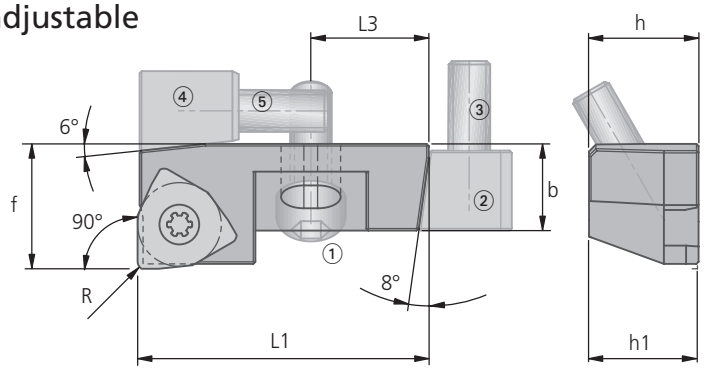
# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 90°$

P M K N S H for power insert W01

## axially adjustable




## axially + radially adjustable



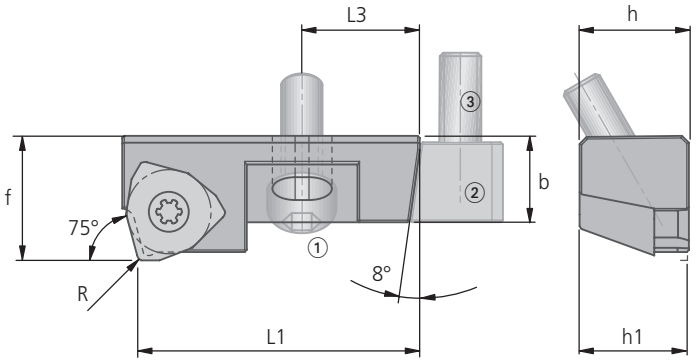

| Article cutting form ▾ | Order No. | adjustable | h1 | h | L1 | L3 | b | ISO dimension f for radius R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|
| UKS 8 WOHX 05T3 PN EL 90° | **D40 55180** | axially | 7,6 | 7,8 | 24,75 | 9,75 | 7,5 | 10,81 | 0,01 |
| UKS 10 WOHX 05T3 PN EL 90° | **D40 55190** | axially + radially | 7,6 | 9,8 | 29,5 | 10,5 | 10 | 14,5 | 0,021 |
| UKS 16 WOHX 0804 PN EL 90° | **D40 65180** | axially | 15,6 | 15,8 | 42 | 17 | 12,5 | 18 | 0,059 |
| UKS 16 WOHX 0804 PN EL 90° | **D40 65190** | axially + radially | 15,6 | 15,8 | 42 | 17 | 12,5 | 18 | 0,057 |

| for short clamp holder | Insert | Assembly parts | Accessories | Assembly parts | | | | |
|---|---|---|---|---|---|---|---|---|
| | W01 neutral  | Clamping screw  | Screwdriver  | Location screw ①  | Axial wedge ② | Differential screw ③ | Radial wedge ④ | Differential screw ⑤ |
| | | **Order No.** Article | **Order No.** Article | **Order No.** Article | **Order No.** | **Order No.** Article | **Order No.** | **Order No.** Article |
| UKS 8 WOHX 05T3 PN EL 90° | **W01 24600.906115** | **N00 57511** S/M2,5x7,2-8IP 1,28 | **L05 00830** 8IP | **L02 30170** UKS8-3 4,1 Nm | **L02 30870** | **L02 30851** M5×18-15IP | – | – |
| UKS 10 WOHX 05T3 PN EL 90° | **W01 24600.906115** | **N00 57511** S/M2,5x7,2-8IP 1,28 | **L05 00830** 8IP | **L02 30130** UKS10-3 8,5 Nm | **L02 30880** | **L02 30851** M5×18-15IP | **L02 30860** | **L02 30851** M5×18-15IP |
| UKS 16 WOHX 0804 PN EL 90° | **W01 42600.906115** | **N00 57531** S/M4,5x9-15IP 6,25 | **L05 00860** 15IP | **L02 30140** UKS12-3 14 Nm | **L02 30890** | **N10 20220** M6x0,75 | – | – |
| UKS 16 WOHX 0804 PN EL 90° | **W01 42600.906115** | **N00 57531** S/M4,5x9-15IP 6,25 | **L05 00860** 15IP | **L02 30140** UKS12-3 14 Nm | **L02 30890** | **N10 20220** M6x0,75 | **L02 30860** | **L02 30851** M5×18-15IP |

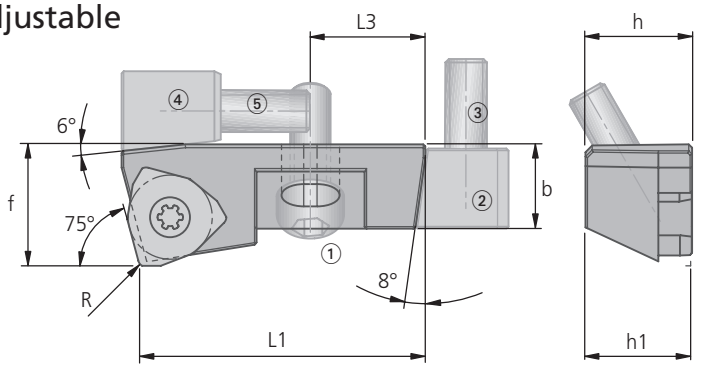
For further details on inserts see chapter 7

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

## axially adjustable




## axially + radially adjustable




| Article<br>cutting form ▾ | Order No. | adjustable | h1 | h | L1 | L3 | b | ISO dimension<br>f<br>for radius<br>R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|
| UKS 10 WOHX 05T3 EN EL 75° | **D40 55280** | axially | 7,6 | 9,8 | 26,9 | 10,25 | 7,75 | 14,5 | 0,018 |
| UKS 10 WOHX 05T3 EN EL 75° | **D40 55290** | axially + radially | 7,6 | 9,8 | 27,15 | 10,5 | 10 | 14,5 | 0,019 |
| UKS 16 WOHX 0804 EN EL 75° | **D40 65280** | axially | 15,6 | 15,8 | 40,5 | 17 | 12,5 | 18 | 0,06 |
| UKS 16 WOHX 0804 EN EL 75° | **D40 65290** | axially + radially | 15,6 | 15,8 | 42 | 17 | 12,5 | 18 | 0,06 |

| for<br>short clamp holder | Insert<br>W01<br>neutral | Assembly parts<br>Clamping screw | Accessories<br>Screwdriver | Assembly parts<br>Location screw ① | Axial wedge ② | Differential screw ③ | Radial wedge ④ | Differential screw ⑤ |
|---|---|---|---|---|---|---|---|---|
| | | Order No.<br>Article | Order No.<br>Article | Order No.<br>Article | Order No. | Order No.<br>Article | Order No. | Order No.<br>Article |
| UKS 10 WOHX 05T3 EN EL 75° | **W01 24600.756115** | **N00 57511**<br>S/M2,5x7,2-8IP<br>1,28 | **L05 00830**<br>8IP | **L02 30130**<br>UKS10-3<br>8,5 Nm | **L02 30880** | **L02 30851**<br>M5×18-15IP | – | – |
| UKS 10 WOHX 05T3 EN EL 75° | **W01 24600.756115** | **N00 57511**<br>S/M2,5x7,2-8IP<br>1,28 | **L05 00830**<br>8IP | **L02 30130**<br>UKS10-3<br>8,5 Nm | **L02 30880** | **L02 30851**<br>M5×18-15IP | **L02 30860** | **L02 30851**<br>M5×18-15IP |
| UKS 16 WOHX 0804 EN EL 75° | **W01 42600.756115** | **N00 57531**<br>S/M4,5x9-15IP<br>6,25 | **L05 00860**<br>15IP | **L02 30140**<br>UKS12-3<br>14 Nm | **L02 30890** | **N10 20220**<br>M6×0,75 | – | – |
| UKS 16 WOHX 0804 EN EL 75° | **W01 42600.756115** | **N00 57531**<br>S/M4,5x9-15IP<br>6,25 | **L05 00860**<br>15IP | **L02 30140**<br>UKS12-3<br>14 Nm | **L02 30890** | **N10 20220**<br>M6×0,75 | **L02 30860** | **L02 30851**<br>M5×18-15IP |

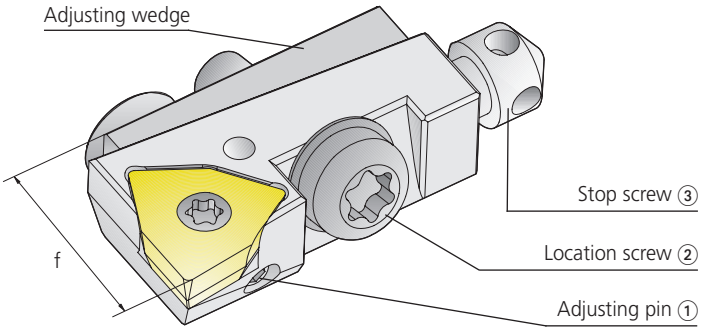
For further details on inserts see chapter 7

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UKS Short Clamp Holder

## with wedge adjustment and axial and radial adjustment

### Adjusting the KOMET Kometric® short clamp holder with wedge adjustment




1. Set the short clamping holder to the smallest possible diameter (turn adjusting pin ① clockwise as far as the stop) and place the location screw ② lightly in position
2. Set the axial dimension (length) with the stop screw ③
3. Set the short clamping holder to the required diameter by turning the adjusting pin ① anti-clockwise. (If necessary loosen the location screw ② slightly)
4. Tighten the location screw ②

**Important note!**
The short clamping holder must always be set from minus to plus!

### The following short clamping holder adjustments apply:

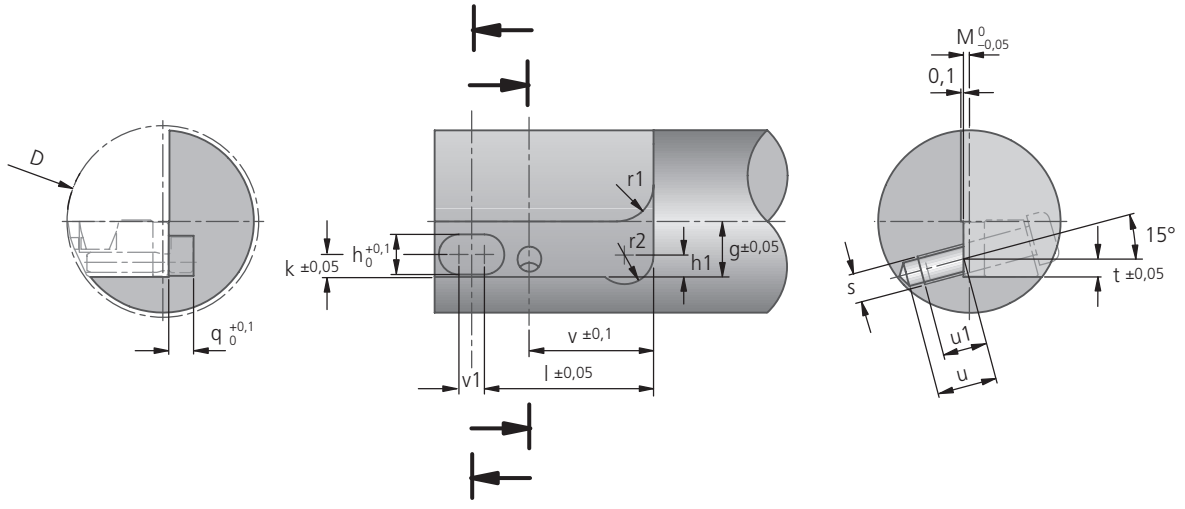
| Holder size | axial | radial | f (for R0.4) |
|---|---|---|---|
| UKS 08 | –1.0 to +1.0 mm | –0.07 to +0.16 mm | 13.80 |
| USK 10 | –1.0 to +1.0 mm | –0.07 to +0.20 mm | 17.58 |

### Features

- Precise radial and axial adjustment
- Maximum support surface for short clamping holder on basic body provides maximum stability
- Parallel radial adjustment without changing the approach angle

Unlike the previous short clamping holder solutions, the user can carry out setting in the radial direction more accurately and more comfortably as no further movement occurs when the short clamping holder is locked with the central clamping screw.

### Mounting details

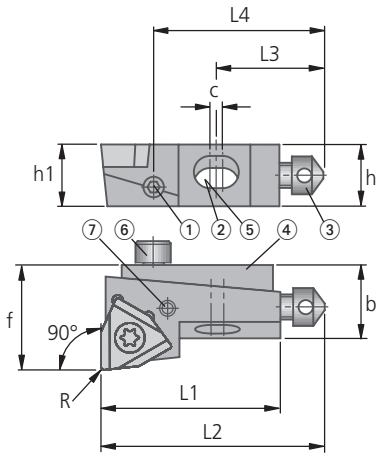



| Short clamp holder size | D min. | for R0,4 f | g | h | h1 | k | l | M | q | r1 | r2 | s | t | u | u1 | v | v1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS 08 | 26 | 13,8 | 7,6 | 5,5 | 3 | 2,9 | 23,15 | D/2 – f | 3,4 | 5 | 4 | M4 | 2,45 | 8 | 6,5 | 17 | 3,5 |
| UKS 10 | 34 | 17,58 | 9,6 | 6,5 | 4 | 4 | 24,6 | D/2 – f | 4 | 5 | 5 | M5 | 2,55 | 11 | 9 | 17 | 3,8 |

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 90°$

## for insert W01 / W29

R.H. short clamp holder as shown with left or neutral insert ■
with wedge adjustment and axial and radial adjustment ■




| Article | Order No. | h1 | h | L1 | L2 | L3 | L4 | b | c | Adjustment path radial from | Adjustment path radial to | ISO dim. f in zero setting for radius R0,4 | kg | Inserts W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽ | Inserts W01 / W29 neutral |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS08-W2924-90R | **D40 65011** | 7,6 | 7,8 | 25 | 32 | 10 | 17,9 | 10,3 | 2 | –0,07 | +0,16 | 13,9 | 0,028 | **W01 24..0.04..** | **W01 24600..<br>W29 24000.04..** |
| UKS10-W2934-90R | **D40 65021** | 9,6 | 9,8 | 30 | 37 | 10 | 19,5 | 12,5 | 2 | –0,10 | +0,20 | 17,58 | 0,024 | **W01 34..0.04..** | **W01 34600..<br>W29 34000.04..** |

For further details on inserts see chapter 7

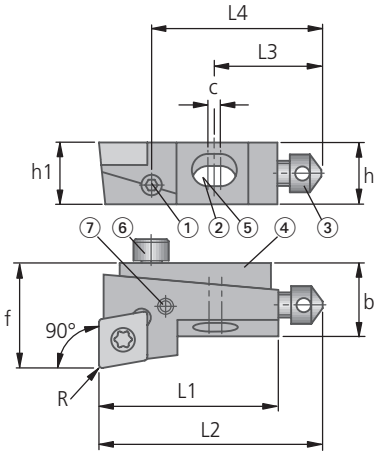
| for short clamp holder | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Adjusting pin ① Order No. Article | Accessories Screwdriver Order No. | Assembly parts Location screw ② Order No. Article | Stop screw ③ Order No. Article | Adjusting wedge ④ Order No. | Disc spring ⑤ Order No. Article | Cylindrical pin ⑥ Order No. Article | Cylindrical pin ⑦ Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|
| UKS08 | **N00 57511** S/M2,5x7,2-8IP 1,28 Nm | **L05 00830** 8IP | **L02 30771** | Tx 6 | **L02 31010** UKS8-3 | **L02 30020** UKS8-4 | **L02 22510** | **56771 08043** 8×4,2×0,3 | **55311 02006** 2m6×6 | **55311 01504** 1,5m6×4 |
| UKS10 | **N00 57521** S/M3,5x7,3-10IP 2,8 Nm | **L05 00850** 10IP | **L02 30781** | Tx 6 | **L02 31020** UKS10-3 | **L02 30020** UKS8-4 | **L02 22520** | **56771 10054** 10×5,2×0,4 | **55311 02008** 2m6×8 | **55311 01505** 1,5m6×5 |

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 90°$

P M K N S H for insert C85 / CCMT

- R.H. short clamp holder as shown with neutral insert
- with wedge adjustment and axial and radial adjustment
- mounting instruction see page 542




| Article | Order No. | h1 | h | L1 | L2 | L3 | L4 | b | c | Adjustment path radial from | Adjustment path radial to | ISO dim. f in zero setting for radius R0,4 | kg | Inserts W85 neutral |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS10-CC09T3-90R | **D40 65081** | 9,6 | 9,8 | 30 | 37 | 10 | 19,5 | 12,5 | 2 | –0,10 | +0,20 | 17,58 | 0,024 | **C85 32...** |

For further details on inserts see chapter 7

| for short clamp holder | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Adjusting pin ① Order No. Article | Accessories Screwdriver Order No. | Assembly parts Location screw ② Order No. Article | Stop screw ③ Order No. Article | Adjusting wedge ④ Order No. | Disc spring ⑤ Order No. Article | Cylindrical pin ⑥ Order No. Article | Cylindrical pin ⑦ Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|
| UKS10 | **N00 56751** S3574-10IP 2,8 Nm | **L05 00850** 10IP | **L02 30781** | Tx 6 | **L02 31020** UKS10-3 | **L02 30020** UKS8-4 | **L02 22520** | **56771 10054** 10×5,2×0,4 | **55311 02008** 2m6×8 | **55311 01505** 1,5m6×5 |

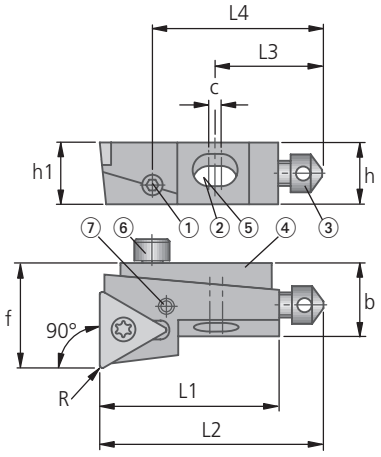
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 90°$

## for insert W30 / W57

P M K N S H

R.H. short clamp holder as shown with left or neutral insert ■
with wedge adjustment and axial and radial adjustment ■
mounting instruction see page 542 ■




| Article | Order No. | h1 | h | L1 | L2 | L3 | L4 | b | c | Adjustment path radial from | Adjustment path radial to | ISO dim. f in zero setting for radius R0,4 | kg | Inserts W30 L.H. radial rake 06 = 6° 12 = 12° 20 = 20° ▽▽ | Inserts W57 neutral |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS08-W3014-90R | **D40 65131** | 7,6 | 7,8 | 25 | 32 | 10 | 17,9 | 10,3 | 2 | –0,07 | +0,16 | 13,8 | 0,013 | **W30 14..0.04..** | **W57 14140.04..** |

For further details on inserts see chapter 7

| for short clamp holder | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Adjusting pin ① Order No. Article | Accessories Screwdriver Order No. | Assembly parts Location screw ② Order No. Article | Stop screw ③ Order No. Article | Adjusting wedge ④ Order No. | Disc spring ⑤ Order No. Article | Cylindrical pin ⑥ Order No. Article | Cylindrical pin ⑦ Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|
| UKS08 | **N00 56111** S/M2,6×6,2-8IP 1,28 Nm | **L05 00830** 8IP | **L02 30771** | Tx 6 | **L02 31010** UKS8-3 | **L02 30020** UKS8-4 | **L02 22510** | **56771 08043** 8×4,2×0,3 | **55311 02006** 2m6×6 | **55311 01504** 1,5m6×4 |

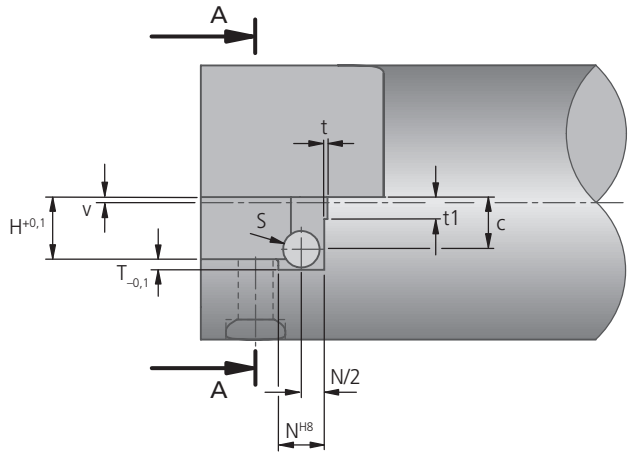
**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.

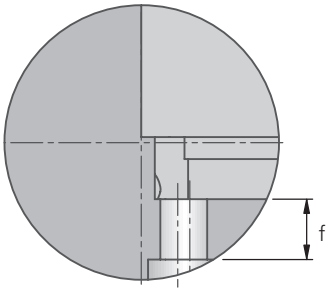
# KOMET Kometric® FLWE Insert Flat Bed Seating

## Mounting details

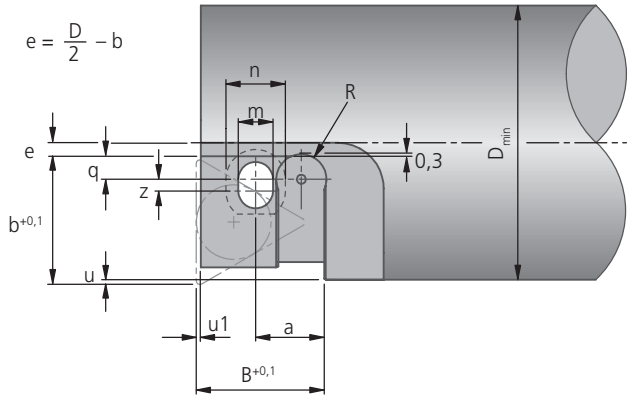
### Mounting

for cutting form 1 as shown
for cutting form 2 in mirror image




Section A-A

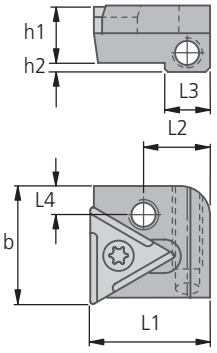



D = Ø de tournage souhaité

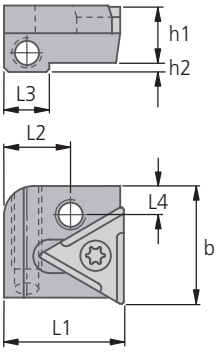
| Insert flat bed seating size | a | B | c | D min. | f | b | H | m | N | n | q | R | S | T | t | t1 | u | u1 | v | z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FLWE-U3.. | 4,4 | 8 | 2,9 | 16 | 1,3 | 7,8 | 3,6 | 2,2 | 3 | 4 | 1,6 | 1,75 | 2,5 | 0,85 | 0,1 | 1,8 | 0,5 | 0,3 | 0,5 | 0,8 |
| FLWE-TPHB06.. | | | | | | | | | | | | | | | | | | | | |
| FLWE-U4.. | 7 | 12 | 4,1 | 22 | 3,6 | 11 | 5,7 | 2,8 | 5 | 4,5 | 2 | 2,75 | 4 | 1,15 | 0,15 | 2,4 | 0,5 | 0,5 | 0,6 | 1,3 |
| FLWE-TPHB09.. | | | | | | | | | | | | | | | | | | | | |
| FLWE-U5.. | 7,5 | 14 | 5,7 | 30 | 6,6 | 14 | 6,8 | 3,8 | 5 | 6,5 | 2,5 | 2,75 | 4 | 1,15 | 0,15 | 2,4 | 0,5 | 0,5 | 0,6 | 1,3 |

# KOMET Kometric® FLWE Adjustable Insert Flat Bed Seating $\varkappa = 90°$

for insert W30 / W57 P M K N S H




Insert seating cutting form 1 as shown with left or neutral insert.




Insert seating cutting form 2 in mirror image with right or neutral insert.

Dimension 'b' relates to the appropriate insert radius

| Article cutting form ▼ | Order No. | for radius b | L1 | L2 | L3 | L4 | h1 | h2 | kg |
|---|---|---|---|---|---|---|---|---|---|
| FLWE-U3-90°-1 | D53 56410 | 7,8 | 8 | 4,4 | 3 | 1,9 | 3,6 | 0,6 | 0,004 |
| FLWE-U4-90°-1 | D53 56430 | 11 | 12 | 7 | 5 | 2,5 | 5,7 | 0,95 | 0,006 |
| FLWE-U4-90°-2 | D53 51430 | | | | | | | | |
| FLWE-U5-90°-1 | D53 56440 | 14 | 14 | 7,5 | 5 | 3 | 6,8 | 0,95 | 0,008 |
| FLWE-U5-90°-2 | D53 51440 | | | | | | | | |

| for insert seating | Insert | | | Assembly parts | Accessories | Assembly parts | |
|---|---|---|---|---|---|---|---|
| | W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | W57 neutral | Clamping screw Order No. Article | Screwdriver Order No. Article | Location screw Order No. | Threaded pin Order No. Article |
| FLWE-U3-90°-1 | W30 04..0.03.. | | W57 04140.04.. | N00 56021 S/M2×3,8-6IP 0,62Nm | L05 00810 6IP | N10 11200 | 55051 02005 M2×5 |
| FLWE-U4-90°-1 | W30 14..0.04.. | | W57 14140.04.. | N00 56031 S/M2,6×5,2-8IP 1,28Nm | L05 00830 8IP | N10 11310 | 55051 03006 M3×6 |
| FLWE-U4-90°-2 | | W30 14..0.04.. | | | | | |
| FLWE-U5-90°-1 | W30 26..0.05.. | | W57 26140.04.. | N00 56201 S/M3,5×6,2-10IP 2,8Nm | L05 00850 10IP | N10 11400 | 55051 03006 M3×6 |
| FLWE-U5-90°-2 | | W30 26..0.05.. | | | | | |

For further details on inserts see chapter 7

**Note:**
If using insert W30 ... .31.. (UF) the external contour have to be reworked.

**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

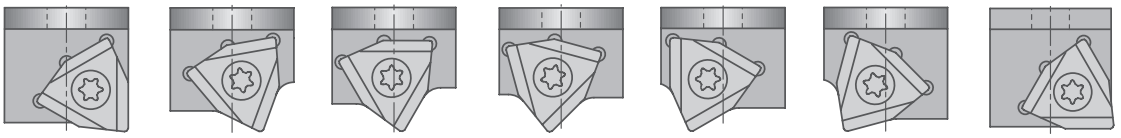
# KOMET Kometric® WVP, WVU Adjustable Insert Seating

## Mounting details

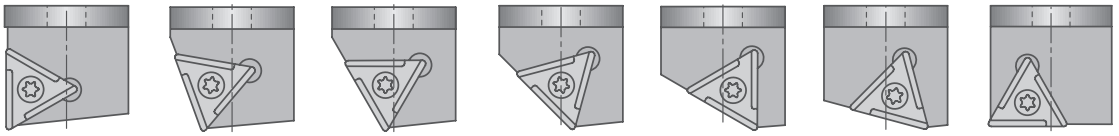
### WVP left



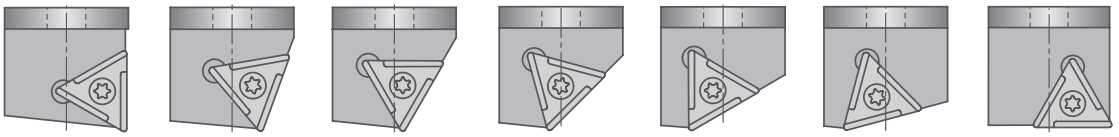

### WVP right




### WVU left



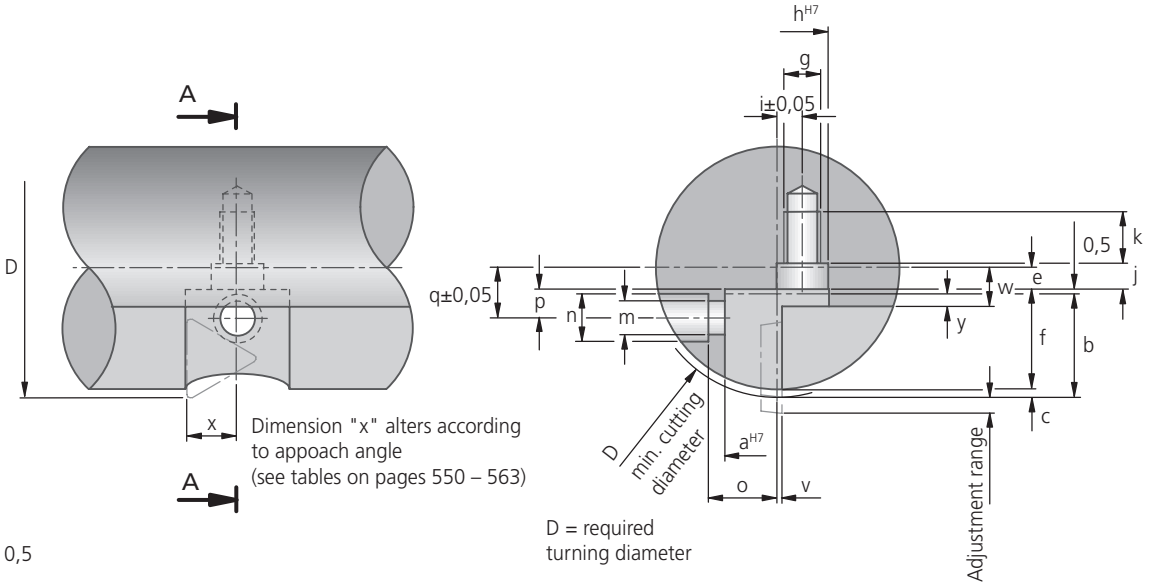

### WVU right available on request




**Features**

- KOMET Kometric® type WVP can be fitted with Unisix® insert
- KOMET Kometric® type WVU can be fitted with triangular insert
- KOMET Kometric® types WVU4 and WVU5 can be interchanged with types WVP12 and WVP16
- can be used from 16 mm ∅
- optimum adjustment with easily accessible adjusting screw
- for own manufacture of fine boring tools using ABS® or HSK semi-finished heads

## Mounting details




$e = \frac{D}{2} - b - 0,5$

$f = b + 0,5 - c$

$q = p + \frac{D}{2} - b - 0,5$

$w = e + y + 0,5$

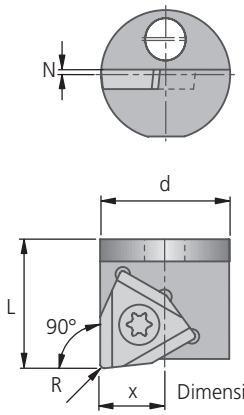
| WVP | Insert seating | | | Adjusting screw | | | | | Location screw | | | | Chip channel | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Insert seating size | a | b | c | g | h | i | j | k | m | n | o | p | v | y |
| WVP 12.. | 12 | 12 | 1 | M4 | 6 | 2,9 | 3 | 6 | 3,9 | 5,5 | 7,9 | 3,3 | 0,6 | 1,5 |
| WVP 16.. | 16 | 16 | 1 | M5 | 7 | 4,4 | 3,5 | 8 | 4,5 | 7,5 | 9,5 | 4,2 | 0,6 | 2 |
| WVP 18.. | 18 | 18,5 | 2 | M6 | 9 | 4,4 | 5 | 10 | 4,5 | 7,5 | 11 | 5 | 0,5 | 2,5 |

| WVP | Insert seating | | | Adjusting screw | | | | | Location screw | | | | Chip channel | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Insert seating size | a | b | c | g | h | i | j | k | m | n | o | p | v | y |
| WVU3.. | 8 | 8,5 | 0,75 | M3 | 4 | 2,1 | 2,5 | 4 | 2,8 | 4 | 5,5 | 2,7 | 0,5 | 1,5 |
| WVU T06.. | | | | | | | | | | | | | | |
| WVU4.. | 12 | 12 | 1 | M4 | 6 | 2,9 | 3 | 6 | 3,9 | 5,5 | 7,9 | 3,3 | 0,6 | 1,5 |
| WVU T09.. | | | | | | | | | | | | | | |
| WVU5.. | 16 | 16 | 1 | M5 | 7 | 4,4 | 3,5 | 8 | 4,5 | 7,5 | 9,5 | 4,2 | 0,6 | 2 |
| WVU T11.. | | | | | | | | | | | | | | |
| WVU T13.. | | | | | | | | | | | | | | |
| WVU T16.. | 20 | 24 | 2 | M6 | 9 | 5,8 | 5 | 10 | 5,5 | 9 | 14 | 6 | 0,6 | 3 |

# KOMET Kometric® WVP Adjustable Insert Seatings $\varkappa$ = 90°

## for insert W01 / W29

- L.H. insert seating as shown with left or neutral insert
- R.H. insert seating in mirror image with right or neutral insert
- mounting instruction see page 548 – 549




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|
| WVP12-818-90L31 | D20 80050 | 22 | 0,4 | 12 | 12 | 0,6 | 5,8 | 5,8 | 5,8 | 0,02 |
| WVP12-818-90R31 | D20 85050 | | | | | | | | | |
| WVP16-824-90L38 | D20 80060 | 30 | 0,5 | 16 | 16 | 0,6 | 7,8 | 7,8 | 7,8 | 0,02 |
| WVP16-824-90R38 | D20 85060 | | | | | | | | | |
| WVP18-834-90L38 | D20 80070 | 36 | 0,5 | 18 | 18,5 | 0,5 | 8,8 | 8,8 | 8,8 | 0,02 |
| WVP18-834-90R38 | D20 85070 | | | | | | | | | |

| for insert seating | Insert W01 L.H. | Insert W01 R.H. | Insert W01 neutral | Insert W29 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw Order No. Article | Assembly parts Adjusting screw Order No. Article |
|---|---|---|---|---|---|---|---|---|
| WVP12-818-90L31 | | | | W29 18010.04.. | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP | N00 55701 M3×5-8IP 2,25 Nm | N00 52510 E46 |
| WVP12-818-90R31 | | | | | | | | |
| WVP16-824-90L38 | W01 24060.02.. | | W01 24600... | W29 24010.04.. | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP | 55012 04006 M4×6 DIN7984 | N00 52520 E58 |
| WVP16-824-90R38 | | W01 24360.02.. | | | | | | |
| WVP18-834-90L38 | W01 34060.04.. | | W01 34600... | W29 34010.04.. | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP | 55011 04006 M4×6 DIN912 | N00 52530 E610 |
| WVP18-834-90R38 | | W01 34360.04.. | | | | | | |

For further details on inserts see chapter 7

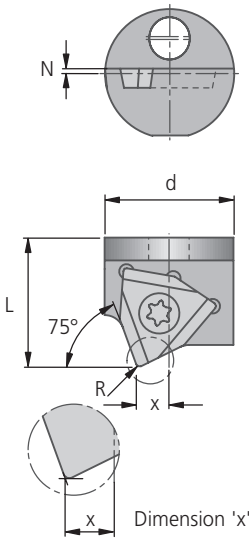
**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVP Adjustable Insert Seatings $\varkappa$ = 75°

## for insert W01 / W29

P M K N S H

L.H. insert seating as shown with left or neutral insert ■
R.H. insert seating in mirror image with right or neutral insert ■
mounting instruction see page 548 – 549 ■




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|
| WVP12-818-75R31 | D20 85150 | 22 | 0,4 | 12 | 12 | 0,6 | 3,6 | 3,62 | 3,66 | 0,02 |
| WVP16-824-75L38 | D20 80160 | 30 | 0,5 | 16 | 16 | 0,6 | 4 | 4,02 | 4,05 | 0,02 |
| WVP16-824-75R38 | D20 85160 | | | | | | | | | |
| WVP18-834-75L38 | D20 80170 | 36 | 0,5 | 18 | 18,5 | 0,5 | 5 | 5,02 | 5,05 | 0,02 |
| WVP18-834-75R38 | D20 85170 | | | | | | | | | |

| for insert seating | Insert W01 L.H. | Insert W01 R.H. | Insert W01 neutral | Insert W29 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw Order No. Article | Assembly parts Adjusting screw Order No. Article |
|---|---|---|---|---|---|---|---|---|
| WVP12-818-75R31 | | | | W29 18010.04.. | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP | N00 55701 M3×5-8IP 2,25 Nm | N00 52510 E46 |
| WVP16-824-75L38 | W01 24060.02.. | | W01 24600... | W29 24010.04.. | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP | 55012 04006 M4×6 DIN7984 | N00 52520 E58 |
| WVP16-824-75R38 | | W01 24360.02.. | | | | | | |
| WVP18-834-75L38 | W01 34060.04.. | | W01 34600... | W29 34010.04.. | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP | 55011 04006 M4×6 DIN912 | N00 52530 E610 |
| WVP18-834-75R38 | | W01 34360.04.. | | | | | | |

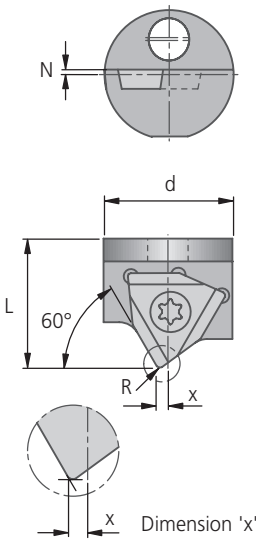
For further details on inserts see chapter 7

**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVP Adjustable Insert Seatings $\varkappa$ = 60°

## for insert W01 / W29

- L.H. insert seating as shown with left or neutral insert
- R.H. insert seating in mirror image with right or neutral insert
- mounting instruction see page 548 – 549




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|
| WVP12-818-60L31 | D20 80250 | 22 | 0,4 | 12 | 12 | 0,6 | 1,5 | 1,55 | 1,66 | 0,02 |
| WVP12-818-60R31 | D20 85250 | | | | | | | | | |
| WVP16-824-60L38 | D20 80260 | 30 | 0,5 | 16 | 16 | 0,6 | 1,3 | 1,36 | 1,46 | 0,02 |
| WVP16-824-60R38 | D20 85260 | | | | | | | | | |
| WVP18-834-60L38 | D20 80270 | 36 | 0,5 | 18 | 18,5 | 0,5 | 2,3 | 2,36 | 2,46 | 0,02 |
| WVP18-834-60R38 | D20 85270 | | | | | | | | | |

| for insert seating | Insert W01 L.H. | Insert W01 R.H. | Insert W01 neutral | Insert W29 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw Order No. Article | Assembly parts Adjusting screw Order No. Article |
|---|---|---|---|---|---|---|---|---|
| WVP12-818-60L31 | | | | W29 18010.04.. | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP | N00 55701 M3×5-8IP 2,25 Nm | N00 52510 E46 |
| WVP12-818-60R31 | | | | | | | | |
| WVP16-824-60L38 | W01 24060.02.. | | W01 24600... | W29 24010.04.. | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP | 55012 04006 M4×6 DIN7984 | N00 52520 E58 |
| WVP16-824-60R38 | | W01 24360.02.. | | | | | | |
| WVP18-834-60L38 | W01 34060.04.. | | W01 34600... | W29 34010.04.. | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP | 55011 04006 M4×6 DIN912 | N00 52530 E610 |
| WVP18-834-60R38 | | W01 34360.04.. | | | | | | |

For further details on inserts see chapter 7

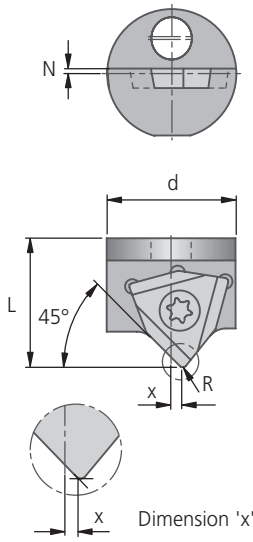
**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVP Adjustable Insert Seatings $\varkappa = 45°$

## for insert W01 / W29

P M K N S H

L.H. insert seating as shown with left or neutral insert ■
R.H. insert seating in mirror image with right or neutral insert ■
mounting instruction see page 548 – 549 ■




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|
| WVP12-818-45L31 | D20 80350 | 22 | 0,4 | 12 | 12 | 0,6 | 0,7 | 0,61 | 0,41 | 0,02 |
| WVP12-818-45R31 | D20 85350 | | | | | | | | | |
| WVP16-824-45L38 | D20 80360 | 30 | 0,5 | 16 | 16 | 0,6 | 1,3 | 1,2 | 1,01 | 0,02 |
| WVP16-824-45R38 | D20 85360 | | | | | | | | | |
| WVP18-834-45L38 | D20 80370 | 36 | 0,5 | 18 | 18,5 | 0,5 | 0,5 | 0,4 | 0,21 | 0,02 |
| WVP18-834-45R38 | D20 85370 | | | | | | | | | |

| for insert seating | Insert W01 L.H. | Insert W01 R.H. | Insert W01 neutral | Insert W29 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw Order No. Article | Assembly parts Adjusting screw Order No. Article |
|---|---|---|---|---|---|---|---|---|
| WVP12-818-45L31 | | | | W29 18010.04.. | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP | N00 55701 M3×5-8IP 2,25 Nm | N00 52510 E46 |
| WVP12-818-45R31 | | | | | | | | |
| WVP16-824-45L38 | W01 24060.02.. | | W01 24600... | W29 24010.04.. | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP | 55012 04006 M4×6 DIN7984 | N00 52520 E58 |
| WVP16-824-45R38 | | W01 24360.02.. | | | | | | |
| WVP18-834-45L38 | W01 34060.04.. | | W01 34600... | W29 34010.04.. | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP | 55011 04006 M4×6 DIN912 | N00 52530 E610 |
| WVP18-834-45R38 | | W01 34360.04.. | | | | | | |

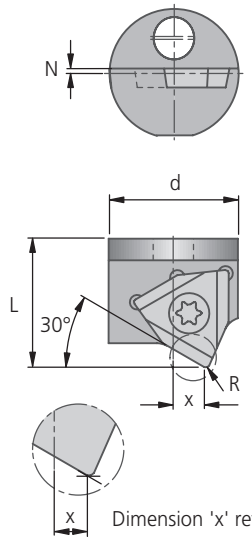
For further details on inserts see chapter 7

**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVP Adjustable Insert Seatings $\varkappa$ = 30°

## for insert W01 / W29

- L.H. insert seating as shown with left or neutral insert
- R.H. insert seating in mirror image with right or neutral insert
- mounting instruction see page 548 – 549




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|
| WVP12-818-30L31 | D20 80450 | 22 | 0,4 | 12 | 12 | 0,6 | 2,5 | 2,35 | 2,06 | 0,02 |
| WVP12-818-30R31 | D20 85450 | | | | | | | | | |
| WVP16-824-30L38 | D20 80460 | 30 | 0,5 | 16 | 16 | 0,6 | 4 | 3,86 | 3,57 | 0,02 |
| WVP16-824-30R38 | D20 85460 | | | | | | | | | |
| WVP18-834-30L38 | D20 80470 | 36 | 0,5 | 18 | 18,5 | 0,5 | 3,5 | 3,36 | 3,07 | 0,02 |
| WVP18-834-30R38 | D20 85470 | | | | | | | | | |

| for insert seating | Insert W01 L.H. | Insert W01 R.H. | Insert W01 neutral | Insert W29 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw Order No. Article | Assembly parts Adjusting screw Order No. Article |
|---|---|---|---|---|---|---|---|---|
| WVP12-818-30L31 | | | | W29 18010.04.. | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP | N00 55701 M3×5-8IP 2,25 Nm | N00 52510 E46 |
| WVP12-818-30R31 | | | | | | | | |
| WVP16-824-30L38 | W01 24060.02.. | | W01 24600... | W29 24010.04.. | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP | 55012 04006 M4×6 DIN7984 | N00 52520 E58 |
| WVP16-824-30R38 | | W01 24360.02.. | | | | | | |
| WVP18-834-30L38 | W01 34060.04.. | | W01 34600... | W29 34010.04.. | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP | 55011 04006 M4×6 DIN912 | N00 52530 E610 |
| WVP18-834-30R38 | | W01 34360.04.. | | | | | | |

For further details on inserts see chapter 7

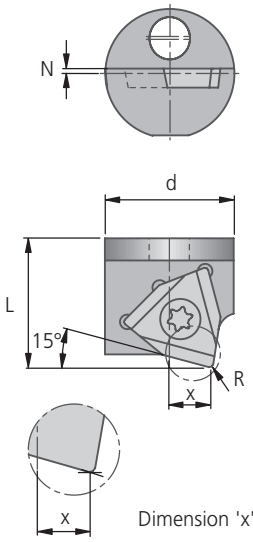
**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVP Adjustable Insert Seatings $\varkappa$ = 15°

## for insert W01 / W29

P M K N S H

L.H. insert seating as shown with left or neutral insert ■
R.H. insert seating in mirror image with right or neutral insert ■
mounting instruction see page 548 – 549 ■




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|
| WVP12-818-15L31 | D20 80550 | 22 | 0,4 | 12 | 12 | 0,6 | 3 | 2,81 | 2,43 | 0,02 |
| WVP12-818-15R31 | D20 85550 | | | | | | | | | |
| WVP16-824-15R38 | D20 85560 | 30 | 0,5 | 16 | 16 | 0,6 | 5 | 4,81 | 4,43 | 0,02 |
| WVP18-834-15L38 | D20 80570 | 36 | 0,5 | 18 | 18,5 | 0,5 | 6 | 5,81 | 5,43 | 0,02 |
| WVP18-834-15R38 | D20 85570 | | | | | | | | | |

| for insert seating | Insert W01 L.H. | Insert W01 R.H. | Insert W01 neutral | Insert W29 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw Order No. Article | Assembly parts Adjusting screw Order No. Article |
|---|---|---|---|---|---|---|---|---|
| WVP12-818-15L31 | | | | W29 18010.04.. | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP | N00 55701 M3×5-8IP 2,25 Nm | N00 52510 E46 |
| WVP12-818-15R31 | | | | | | | | |
| WVP16-824-15R38 | | W01 24360.02.. | W01 24600... | W29 24010.04.. | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP | 55012 04006 M4×6 DIN7984 | N00 52520 E58 |
| WVP18-834-15L38 | W01 34060.04.. | | W01 34600... | W29 34010.04.. | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP | 55011 04006 M4×6 DIN912 | N00 52530 E610 |
| WVP18-834-15R38 | | W01 34360.04.. | | | | | | |

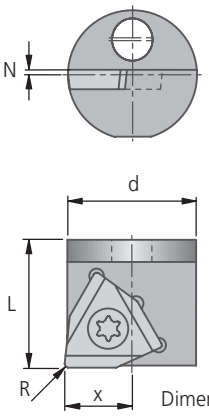
For further details on inserts see chapter 7

**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVP Adjustable Insert Seatings $\varkappa = 0°$

## for insert W01 / W29

- L.H. insert seating as shown with right or neutral insert
- R.H. insert seating in mirror image with left or neutral insert
- mounting instruction see page 548 – 549




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|
| WVP12-818-0L31 | D20 80650 | 22 | 0,4 | 12 | 12 | 0,6 | 6,3 | 6,28 | 6,23 | 0,02 |
| WVP12-818-0R31 | D20 85650 | | | | | | | | | |
| WVP16-824-0L38 | D20 80660 | 30 | 0,5 | 16 | 16 | 0,6 | 8,3 | 8,28 | 8,23 | 0,02 |
| WVP16-824-0R38 | D20 85660 | | | | | | | | | |
| WVP18-834-0L38 | D20 80670 | 36 | 0,5 | 18 | 18,5 | 0,5 | 9,3 | 9,28 | 9,23 | 0,02 |
| WVP18-834-0R38 | D20 85670 | | | | | | | | | |

| for insert seating | Insert W01 L.H. | Insert W01 R.H. | Insert W01 neutral | Insert W29 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw Order No. Article | Assembly parts Adjusting screw Order No. Article |
|---|---|---|---|---|---|---|---|---|
| WVP12-818-0L31 | | | | W29 18010.04.. | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP | N00 55701 M3×5-8IP 2,25 Nm | N00 52510 E46 |
| WVP12-818-0R31 | | | | | | | | |
| WVP16-824-0L38 | W01 24060.02.. | | W01 24600... | W29 24010.04.. | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP | 55012 04006 M4×6 DIN7984 | N00 52520 E58 |
| WVP16-824-0R38 | | W01 24360.02.. | | | | | | |
| WVP18-834-0L38 | W01 34060.04.. | | W01 34600... | W29 34010.04.. | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP | 55011 04006 M4×6 DIN912 | N00 52530 E610 |
| WVP18-834-0R38 | | W01 34360.04.. | | | | | | |

For further details on inserts see chapter 7

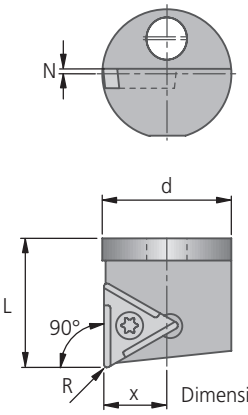
**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVU Adjustable Insert Seatings $\varkappa = 90°$

## for insert W30 / W57

P M K N S H

L.H. insert seating as shown with left or neutral insert ■
mounting instruction see page 548 – 549 ■




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|
| WVU3-800-90L | **D20 40000** | 16 | 0,3 | 8 | 8,5 | 0,5 | 3,9 | 3,9 | 3,9 | 0,004 |
| WVU4-800-90L | **D20 40010** | 22 | 0,4 | 12 | 12 | 0,6 | 5,8 | 5,8 | 5,8 | 0,004 |
| WVU5-800-90L | **D20 40020** | 30 | 0,5 | 16 | 16 | 0,6 | 7,8 | 7,8 | 7,8 | 0,01 |

| for insert seating | Insert | | Assembly parts | Accessories | Assembly parts | |
|---|---|---|---|---|---|---|
| | W30 L.H.  radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | W57 neutral  | Clamping screw  Order No. Article | Screwdriver  Order No. Article | Location screw  Order No. Article | Adjusting screw  Order No. Article |
| WVU3-800-90L | **W30 04..0.03..** | **W57 04140.04..** | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **N00 55561** M2,5×4-8IP 1,28 Nm | **N00 52500** E34 |
| WVU4-800-90L | **W30 14..0.04..** | **W57 14140.04..** | **N00 56121** S/M2,6×4,7-8IP 1,28 Nm | **L05 00830** 8IP | **N00 55701** M3,5×5-8IP 2,25 Nm | **N00 52510** E46 |
| WVU5-800-90L | **W30 26..0.05..** | **W57 26140.04..** | **N00 56201** S/M3,5×6,2-10IP 2,8 Nm | **L05 00850** 10IP | **55012 04006** M4×6 DIN7984 | **N00 52520** E58 |

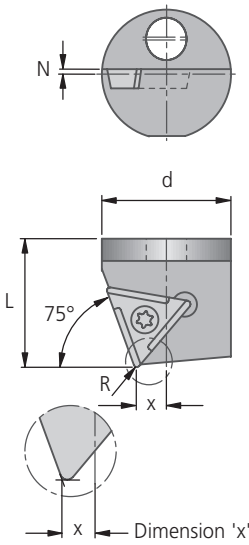
For further details on inserts see chapter 7

**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVU Adjustable Insert Seatings $\varkappa$ = 75°

P M K N S H for insert W30 / W57

- L.H. insert seating as shown with left or neutral insert
- mounting instruction see page 548 – 549




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,3 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WVU3-800-75L | **D20 40100** | 16 | 0,3 | 8 | 8,5 | 0,5 | 2,28 | 2,3 | 2,33 | – | 0,003 |
| WVU4-800-75L | **D20 40110** | 22 | 0,4 | 12 | 12 | 0,6 | 3,55 | – | 3,6 | – | 0,006 |
| WVU5-800-75L | **D20 40120** | 30 | 0,5 | 16 | 16 | 0,6 | 3,92 | – | 3,97 | 4 | 0,012 |

| for insert seating | Insert W30 L.H. (radial rake 06 = 6° 12 = 12° 20 = 20°) | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw Order No. Article | Assembly parts Adjusting screw Order No. Article |
|---|---|---|---|---|---|---|
| WVU3-800-75L | **W30 04..0.03..** | **W57 04140.04..** | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **N00 55561** M2,5×4-8IP 1,28 Nm | **N00 52500** E34 |
| WVU4-800-75L | **W30 14..0.04..** | **W57 14140.04..** | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **N00 55701** M3,5×5-8IP 2,25 Nm | **N00 52510** E46 |
| WVU5-800-75L | **W30 26..0.05..** | **W57 26140.04..** | **N00 56201** S/M3,5×6,2-10IP 2,8 Nm | **L05 00850** 10IP | **55012 04006** M4×6 DIN7984 | **N00 52520** E58 |

For further details on inserts see chapter 7

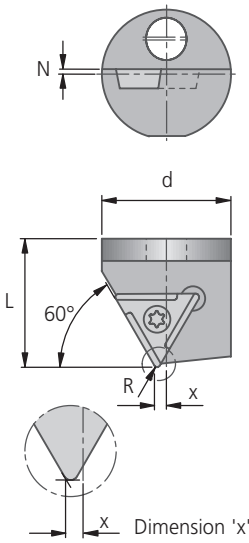
**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVU Adjustable Insert Seatings $\varkappa = 60°$

## for insert W30 / W57

P M K N S H

L.H. insert seating as shown with left or neutral insert ■
mounting instruction see page 548 – 549 ■




Dimension 'x' refers to the appropriate insert radius

| Article<br>cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,3 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WVU3-800-60L | **D20 40200** | 16 | 0,3 | 8 | 8,5 | 0,5 | 0,75 | 0,8 | 0,86 | – | 0,002 |
| WVU4-800-60L | **D20 40210** | 22 | 0,4 | 12 | 12 | 0,6 | 1,39 | – | 1,5 | – | 0,006 |
| WVU5-800-60L | **D20 40220** | 30 | 0,5 | 16 | 16 | 0,6 | 1,13 | – | 1,24 | 1,3 | 0,013 |

| for insert seating | Insert | | Assembly parts | Accessories | Assembly parts | |
|---|---|---|---|---|---|---|
| | W30 L.H.<br>radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | W57 neutral | Clamping screw<br>Order No.<br>Article | Screwdriver<br>Order No.<br>Article | Location screw<br>Order No.<br>Article | Adjusting screw<br>Order No.<br>Article |
| WVU3-800-60L | **W30 04..0.03..** | **W57 04140.04..** | **N00 56021**<br>S/M2×3,8-6IP<br>0,62 Nm | **L05 00810**<br>6IP | **N00 55561**<br>M2,5×4-8IP<br>1,28 Nm | **N00 52500**<br>E34 |
| WVU4-800-60L | **W30 14..0.04..** | **W57 14140.04..** | **N00 56101**<br>S/M2,6×5,2-8IP<br>1,28 Nm | **L05 00830**<br>8IP | **N00 55701**<br>M3,5×5-8IP<br>2,25 Nm | **N00 52510**<br>E46 |
| WVU5-800-60L | **W30 26..0.05..** | **W57 26140.04..** | **N00 56201**<br>S/M3,5×6,2-10IP<br>2,8 Nm | **L05 00850**<br>10IP | **55012 04006**<br>M4×6 DIN7984 | **N00 52520**<br>E58 |

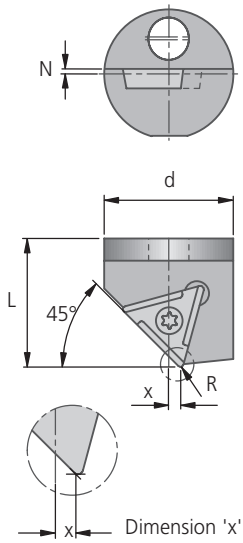
For further details on inserts see chapter 7

**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVU Adjustable Insert Seatings $\varkappa = 45°$

P M K N S H for insert W30 / W57

- L.H. insert seating as shown with left or neutral insert
- R.H. insert seating in mirror image with right or neutral insert
- mounting instruction see page 548 – 549




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,3 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WVU3-800-45L | **D20 40300** | 16 | 0,3 | 8 | 8,5 | 0,5 | 0,49 | 0,4 | 0,3 | – | 0,002 |
| WVU4-800-45L | **D20 40310** | 22 | 0,4 | 12 | 12 | 0,6 | 0,88 | – | 0,7 | – | 0,005 |
| WVU4-800-45R | **D20 45310** | | | | | | | | | | |
| WVU5-800-45L | **D20 40320** | 30 | 0,5 | 16 | 16 | 0,6 | 1,59 | – | 1,4 | 1,3 | 0,012 |
| WVU5-800-45R | **D20 45320** | | | | | | | | | | |

| for insert seating | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw Order No. | Assembly parts Adjusting screw Order No. Article |
|---|---|---|---|---|---|---|---|
| WVU3-800-45L | **W30 04..0.03..** | | **W57 04140.04..** | **N00 56021** S/M2×3,8-6IP 0,62Nm | **L05 00810** 6IP | **N00 55561** M2,5×4-8IP 1,28Nm | **N00 52500** E34 |
| WVU4-800-45L | **W30 14..0.04..** | | **W57 14140.04..** | **N00 56101** S/M2,6×5,2-8IP 1,28Nm | **L05 00830** 8IP | **N00 55701** M3,5×5-8IP 2,25Nm | **N00 52510** E46 |
| WVU4-800-45R | | **W30 14..0.04..** | | | | | |
| WVU5-800-45L | **W30 26..0.05..** | | **W57 26140.04..** | **N00 56201** S/M3,5×6,2-10IP 2,8Nm | **L05 00850** 10IP | **55012 04006** M4×6 DIN7984 | **N00 52520** E58 |
| WVU5-800-45R | | **W30 26..0.05..** | | | | | |

For further details on inserts see chapter 7

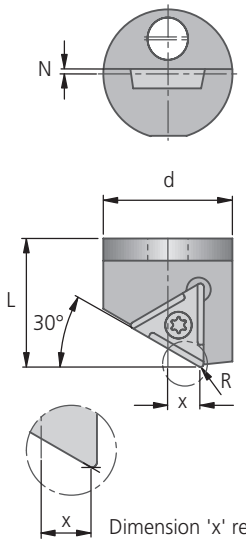
**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVU Adjustable Insert Seatings $\varkappa$ = 30°

## for insert W30 / W57

P M K N S H

L.H. insert seating as shown with left or neutral insert ■
mounting instruction see page 548 – 549 ■




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,3 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WVU3-800-30L | **D20 40400** | 16 | 0,3 | 8 | 8,5 | 0,5 | 1,63 | 1,5 | 1,37 | – | 0,002 |
| WVU4-800-30L | **D20 40410** | 22 | 0,4 | 12 | 12 | 0,6 | 2,76 | – | 2,5 | – | 0,006 |
| WVU5-800-30L | **D20 40420** | 30 | 0,5 | 16 | 16 | 0,6 | 4,38 | – | 4,12 | 4 | 0,012 |

| for insert seating | Insert | | Assembly parts | Accessories | Assembly parts | |
|---|---|---|---|---|---|---|
| | W30 L.H. | W57 neutral | Clamping screw | Screwdriver | Location screw | Adjusting screw |
| | radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | | Order No. Article | Order No. Article | Order No. Article | Order No. Article |
| WVU3-800-30L | **W30 04..0.03..** | **W57 04140.04..** | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **N00 55561** M2,5×4-8IP 1,28 Nm | **N00 52500** E34 |
| WVU4-800-30L | **W30 14..0.04..** | **W57 14040.04..** | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **N00 55701** M3,5×5-8IP 2,25 Nm | **N00 52510** E46 |
| WVU5-800-30L | **W30 26..0.05..** | **W57 26140.04..** | **N00 56201** S/M3,5×6,2-10IP 2,8 Nm | **L05 00850** 10IP | **55012 04006** M4×6 DIN7984 | **N00 52520** E58 |

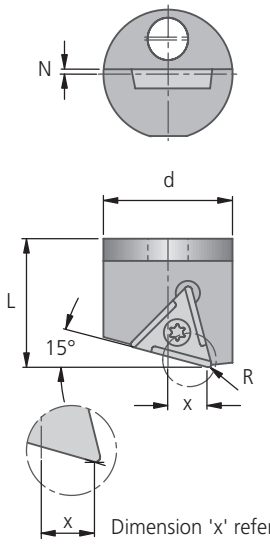
For further details on inserts see chapter 7

**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVU Adjustable Insert Seatings $\varkappa$ = 15°

P M K N S H for insert W30 / W57

- L.H. insert seating as shown with left or neutral insert
- mounting instruction see page 548 – 549




Dimension 'x' refers to the appropriate insert radius

| Article cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,3 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WVU3-800-15L | **D20 40500** | 16 | 0,3 | 8 | 8,5 | 0,5 | 2,25 | 2,1 | 1,94 | – | 0,003 |
| WVU4-800-15L | **D20 40510** | 22 | 0,4 | 12 | 12 | 0,6 | 3,31 | – | 3 | – | 0,006 |
| WVU5-800-15L | **D20 40520** | 30 | 0,5 | 16 | 16 | 0,6 | 5,46 | – | 5,15 | 5 | 0,013 |

| for insert seating | Insert W30 L.H. (radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20°) | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw Order No. Article | Assembly parts Adjusting screw Order No. Article |
|---|---|---|---|---|---|---|
| WVU3-800-15L | **W30 04..0.03..** | **W57 04140.04..** | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **N00 55561** M2,5×4-8IP 1,28 Nm | **N00 52500** E34 |
| WVU4-800-15L | **W30 14..0.04..** | **W57 14040.04..** | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **N00 55701** M3,5×5-8IP 2,25 Nm | **N00 52510** E46 |
| WVU5-800-15L | **W30 26..0.05..** | **W57 26140.04..** | **N00 56201** S/M3,5×6,2-10IP 2,8 Nm | **L05 00850** 10IP | **55012 04006** M4×6 DIN7984 | **N00 52520** E58 |

For further details on inserts see chapter 7

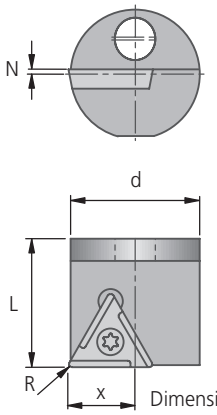
**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® WVU Adjustable Insert Seatings $\varkappa = 0°$

## for insert W30 / W57

P M K N S H

L.H. insert seating as shown with right or neutral insert ■
mounting instruction see page 548 – 549 ■




Dimension 'x' refers to the appropriate insert radius

| Article<br>cutting form ▼ | Order No. | min. cutting diameter | Adjust-ment-range | d | L | N | ISO dimension x for radius R0,2 | R0,3 | R0,4 | R0,8 | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WVU4-800-0L | **D20 40610** | 22 | 0,4 | 12 | 12 | 0,6 | 6,45 | – | 6,3 | – | 0,006 |
| WVU5-800-0L | **D20 40620** | 30 | 0,5 | 16 | 16 | 0,6 | 8,53 | – | 8,38 | 8,3 | 0,015 |

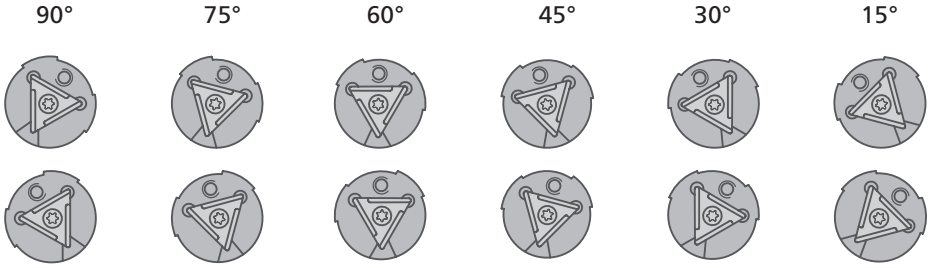
| for insert seating | Insert W30 L.H. | Insert W57 neutral | Assembly parts Clamping screw | Accessories Screwdriver | Assembly parts Location screw | Assembly parts Adjusting screw |
|---|---|---|---|---|---|---|
| | radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | | **Order No.** Article | **Order No.** Article | **Order No.** Article | **Order No.** Article |
| WVU4-800-0L | **W30 14..0.04..** | **W57 14140.04..** | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **N00 55701** M3,5×5-8IP 2,25 Nm | **N00 52510** E46 |
| WVU5-800-0L | **W30 26..0.05..** | **W57 26140.04..** | **N00 56201** S/M3,5×6,2-10IP 2,8 Nm | **L05 00850** 10IP | **55012 04006** M4×6 DIN7984 | **N00 52520** E58 |

For further details on inserts see chapter 7

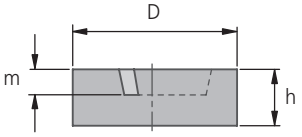
**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UWU Insert Seatings

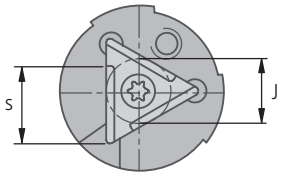
P M K N S H for insert W30 / W57




Mounting instruction see page 566 – 567




L.H. insert seating as shown with
left or neutral insert.
R.H. insert seating in mirror image
with right or neutral insert.




| Article cutting form ▼ | Order No. | J | D | h | at standard radius s | insert thickness m | kg | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W30 R.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W57 neutral |
|---|---|---|---|---|---|---|---|---|---|---|
| UWU 4 L | D52 01100 | 5,6 | 16 | 5,5 | 4,5 | 2,5 | 0,007 | W30 14..0.04.. | | W57 14140.04.. |
| UWU 4 R | D52 06100 | | | | | | | | W30 14..0.04.. | |
| UWU 5 L | D52 01110 | 8,2 | 20 | 6,5 | 6,7 | 3 | 0,012 | W30 26..0.04.. | | W57 26140.04.. |
| UWU 5 R | D52 06110 | | | | | | | | W30 26..0.04.. | |
| UWU 6 L | D52 01120 | 12,7 | 30 | 8,8 | 10,4 | 4,3 | 0,038 | W30 44..0.05.. | | |
| UWU 6 R | D52 06120 | | | | | | | | W30 44..0.05.. | |

For further details on inserts see chapter 7

| for insert seating | Assembly parts: Clamping screw Article | Assembly parts: Clamping screw Order No. | Accessories: Screwdriver Article | Accessories: Screwdriver Order No. | Assembly parts: Location screw Article | Assembly parts: Location screw Order No. | Assembly parts: Cylindrical pin external machining Article | Assembly parts: Cylindrical pin external machining Order No. | Assembly parts: Cylindrical pin internal machining Article | Assembly parts: Cylindrical pin internal machining Order No. |
|---|---|---|---|---|---|---|---|---|---|---|
| UWU 4.. | S/M2,6×6,2-8IP 1,28 Nm | N00 56111 | 8IP | L05 00830 | Tx M2,6×6 | N00 55600 | 1,8/2×4,5 | N00 52000 | 1,8/2×4,5 | N00 52000 |
| UWU 5.. | S/M3,5×7,3-10IP 2,8 Nm | N00 56211 | 10IP | L05 00850 | M3,5×5-8IP 2,25 Nm | N00 55701 | Ø3×10 DIN 6325 | 55311 03010 | 1,8/2×5,5 | 55311 03010 |
| UWU 6.. | S/M5×13,4-20IP 6,25 Nm | N00 56411 | 20IP | L05 00870 | M5×13,5-15IP 6,25 Nm | N00 55851 | Ø4×10 DIN 6325 | 55311 04010 | 3/4×5,5 | 55311 04010 |

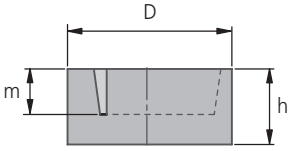
**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UWE Insert Seatings

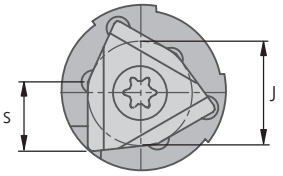
## for insert W01 / W29 P M K N S H

| | 90° | 75° | 66° | 60° | 45° | 30° | 21° | 15° |
|---|---|---|---|---|---|---|---|---|
| UWE L.H. |  |  |  |  |  |  |  |  |
| UWE R.H. |  |  |  |  |  |  |  |  |

Mounting instruction see page 568 – 569




L.H. insert seating as shown with left or neutral insert.
R.H. insert seating in mirror image with right or neutral insert.




| Article cutting form ▼ | Order No. | J | D | h | s | insert thickness m | kg | Insert W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽ | Insert W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽ | Insert W01 neutral | Insert W29 neutral 00 = PD 01 = K ▽▽ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UWE02-38 L | D52 50090 | 8 | 14 | 6 | 5 | 3,8 | 0,005 | W01 24..0.04.. | | W01 24600... | W29 24..0.04.. |
| UWE02-38 R | D52 55090 | | | | | | | | W01 24..0.04.. | | |
| UWE01-38 L | D52 50100 | 10 | 16 | 6,5 | 6,5 | 3,8 | 0,007 | W01 34..0.04.. | | W01 34600... | W29 34..0.04.. |
| UWE01-38 R | D52 55100 | | | | | | | | W01 34..0.04.. | | |
| UWE1-48 L | D52 50110 | 12 | 20 | 8,3 | 7,5 | 4,8 | 0,013 | W01 42..0.04.. | | W01 42600... | W29 42..0.04.. |
| UWE1-48 R | D52 55110 | | | | | | | | W01 42..0.04.. | | |
| UWE2-53 L | D52 50120 | 15 | 25 | 8,8 | 9,5 | 5,3 | 0,023 | W01 50..0.04.. | | W01 50600... | W29 50..0.08.. |
| UWE2-53 R | D52 55120 | | | | | | | | W01 50..0.04.. | | |
| UWE3-60 L | D52 50130 | 17,6 | 30 | 10,5 | 11,5 | 6 | 0,041 | W01 58..0.04.. | | W01 58600... | W29 58..0.08.. |
| UWE3-60 R | D52 55130 | | | | | | | | W01 58..0.04.. | | |

For further details on inserts see chapter 7

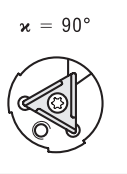
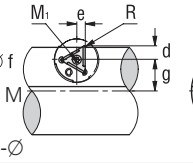
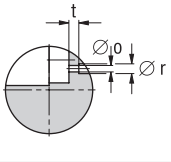
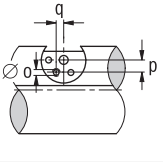
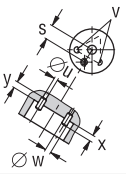
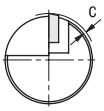
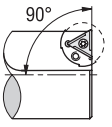
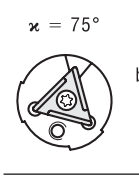
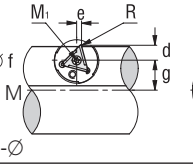
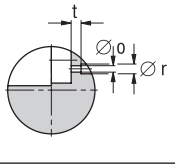
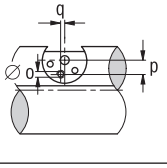
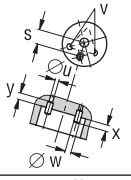
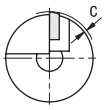
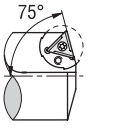
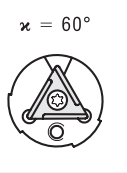
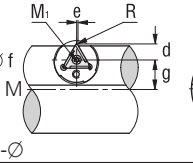
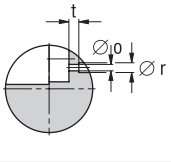
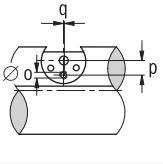
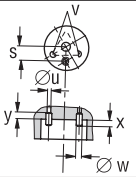
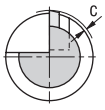
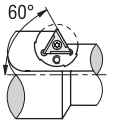
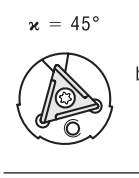
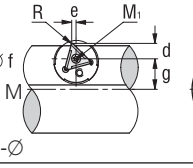
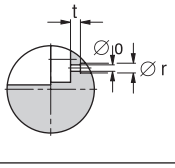
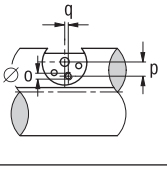
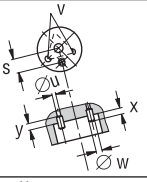
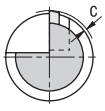
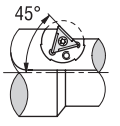
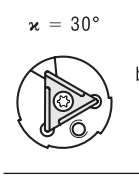
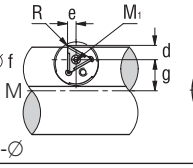
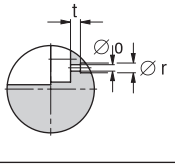
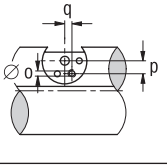
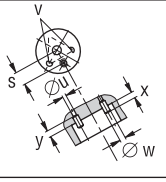
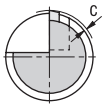
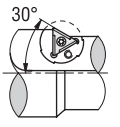
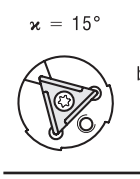
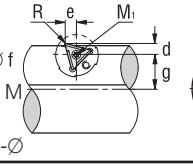
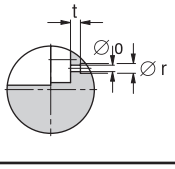
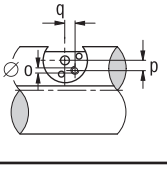
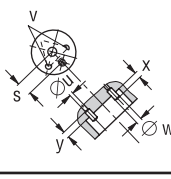
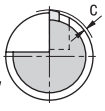
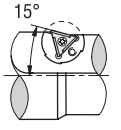
| for insert seating | Assembly parts: Clamping screw Article | Assembly parts: Clamping screw Order No. | Accessories: Screwdriver Article | Accessories: Screwdriver Order No. | Assembly parts: Location screw Article | Assembly parts: Location screw Order No. | Assembly parts: Cylindrical pin external machining Article | Assembly parts: Cylindrical pin external machining Order No. | Assembly parts: Cylindrical pin internal machining Article | Assembly parts: Cylindrical pin internal machining Order No. |
|---|---|---|---|---|---|---|---|---|---|---|
| UWE 02.. | S/M2,5×6,3-8IP 1,28 Nm | N00 57571 | 8IP | L05 00830 | M2,5×6-8IP 1,28 Nm | N00 55571 | 1,8/2×4,5 | N00 52000 | 1,8/2×4,5 | N00 52000 |
| UWE 01.. | S/M3,5×7,3-10IP 2,8 Nm | N00 57521 | 10IP | L05 00850 | M3,5×5-8IP 2,25 Nm | N00 55701 | 1,8/2×4,5 | N00 52000 | 1,8/2×4,5 | N00 52000 |
| UWE 1.. | S/M4,5×9-15IP 6,25 Nm | N00 57531 | 15IP | L05 00860 | M4,5×9-10IP 6,25 Nm | N00 55821 | Ø4×10 DIN 6325 | 55311 04010 | 3/4×5,5 | N00 52010 |
| UWE 2.. | S/M4,5×9-15IP 6,25 Nm | N00 57531 | 15IP | L05 00860 | M4,5×9-10IP 6,25 Nm | N00 55821 | Ø4×10 DIN 6325 | 55311 04010 | 3/4×5,5 | N00 52010 |
| UWE 3.. | S/M5,5×11-20IP 6,25 Nm | N00 57541 | 20IP | L05 00870 | M5,5×13,5-20IP 6,25 Nm | N00 559051 | Ø5×12 DIN 6325 | 55311 05012 | 4/5×7 | N00 52020 |

**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UWU Insert Seatings

## Mounting Instructions

L.H. cutting (R.H. cutting reflected image)

| Approach angle | Fig. 1 | Fig. 2 | Fig. 3 | Fig. 4 | Fig. 5 | Fig. 5a | Fig. 6 |
|---|---|---|---|---|---|---|---|
| $\varkappa$ = 90° |  |  |  |  |  |  |  |
| $\varkappa$ = 75° |  |  |  |  |  |  |  |
| $\varkappa$ = 60° |  |  |  |  |  |  |  |
| $\varkappa$ = 45° |  |  |  |  |  |  |  |
| $\varkappa$ = 30° |  |  |  |  |  |  |  |
| $\varkappa$ = 15° |  |  |  |  |  |  |  |

∅ D = required turning diameter

1. Mill cutting height ***Z*** to minimum width b, so that seating lies with diameter ***f*** as far as possible in the flute (Fig. 1).
2. Align machine spindle with central axis ***M-M***, take dimensions ***d*** and ***e*** from the table, based on insert radius ***R***, and calculate the distance ***g*** for centre point M1 ($g = \frac{D}{2} - d$). Move spindle by an amount ***g*** and allow for ***e***. The spindle is now at the centre point ***M1*** (Fig. 2).
3. Centre centrepoint ***M1*** and drill centre hole ***n*** to depth ***m*** (Fig. 3). Position machine spindle over ***n***.
4. Move to cutting height ***Z*** and countersink with ∅ ***f*** to depth ***h*** (Fig. 3).
5. Move with machine spindle (to coordinates ***p*** and ***q***) to clamping hole ***o***, centre and drill with ∅ ***o*** (Fig. 4).
6. Rotate workpiece 180°, locate bore ***o*** and counterbore ∅ ***r*** to dimension ***t*** (Fig. 4).
7. Move workpiece back 180°. Position seating, secure lightly, insert and check setting dimensions. Secure seating with clamping screw (Fig. 6).
8. Seating is now firmly mounted, remove insert and drill out both pin holes ***u*** to corner holes ***v*** and ream with ∅ ***w*** to depth ***y*** (Fig. 6 + 6a). Remove seating.
   **Note:** Attention should be paid with pin hole ***u*** and ***w*** as to whether the seating is used for internal or external machining (see table).
9. Press in the pins provided to a distance of ***x*** (Fig. 6a).
10. Turn, mill or grind off the excessive seating (Fig. 7). Deburr the tool an if necessary harden or temper.

**Note:**

The seating is hardened to approx. 52 HRc and has a tensile strengh of approx. 1800 N/mm². It is therefore highly suitable for machining with turning tool holders D007 and inserts. Carbide grade P25M at cutting speed of 45 m/min. and feed s ≈ 0.08 mm/rev.

## Mounting dimensions

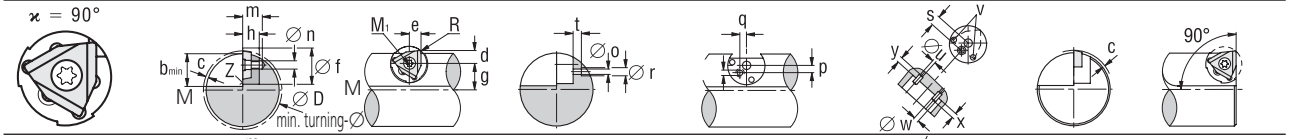
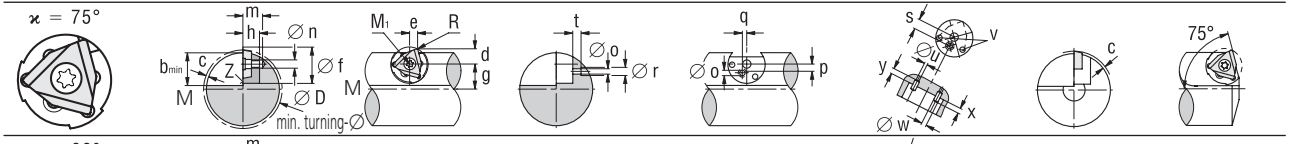
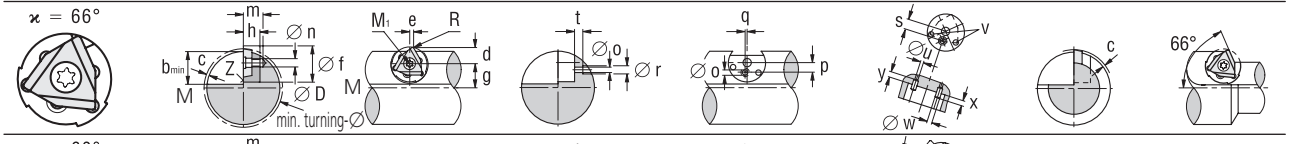
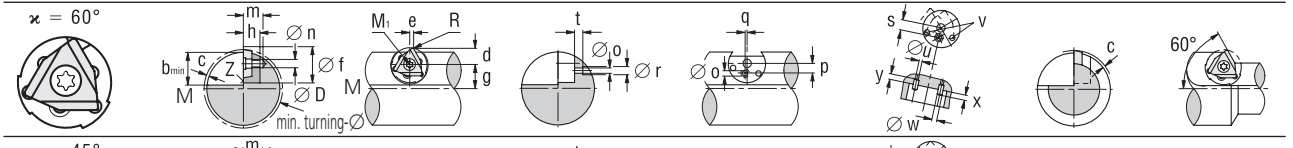
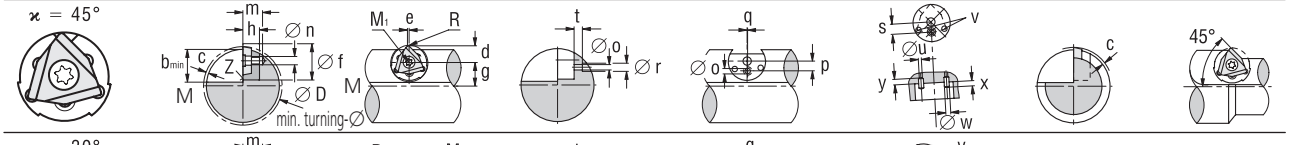
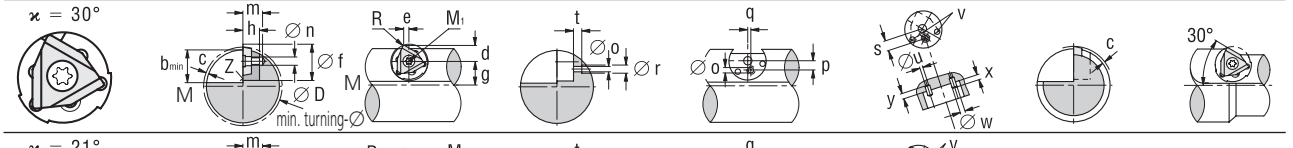
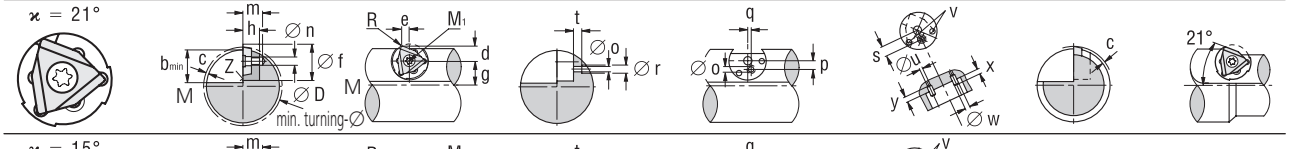
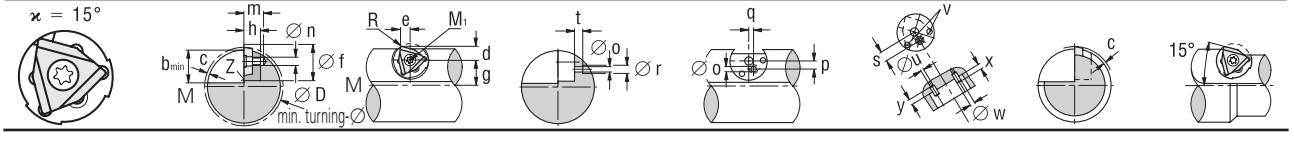
| Approach angle | | UWU 4 L/R | | UWU 5 L/R | | | UWU 6 L/R | | |
|---|---|---|---|---|---|---|---|---|---|
| | | for R0,4 | for R0,8 | for R0,4 | for R0,5 | for R0,8 | for R0,4 | for R0,5 | for R0,8 |
| ϰ = 90° | d | 4,56 | 4,26 | 6,81 | 6,73 | 6,51 | 10,71 | 10,41 | 10,12 |
|  | e | 2,8 | 2,8 | 4,1 | 4,1 | 4,1 | 6,35 | 6,35 | 6,35 |
| | p | 3,9 | 3,9 | 5,5 | 5,5 | 5,5 | 8,23 | 8,23 | 8,23 |
| | q | 2,25 | 2,25 | 3,18 | 3,18 | 3,18 | 4,75 | 4,75 | 4,75 |
| ϰ = 75° | d | 5,04 | 4,66 | 7,55 | 7,45 | 7,17 | 11,94 | 11,56 | 11,19 |
|  | e | 1,55 | 1,65 | 2,22 | 2,25 | 2,32 | 3,39 | 3,49 | 3,59 |
| | p | 4,35 | 4,35 | 6,13 | 6,13 | 6,13 | 9,18 | 9,18 | 9,18 |
| | q | 1,16 | 1,16 | 1,64 | 1,64 | 1,64 | 2,46 | 2,46 | 2,46 |
| ϰ = 60° | d | 5,2 | 4,8 | 7,8 | 7,7 | 7,4 | 12,3 | 11,9 | 11,5 |
|  | e | 0,23 | 0,46 | 0,23 | 0,29 | 0,46 | 0,23 | 0,46 | 0,69 |
| | p | 4,5 | 4,5 | 6,35 | 6,35 | 6,35 | 9,5 | 9,5 | 9,5 |
| | q | – | – | – | – | – | – | – | – |
| ϰ = 45° | d | 5,04 | 4,66 | 7,55 | 7,45 | 7,17 | 11,89 | 11,52 | 11,15 |
|  | e | 1,08 | 0,7 | 1,72 | 1,65 | 1,37 | 2,92 | 2,54 | 2,17 |
| | p | 4,35 | 4,35 | 6,13 | 6,13 | 6,13 | 9,18 | 9,18 | 9,18 |
| | q | 1,16 | 1,16 | 1,64 | 1,64 | 1,64 | 2,46 | 2,46 | 2,46 |
| ϰ = 30° | d | 4,56 | 4,26 | 6,81 | 6,73 | 6,51 | 10,71 | 10,41 | 10,12 |
|  | e | 2,29 | 1,79 | 3,59 | 3,47 | 3,09 | 5,84 | 5,34 | 4,83 |
| | p | 3,9 | 3,9 | 5,5 | 5,5 | 5,5 | 8,23 | 8,23 | 8,23 |
| | q | 2,25 | 2,25 | 3,18 | 3,18 | 3,18 | 4,75 | 4,75 | 4,75 |
| ϰ = 15° | d | 3,79 | 3,63 | 5,63 | 5,59 | 5,47 | 8,81 | 8,65 | 8,48 |
|  | e | 3,34 | 3,72 | 5,18 | 5,03 | 4,56 | 8,36 | 7,74 | 7,13 |
| | p | 3,18 | 3,18 | 4,49 | 4,49 | 4,49 | 6,72 | 6,72 | 6,72 |
| | q | 3,18 | 3,18 | 4,49 | 4,49 | 4,49 | 6,72 | 6,72 | 6,72 |

| Mounting dimensions for | | UWU 4 L/R | UWU 5 L/R | | UWU 6 L/R | |
|---|---|---|---|---|---|---|
| Seating | min. cutting-Ø | 24,0 | 40,0 | | 50,0 | |
| | b | 14,0 | 19,0 | | 28,0 | |
| | c | 0,5 | 0,5 | | 0,7 | |
| g = D/2 – d | $f^{H7}$ | 16,0 | 20,0 | | 30,0 | |
| | h | 5,5 | 6,5 | | 8,8 | |
| | n | 3,0 | 3,8 | | 5,5 | |
| | m | 7,0 | 11,3 | | 14,2 | |
| Location screw | o | 2,8 | 3,8 | | 5,3 | |
| | r | 4,5 | 5,5 | | 7,5 | |
| | s | 4,5 | 6,35 | | 9,5 | |
| | $t^{+0,1}$ | 2,5 | 3,9 | | 8,5 | |
| Pin | | | internal machining | external machining | internal machining | external machining |
| | u | 1,6 | 1,6 | 2,8 | 2,8 | 3,8 |
| | $v^{H7}$ | 2,0 | 3,0 | 3,0 | 4,0 | 4,0 |
| | $w^{H7}$ | 1,8 | 1,8 | 3,0 | 3,0 | 4,0 |
| | x | 2,0 | 2,5 | 2,5 | 2,5 | 2,5 |
| | y | 3,0 | 6,0 | 7,5 | 6,0 | 7,5 |

# KOMET Kometric® UWE Insert Seatings

## Mounting Instructions

L.H. cutting (R.H. cutting reflected image)

| Approach angle | Fig. 1 | Fig. 2 | Fig. 3 | Fig. 4 | Fig. 5 | Fig. 5a | Fig. 6 |
|---|---|---|---|---|---|---|---|
| $\varkappa$ = 90° |  | | | | | | |
| $\varkappa$ = 75° |  | | | | | | |
| $\varkappa$ = 66° |  | | | | | | |
| $\varkappa$ = 60° |  | | | | | | |
| $\varkappa$ = 45° |  | | | | | | |
| $\varkappa$ = 30° |  | | | | | | |
| $\varkappa$ = 21° |  | | | | | | |
| $\varkappa$ = 15° |  | | | | | | |

∅ D = required turning diameter

1. Mill cutting height ***Z*** to minimum width b, so that seating lies with diameter ***f*** as far as possible in the flute (Fig. 1).
2. Align machine spindle with central axis ***M-M***, take dimensions ***d*** and ***e*** from the table, based on insert radius ***R***, and calculate the distance ***g*** for centre point M1 ($g = \frac{D}{2} - d$). Move spindle by an amount ***g*** and allow for ***e***. The spindle is now at the centre point ***M1*** (Fig. 2).
3. Centre centrepoint ***M1*** and drill centre hole ***n*** to depth ***m*** (Fig. 3). Position machine spindle over ***n***.
4. Move to cutting height ***Z*** and countersink with ∅ ***f*** to depth ***h*** (Fig. 3).
5. Move with machine spindle (to coordinates ***p*** and ***q***) to clamping hole ***o***, centre and drill with ∅ ***o*** (Fig. 4).
6. Rotate workpiece 180°, locate bore ***o*** and counterbore ∅ ***r*** to dimension ***t*** (Fig. 4).
7. Move workpiece back 180°. Position seating, secure lightly, insert and check setting dimensions. Secure seating with clamping screw (Fig. 6).
8. Seating is now firmly mounted, remove insert and drill out both pin holes ***u*** to corner holes ***v*** and ream with ∅ ***w*** to depth ***y*** (Fig. 6 + 6a). Remove seating.
   **Note:** Attention should be paid with pin hole ***u*** and ***w*** as to whether the seating is used for internal or external machining (see table).
9. Press in the pins provided to a distance of ***x*** (Fig. 6a).
10. Turn, mill or grind off the excessive seating (Fig. 7). Deburr the tool an if necessary harden or temper.

**Note:**

The seating is hardened to approx. 52 HRc and has a tensile strengh of approx. 1800 N/mm². It is therefore highly suitable for machining with turning tool holders D007 and inserts. Carbide grade P25M at cutting speed of 45 m/min. and feed s ≈ 0.08 mm/rev.

## Mounting dimensions

| Approach angle | | UWU 02..L/R | | | | UWU 01..L/R | | | UWU 1..L/R | | | | UWU 2..L/R | | | | UWU 3..L/R | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | for R0,2 | for R0,4 | for R0,8 | for R1,2 | for R0,2 | for R0,4 | for R0,8 | for R0,2 | for R0,4 | for R0,8 | for R1,2 | for R0,4 | for R0,8 | for R1,2 | for R1,6 | for R0,6 | for R0,8 | for R1,2 | for R1,6 |
| ϰ = 90° | d | 4,42 | 4,34 | 4,35 | 4,31 | 5,53 | 5,51 | 5,47 | 6,64 | 6,62 | 6,58 | | 8,29 | 8,25 | 8,2 | | 9,71 | 9,69 | 9,65 | 9,61 |
|  | e | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | | 7,5 | 7,5 | 7,5 | | 8,8 | 8,8 | 8,8 | 8,8 |
| | p | 2,39 | 2,39 | 2,39 | 2,39 | 2,97 | 2,97 | 2,97 | 3,72 | 3,72 | 3,72 | | 4,09 | 4,09 | 4,09 | | 5,05 | 5,05 | 5,05 | 5,05 |
| | q | 2,14 | 2,14 | 2,14 | 2,14 | 2,68 | 2,68 | 2,68 | 3,35 | 3,35 | 3,35 | | 3,68 | 3,68 | 3,68 | | 4,55 | 4,55 | 4,55 | 4,55 |
| ϰ = 75° | d | 5,26 | 5,19 | 5,06 | 4,93 | 6,59 | 6,53 | 6,39 | 7,92 | 7,87 | 7,72 | 7,59 | 9,86 | 9,72 | 9,59 | 9,46 | 11,52 | 11,46 | 11,33 | 11,2 |
|  | e | 2,73 | 2,75 | 2,79 | 2,82 | 3,41 | 3,43 | 3,46 | 4,09 | 4,11 | 4,14 | 4,18 | 5,13 | 5,16 | 5,2 | 5,23 | 6,02 | 6,04 | 6,08 | 6,11 |
| | p | 2,85 | 2,85 | 2,85 | 2,85 | 3,56 | 3,56 | 3,56 | 4,46 | 4,46 | 4,46 | 4,46 | 4,9 | 4,9 | 4,9 | 4,9 | 6,06 | 6,06 | 6,06 | 6,06 |
| | q | 1,45 | 1,45 | 1,45 | 1,45 | 1,82 | 1,82 | 1,82 | 2,27 | 2,27 | 2,27 | 2,27 | 2,49 | 2,49 | 2,49 | 2,49 | 3,09 | 3,09 | 3,09 | 3,09 |
| ϰ = 66° | d | 4,42 | 4,4 | 4,35 | 4,31 | 5,53 | 5,51 | 5,46 | 6,64 | 6,62 | 6,58 | | 8,29 | 8,24 | 8,2 | | 9,71 | 9,68 | 9,64 | 9,6 |
|  | e | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | | 7,5 | 7,5 | 7,5 | | 8,8 | 8,8 | 8,8 | 8,8 |
| | p | 3,04 | 3,04 | 3,04 | 3,04 | 3,8 | 3,8 | 3,8 | 4,76 | 4,76 | 4,76 | | 5,23 | 5,23 | 5,23 | | 6,47 | 6,47 | 6,47 | 6,47 |
| | q | 0,99 | 0,99 | 0,99 | 0,99 | 1,24 | 1,24 | 1,24 | 1,55 | 1,55 | 1,55 | | 1,7 | 1,7 | 1,7 | | 2,1 | 2,1 | 2,1 | 2,1 |
| ϰ = 60° | d | 5,76 | 5,66 | 5,48 | 5,29 | 7,22 | 7,12 | 6,94 | 8,68 | 8,58 | 8,4 | 8,22 | 10,78 | 10,6 | 10,42 | 10,33 | 12,59 | 12,49 | 12,31 | 12,12 |
|  | e | 1,3 | 1,35 | 1,46 | 1,56 | 1,6 | 1,66 | 1,76 | 1,92 | 1,98 | 2,08 | 2,19 | 2,44 | 2,55 | 2,65 | 2,77 | 2,89 | 2,95 | 3,05 | 3,17 |
| | p | 3,13 | 3,13 | 3,13 | 3,13 | 3,91 | 3,91 | 3,91 | 4,89 | 4,89 | 4,89 | 4,89 | 5,38 | 5,38 | 5,38 | 5,38 | 6,65 | 6,65 | 6,65 | 6,65 |
| | q | 0,66 | 0,66 | 0,66 | 0,66 | 0,83 | 0,83 | 0,83 | 1,04 | 1,04 | 1,04 | 1,04 | 1,14 | 1,14 | 1,14 | 1,14 | 1,41 | 1,41 | 1,41 | 1,41 |
| ϰ = 45° | d | 5,87 | 5,77 | 5,58 | 5,38 | 7,36 | 7,26 | 7,07 | 8,86 | 8,76 | 8,57 | 8,37 | 10,99 | 10,8 | 10,6 | 10,41 | 12,84 | 12,74 | 12,54 | 12,35 |
|  | e | 0,21 | 0,12 | 0,08 | –0,28 | 0,29 | 0,19 | 0 | 0,37 | 0,27 | 0,08 | –0,12 | 0,39 | 0,2 | 0 | –0,19 | 0,4 | 0,3 | 0,1 | –0,09 |
| | p | 3,2 | 3,2 | 3,2 | 3,2 | 3,99 | 3,99 | 3,99 | 4,99 | 4,99 | 4,99 | 4,99 | 5,49 | 5,49 | 5,49 | 5,49 | 6,79 | 6,79 | 6,79 | 6,79 |
| | q | 0,17 | 0,17 | 0,17 | 0,17 | 0,21 | 0,21 | 0,21 | 0,26 | 0,26 | 0,26 | 0,26 | 0,29 | 0,29 | 0,29 | 0,29 | 0,36 | 0,36 | 0,36 | 0,36 |
| ϰ = 30° | d | 5,6 | 5,52 | 5,35 | 5,18 | 7,02 | 6,93 | 6,76 | 8,45 | 8,36 | 8,19 | 8,03 | 10,49 | 10,32 | 10,15 | 9,99 | 12,25 | 12,16 | 12 | 11,82 |
|  | e | 1,7 | 1,56 | 1,26 | 0,97 | 2,16 | 2,02 | 1,73 | 2,62 | 2,48 | 2,19 | 1,9 | 3,17 | 2,88 | 2,59 | 2,3 | 3,63 | 3,48 | 3,19 | 2,9 |
| | p | 3,04 | 3,04 | 3,04 | 3,04 | 3,8 | 3,8 | 3,8 | 4,76 | 4,76 | 4,76 | 4,76 | 5,23 | 5,23 | 5,23 | 5,23 | 6,47 | 6,47 | 6,47 | 6,47 |
| | q | 0,99 | 0,99 | 0,99 | 0,99 | 1,24 | 1,24 | 1,24 | 1,55 | 1,55 | 1,55 | 1,55 | 1,7 | 1,7 | 1,7 | 1,7 | 2,1 | 2,1 | 2,1 | 2,1 |
| ϰ = 21° | d | 5,26 | 5,19 | 5,06 | 4,93 | 6,59 | 6,53 | 6,39 | 7,92 | 7,86 | 7,72 | | 9,85 | 9,72 | 9,59 | | 11,52 | 11,45 | 11,32 | 11,19 |
|  | e | 2,54 | 2,37 | 2,02 | 1,68 | 3,22 | 3,05 | 2,7 | 3,9 | 3,73 | 3,38 | | 4,74 | 4,4 | 4,05 | | 5,45 | 5,28 | 4,93 | 4,59 |
| | p | 2,85 | 2,85 | 2,85 | 2,85 | 3,56 | 3,56 | 3,56 | 4,46 | 4,46 | 4,46 | | 4,9 | 4,9 | 4,9 | | 6,06 | 6,06 | 6,06 | 6,06 |
| | q | 1,45 | 1,45 | 1,45 | 1,45 | 1,82 | 1,82 | 1,82 | 2,27 | 2,27 | 2,27 | | 2,5 | 2,5 | 2,5 | | 3,09 | 3,09 | 3,09 | 3,09 |
| ϰ = 15° | d | 4,96 | 4,91 | 4,81 | 4,71 | 6,22 | 6,17 | 6,06 | 7,47 | 7,42 | 7,32 | | 9,3 | 9,2 | 9,1 | | 10,88 | 10,83 | 10,73 | 10,62 |
|  | e | 3,07 | 2,88 | 2,5 | 2,12 | 3,88 | 3,69 | 3,31 | 4,69 | 4,51 | 4,13 | | 5,73 | 5,35 | 4,97 | | 6,6 | 6,41 | 6,03 | 5,65 |
| | p | 2,68 | 2,68 | 2,68 | 2,68 | 3,35 | 3,35 | 3,35 | 4,19 | 4,19 | 4,19 | | 4,61 | 4,61 | 4,61 | | 5,7 | 5,7 | 5,7 | 5,7 |
| | q | 1,74 | 1,74 | 1,74 | 1,74 | 2,18 | 2,18 | 2,18 | 2,72 | 2,72 | 2,72 | | 3 | 3 | 3 | | 3,7 | 3,7 | 3,7 | 3,7 |

| Mounting dimensions for | | UWU 02..L/R | UWU 01..L/R | UWU 1..L/R | | UWU 2..L/R | | UWU 3..L/R | |
|---|---|---|---|---|---|---|---|---|---|
| Seating | min. cutt.-Ø | 32 | 34 | 40 | | 50 | | 54 | |
| | b | 13 | 16 | 19 | | 24 | | 28 | |
| ϰ = 90°, 75°, 60°, 45°, 30°, 15° | c | 0,5 | 0,5 | 0,6 | | 0,7 | | 0,8 | |
| g = D/2 – d | $f^{H7}$ | 14 | 16 | 20 | | 25 | | 30 | |
| ϰ = 66°, 21° | h | 6 | 6,5 | 8,3 | | 8,8 | | 10,5 | |
| g = D/2 + d | n | 2,7 | 3,8 | 4,8 | | 4,8 | | 5,8 | |
| | m | 8,5 | 7 | 11,3 | | 11,3 | | 16 | |
| Location screw | o | 2,7 | 3,8 | 4,8 | | 4,8 | | 5,8 | |
| | r | 4 | 5,5 | 6,5 | | 6,5 | | 7,5 | |
| | s | 3,2 | 4 | 5 | | 5,5 | | 6,8 | |
| | $t^{+0,1}$ | 3,9 | 2,5 | 5,7 | | 5,7 | | 9,2 | |
| Pin | | | | internal machining | external machining | internal machining | external machining | internal machining | external machining |
| | u | 1,6 | 1,6 | 2,8 | 3,8 | 2,8 | 3,8 | 3,8 | 4,8 |
| | $v^{H7}$ | 2 | 2 | 4 | 4 | 4 | 4 | 5 | 5 |
| | $w^{H7}$ | 1,8 | 1,8 | 3 | 4 | 3 | 4 | 4 | 5 |
| | x | 2 | 2 | 2,5 | 2,5 | 2,5 | 2,5 | 5 | 5 |
| | y | 3 | 3 | 6 | 7,5 | 6 | 7,5 | 8 | 8 |

# KOMET Kometric® UZV Boring Tool

## Mounting Instructions

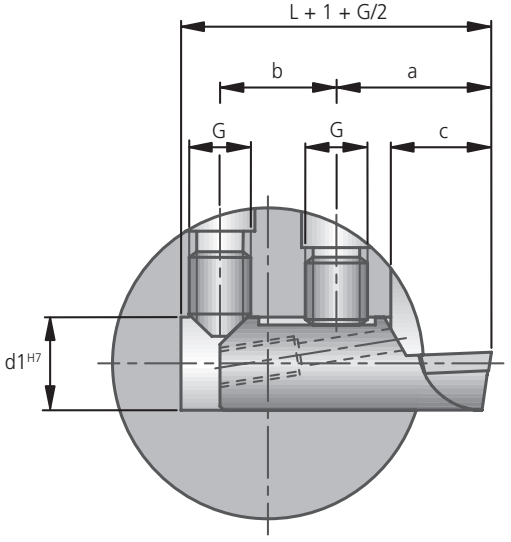
Mounting depends on the insert position required. The right dimensions for the mounting bore and holding thread for each boring bar Ø can be taken from the details on the drawings and tables.

## Mounting dimensions

| Boring tool size | d1 | a | b | G | c |
|---|---|---|---|---|---|
| UZV 8 | 8 | 15 | 10 | M6 | 9 |
| UZV 10 | 10 | 18 | 12 | M6 | 12 |
| UZV 12 | 12 | 20 | 15 | M8 | 13 |
| UZV 16 | 16 | 27 | 18 | M10 | 18 |
| UZV 20 | 20 | 30 | 20 | M12 | 20 |

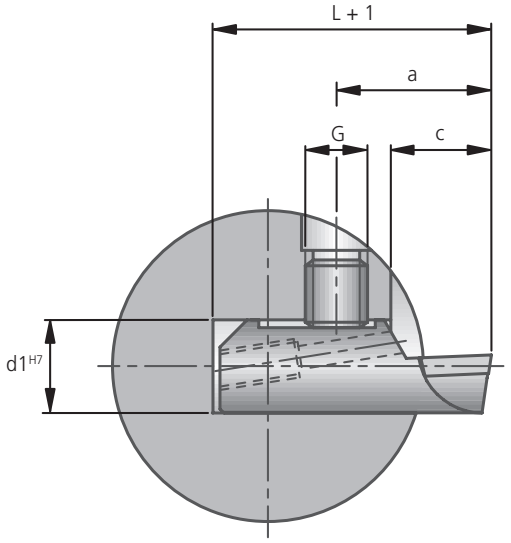
## Mounting form A

Angled adjustment with threaded pin DIN 914




## Mounting form B

Adjustment with internal adjusting screw

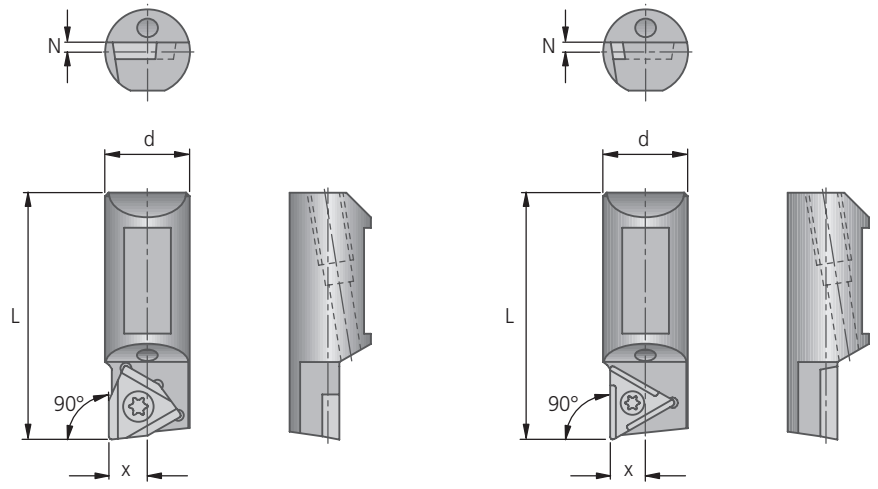


# KOMET Kometric® UZV Boring Tool $\varkappa = 90°$

## for insert W01 / W29 and W30 / W57

P M K N S H

L.H. boring tool as shown with left or neutral insert ■
R.H. boring tool in mirror image with right or neutral insert ■
mounting instruction see page 570 ■




| Article<br>cutting form ▼ | Order No. | d | L | N | x | kg | Insert<br>W30 L.H.<br>radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert<br>W30 R.H.<br>radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert<br>W57 neutral | Assembly parts<br>Clamping screw<br>Order No.<br>Article | Accessories<br>Screwdriver<br>Order No.<br>Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV8-803-25-90°-L | D20 00000 | 8 | 25 | 1,0 | 3 | 0,007 | W30 04..0.03.. | | W57 04140.04.. | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP |
| UZV8-803-25-90°-R | D20 05000 | | | | | | | W30 04..0.03.. | | | |
| UZV10-804-30-90°-L | D20 00020 | 10 | 30 | 1,5 | 4 | 0,013 | W30 14..0.04.. | | W57 14140.04.. | N00 56111<br>S/M2,6×6,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZV10-804-30-90°-R | D20 05020 | | | | | | | W30 14..0.04.. | | | |
| UZV12-804-35-90°-L | D20 00040 | 12 | 35 | 1,5 | 5 | 0,022 | W30 14..0.04.. | | W57 14140.04.. | N00 56111<br>S/M2,6×6,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZV12-804-35-90°-R | D20 05040 | | | | | | | W30 14..0.04.. | | | |
| UZV16-805-45-90°-L | D20 00060 | 16 | 45 | 3,0 | 6 | 0,052 | W30 26..0.05.. | | W57 26140.04.. | N00 56211<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |
| UZV16-805-45-90°-R | D20 05060 | | | | | | | W30 26..0.05.. | | | |

| Article<br>cutting form ▼ | Order No. | d | L | N | x | kg | Insert<br>W01 L.H.<br>radial rake 06 = 6° 12 = 12° ▽▽ | Insert<br>W01 R.H.<br>radial rake 36 = 6° 42 = 12° ▽▽ | Insert<br>W29 neutral<br>00 = PD 01 = K ▽▽ | Assembly parts<br>Clamping screw<br>Order No.<br>Article | Accessories<br>Screwdriver<br>Order No.<br>Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV10-818-30-90°-L31 | D20 50020 | 10 | 30 | 1,5 | 4 | 0,013 | W01 18.... | | W29 18.... | N00 57553<br>S/M2,2×5,5-6IP<br>1,01 Nm | L05 00810<br>6IP |
| UZV10-818-30-90°-R31 | D20 55020 | | | | | | | W01 18.... | | | |
| UZV12-802-35-90°-L38 | D20 00071 | 12 | 35 | 1,5 | 5 | 0,022 | W01 24.... | | W29 24.... | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZV12-802-35-90°-R38 | D20 05071 | | | | | | | W01 24.... | | | |
| UZV16-802-45-90°-L38 | D20 50090 | 16 | 45 | 3,0 | 6 | 0,052 | W01 24.... | | W29 24.... | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZV16-802-45-90°-R38 | D20 55090 | | | | | | | W01 24.... | | | |
| UZV16-801-45-90°-L38 | D20 00091 | 16 | 45 | 3,0 | 6 | 0,052 | W01 34.... | | W29 34.... | N00 57521<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |
| UZV16-801-45-90°-R38 | D20 05091 | | | | | | | W01 34.... | | | |

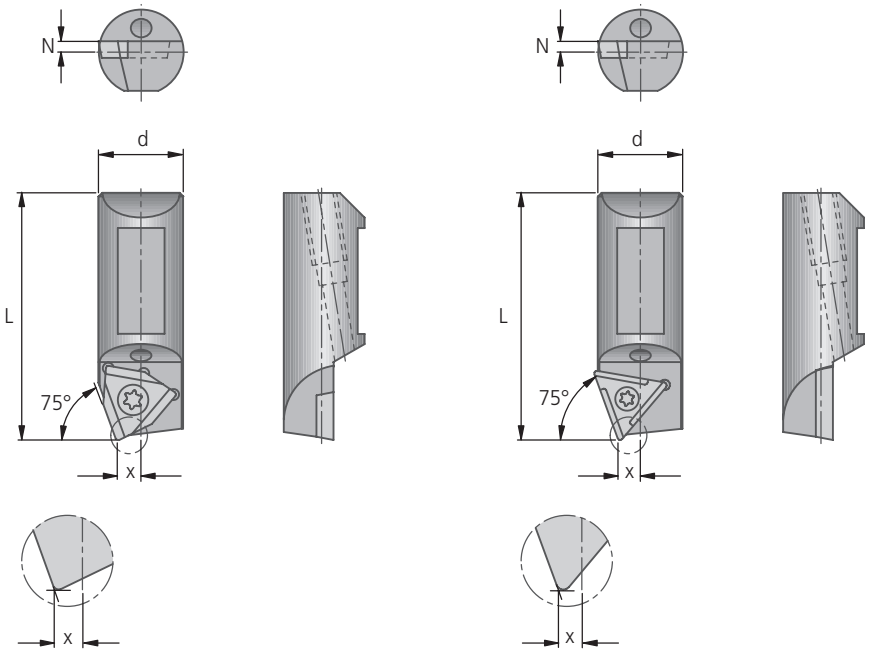
For further details on inserts see chapter 7

**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZV Boring Tool $\varkappa = 75°$

P M K N S H for insert W01 / W29 and W30 / W57

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting instruction see page 570




| Article cutting form ▼ | Order No. | d | L | N | x | kg | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV8-803-25-75°-L | D20 00100 | 8 | 25 | 1,0 | 2 | 0,007 | W30 04..0.03.. | | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP |
| UZV8-803-25-75°-R | D20 05100 | | | | | | | W30 04..0.03.. | | | |
| UZV10-804-30-75°-L | D20 00120 | 10 | 30 | 1,5 | 2,5 | 0,013 | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV10-804-30-75°-R | D20 05120 | | | | | | | W30 14..0.04.. | | | |
| UZV12-804-35-75°-L | D20 00140 | 12 | 35 | 1,5 | 4 | 0,022 | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV12-804-35-75°-R | D20 05140 | | | | | | | W30 14..0.04.. | | | |
| UZV16-805-45-75°-L | D20 00160 | 16 | 45 | 3,0 | 4 | 0,052 | W30 26..0.05.. | | W57 26140.04.. | N00 56211 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UZV16-805-45-75°-R | D20 05160 | | | | | | | W30 26..0.05.. | | | |

| Article cutting form ▼ | Order No. | d | L | N | x | kg | Insert W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽ | Insert W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽ | Insert W29 neutral 00 = PD 01 = K ▽▽ | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV10-818-30-75°-L31 | D20 50120 | 10 | 30 | 1,5 | 2,5 | 0,013 | W01 18.... | | W29 18.... | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP |
| UZV10-818-30-75°-R31 | D20 55120 | | | | | | | W01 18.... | | | |
| UZV12-802-35-75°-L38 | D20 00171 | 12 | 35 | 1,5 | 4 | 0,022 | W01 24.... | | W29 24.... | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV12-802-35-75°-R38 | D20 05171 | | | | | | | W01 24.... | | | |
| UZV16-802-45-75°-L38 | D20 50190 | 16 | 45 | 3,0 | 4 | 0,052 | W01 24.... | | W29 24.... | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV16-802-45-75°-R38 | D20 55190 | | | | | | | W01 24.... | | | |
| UZV16-801-45-75°-L38 | D20 00191 | 16 | 45 | 3,0 | 4 | 0,052 | W01 34.... | | W29 34.... | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UZV16-801-45-75°-R38 | D20 05191 | | | | | | | W01 34.... | | | |

For further details on inserts see chapter 7

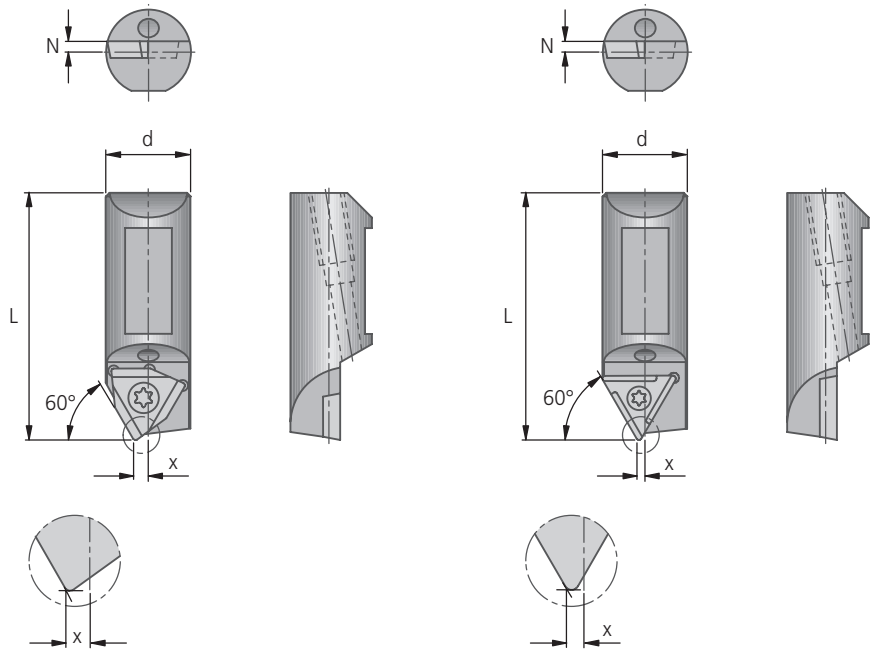
**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZV Boring Tool $\varkappa = 60°$

## for insert W01 / W29 and W30 / W57

P M K N S H

L.H. boring tool as shown with left or neutral insert ■
R.H. boring tool in mirror image with right or neutral insert ■
mounting instruction see page 570 ■




| Article cutting form ▼ | Order No. | d | L | N | x | kg | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV8-803-25-60°-L | D20 00200 | 8 | 25 | 1,0 | 0,6 | 0,007 | W30 04..0.03.. | | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP |
| UZV8-803-25-60°-R | D20 05200 | | | | | | | W30 04..0.03.. | | | |
| UZV10-804-30-60°-L | D20 00220 | 10 | 30 | 1,5 | 0,6 | 0,013 | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV10-804-30-60°-R | D20 05220 | | | | | | | W30 14..0.04.. | | | |
| UZV12-804-35-60°-L | D20 00240 | 12 | 35 | 1,5 | 1 | 0,022 | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV12-804-35-60°-R | D20 05240 | | | | | | | W30 14..0.04.. | | | |
| UZV16-805-45-60°-R | D20 05260 | 16 | 45 | 3,0 | 1 | 0,052 | | W30 26..0.05.. | W57 26140.04.. | N00 56211 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |

| Article cutting form ▼ | Order No. | d | L | N | x | kg | Insert W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽ | Insert W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽ | Insert W29 neutral 00 = PD 01 = K ▽▽ | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV10-818-30-60°-L31 | D20 50220 | 10 | 30 | 1,5 | 0,5 | 0,013 | W01 18.... | | W29 18.... | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP |
| UZV10-818-30-60°-R31 | D20 55220 | | | | | | | W01 18.... | | | |
| UZV12-802-35-60°-L38 | D20 00271 | 12 | 35 | 1,5 | 1 | 0,022 | W01 24.... | | W29 24.... | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV12-802-35-60°-R38 | D20 05271 | | | | | | | W01 24.... | | | |
| UZV16-802-45-60°-L38 | D20 50290 | 16 | 45 | 3,0 | 1 | 0,052 | W01 24.... | | W29 24.... | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV16-802-45-60°-R38 | D20 55290 | | | | | | | W01 24.... | | | |
| UZV16-801-45-60°-L38 | D20 00291 | 16 | 45 | 3,0 | 1 | 0,052 | W01 34.... | | W29 34.... | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UZV16-801-45-60°-R38 | D20 05291 | | | | | | | W01 34.... | | | |

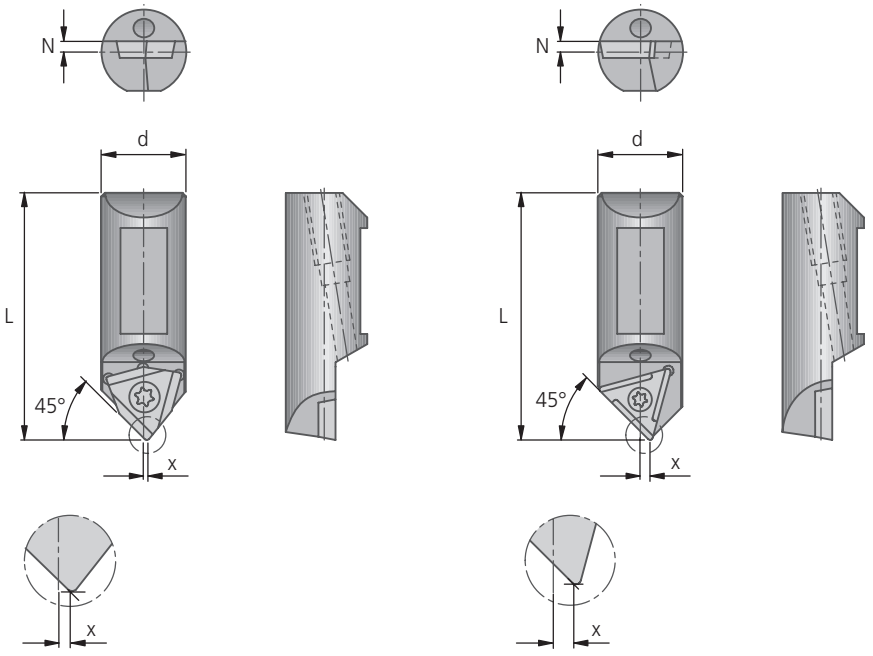
For further details on inserts see chapter 7

**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZV Boring Tool $\varkappa = 45°$

P M K N S H for insert W01 / W29 and W30 / W57

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting instruction see page 570




| Article cutting form | Order No. | d | L | N | x | kg | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV8-803-25-45°-L | D20 00400 | 8 | 25 | 1,0 | 1 | 0,007 | W30 04..0.03.. | | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP |
| UZV8-803-25-45°-R | D20 05400 | | | | | | | W30 04..0.03.. | | | |
| UZV10-804-30-45°-L | D20 00420 | 10 | 30 | 1,5 | 1,3 | 0,013 | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV10-804-30-45°-R | D20 05420 | | | | | | | W30 14..0.04.. | | | |
| UZV12-804-35-45°-L | D20 00440 | 12 | 35 | 1,5 | 1 | 0,022 | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV12-804-35-45°-R | D20 05440 | | | | | | | W30 14..0.04.. | | | |
| UZV16-805-45-45°-L | D20 00460 | 16 | 45 | 3,0 | 1,5 | 0,052 | W30 26..0.05.. | | W57 26140.04.. | N00 56211 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UZV16-805-45-45°-R | D20 05460 | | | | | | | W30 26..0.05.. | | | |

| Article cutting form | Order No. | d | L | N | x | kg | Insert W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽ | Insert W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽ | Insert W29 neutral 00 = PD 01 = K ▽▽ | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV10-818-30-45°-L31 | D20 50420 | 10 | 30 | 1,5 | 1,3 | 0,013 | W01 18.... | | W29 18.... | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP |
| UZV10-818-30-45°-R31 | D20 55420 | | | | | | | W01 18.... | | | |
| UZV12-802-35-45°-L38 | D20 00471 | 12 | 35 | 1,5 | 1 | 0,022 | W01 24.... | | W29 24.... | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV12-802-35-45°-R38 | D20 05471 | | | | | | | W01 24.... | | | |
| UZV16-802-45-45°-L38 | D20 50490 | 16 | 45 | 3,0 | 1,5 | 0,052 | W01 24.... | | W29 24.... | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV16-802-45-45°-R38 | D20 55490 | | | | | | | W01 24.... | | | |
| UZV16-801-45-45°-L38 | D20 00491 | 16 | 45 | 3,0 | 1,5 | 0,052 | W01 34.... | | W29 34.... | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UZV16-801-45-45°-R38 | D20 05491 | | | | | | | W01 34.... | | | |

For further details on inserts see chapter 7

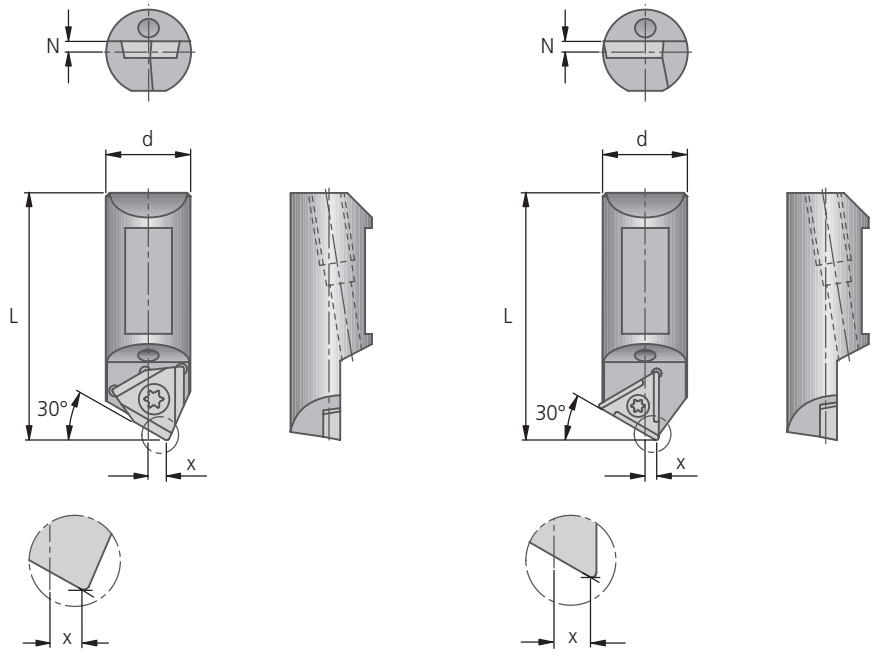
**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZV Boring Tool $\varkappa = 30°$

## for insert W01 / W29 and W30 / W57

P M K N S H

L.H. boring tool as shown with left or neutral insert ■
R.H. boring tool in mirror image with right or neutral insert ■
mounting instruction see page 570 ■




| Article<br>cutting form ▼ | Order No. | d | L | N | x | kg | Insert<br>W30 L.H.<br>radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert<br>W30 R.H.<br>radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert<br>W57 neutral | Assembly parts<br>Clamping screw<br>Order No.<br>Article | Accessories<br>Screwdriver<br>Order No.<br>Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV8-803-25-30°-L | D20 00500 | 8 | 25 | 1,0 | 2,5 | 0,007 | W30 04..0.03.. | | W57 04140.04.. | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP |
| UZV8-803-25-30°-R | D20 05500 | | | | | | | W30 04..0.03.. | | | |
| UZV10-804-30-30°-L | D20 00520 | 10 | 30 | 1,5 | 3 | 0,013 | W30 14..0.04.. | | W57 14140.04.. | N00 56111<br>S/M2,6×6,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZV10-804-30-30°-R | D20 05520 | | | | | | | W30 14..0.04.. | | | |
| UZV12-804-35-30°-L | D20 00540 | 12 | 35 | 1,5 | 3 | 0,022 | W30 14..0.04.. | | W57 14140.04.. | N00 56111<br>S/M2,6×6,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZV12-804-35-30°-R | D20 05540 | | | | | | | W30 14..0.04.. | | | |
| UZV16-805-45-30°-L | D20 00560 | 16 | 45 | 3,0 | 3,5 | 0,052 | W30 26..0.05.. | | W57 26140.04.. | N00 56211<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |
| UZV16-805-45-30°-R | D20 05560 | | | | | | | W30 26..0.05.. | | | |

| Article<br>cutting form ▼ | Order No. | d | L | N | x | kg | Insert<br>W01 L.H.<br>radial rake 06 = 6° 12 = 12° ▽▽ | Insert<br>W01 R.H.<br>radial rake 36 = 6° 42 = 12° ▽▽ | Insert<br>W29 neutral<br>00 = PD 01 = K ▽▽ | Assembly parts<br>Clamping screw<br>Order No.<br>Article | Accessories<br>Screwdriver<br>Order No.<br>Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV10-818-30-30°-L31 | D20 50520 | 10 | 30 | 1,5 | 3 | 0,013 | W01 18.... | | W29 18.... | N00 57553<br>S/M2,2×5,5-6IP<br>1,01 Nm | L05 00810<br>6IP |
| UZV10-818-30-30°-R31 | D20 55520 | | | | | | | W01 18.... | | | |
| UZV12-802-35-30°-L38 | D20 00571 | 12 | 35 | 1,5 | 3 | 0,022 | W01 24.... | | W29 24.... | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZV12-802-35-30°-R38 | D20 05571 | | | | | | | W01 24.... | | | |
| UZV16-802-45-30°-L38 | D20 50590 | 16 | 45 | 3,0 | 3,5 | 0,052 | W01 24.... | | W29 24.... | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZV16-802-45-30°-R38 | D20 55590 | | | | | | | W01 24.... | | | |
| UZV16-801-45-30°-L38 | D20 00591 | 16 | 45 | 3,0 | 3,5 | 0,052 | W01 34.... | | W29 34.... | N00 57521<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |
| UZV16-801-45-30°-R38 | D20 05591 | | | | | | | W01 34.... | | | |

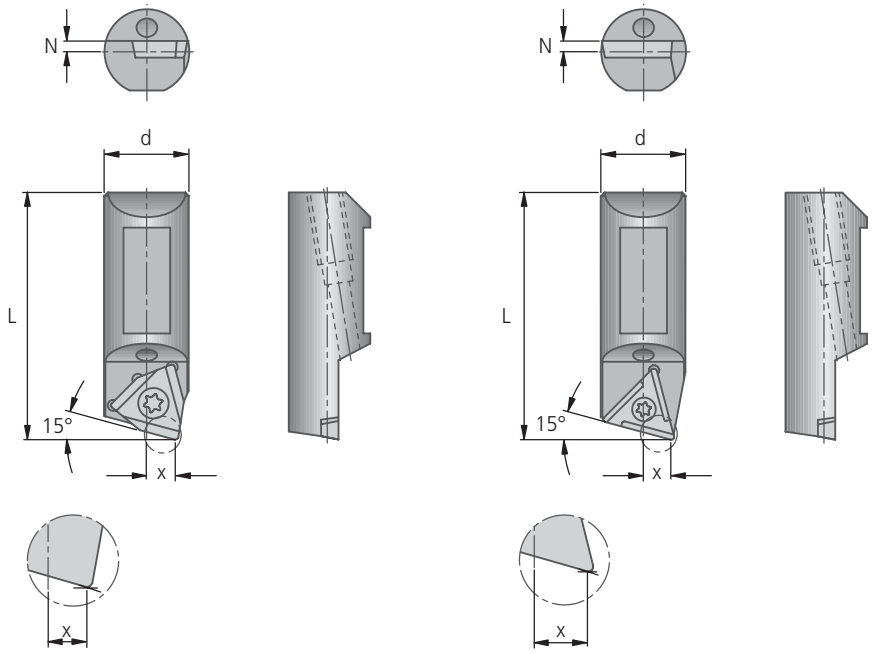
For further details on inserts see chapter 7

**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZV Boring Tool $\varkappa = 15°$

P M K N S H for insert W01 / W29 and W30 / W57

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting instruction see page 570




| Article cutting form ▼ | Order No. | d | L | N | x | kg | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV8-803-25-15°-R | D20 05600 | 8 | 25 | 1,0 | 3 | 0,007 | | W30 04..0.03.. | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP |
| UZV10-804-30-15°-L | D20 00620 | 10 | 30 | 1,5 | 4 | 0,013 | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV10-804-30-15°-R | D20 05620 | | | | | | | W30 14..0.04.. | | | |
| UZV12-804-35-15°-L | D20 00640 | 12 | 35 | 1,5 | 3,5 | 0,022 | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV12-804-35-15°-R | D20 05640 | | | | | | | W30 14..0.04.. | | | |
| UZV16-805-45-15°-L | D20 00660 | 16 | 45 | 3,0 | 5 | 0,052 | W30 26..0.05.. | | W57 26140.04.. | N00 56211 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UZV16-805-45-15°-R | D20 05660 | | | | | | | W30 26..0.05.. | | | |

| Article cutting form ▼ | Order No. | d | L | N | x | kg | Insert W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽ | Insert W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽ | Insert W29 neutral 00 = PD 01 = K ▽▽ | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV10-818-30-15°-L31 | D20 50620 | 10 | 30 | 1,5 | 4 | 0,013 | W01 18.... | | W29 18.... | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP |
| UZV10-818-30-15°-R31 | D20 55620 | | | | | | | W01 18.... | | | |
| UZV12-802-35-15°-L38 | D20 00671 | 12 | 35 | 1,5 | 3,5 | 0,022 | W01 24.... | | W29 24.... | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV12-802-35-15°-R38 | D20 05671 | | | | | | | W01 24.... | | | |
| UZV16-802-45-15°-L38 | D20 50690 | 16 | 45 | 3,0 | 5 | 0,052 | W01 24.... | | W29 24.... | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV16-802-45-15°-R38 | D20 55690 | | | | | | | W01 24.... | | | |
| UZV16-801-45-15°-L38 | D20 00691 | 16 | 45 | 3,0 | 5 | 0,052 | W01 34.... | | W29 34.... | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UZV16-801-45-15°-R38 | D20 05691 | | | | | | | W01 34.... | | | |

For further details on inserts see chapter 7

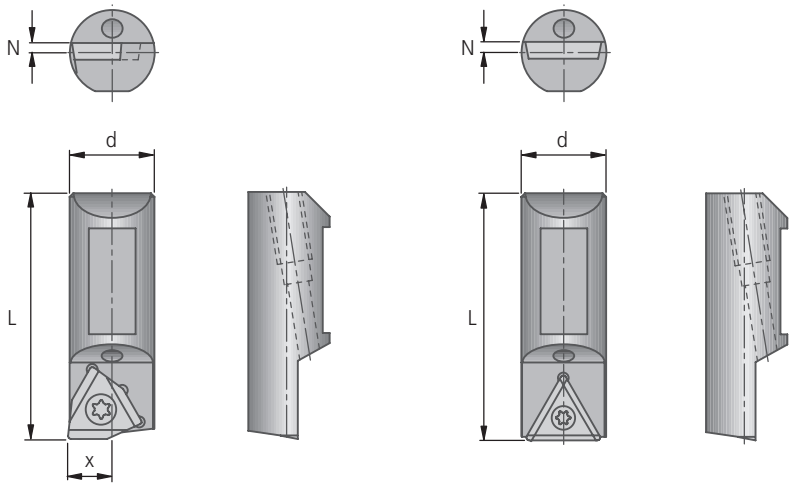
**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZV Boring Tool $\varkappa = 0°$

## for insert W01 / W29 and W30 / W57

P M K N S H

L.H. boring tool as shown with right or neutral insert ■
R.H. boring tool in mirror image with left or neutral insert ■
mounting instruction see page 570 ■




| Article | Order No. | d | L | N | kg | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|
| UZV8-803-25-0° | D20 05700 | 8 | 25 | 1,0 | 0,007 | W30 04..0.03.. | W30 04..0.03.. | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP |
| UZV10-804-30-0° | D20 05720 | 10 | 30 | 1,5 | 0,013 | W30 14..0.04.. | W30 14..0.04.. | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV12-804-35-0° | D20 05740 | 12 | 35 | 1,5 | 0,022 | W30 14..0.04.. | W30 14..0.04.. | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV16-805-45-0° | D20 05760 | 16 | 45 | 3,0 | 0,052 | W30 26..0.05.. | W30 26..0.05.. | W57 26140.04.. | N00 56211 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UZV20-806-50-0° | D20 05800 | 20 | 50 | 4,0 | 0,98 | W30 44..0.08.. | W30 44..0.08.. | | N00 56411 S/M5×13,4-20IP 6,25 Nm | L05 00870 20IP |

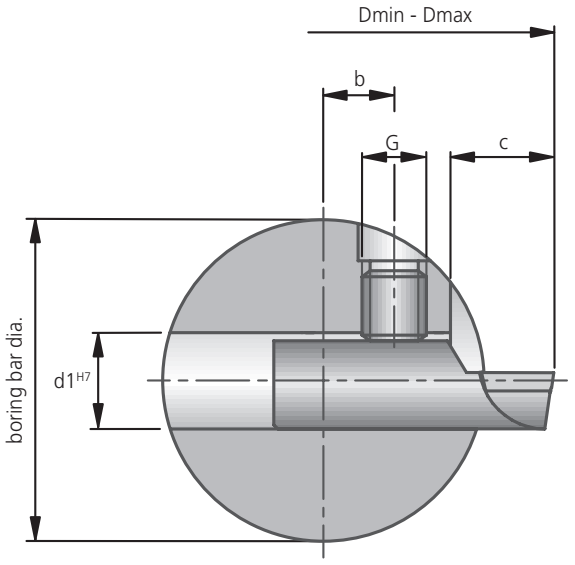
| Article cutting form ▼ | Order No. | d | L | N | x | kg | Insert W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽ | Insert W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽ | Insert W29 neutral 00 = PD 01 = K ▽▽ | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZV10-818-30-0°-L31 | D20 50720 | 10 | 30 | 1,5 | 5,3 | 0,013 | | W01 18.... | W29 18.... | N00 57553 S/M2,2×5,5-6IP 1,01 Nm | L05 00810 6IP |
| UZV10-818-30-0°-R31 | D20 55720 | | | | | | W01 18.... | | | | |
| UZV12-802-35-0°-L38 | D20 00771 | 12 | 35 | 1,5 | 6,3 | 0,022 | | W01 24.... | W29 24.... | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV12-802-35-0°-R38 | D20 05771 | | | | | | W01 24.... | | | | |
| UZV16-802-45-0°-L38 | D20 50790 | 16 | 45 | 3,0 | 8,3 | 0,052 | | W01 24.... | W29 24.... | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP |
| UZV16-802-45-0°-R38 | D20 55790 | | | | | | W01 24.... | | | | |
| UZV16-801-45-0°-L38 | D20 00791 | 16 | 45 | 3,0 | 8,3 | 0,052 | | W01 34.... | W29 34.... | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UZV16-801-45-0°-R38 | D20 05791 | | | | | | W01 34.... | | | | |

For further details on inserts see chapter 7

**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZ Boring Tool

## Mounting Instructions




## Mounting dimensions

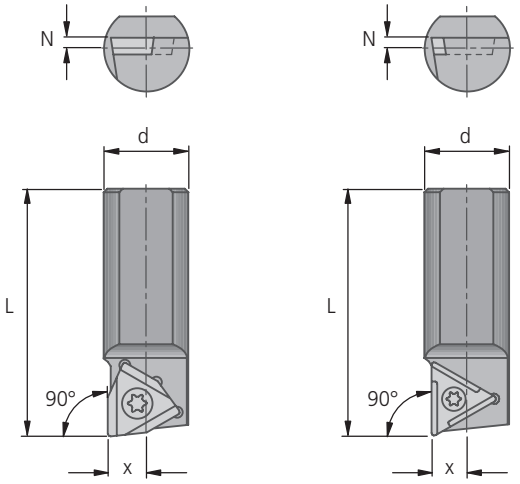
| Boring tool **size** | Drilling range Radial mounting $D_{min}$ – $D_{max}$ | for boring bar dia. | d1 | b | G | c |
|---|---|---|---|---|---|---|
| UZ8 | 27 – 40 | 20 | 8 | 1,5 | M6 | 9 |
| UZ10 | 35 – 52 | 25 | 10 | 2,0 | M6 | 12 |
| UZ12 | 40 – 63 | 32 | 12 | 2,5 | M8 | 13 |
| UZ16 | 52 – 80 | 40 | 16 | 3,0 | M10 | 18 |
| UZ20 | 64 – 100 | 50 | 20 | 5,0 | M12 | 20 |
| UZ25 | 79 – 126 | 63 | 25 | 4,0 | M16 | 23 |

# KOMET Kometric® UZ Boring Tool $\varkappa = 90°$

## for insert W01 / W29 and W30 / W57

P M K N S H

L.H. boring tool as shown with left or neutral insert ■
R.H. boring tool in mirror image with right or neutral insert ■
mounting instruction see page 578 ■




| Article<br>cutting form ▼ | Order No. | d | L | N | x | kg | Insert<br>W30 L.H.<br>radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert<br>W30 R.H.<br>radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert<br>W57 neutral | Assembly parts<br>Clamping screw<br>Order No.<br>Article | Accessories<br>Screwdriver<br>Order No.<br>Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZ8-803-45-90°-L | D20 10010 | 8 | 45 | 1,0 | 3 | 0,015 | W30 04..0.03.. | | W57 04140.04.. | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP |
| UZ8-803-45-90°-R | D20 15010 | | | | | | | W30 04..0.03.. | | | |
| UZ10-804-50-90°-L | D20 10030 | 10 | 50 | 1,5 | 4 | 0,026 | W30 14..0.04.. | | W57 14140.04.. | N00 56111<br>S/M2,6×6,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZ10-804-50-90°-R | D20 15030 | | | | | | | W30 14..0.04.. | | | |
| UZ12-804-60-90°-L | D20 10050 | 12 | 60 | 1,5 | 5 | 0,045 | W30 14..0.04.. | | W57 14140.04.. | N00 56111<br>S/M2,6×6,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZ12-804-60-90°-R | D20 15050 | | | | | | | W30 14..0.04.. | | | |

| Article<br>cutting form ▼ | Order No. | d | L | N | x | kg | Insert<br>W01 L.H.<br>radial rake 06 = 6° 12 = 12° ▽▽ | Insert<br>W01 R.H.<br>radial rake 36 = 6° 42 = 12° ▽▽ | Insert<br>W29 neutral<br>00 = PD 01 = K ▽▽ | Assembly parts<br>Clamping screw<br>Order No.<br>Article | Accessories<br>Screwdriver<br>Order No.<br>Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZ12-802-60-90°-L38 | D20 10071 | 12 | 60 | 1,5 | 5 | 0,047 | W01 24.... | | W29 24.... | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZ12-802-60-90°-R38 | D20 15071 | | | | | | | W01 24.... | | | |
| UZ16-801-80-90°-L38 | D20 10091 | 16 | 80 | 3,0 | 6 | 0,11 | W01 34.... | | W29 34.... | N00 57521<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |
| UZ16-801-80-90°-R38 | D20 15091 | | | | | | | W01 34.... | | | |
| UZ20-810-100-90°-L48 | D20 10111 | 20 | 100 | 4,0 | 8 | 0,217 | W01 42.... | | W29 42.... | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP |
| UZ20-810-100-90°-R48 | D20 15111 | | | | | | | W01 42.... | | | |
| UZ25-820-120-90°-L53 | D20 10131 | 25 | 120 | 4,0 | 10 | 0,404 | W01 50.... | | W29 50.... | N00 57531<br>S/M4,5×9-15IP<br>6,25 Nm | L05 00860<br>15IP |
| UZ25-820-120-90°-R53 | D20 15131 | | | | | | | W01 50.... | | | |

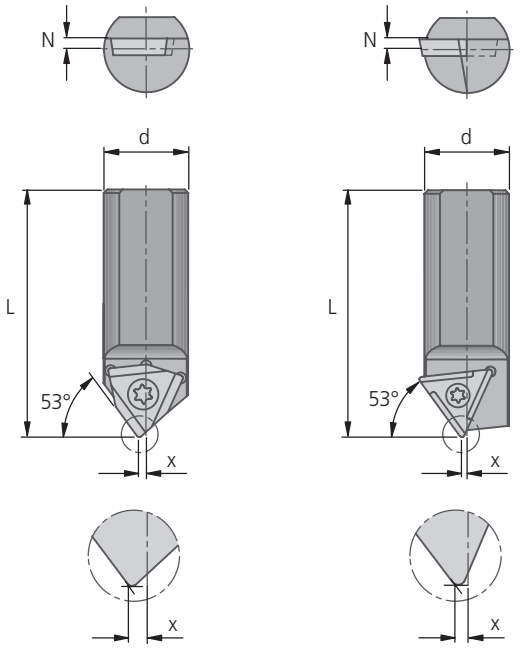
For further details on inserts see chapter 7

**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZ Boring Tool $\varkappa$ = 53°

## P M K N S H for insert W01 / W29 and W30 / W57

- L.H. boring tool as shown with left or neutral insert
- R.H. boring tool in mirror image with right or neutral insert
- mounting instruction see page 578




| Article cutting form ▼ | Order No. | d | L | N | x | kg | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W30 R.H. radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZ8-803-45-53°-L | D20 10610 | 8 | 45 | 1,0 | 0,4 | 0,015 | W30 04..0.03.. | | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP |
| UZ8-803-45-53°-R | D20 15610 | | | | | | | W30 04..0.03.. | | | |
| UZ10-804-50-53°-L | D20 10630 | 10 | 50 | 1,5 | 0,5 | 0,026 | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZ12-804-60-53°-L | D20 10650 | 12 | 60 | 1,5 | 0,5 | 0,044 | W30 14..0.04.. | | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UZ12-804-60-53°-R | D20 15650 | | | | | | | W30 14..0.04.. | | | |

| Article cutting form ▼ | Order No. | d | L | N | x | kg | Insert W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽ | Insert W01 R.H. radial rake 36 = 6° 42 = 12° ▽▽ | Insert W29 neutral 00 = PD 01 = K ▽▽ | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZ12-802-60-53°-L38 | D20 10671 | 12 | 60 | 1,5 | 0,5 | 0,047 | W01 24.... | | W29 24.... | N00 57511 S/M2,5×7,2-8IP 1,28 Nm | L05 00830 8IP |
| UZ12-802-60-53°-R38 | D20 15671 | | | | | | | W01 24.... | | | |
| UZ16-801-80-53°-L38 | D20 10691 | 16 | 80 | 3,0 | 0,6 | 0,108 | W01 34.... | | W29 34.... | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UZ16-801-80-53°-R38 | D20 15691 | | | | | | | W01 34.... | | | |
| UZ20-810-100-53°-L48 | D20 10711 | 20 | 100 | 4,0 | 0,6 | 0,212 | W01 42.... | | W29 42.... | N00 57531 S/M4,5×9-15IP 6,25 Nm | L05 00860 15IP |
| UZ25-820-120-53°-L53 | D20 10731 | 25 | 120 | 4,0 | 0,6 | 0,395 | W01 50.... | | W29 50.... | N00 57531 S/M4,5×9-15IP 6,25 Nm | L05 00860 15IP |
| UZ25-820-120-53°-R53 | D20 15731 | | | | | | | W01 50.... | | | |

For further details on inserts see chapter 7

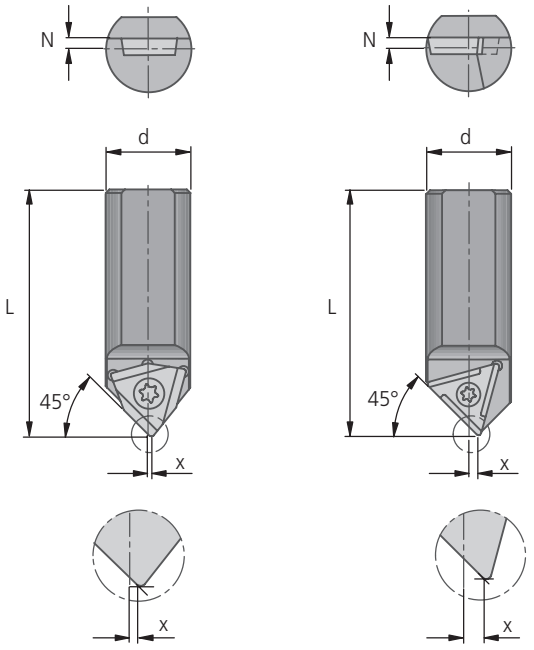
**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UZ Boring Tool $\varkappa = 45°$

## for insert W01 / W29 and W30 / W57

P M K N S H

L.H. boring tool as shown with left or neutral insert ■
R.H. boring tool in mirror image with right or neutral insert ■
mounting instruction see page 578 ■




| Article<br>cutting form ▼ | Order No. | d | L | N | x | kg | Insert<br>W30 L.H.<br>radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert<br>W30 R.H.<br>radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | Insert<br>W57 neutral | Assembly parts<br>Clamping screw<br>Order No.<br>Article | Accessories<br>Screwdriver<br>Order No.<br>Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZ8-803-45-45°-L | D20 10810 | 8 | 45 | 1,0 | 1,0 | 0,015 | W30 04..0.03.. | | W57 04140.04.. | N00 56031<br>S/M2×4,9-6IP<br>0,62 Nm | L05 00810<br>6IP |
| UZ8-803-45-45°-R | D20 15810 | | | | | | | W30 04..0.03.. | | | |
| UZ10-804-50-45°-L | D20 10830 | 10 | 50 | 1,5 | 1,3 | 0,026 | W30 14..0.04.. | | W57 14140.04.. | N00 56111<br>S/M2,6×6,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZ10-804-50-45°-R | D20 15830 | | | | | | | W30 14..0.04.. | | | |
| UZ12-804-60-45°-L | D20 10850 | 12 | 60 | 1,5 | 1,0 | 0,044 | W30 14..0.04.. | | W57 14140.04.. | N00 56111<br>S/M2,6×6,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZ12-804-60-45°-R | D20 15850 | | | | | | | W30 14..0.04.. | | | |

| Article<br>cutting form ▼ | Order No. | d | L | N | x | kg | Insert<br>W01 L.H.<br>radial rake 06 = 6° 12 = 12° ▽▽ | Insert<br>W01 R.H.<br>radial rake 36 = 6° 42 = 12° ▽▽ | Insert<br>W29 neutral<br>00 = PD 01 = K ▽▽ | Assembly parts<br>Clamping screw<br>Order No.<br>Article | Accessories<br>Screwdriver<br>Order No.<br>Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UZ12-802-60-45°-L38 | D20 10871 | 12 | 60 | 1,5 | 1,0 | 0,044 | W01 24.... | | W29 24.... | N00 57511<br>S/M2,5×7,2-8IP<br>1,28 Nm | L05 00830<br>8IP |
| UZ12-802-60-45°-R38 | D20 15871 | | | | | | | W01 24.... | | | |
| UZ16-801-80-45°-L38 | D20 10891 | 16 | 80 | 3,0 | 1,5 | 0,107 | W01 34.... | | W29 34.... | N00 57521<br>S/M3,5×7,3-10IP<br>2,8 Nm | L05 00850<br>10IP |
| UZ16-801-80-45°-R38 | D20 15891 | | | | | | | W01 34.... | | | |

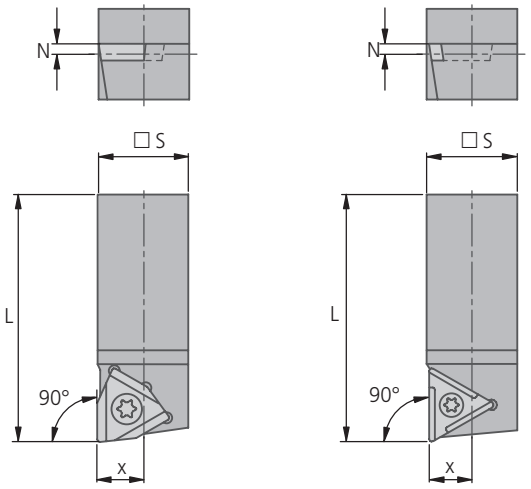
For further details on inserts see chapter 7

**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UV Boring Tool $\varkappa = 90°$

P M K N S H for insert W01 / W29 and W30 / W57

■ L.H. boring tool as shown with left or neutral insert




| Article cutting form ▼ | Order No. | for boring bar dia. | □ S | L | N | x | kg | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UV8-803-40-90°-L | D20 20020 | 25 | 8 | 40 | 1,5 | 3,8 | 0,02 | W30 04..0.03.. | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP |
| UV10-804-50-90°-L | D20 20040 | 32 | 10 | 50 | 1,5 | 4,8 | 0,03 | W30 14..0.04.. | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UV12-804-60-90°-L | D20 20060 | 40 | 12 | 60 | 1,5 | 5,8 | 0,04 | W30 14..0.04.. | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |

| Article cutting form ▼ | Order No. | for boring bar dia. | □ S | L | N | x | kg | Insert W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽ | Insert W29 neutral 00 = PD 01 = K ▽▽ | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UV16-801-80-90°-L38 | D20 20081 | 50 | 16 | 80 | 3 | 7,8 | 0,01 | W01 34.... | W29 34.... | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UV20-810-100-90°-L48 | D20 20101 | 63 | 20 | 100 | 4 | 9,8 | 0,03 | W01 42.... | W29 42.... | N00 57531 S/M4,5×9-15IP 6,25 Nm | L05 00860 15IP |
| UV25-820-120-90°-L53 | D20 20121 | 80 | 25 | 120 | 4 | 12,3 | 0,05 | W01 50.... | W29 50.... | N00 57531 S/M4,5×9-15IP 6,25 Nm | L05 00860 15IP |

For further details on inserts see chapter 7

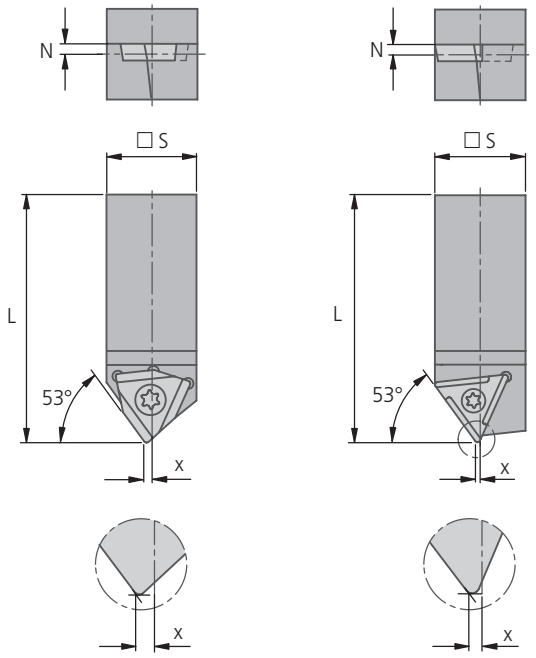
**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® UV Boring Tool $\varkappa = 53°$

## for insert W01 / W29 and W30 / W57

P M K N S H

L.H. boring tool as shown with left or neutral insert ■




| Article cutting form ▼ | Order No. | for boring bar dia. | □S | L | N | x | kg | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UV8-803-40-53°-L | D20 20220 | 25 | 8 | 40 | 1,5 | 0,4 | 0,02 | W30 04..0.03.. | W57 04140.04.. | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP |
| UV10-804-50-53°-L | D20 20240 | 32 | 10 | 50 | 1,5 | 0,5 | 0,03 | W30 14..0.04.. | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |
| UV12-804-60-53°-L | D20 20260 | 40 | 12 | 60 | 1,5 | 0,5 | 0,06 | W30 14..0.04.. | W57 14140.04.. | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP |

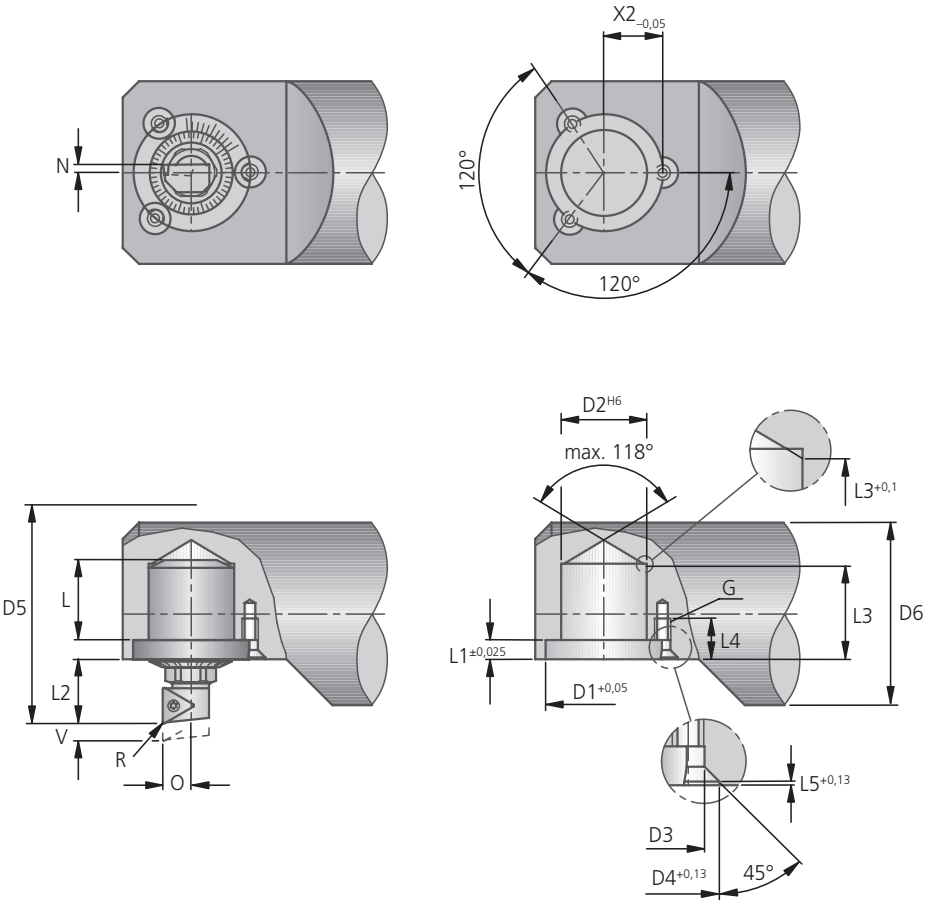
| Article cutting form ▼ | Order No. | for boring bar dia. | □S | L | N | x | kg | Insert W01 L.H. radial rake 06 = 6° 12 = 12° ▽▽ | Insert W29 neutral 00 = PD 01 = K ▽▽ | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UV16-801-80-53°-L38 | D20 20281 | 50 | 16 | 80 | 3 | 0,6 | 0,01 | W01 34.... | W29 34.... | N00 57521 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP |
| UV20-810-100-53°-L48 | D20 20301 | 63 | 20 | 100 | 4 | 0,6 | 0,03 | W01 42.... | W29 42.... | N00 57531 S/M4,5×9-15IP 6,25 Nm | L05 00860 15IP |
| UV25-820-120-53°-L53 | D20 20321 | 80 | 25 | 120 | 4 | 0,6 | 0,05 | W01 50.... | W29 50.... | N00 57531 S/M4,5×9-15IP 6,25 Nm | L05 00860 15IP |

For further details on inserts see chapter 7

**Supply includes:**
Boring tool with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® Micro-adjustable Cartridge up to Ø 27,6 mm

P M K N S H for insert W30 / W57




## Radial Mounting

- the smallest adjustment increment is 0.002 mm in the ∅ above vernier
- easy adjustment from the front
- high precision setting
- no clamping required
- compact, rigid design
- two mounting sizes
- significant saving in setting times
- extensive range of inserts with positive chip geometry provides the right type of cutting for the material

| min. turning Ø D5 | Order No. | kg | Insert W30 L.H. | Insert W30 neutral | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw 3× Order No. Article | Accessories Wrench Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| 27,6 | **M31 00022** | 0,021 | **W30 04060.04..** | **W30 04660.03..** | **W57 04140.04..** | **N00 56041** S/M2×4,3-6IP 0,62 Nm | **L05 00810** 6IP | **M31 00020.18** M3×6 sim. DIN7991 | **18589 10010** SW10 |
| 49,5 | **M31 00032** | 0,081 | **W30 14060.04..** | **W30 14660.04..** | **W57 14140.04..** | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **55021 04010** M4×10 | **18589 10014** SW14 |
| 70 | **M31 00042** | 0,249 | **W30 26060.05..** | **W30 26660.05..** | **W57 26140.04..** | **N00 56201** S/M3,5×6,2-10IP 2,8 Nm | **L05 00850** 10IP | **55021 05012** M5×12 | **18589 10022** SW22 |

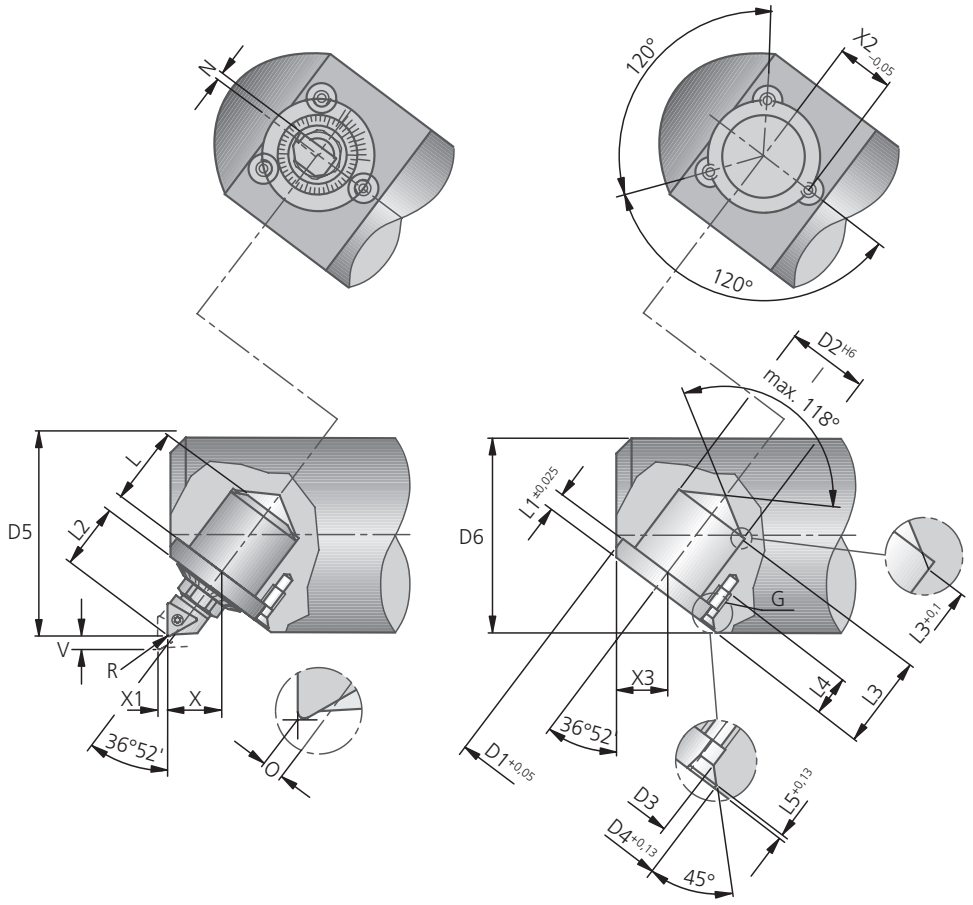
**Supply includes:**
Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

## Mounting dimension

| for cartridges | D1 | D2 | D3 | D4 | D6 min. | L | L1 | L2 | L3 min. | L4 | L5 | G | N | R | V | O | X2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M31 00022 | 19 | 16 | 3,2 | 4,6 | 26 | 10,9 | 2,8 | 10 | 11,5 | 9 | 1,6 | M3 | 1,5 | 0,4 | 1,0 | 5,1 | 9,65 |
| M31 00032 | 30 | 22 | 4,3 | 8 | 46 | 20,5 | 5 | 16,9 | 24 | 10 | 0,9 | M4 | 2 | 0,4 | 3,4 | 7,2 | 15,4 |
| M31 00042 | 46 | 32 | 5,5 | 10 | 67 | 29 | 6,3 | 25,5 | 33 | 12 | 0,8 | M5 | 2 | 0,5 | 5,22 | 10,3 | 23,0 |

# KOMET Kometric® Micro-adjustable Cartridge up to Ø 25,4 mm

for insert W30 / W57 P M K N S H




## Angled Mounting

- the smallest adjustment increment is 0.0016 mm in the ∅ above vernier
- easy adjustment from the front
- high precision setting
- no clamping required
- compact, rigid design
- two mounting sizes
- significant saving in setting times
- extensive range of inserts with positive chip geometry provides the right type of cutting for the material

| min. turning Ø D5 | Order No. | kg | Insert W30 L.H. | Insert W30 neutral | Insert W57 neutral | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw 3× Order No. Article | Accessories Wrench Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| 25,4 | **M31 01022** | 0,021 | **W30 04060.04..** | **W30 04660.03..** | **W57 04140.04..** | **N00 56041** S/M2×4,3-6IP 0,62 Nm | **L05 00810** 6IP | **M31 00020.18** M3×6 sim. DIN7991 | **18589 10010** SW10 |
| 43 | **M31 01032** | 0,082 | **W30 14060.04..** | **W30 14660.04..** | **W57 14140.04..** | **N00 56111** S/M2,6×6,2-8IP 1,28 Nm | **L05 00830** 8IP | **55021 04010** M4×10 | **18589 00012** SW12 |
| 61 | **M31 01042** | 0,25 | **W30 26060.05..** | **W30 26660.05..** | **W57 26140.04..** | **N00 56201** S/M3,5×6,2-10IP 2,8 Nm | **L05 00850** 10IP | **55021 05012** M5×12 | **18589 00017** SW17 |

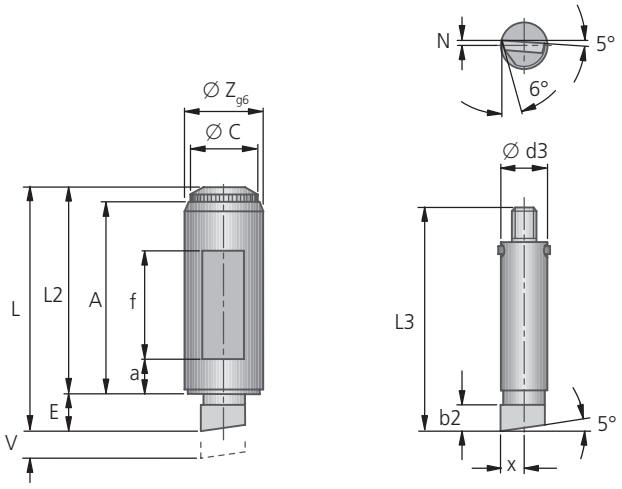
**Supply includes:**
Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

## Mounting dimension

| for cartridges | D1 | D2 | D3 | D4 | D6 min. | L | L1 | L2 | L3 min. | L4 | L5 | G | N | ISO dimension for R | V | O | X | X1 | X2 | X3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M31 01022 | 19 | 16 | 3,2 | 4,6 | 24,5 | 10,9 | 2,8 | 11 | 11,5 | 9 | 1,6 | M3 | 1,5 | 0,4 | 1,1 | 0,33 | 8,64 | 0,81 | 9,65 | 8,18 |
| M31 01032 | 30 | 22 | 4,3 | 8 | 40 | 20,5 | 5 | 18,4 | 24 | 10 | 0,9 | M4 | 2 | 0,4 | 3,1 | 1,3 | 15,1 | 2,0 | 15,4 | 14,0 |
| M31 01042 | 46 | 32 | 5,5 | 10 | 55 | 29 | 6,3 | 27,2 | 33 | 12 | 0,8 | M5 | 2 | 0,5 | 4,6 | 1,4 | 21,34 | 3,2 | 23 | 19,8 |

# KOMET Kometric® FZ Micro-adjustable Cartridge up to Ø 25 mm

P M K N S H for Soldering




| Drilling range[1] | | | Housing | | Soldering | | | Accessories |
|---|---|---|---|---|---|---|---|---|
| | | | | | cutting form 1 | cutting form 2 | | Wrench |
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | Article | Order No. | Order No. Article | Order No. Article | kg | Order No. Article |
| 25 | 33 | 36 | FZ8-25-1 | M30 00011 | M30 50111.21 8Z1-K10 | M30 51111.21 8Z2-K10 | 0,007 | L05 01010 R0/N0 |
| 28 | 36 | 39 | FZ8-28-1 | M30 00021 | | | 0,008 | |

| Drilling range[1] | | | d1 | n[2] | Cutter Ø D1[2] | b | d2 | Ø $Z^{H7}_{g6}$ | L1 | L2 | E1 | V | A | Ø C | a | f | Ø d3 | L4 | x | N | b2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | | | | | | | | | | | | | | | | | | | |
| 25 | 33 | 36 | 20 | 3,5 | 8 | 1,5 | M6 | 8 | 23,7 | 21 | 2,7 | 4 | 19,2 | 6,9 | 5 | 10 | 4,7 | 19,2 | 1,9 | 0,9 | 2,5 |
| 28 | 36 | 39 | | | | | | | 26,7 | 24 | | | 22,2 | | | 13 | | | | | |

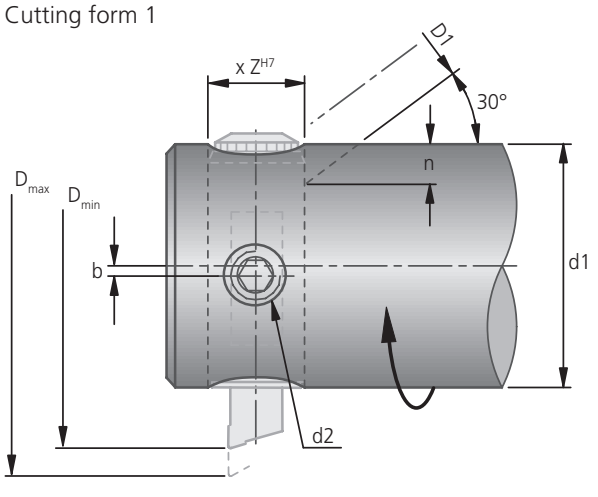
[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

[2] when using rough adjustment, the distance „n" must be used on the boring bar

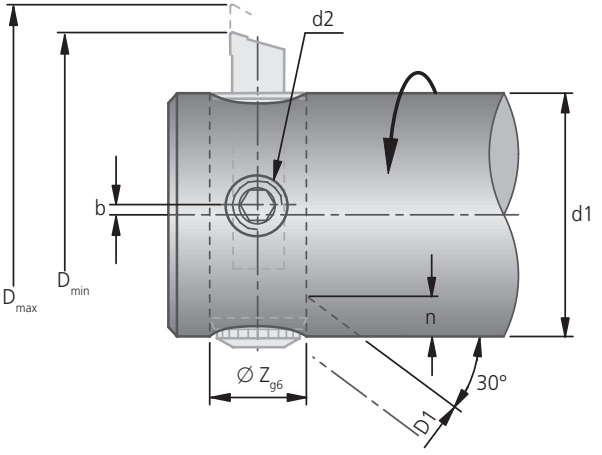
## Radial mounting 90° (cutting form 1 and 2)

- Adjustment per graduation = 0.02 mm Ø
- Adjustment accuracy 2 µm Ø above vernier

Cutting form 1

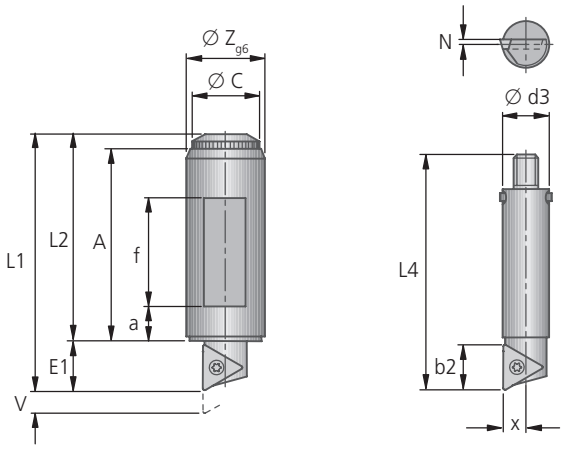



Cutting form 2



# KOMET Kometric® FZ Micro-adjustable Cartridge up to Ø 33 mm

for insert W30 / W57 P M K N S H




| Drilling range[1] | | | Housing | | Turning tool | | | Insert | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | cutting form 1 | cutting form 2 | | W30 L.H. | W30 R.H. | W57 neutral | Clamping screw | Screwdriver | Wrench |
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | Article | Order No. | Order No. Article | Order No. Article | kg | radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | | Order No. Article | Order No. Article | Order No. Article |
| 33 | 41 | 48 | FZ10-31-1 | M30 00031 | M30 50021 U10Z1-803 | M30 51021 U10Z2-803 | 0,014 | W30 04 .. 0.03.. | W30 04 .. 0.03.. | W57 04140.04.. | N00 56021 S/M2×3,8-6IP 0,62 Nm | L05 00810 6IP | L05 01020 R2/N1 |
| 37 | 45 | 52 | FZ10-35-1 | M30 00041 | | | 0,016 | | | | | | |
| 41 | 51 | 58 | FZ12-40-1 | M30 00051 | M30 50031 U12Z1-803 | M30 51031 U12Z2-803 | 0,025 | | | | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP | L05 01030 R2a/N2 |
| 46 | 56 | 63 | FZ12-45-1 | M30 00061 | | | 0,03 | | | | | | |
| 53 | 65 | 73 | FZ16-50-1 | M30 00071 | M30 50041 U16Z1-804 | M30 51041 U16Z2-804 | 0,058 | W30 14 .. 0.04.. | W30 14 .. 0.04.. | W57 14140.04.. | N00 56101 S/M2,6×5,2-8IP 1,28 Nm | L05 00830 8IP | L05 01040 N3 |
| 59 | 71 | 79 | FZ16-56-1 | M30 00081 | | | 0,067 | | | | | | |
| 63 | 78 | 88 | FZ20-64-1 | M30 00091 | M30 50051 U20Z1-804 | M30 51051 U20Z2-804 | 0,112 | | | | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP | L05 01050 R4/N4 |
| 72 | 87 | 100 | FZ20-72-1 | M30 00101 | | | 0,13 | | | | | | |
| 80 | 100 | 115 | FZ25-80-1 | M30 00111 | M30 50061 U25Z1-805 | M30 51061 U25Z2-805 | 0,221 | W30 26 .. 0.05.. | W30 26 .. 0.05.. | W57 26140.04.. | N00 56211 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP | L05 01060 ZV25 |
| 90 | 110 | 126 | FZ25-90-1 | M30 00121 | | | 0,259 | | | | | | |
| 104 | 134 | 154 | FZ32-100-1 | M30 00131 | M30 50071 U32Z1-805 | M30 51071 U32Z2-805 | 0,482 | | | | | | L05 01070 R5/N5 |
| 114 | 144 | 165 | FZ32-110-1 | M30 00141 | | | 0,544 | | | | | | |
| 129 | 159 | 185 | FZ32-125-1 | M30 00151 | | | 0,635 | | | | | | |
| 145 | 175 | 205 | FZ32-140-1 | M30 00161 | | | 0,728 | | | | | | |

For further details on inserts see chapter 7

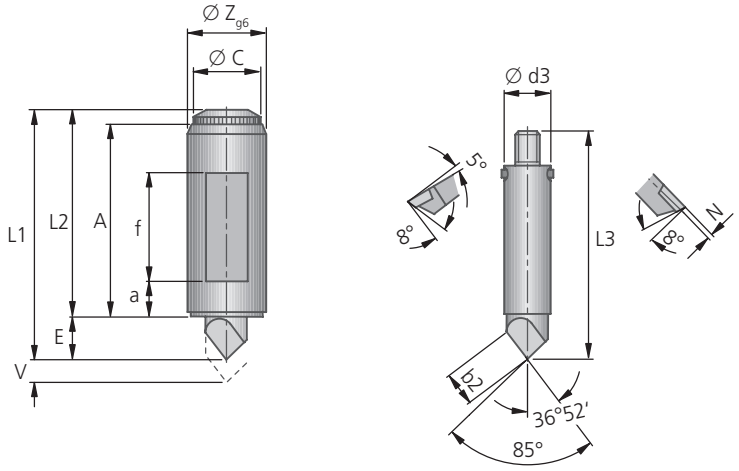
| Drilling range[1] | | | d1 | $n^{2)}$ | Cutter Ø $D1^{2)}$ | b | d2 | Ø $Z^{H7}_{g6}$ | L1 | L2 | E1 | V | A | Ø C | a | f | Ø d3 | L4 | x | N | b2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | | | | | | | | | | | | | | | | | | | |
| 33 | 41 | 48 | 25 | 4,5 | 8 | 2 | M6 | 10 | 31,5 | 25,5 | 6 | 4 | 23,3 | 8,9 | 6 | 12 | 5,7 | 24,8 | 2,3 | 1,2 | 6,5 |
| 37 | 45 | 52 | | | | | | | 35,5 | 29,5 | | | 27,3 | | | 16 | | | | | |
| 41 | 51 | 58 | 32 | 5 | 10 | 2,5 | M8 | 12 | 39,5 | 33,5 | 6 | 5 | 31 | 10,9 | 8 | 16 | 6,7 | 30,5 | 2,9 | 1,2 | 6,5 |
| 46 | 56 | 63 | | | | | | | 44,5 | 38,5 | | | 36 | | | 21 | | | | | |
| 53 | 65 | 73 | 40 | 8 | 12 | 3 | M10 | 16 | 51 | 42 | 9 | 6 | 39 | 13,9 | 10 | 20 | 8,6 | 39,7 | 3,8 | 1,2 | 9 |
| 59 | 71 | 79 | | | | | | | 57 | 48 | | | 45 | | | 26 | | | | | |
| 63 | 78 | 88 | 50 | 9 | 16 | 5 | M12 | 20 | 60 | 51 | 9 | 7,5 | 47 | 17,9 | 12 | 24 | 11,5 | 48,2 | 4,7 | 1,7 | 9 |
| 72 | 87 | 100 | | | | | | | 68 | 59 | | | 55 | | | 32 | | | | | |
| 80 | 100 | 115 | 63 | 10 | 20 | 4 | M16 | 25 | 77,5 | 64,5 | 13 | 10 | 59,5 | 21,9 | 15 | 30 | 14 | 60,3 | 6 | 2 | 13,5 |
| 90 | 110 | 126 | | | | | | | 87,5 | 74,5 | | | 69,5 | | | 40 | | | | | |
| 104 | 134 | 154 | 80 | 13 | 25 | 6 | M20 | 32 | 97 | 84 | 13 | 15 | 78 | 28,9 | 20 | 40 | 18 | 78,5 | 7,6 | 2,7 | 13,5 |
| 114 | 144 | 165 | | | | | | | 107 | 94 | | | 88 | | | 50 | | | | | |
| 129 | 159 | 185 | 100 | 13 | 25 | 12 | M20 | 32 | 122 | 109 | 13 | 15 | 103 | 28,9 | 25 | 50 | 18 | 78,5 | 7,6 | 2,7 | 13,5 |
| 145 | 175 | 205 | | | | | | | 137 | 124 | | | 118 | | | 65 | | | | | |

[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

[2] when using rough adjustment, the distance „n" must be used on the boring bar

# KOMET Kometric® FZ Micro-adjustable Cartridge up to Ø 23 mm

P M K N S H for Soldering




| Drilling range[1] | | | Housing | | Soldering cutting form 3 | | Accessories |
|---|---|---|---|---|---|---|---|
| | | |  | |  | | Wrench  |
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | Article | Order No. | Order No. Article | kg | Order No. Article |
| 23 | 29,4 | 32 | FZ8-23-3 | M30 02011 | M30 52111.21 8Z3-K10 | 0,007 | L05 01010 R0/N0 |
| 26 | 32,4 | 49 | FZ8-26-3 | M30 02021 | | 0,008 | |

| Drilling range[1] | | | d1 | n[2] | Cutter Ø D1[2] | b | d2 | Ø $Z^{H7}_{g6}$ | L1 | L2 | E1 | V | A | Ø C | a | f | Ø d3 | L4 | N | b2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | | | | | | | | | | | | | | | | | | |
| 23 | 29,4 | 32 | 20 | 3 | 8 | 1,5 | M6 | 8 | 26 | 21 | 5 | 4 | 19,2 | 6,9 | 5 | 10 | 4,7 | 21,5 | 0,9 | 2,5 |
| 26 | 32,4 | 49 | | | | | | | 29 | 24 | | | 22,2 | | | 13 | | | | |

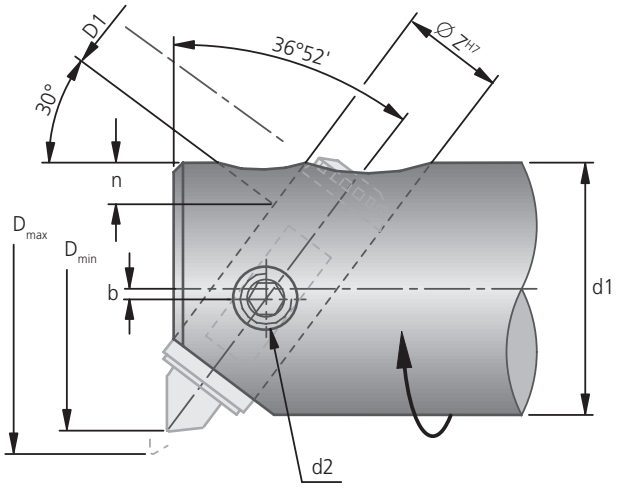
[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

[2] when using rough adjustment, the distance „n" must be used on the boring bar

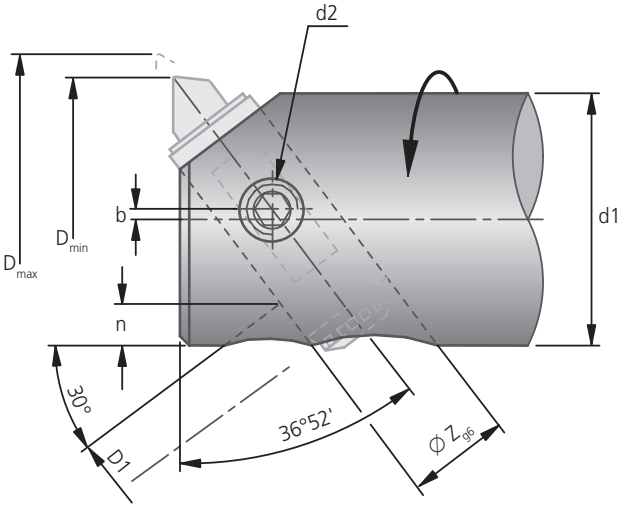
## Angled mounting 36°52' (cutting form 3 and 4)

- Adjustment per graduation = 0.02 mm Ø
- Adjustment accuracy 1.6 µm Ø above vernier

Cutting form 3

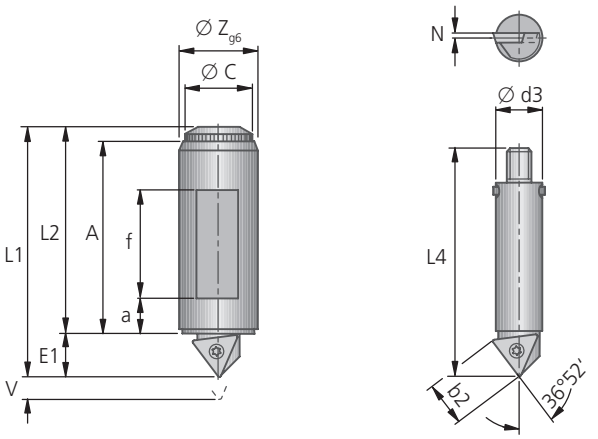



Cutting form 4



# KOMET Kometric® FZ Micro-adjustable Cartridge up to Ø 28 mm

for insert W30 / W57 P M K N S H




| Drilling range[1] | | | Housing | | Turning tool | | | Insert | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | cutting form 3 | cutting form 4 | | W30 L.H. | W30 R.H. | W57 neutral | Clamping screw | Screwdriver | Wrench |
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | Article | Order No. | Order No. Article | Order No. Article | kg | radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | radial rake 36 = 6° 42 = 12° ▽▽ 50 = 20° | | Order No. Article | Order No. Article | Order No. Article |
| 28 | 34,4 | 38 | FZ10-28-3 | M30 02031 | M30 52021 U10Z3-803 | M30 53021 U10Z4-803 | 0,013 | W30 04 .. 0.03.. | W30 04 .. 0.03.. | W57 04140.04.. | N00 56021 S/M2×3,8-6IP 0,62 Nm | L05 00810 6IP | L05 01020 R2/N1 |
| 32 | 38,4 | 44 | FZ10-32-3 | M30 02041 | | | 0,015 | | | | | | |
| 36 | 44 | 48 | FZ12-36-3 | M30 02051 | M30 52031 U12Z3-803 | M30 53031 U12Z4-803 | 0,026 | | | | N00 56031 S/M2×4,9-6IP 0,62 Nm | L05 00810 6IP | L05 01030 R2a/N2 |
| 40 | 48 | 55 | FZ12-40-3 | M30 02061 | | | 0,029 | | | | | | |
| 45 | 54,6 | 60 | FZ16-45-3 | M30 02071 | M30 52041 U16Z3-804 | M30 53041 U16Z4-804 | 0,058 | W30 14 .. 0.04.. | W30 14 .. 0.04.. | W57 14140.04.. | N00 56101 S/M2,6×5,2-8IP 1,28 Nm | L05 00830 8IP | L05 01040 N3 |
| 50 | 59,6 | 68 | FZ16-50-3 | M30 02081 | | | 0,067 | | | | | | |
| 56 | 68 | 78 | FZ20-56-3 | M30 02091 | M30 52051 U20Z3-804 | M30 53051 U20Z4-804 | 0,112 | | | | N00 56111 S/M2,6×6,2-8IP 1,28 Nm | L05 00830 8IP | L05 01050 R4/N4 |
| 64 | 76 | 90 | FZ20-64-3 | M30 02101 | | | 0,132 | | | | | | |
| 72 | 88 | 100 | FZ25-72-3 | M30 02111 | M30 52061 U25Z3-805 | M30 53061 U25Z4-805 | 0,224 | W30 26 .. 0.05.. | W30 26 .. 0.05.. | W57 26140.04.. | N00 56211 S/M3,5×7,3-10IP 2,8 Nm | L05 00850 10IP | L05 01060 ZV25 |
| 80 | 96 | 114 | FZ25-80-3 | M30 02121 | | | 0,263 | | | | | | |
| 90 | 114 | 126 | FZ32-90-3 | M30 02131 | M30 52071 U32Z3-805 | – | 0,487 | | | | | | L05 01070 R5/N5 |
| 100 | 124 | 140 | FZ32-100-3 | M30 02141 | | | 0,548 | | | | | | |
| 110 | 134 | 150 | FZ32-110-3 | M30 02151 | | | 0,639 | | | | | | |
| 125 | 149 | 175 | FZ32-125-3 | M30 02161 | | | 0,732 | | | | | | |

For further details on inserts see chapter 7

| Drilling range[1] | | | d1 | n[2] | Cutter Ø D1[2] | b | d2 | Ø $Z^{H7}_{g6}$ | L1 | L2 | E1 | V | A | Ø C | a | f | Ø d3 | L4 | N | b2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | | | | | | | | | | | | | | | | | | |
| 28 | 34,4 | 38 | 25 | 3,5 | 8 | 2 | M6 | 10 | 31,5 | 25,5 | 6 | 4 | 23,3 | 8,9 | 6 | 12 | 5,7 | 24,8 | 1,2 | 6,5 |
| 32 | 38,4 | 44 | | | | | | | 35,5 | 29,5 | | | 27,3 | | | 16 | | | | |
| 36 | 44 | 48 | 32 | 4 | 10 | 2,5 | M8 | 12 | 40,3 | 33,5 | 6,8 | 5 | 31 | 10,9 | 8 | 16 | 6,7 | 31,3 | 1,2 | 6,5 |
| 40 | 48 | 55 | | | | | | | 45,3 | 38,5 | | | 36 | | | 21 | | | | |
| 45 | 54,6 | 60 | 40 | 6,5 | 12 | 3 | M10 | 16 | 51 | 42 | 9 | 6 | 39 | 13,9 | 10 | 20 | 8,6 | 39,7 | 1,2 | 9 |
| 50 | 59,6 | 68 | | | | | | | 57 | 48 | | | 45 | | | 26 | | | | |
| 56 | 68 | 78 | 50 | 7 | 16 | 5 | M12 | 20 | 63 | 51 | 12 | 7,5 | 47 | 17,9 | 12 | 24 | 11,5 | 51,2 | 1,7 | 9 |
| 64 | 76 | 90 | | | | | | | 71 | 59 | | | 55 | | | 32 | | | | |
| 72 | 88 | 100 | 63 | 8 | 20 | 4 | M16 | 25 | 81 | 64,5 | 16,5 | 10 | 59,5 | 21,9 | 15 | 30 | 14 | 63,8 | 2 | 13,5 |
| 80 | 96 | 114 | | | | | | | 91 | 74,5 | | | 69,5 | | | 40 | | | | |
| 90 | 114 | 126 | 80 | 10 | 25 | 6 | M20 | 32 | 102 | 84 | 18 | 15 | 78 | 28,9 | 20 | 40 | 18 | 83,5 | 2,7 | 13,5 |
| 100 | 124 | 140 | | | | | | | 112 | 94 | | | 88 | | | 50 | | | | |
| 110 | 134 | 150 | 100 | 10 | 25 | 12 | M20 | 32 | 127 | 109 | 18 | 15 | 103 | 28,9 | 25 | 50 | 18 | 83,5 | 2,7 | 13,5 |
| 125 | 149 | 175 | | | | | | | 142 | 124 | | | 118 | | | 65 | | | | |

[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

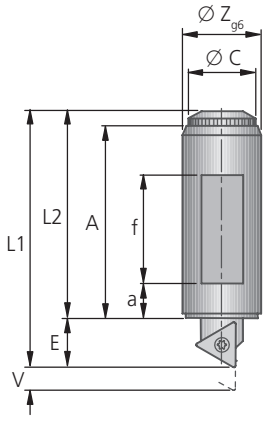
[2] when using rough adjustment, the distance „n" must be used on the boring bar

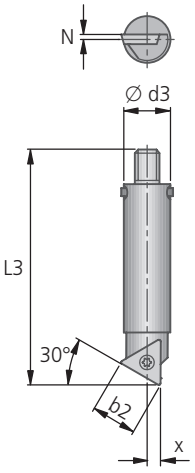
# KOMET Kometric® FZ Micro-adjustable Cartridge Ø 20 – 44 mm

P M K N S H for insert W30 / W57

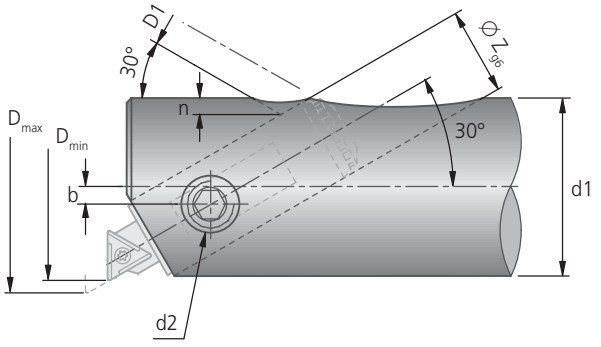
## Angled mounting 30° (cutting form 5)

- Adjustment accuracy 1 µm ∅ above vernier
- For machining particularly small bores, the FZ fine boring cartridges can also be used for radial mounting on the boring bar are a 30° angle. Adjustment is then →||← 0.005 mm per graduation in the radial direction.




Cutting form 5




| Drilling range[1] | | | Housing | Turning tool cutting form 5 | | Insert | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | W30 L.H. | W57 neutral | Clamping screw | Screwdriver | Wrench |
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | Order No. Article | Order No. Article | kg | radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | | Order No. Article | Order No. Article | Order No. Article |
| 20 | 22 | 26 | **M30 04011** FZ10-20-5 | **M30 54011** U10Z5-803K | 0,012 | **W30 04 .. 0.03..** | **W57 04140.04..** | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **L05 01020** R2/N1 |
| 26 | 30 | 33 | **M30 00031** FZ10-31-1 | **M30 54021** U10Z5-803 | 0,014 | **W30 04 .. 0.03..** | **W57 04140.04..** | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **L05 01020** R2/N1 |
| 30 | 35 | 40 | **M30 00051** FZ12-40-1 | **M30 54030** U12Z5-803 | 0,026 | **W30 04 .. 0.03..** | **W57 04140.04..** | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **L05 01030** R2a/N2 |
| 38 | 44 | 50 | **M30 00071** FZ16-50-1 | **M30 54040** U16Z5-804 | 0,059 | **W30 14 .. 0.04..** | **W57 14140.04..** | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **L05 01040** N3 |

For further details on inserts see chapter 7

| Drilling range[1] | | | d1 | n[2] | Cutter Ø D1[2] | b | d2 | Ø $Z^{H7}_{g6}$ | L1 | L2 | E | V | A | Ø C | a | f | Ø d3 | L3 | x | N | b2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | | | | | | | | | | | | | | | | | | | |
| 20 | 22 | 26 | 18 | – | – | 0,8 | M5 | 10 | 28,5 | 23,7 | 4,8 | 2 | 21,5 | 8,9 | 5 | 10 | 5,7 | 22,0 | 2,1 | 1,2 | 6,5 |
| 26 | 30 | 33 | 20 | 4,5 | 8 | 1,2 | M6 | 10 | 33,9 | 25,5 | 8,4 | 4 | 23,3 | 8,9 | 6 | 12 | 5,7 | 27,3 | 2,1 | 1,2 | 6,5 |
| 30 | 35 | 40 | 25 | 5 | 10 | 1,5 | M8 | 12 | 43,0 | 33,5 | 9,5 | 5 | 31,0 | 10,9 | 8 | 16 | 6,7 | 34,0 | 2,8 | 1,2 | 6,5 |
| 38 | 44 | 50 | 32 | 8 | 12 | 2,0 | M10 | 16 | 54,5 | 42,0 | 12,5 | 6 | 39,0 | 13,9 | 10 | 20 | 8,6 | 43,2 | 3,3 | 1,2 | 9 |

[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder

[2] when using rough adjustment, the distance „n" must be used on the boring bar

# KOMET Kometric® FF Micro-adjustable Cartridge Ø 29,5 – 179 mm

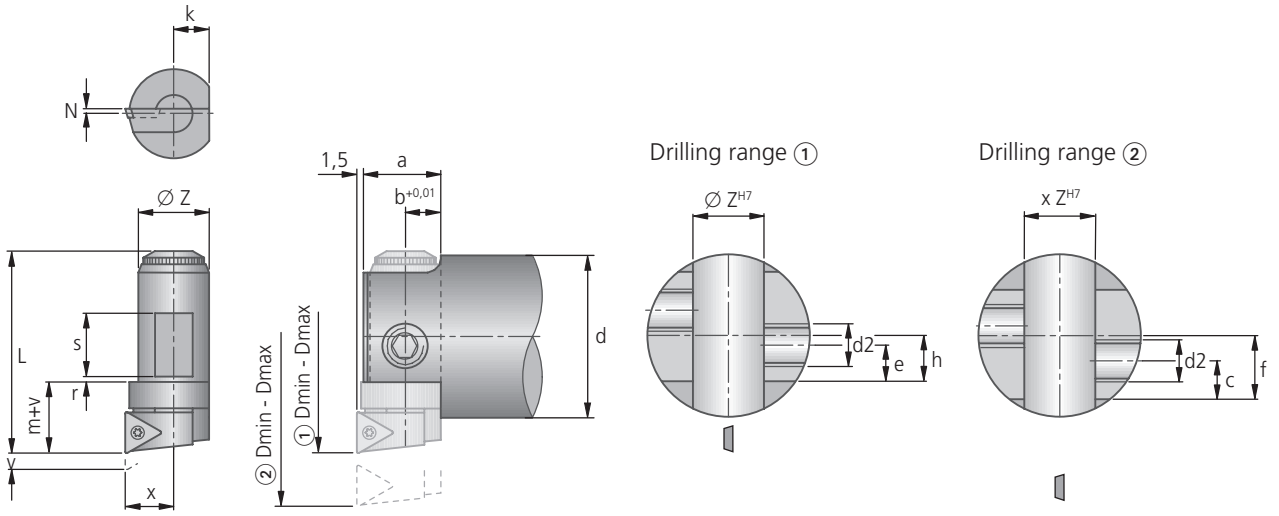
## for insert W30 / W57

P M K N S H

Adjustment per graduation = 0.02 mm Ø ■
Adjustment accuracy 2 µm Ø above vernier ■

The FF micro adjustable cartridge is mounted radially and ideally suitable for NC tools, because the axial cutting dimensions are constant. The design and features of the cartridge are the same as type FZ (see sectional drawing), and are therefore also highly accurate. The prodruding cutting edge is supported in its seating and mounting, and is therefore exceptionally robust. The adjustment is only carried out in a clamped state.

**Setting:** 1. Basic setting to be taken from drilling range ① and ②.
2. Machining diameter set by fine adjustment device.




| Drilling range ① $D_{min}$–$D_{max}$ | Drilling range ② $D_{min}$–$D_{max}$ | Cartridges Article | Cartridges Order No. | kg | Insert W30 L.H. radial rake 06 = 6° 12 = 12° ▽▽ 20 = 20° | Insert W57 neutral | Assembly parts Clamping screw Article | Assembly parts Clamping screw Order No. | Assembly parts Clamping screw Nm | Accessories Screwdriver Article | Accessories Screwdriver Order No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 29,5 – 36 | 35,5 – 42 | FF10-30 | **M30 20011** | 0,055 | **W30 04 .. 0.03..** | **W57 04140.04..** | S/M2×3,8-6IP | **N00 56021** | 0,62 | 6IP | **L05 00810** |
| 39 – 45 | 44 – 50 | FF12-39 | **M30 20021** | 0,031 | | | | | | | |
| 47 – 57 | 56 – 66 | FF16-47 | **M30 20031** | 0,062 | **W30 14 .. 0.04..** | **W57 14140.04..** | S/M2,6×5,2-8IP | **N00 56101** | 1,28 | 8IP | **L05 00830** |
| 58 – 71 | 70 – 83 | FF20-58 | **M30 20041** | 0,123 | | | S/M2,6×6,2-8IP | **N00 56111** | 1,28 | | |
| 79 – 94 | 93 – 108 | FF25-79 | **M30 20051** | 0,268 | **W30 26 .. 0.05..** | **W57 26140.04..** | S/M3,5×7,3-10IP | **N00 56211** | 2,8 | 10IP | **L05 00850** |
| 100 – 121 | 120 – 141 | FF32-100 | **M30 20061** | 0,548 | | | | | | | |
| 138 – 159 | 158 – 179 | FF32-138 | **M30 20071** | 0,76 | | | | | | | |

For further details on inserts see chapter 7

| for cartridges | d | Ø Z | a | b | h | e | f | c | d2 | L | x | N | k | v | m | r | s |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M30 20011 | 25 | 10 | 11 | 5 | 3,7 | 3,9 | 6,7 | 3,9 | M6 | 28,8 | 7,5 | 2,0 | 5 | 3,5 | 11 | 0,5 | 8 |
| M30 20021 | 32 | 12 | 13,5 | 6 | 7 | 6 | 9,5 | 6 | M8 | 37,75 | 9 | 1,2 | 6 | 3,5 | 12,5 | 1 | 11 |
| M30 20031 | 40 | 16 | 17,5 | 8 | 7,5 | 7,5 | 12 | 8 | M10 | 45,4 | 11 | 1,2 | 8 | 5 | 16 | 2 | 13 |
| M30 20041 | 50 | 20 | 23 | 10 | 11 | 9 | 17 | 9 | M12 | 56,35 | 14,5 | 1,7 | 10 | 7 | 18 | 2 | 14,5 |
| M30 20051 | 63 | 25 | 27 | 12,5 | 17,9 | 12,4 | 24,9 | 15,4 | M16 | 77,8 | 16 | 2,0 | 12,5 | 8 | 21,6 | 2 | 28 |
| M30 20061 | 80 | 32 | 33,5 | 16 | 24,5 | 15 | 34,5 | 22 | M20 | 97,4 | 19 | 2,7 | 16 | 11 | 25,5 | 2 | 35 |
| M30 20071 | 115 | 32 | 33,5 | 16 | 43,5 | 20 | 53,5 | 20 | M20 | 131,4 | 19 | 2,7 | 16 | 11 | 25,5 | 2 | 35 |

# KOMET Kometric® FZ Micro-adjustable Cartridge

## BENEFITS for you:

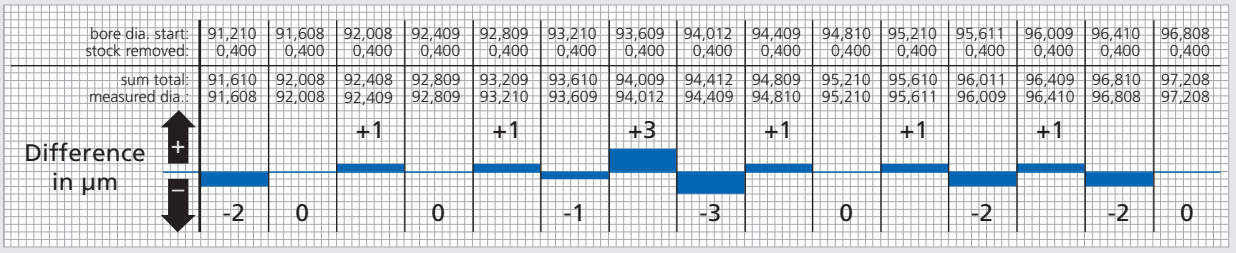
- Fast, accurate tool setting: simply using setting spindle
- Maximum accuracy: Tool is adjusted when clamped Anti-backlash design
- Large turning range: In addition to micro-adjustment, the whole cartridge can be moved
- Easy mounting: Only requirements: close tolerance bore or broached square hole and tapped hole for clamping
- Minimum weakening of boring bar: due to small dimensions of cartridges
- Suitable for standard boring bars
- Excellent for external turning: on automatics, turret lathes and special machines

## Application example

### A Material: Cast iron GG22

Boring bar: BZ 40×63×160 mm
Micro-adjustable cartridge:
Housing: **M30 02121** (FZ25-80-3)
Turning tool: **M30 52061** (U25Z3-805)
Insert: **W30 26600.0521** (TOHX 140305 EN K10)

Cutting speed: v ~ 80 m/min
Feed: f = 0.08 mm⁻¹
Cutting depth: a = 0.2 mm (≙ 0.4 mm in dia.)
Measuring tool: TESA internal precision measuring instrument

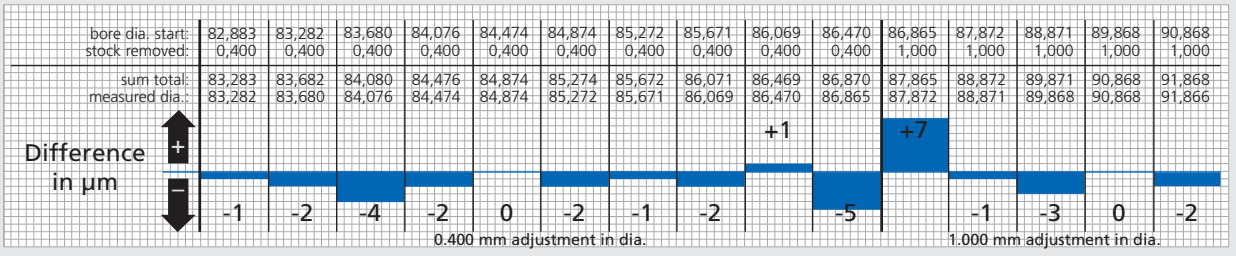



**Result:** Average deviation per pass 1.2 µm

### B Material: Cast iron GG22

Boring bar: BZ 40×63×160 mm
Micro-adjustable cartridge:
Housing: **M30 02121** (FZ25-80-3)
Turning tool: **M30 52061** (U25Z3-805)
Insert: **W30 26060.0521** (TOHX 140305 EL-G06 K10)

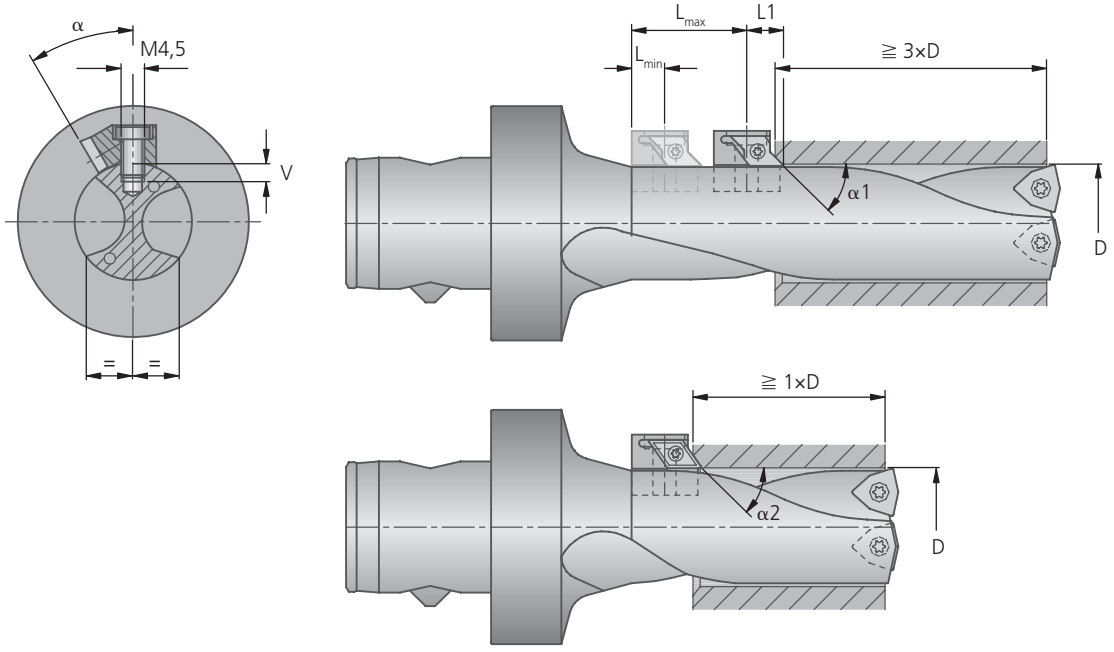
Cutting speed: v ~ 250 m/min
Feed: f = 0.1 mm⁻¹
Cutting depth: a = 0.2 mm (≙ 0.4 mm in dia.)
0.5 mm (≙ 1 mm in dia.) see diagram
Measuring tool: TESA internal precision measuring instrument




**Result:** Average deviation per pass 2.2 µm

**Note:** The application details shown depend on the environmental and application conditions (e.g. machine, ambient temperature, use of lubricant/coolant and the machining result required). These are subject to correct operating conditions, correct application and compliance with the spindle speed limits given for the tools.

## for insert W60 / W79




| Order No. | for ∅ range D | max. chamfer diameter | L min | L max | L1 | α | Insert W60 / W79 | | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D50 00800 | 20 – 24 | D+5 | 7 | 30 | 10 | 26° | W60 18600.4003<br>W60 18420.0403<br>W79 18060.0403 | α1=45°<br>α2=55°<br>α2=55° | N00 57221<br>S2553-7IP<br>0,9 Nm | L05 00820<br>7IP | N10 11500<br>Tx M4,5×10,5 |
| D50 00810 | 25 – 29 | | 5 | 35 | 8 | 30° | | | | | |
| D50 00820* | 30 – 36 | | 5 | 40 | 8 | 23° | | | | | |
| D50 00830* | 37 – 44 | | 5 | 50 | 8 | 20° | | | | | |
| D50 00840* | 45 – 52 | | 5 | 60 | 8 | 19° | | | | | |

* on request

**Supply includes:**
Chamfering cartridge with assembly parts. Please order accessories and inserts separately.

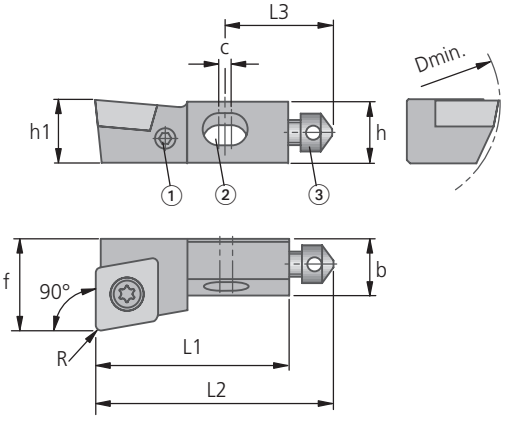
Stepped tools are an important element for minimising production costs. The new D5000 chamfering cartridge now offers an economical solution to frequent solid drilling applications where chamfer machining is required. The D5000 chamfering cartridge can be fitted to any KUB® insert drills, KUB Trigon®, KUB Quatron®, KUB Pentron® and KUB Duon®.



# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 90°$

## N for insert W85 (CPGW / CPTG)

- **insert tilt of +5° over cutting edge**
- R.H. short clamp holder as shown with left or neutral insert
- mounting instruction see page 512 – 513




| Article cutting form ▼ | Order No. | D min | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,2 | R0,4 | R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Shim plate Order No. | Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS8-CP0602-90R | **D40 06410** | 25 | 7,6 | 7,8 | 25 | 32 | 17 | 6,5 | 2 | 10,03 | 10 | | 0,009 | UKS8-5-75R | **L02 20310** | **55023 00206** M2×6 DIN965 |
| UKS10-CP09T3-90R | **D40 06430** | 33 | 9,6 | 9,8 | 30 | 37 | 17 | 9 | 2 | | 14 | 13,92 | 0,018 | UKS10-5-90R | **L02 20220** | **55023 00206** M2×6 DIN965 |
| UKS16-CP1204-90R | **D40 06440** | 56 | 15,6 | 15,8 | 42 | 50 | 25 | 12 | 2 | | 18 | 17,92 | 0,051 | UKS16-5-90R | **L02 20240** | **55021 03008** M3×8 DIN7991 |

| for short clamp holder | Insert: W85 L.H. size ▽▽ | Insert: W85 neutral size ▽▽ | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Location screw ② Order No. Article | Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|
| UKS8-CP0602-90R | **W85 18000..** CPG..0602..L | **W85 18000..** CPGW 0602..N | **N00 57221** S2553-7IP 0,9 Nm | **L05 00820** 7IP | **55054 03006** M3×6 | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS10-CP09T3-90R | **W85 32000..** CPG..09T3..L | **W85 32000..** CPGW 09T3..N | **N00 57261** S3575-15IP 2,8 Nm | **L05 00860** 15IP | **55054 04008** M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS16-CP1204-90R | **W85 44000..** CPG..1204..L | **W85 44000..** CPGW 1204..N | **N00 57301** S45100-20IP 6,25 Nm | **L05 00870** 20IP | **55054 05012** M5×12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12-4 |

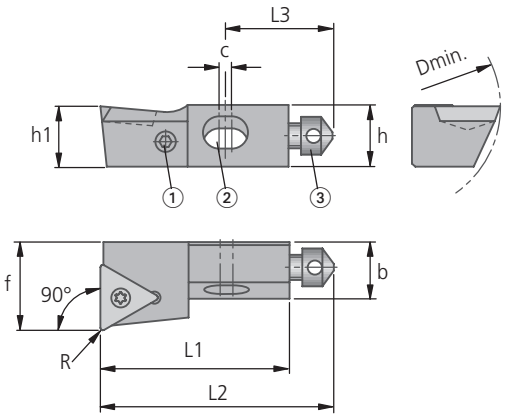
For further details on inserts see chapter 7

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.
* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 90°$

## for insert W32 (TPH..) / W58 (TPGX..) N

**insert tilt of +5° over cutting edge** ■
R.H. short clamp holder as shown with left or neutral insert ■
L.H. short clamp holder in mirror image with right or neutral insert ■
mounting instruction see page 512 – 513 ■




| Article cutting form ▼ | Order No. | D min | h1 | h | L1 | L2 | L3 | b | c | ISO dimension f for radius R0,4 | ISO dimension f for radius R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Accessories: Shim plate Order No. | Accessories: Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-T06-90 R | **D40 07000** | 20 | 5,8 | 5,9 | 20 | 24,5 | 12 | 4,5 | 1 | 7 | 6,7 | 0,04 | UKS6-5-90R | **L02 20200** | **55023 00206** M2×6 DIN965 |
| UKS8-T09-90 R | **D40 07010** | 25 | 7,6 | 7,8 | 25 | 32 | 17 | 6,5 | 2 | 10 | 9,7 | 0,03 | UKS8-5-75R | **L02 20310** | **55023 00206** M2×6 DIN965 |
| UKS8-T09-90 L | **D40 02010** | | | | | | | | | | | | UKS8-7-75L | **L02 21310** | |
| UKS10-T11-90 R | **D40 07020** | 33 | 9,6 | 9,8 | 30 | 37 | 17 | 9 | 2 | 14 | 13,7 | 0,04 | UKS10-5-90R | **L02 20220** | **55023 00206** M2×6 DIN965 |
| UKS10-T11-90 L | **D40 02020** | | | | | | | | | | | | UKS10-5-90L | **L02 21220** | |
| UKS10-T13-90 R | **D40 07030** | 33 | 9,6 | 9,8 | 30 | 37 | 17 | 9 | 2 | 14 | 13,7 | 0,02 | UKS10-5-90R | **L02 20220** | **55023 00206** M2×6 DIN965 |
| UKS10-T13-90 L | **D40 02030** | | | | | | | | | | | | UKS10-5-90L | **L02 21220** | |
| UKS16-T16-90 R | **D40 07040** | 56 | 15,6 | 15,8 | 42 | 50 | 25 | 12 | 2 | 18 | 17,7 | 0,10 | UKS16-5-90R | **L02 20240** | **55021 03008** M3×8 DIN7991 |
| UKS16-T16-90 L | **D40 02040** | | | | | | | | | | | | UKS16-5-90L | **L02 21240** | |
| UKS20-T22-90 R | **D40 07050** | 60 | 19,6 | 19,8 | 47 | 57 | 27 | 15 | 2 | 22 | 21,7 | 0,10 | UKS20-5-90R | **L02 20250** | **55021 03008** M3×8 DIN7991 |

| for short clamp holder | Insert: W32 L.H. size ▽▽ | Insert: W32 R.H. size ▽▽ | Insert: W32 neutral size ▽▽ | Insert: W58 neutral size ▽▽ | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Assembly parts: Location screw ② Order No. Article | Assembly parts: Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| UKS6-T06-90 R | **W32 03150..** | | **W32 03.....** TPHB 0601.. | **W58 03.....** TPGX 0601.. | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **55054 02504** M2,5×4 | **L02 30111** UKS6-3 1,9 Nm | **L02 30010** UKS6-4 |
| UKS8-T09-90 R | **W32 13150..** | | **W32 13.....** TPHB 0902.. | **W58 13.....** TPGX 0902.. | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **55054 03006** M3×6 | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS8-T09-90 L | | **W32 13450..** | | | | | | | |
| UKS10-T11-90 R | **W32 18150..** | | **W32 18.....** TPHB 1102.. | **W58 18.....** TPGX 1102.. | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **55054 04008** M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS10-T11-90 L | | **W32 18450..** | | | | | | | |
| UKS10-T13-90 R | **W32 23150..** | | **W32 23.....** TPHB 1303.. | **W58 23.....** TPGX 1303.. | **N00 56201** S/M3,5×6,2-10IP 2,8 Nm | **L05 00850** 10IP | **55054 04008** M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS10-T13-90 L | | **W32 23450..** | | | | | | | |
| UKS16-T16-90 R | **W32 32150..** | | **W32 32.....** TPHB 1603.. | **W58 32.....** TPGX 1603.. | **N00 56301** S/M4×8-10IP 4,3 Nm | **L05 00850** 10IP | **55054 05012** M5×12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12-4 |
| UKS16-T16-90 L | | **W32 32450..** | | | | | | | |
| UKS20-T22-90 R | **W32 44150..** | | **W32 44.....** TPHB 2204.. | | **N00 56411** S/M5×13,4-20IP 6,25 Nm | **L05 00870** 20IP | **55054 05012** M5×12 | **L02 30160** UKS20-3 35 Nm | **L02 30030** UKS12-4 |

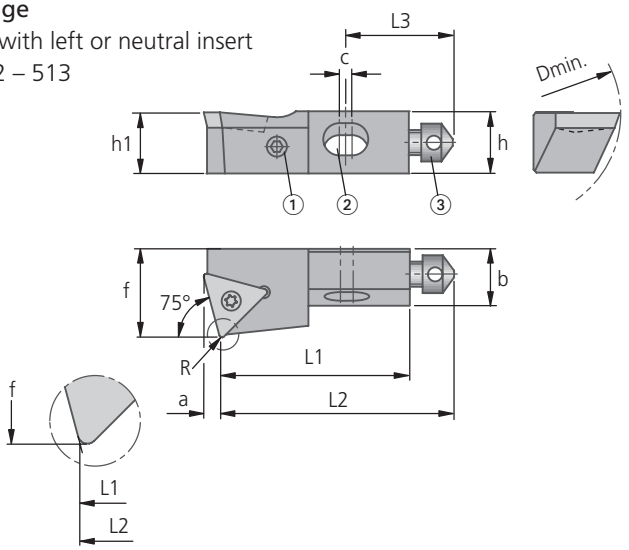
For further details on inserts see chapter 7

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.
* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® UKS Short Clamp Holder $\varkappa = 75°$

## N for insert W32 (TPH..) / W58 (TPGX..)

- insert tilt of +5° over cutting edge
- R.H. short clamp holder as shown with left or neutral insert
- mounting instruction see page 512 – 513




| Article cutting form ▼ | Order No. | D min | h1 | h | L1 | L2 | L3 | b | c | a | ISO dimension f for radius R0,4 | ISO dimension f for radius R0,8 | kg | Accessories: Shim plate (grinding allowance 2,5 / 0,5) Article | Accessories: Shim plate Order No. | Accessories: Countersunk screw for shim plate Order No. Article |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UKS6-T06-75 R | **D40 07200** | 20 | 5,8 | 5,9 | 20 | 24,5 | 12 | 4,5 | 1 | 1,51 | 7 | 6,7 | 0,005 | UKS6-5-75R | **L02 20300** | **55023 00206** M2×6 DIN965 |
| UKS8-T09-75 R | **D40 07210** | 25 | 7,6 | 7,8 | 25 | 32 | 17 | 6,5 | 2 | 2,23 | 10 | 9,7 | 0,015 | UKS8-5-75R | **L02 20310** | **55023 00206** M2×6 DIN965 |
| UKS10-T11-75 R | **D40 07220** | 33 | 9,6 | 9,8 | 30 | 37 | 17 | 9 | 2 | 2,58 | 14 | 13,7 | 0,024 | UKS10-5-75R | **L02 20320** | **55023 00206** M2×6 DIN965 |
| UKS10-T13-75 R | **D40 07230** | 33 | 9,6 | 9,8 | 30 | 37 | 17 | 9 | 2 | 3,29 | 14 | 13,7 | 0,045 | UKS10-5-75R | **L02 20320** | **55023 00206** M2×6 DIN965 |
| UKS16-T16-75 R | **D40 07240** | 56 | 15,6 | 15,8 | 42 | 50 | 25 | 12 | 2 | 4 | 18 | 17,7 | 0,062 | UKS16-5-75R | **L02 20340** | **55021 03008** M3×8 DIN7991 |
| UKS20-T22-75 R | **D40 07250** | 60 | 19,6 | 19,8 | 47 | 57 | 27 | 15 | 2 | 5,43 | 22 | 21,7 | 0,113 | UKS20-5-75R | **L02 20350** | **55021 03008** M3×8 DIN7991 |

| for short clamp holder | Insert: W32 L.H. size ▽▽ | Insert: W32 neutral size ▽▽ | Insert: W58 neutral size ▽▽ | Assembly parts: Clamping screw Order No. Article | Accessories: Screwdriver Order No. Article | Assembly parts: Adjusting screw ① DIN 916 Order No. Article | Assembly parts: Location screw ② Order No. Article | Assembly parts: Stop screw ③ Order No. Article |
|---|---|---|---|---|---|---|---|---|
| UKS6-T06-75 R | **W32 03150..** TPHX 0601.. | **W32 03.....** TPHB 0601.. | **W58 03.....** TPGX 0601.. | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **55054 02504** M2,5×4 | **L02 30111** UKS6-3 1,9 Nm | **L02 30010** UKS6-4 |
| UKS8-T09-75 R | **W32 13150..** TPHX 0902.. | **W32 13.....** TPHB 0902.. | **W58 13.....** TPGX 0902.. | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **55054 03006** M3×6 | **L02 30121*** UKS8-3 4,1 Nm | **L02 30020** UKS8-4 |
| UKS10-T11-75 R | **W32 18150..** TPHX 1102.. | **W32 18.....** TPHB 1102.. | **W58 18.....** TPGX 1102.. | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **55054 04008** M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS10-T13-75 R | **W32 23150..** TPHX 1303.. | **W32 23.....** TPHB 1303.. | **W58 23.....** TPGX 1303.. | **N00 56201** S/M3,5×6,2-10IP 2,8 Nm | **L05 00850** 10IP | **55054 04008** M4×8 | **L02 30130** UKS10-3 8,5 Nm | **L02 30020** UKS8-4 |
| UKS16-T16-75 R | **W32 32150..** TPHX 1603.. | **W32 32.....** TPHB 1603.. | **W58 32.....** TPGX 1603.. | **N00 56301** S/M4×8-10IP 4,3 Nm | **L05 00850** 10IP | **55054 05012** M5×12 | **L02 30140** UKS12-3 14 Nm | **L02 30030** UKS12-4 |
| UKS20-T22-75 R | **W32 44150..** TPHX 2204.. | **W32 44.....** TPHB 2204.. | | N00 56411 S/M5×13,4-20IP 6,25 Nm | **L05 00870** 20IP | **55054 05012** M5×12 | **L02 30160** UKS20-3 35 Nm | **L02 30030** UKS12-4 |

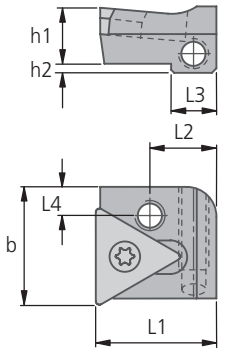
For further details on inserts see chapter 7

**Supply includes:**
Short clamp holder with assembly parts. Please order insert and accessories separately.
* The shim plate for UKS8... is supplied with longer holding screw L02 30170.

# KOMET Kometric® FLWE Adjustable Insert Flat Bed Seatings $\varkappa$ = 90°

## for insert W32 (TPH..) / W58 (TPGX..) N

insert tilt of +5° over cutting edge ■
mounting instruction see page 546 ■




Insert seating cutting form 1
as shown with left or neutral
insert.

Dimension 'b' relates to the appropriate insert radius

| Article<br>cutting form ▼ | Order No. | for radius R0,4<br>b | L1 | L2 | L3 | L4 | h1 | h2 | kg |
|---|---|---|---|---|---|---|---|---|---|
| FLWE-TPHB06-90°-1 | **D53 56400** | 7,8 | 8 | 4,4 | 3 | 1,9 | 3,6 | 0,6 | 0,004 |
| FLWE-TPHB09-90°-1 | **D53 56420** | 11 | 12 | 7 | 5 | 2,5 | 5,7 | 0,95 | 0,006 |

| for<br>insert seating | Insert | | | Assembly parts | Accessories | Assembly parts | |
|---|---|---|---|---|---|---|---|
| | W32<br>L.H.<br>size ▽▽ | W32<br>neutral<br>size ▽▽ | W58<br>neutral<br>size ▽▽ | Clamping screw<br>Order No.<br>Article | Screwdriver<br>Order No.<br>Article | Location screw<br>Order No.<br>Article | Threaded pin<br>Order No.<br>Article |
| FLWE-TPHB06.. | **W32 03150..**<br>TPHX 0601.. | **W32 03.....**<br>TPHB 0601.. | **W58 03.....**<br>TPGX 0601.. | **N00 56021**<br>S/M2×3,8-6IP<br>0,62 Nm | **L05 00810**<br>6IP | **N10 11200** | **55051 02005**<br>M2×5 |
| FLWE-TPHB09.. | **W32 13150..**<br>TPHX 0902.. | **W32 13.....**<br>TPHB 0902.. | **W58 13.....**<br>TPGX 0902.. | **N00 56101**<br>S/M2,6×5,2-8IP<br>1,28 Nm | **L05 00830**<br>8IP | **N10 11310** | **55051 03006**<br>M3×6 |

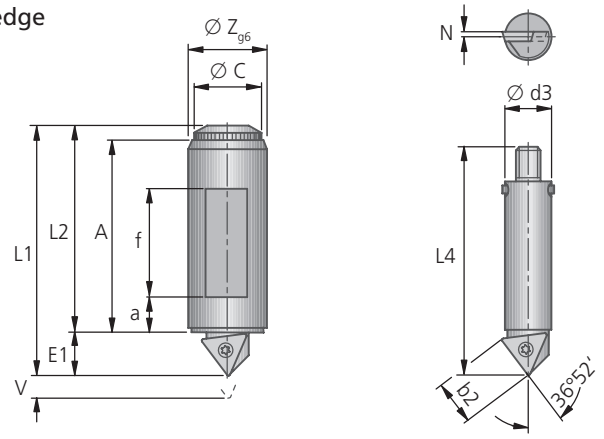
For further details on inserts see chapter 7

**Supply includes:**
Insert seating with assembly parts. Please order insert and accessories separately.

# KOMET Kometric® FZ Micro-adjustable Cartridges Ø 28 – 68 mm

## N for insert W32 (TPH..) / W58 (TPGX..)

■ insert tilt of +5° over cutting edge




| Drilling range[1] | | | Housing | | Turning tool | | Insert | | | Assembly parts | Accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | W32 L.H. | W32 neutral | W58 neutral | Clamping screw | Screwdriver | Wrench |
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | Article | Order No. | Order No. Article | kg | size ▽▽ | size ▽▽ | size ▽▽ | Order No. Article | Order No. Article | Order No. Article |
| 28 | 34,4 | 38 | FZ10-28-3 | **M30 02031** | **M30 52421** U10Z3-T06 | 0,013 | **W32 03150..** TPHX 0601.. | **W32 03.....** TPHB 0601.. | **W58 03.....** TPGX 0601.. | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **L05 01020** R2/N1 |
| 32 | 38,4 | 44 | FZ10-32-3 | **M30 02041** | | 0,015 | | | | | | |
| 36 | 44 | 48 | FZ12-36-3 | **M30 02051** | **M30 52431** U12Z3-T06 | 0,026 | | | | **N00 56031** S/M2×4,9-6IP 0,62 Nm | **L05 00810** 6IP | **L05 01030** R2a/N2 |
| 40 | 48 | 55 | FZ12-40-3 | **M30 02061** | | 0,029 | | | | | | |
| 45 | 54,6 | 60 | FZ16-45-3 | **M30 02071** | **M30 52441** U16Z3-T09 | 0,058 | **W32 13150..** TPHX 0902.. | **W32 13.....** TPHB 0902.. | **W58 13.....** TPGX 0902.. | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **L05 01040** N3 |
| 50 | 59,6 | 68 | FZ16-50-3 | **M30 02081** | | 0,067 | | | | | | |

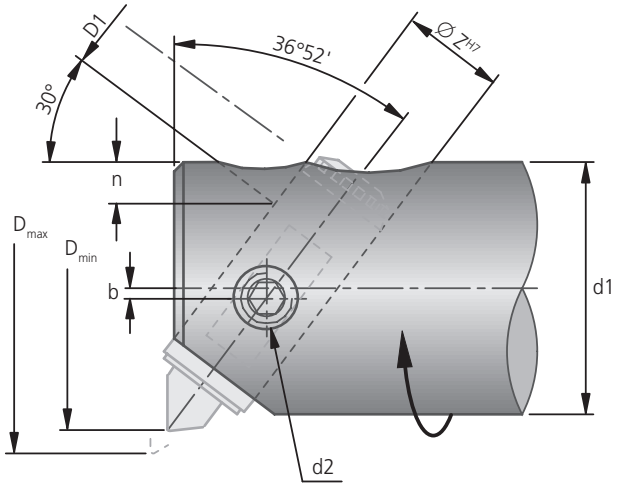
For further details on inserts see chapter 7

| Drilling range[1] | | | d1 | n[2] | Cutter Ø D1[2] | b | d2 | Ø $Z^{H7}_{g6}$ | L1 | L2 | E1 | V | A | Ø C | a | f | Ø d3 | L4 | N | b2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $D_{min}$ ① | $D_{max}$ ② | $D_{max}$ ③ | | | | | | | | | | | | | | | | | | |
| 28 | 34,4 | 38 | 25 | 3,5 | 8 | 2 | M6 | 10 | 31,5 | 25,5 | 6 | 4 | 23,3 | 8,9 | 6 | 12 | 5,7 | 24,8 | 1,2 | 6,5 |
| 32 | 38,4 | 44 | | | | | | | 35,5 | 29,5 | | | 27,3 | | | 16 | | | | |
| 36 | 44 | 48 | 32 | 4 | 10 | 2,5 | M8 | 12 | 40,3 | 33,5 | 6,8 | 5 | 31 | 10,9 | 8 | 16 | 6,7 | 31,3 | 1,2 | 6,5 |
| 40 | 48 | 55 | | | | | | | 45,3 | 38,5 | | | 36 | | | 21 | | | | |
| 45 | 54,6 | 60 | 40 | 6,5 | 12 | 3 | M10 | 16 | 51 | 42 | 9 | 6 | 39 | 13,9 | 10 | 20 | 8,6 | 39,7 | 1,2 | 9 |
| 50 | 59,6 | 68 | | | | | | | 57 | 48 | | | 45 | | | 26 | | | | |

[1] Value ① to ② = micro adjustment range of cartridge
Value ① to ③ = total adjustment range, consisting of micro and rough adjustment of cartridge in holder
[2] when using rough adjustment, the distance „n" must be used on the boring bar

## Angled mounting 36°52'

■ adjustment accuracy 1.6 µm Ø above vernier



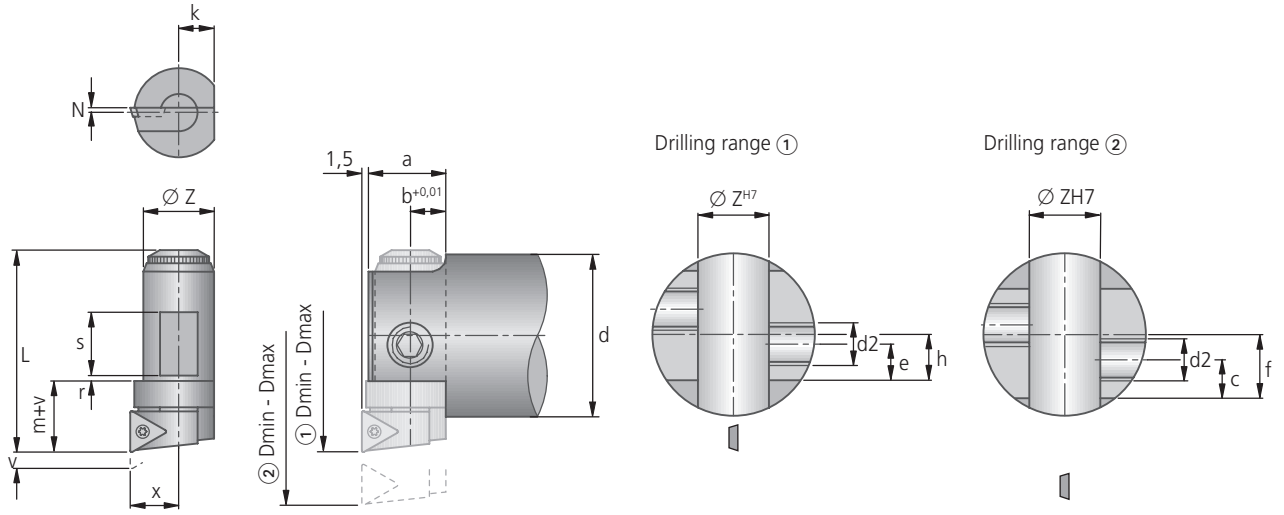
# KOMET Kometric® FF Micro-adjustable Cartridges Ø 29,5 – 66 mm

## for insert W32 (TPH..) / W58 (TPGX..) N

**insert tilt of +5° over cutting edge ■**
adjustment accuracy 2 µm ∅ above vernier ■

The FF micro adjustable cartridge is mounted radially and ideally suitable for NC tools, because the axial cutting dimensions are constant. The design and features of the cartridge are the same as type FZ (see sectional drawing), and are therefore also highly accurate. The prodruding cutting edge is supported in its seating and mounting, and is therefore exceptionally robust. The adjustment is only carried out in a clamped state.

**Setting:** 1. Basic setting to be taken from drilling range ① and ②.
2. Machining diameter set by fine adjustment device.




| Drilling range ① $D_{min}$–$D_{max}$ | Drilling range ② $D_{min}$–$D_{max}$ | Cartridges Article | Cartridges Order No. | kg | Insert W32 L.H. size ▽▽ | Insert W32 neutral size ▽▽ | Insert W58 neutral size ▽▽ | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| 29,5 – 36 | 35,5 – 42 | FF10-T06-30 | **M30 20201** | 0,055 | **W32 03150..** | **W32 03.....** TPHB 0601.. | **W58 03.....** TPGX 0601.. | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP |
| 39 – 45 | 44 – 50 | FF12-T06-39 | **M30 20211** | 0,031 | | | | | |
| 47 – 57 | 56 – 66 | FF16-T09-47 | **M30 20221** | 0,062 | **W32 13150..** | **W32 13.....** TPHB 0902.. | **W58 13.....** TPGX 0902.. | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP |

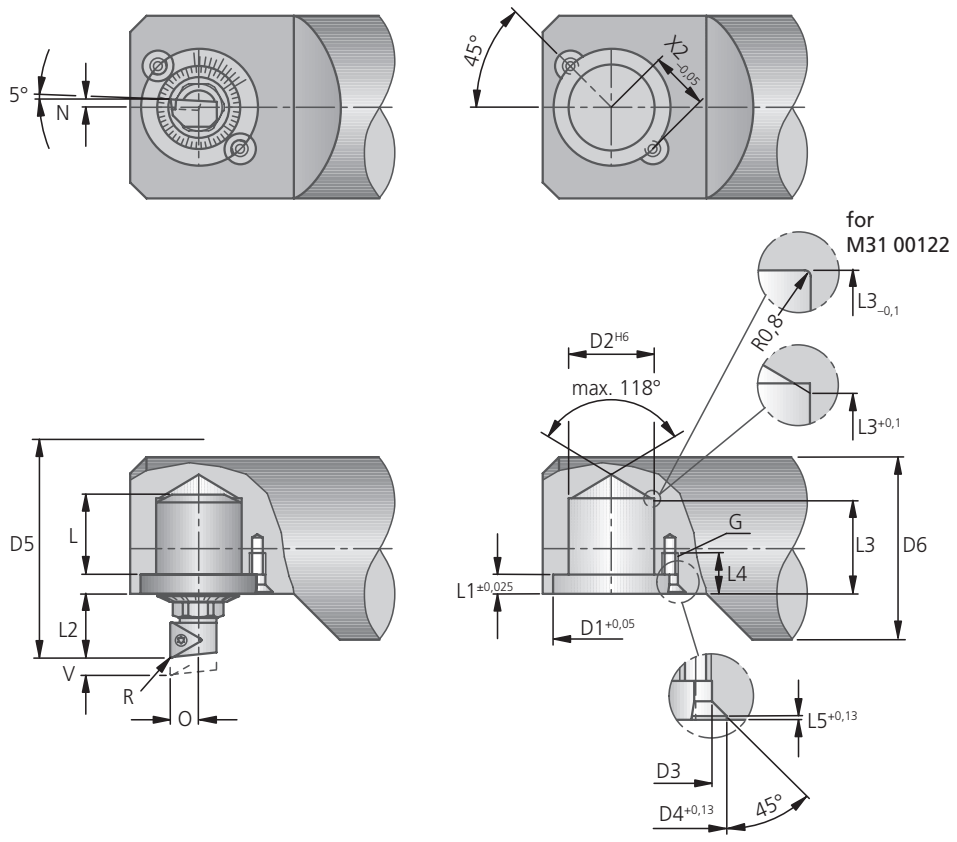
For further details on inserts see chapter 7

| for cartridges | d | Ø Z | a | b | h | e | f | c | d2 | L | x | N | k | v | m | r | s |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M30 20201 | 25 | 10 | 11 | 5 | 3,7 | 3,9 | 6,7 | 3,9 | M6 | 28,8 | 7,5 | 2,0 | 5 | 3,5 | 11 | 0,5 | 8 |
| M30 20211 | 32 | 12 | 13,5 | 6 | 7 | 6 | 9,5 | 6 | M8 | 37,75 | 9 | 1,2 | 6 | 3,5 | 12,5 | 1 | 11 |
| M30 20221 | 40 | 16 | 17,5 | 8 | 7,5 | 7,5 | 12 | 8 | M10 | 45,4 | 11 | 1,2 | 8 | 5 | 16 | 2 | 13 |

# KOMET Kometric® Micro-adjustable Cartridges up to Ø 25,4 mm

## N for insert W32 (TPH..) / W58 (TPGX..)

■ insert tilt of +5° over cutting edge




## Radial Mounting

- ■ the smallest adjustment increment is 0.002 mm in the ∅ above vernier
- ■ easy adjustment from the front
- ■ high precision setting
- ■ no clamping required
- ■ compact, rigid design
- ■ two mounting sizes
- ■ significant saving in setting times
- ■ extensive range of inserts with positive chip geometry provides the right type of cutting for the material

| min. turning Ø D5 | Order No. | kg | Insert W32 L.H. size ▽▽ | Insert W32 neutral size ▽▽ | Insert W58 neutral size ▽▽ | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw 2× DIN7991 Order No. Article | Accessories Wrench Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| 25,4 | **M31 00122** | 0,02 | **W32 03150..** TPHX 0601.. | **W32 03.....** TPHB 0601.. | **W58 03.....** TPGX 0601.. | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **M31 00020.18** M3×6 sim. DIN7991 | **18589 10010** SW10 |
| 36,5 | **M31 00153** | 0,04 | **W32 13150..** TPHX 0902.. | **W32 13.....** TPHB 0902.. | **W58 13.....** TPGX 0902.. | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **55021 03008** M3×8 | **18589 10014** SW14 |
| 73 | **M31 00162** | 0,25 | **W32 23150..** TPHX 1303.. | **W32 23.....** TPHB 1303.. | **W58 23.....** TPGX 1303.. | **N00 56201** S/M3,5×6,2-10IP 2,8 Nm | **L05 00850** 10IP | **55021 05012** M5×12 | **18589 10022** SW22 |

**Supply includes:**
Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

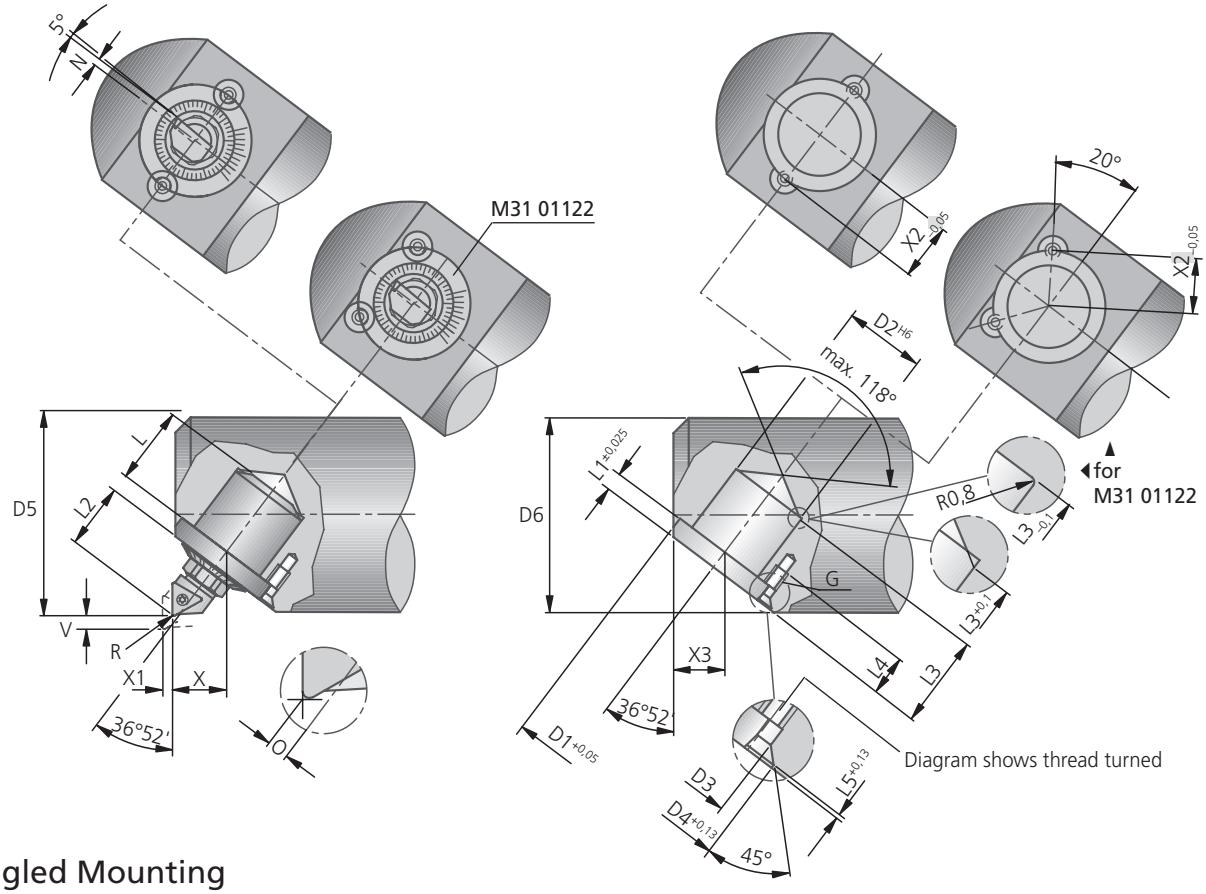
## Mounting dimension

| for cartridges | D1 | D2 | D3 | D4 | D6 min. | L | L1 | L2 | L3 min. | L4 | L5 | G | N | R | V | O | X2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M31 00122 | 21 | 15 | 3,2 | 4,5 | 25 | 9,1 | 3,16 | 10,3 | 12,6 | 13 | 1,6 | M3 | 1,5 | 0,4 | 1,0 | 3,6 | 10,5 |
| M31 00153 | 24,6 | 19,05 | 4,3 | 6 | 33 | 14,54 | 3,96 | 13,5 | 19 | 10 | 1,5 | M3 | 2 | 0,4 | 1,1 | 3,94 | 12,3 |
| M31 00162 | 46 | 31,75 | 5,5 | 10 | 65 | 29,65 | 6,35 | 24,4 | 37 | 12 | 1,5 | M5 | 2 | 0,4 | 5,5 | 7,1 | 23 |

# KOMET Kometric® Micro-adjustable Cartridges up to Ø 25,4 mm

## for insert W32 (TPH..) / W58 (TPGX..) N

insert tilt of +5° over cutting edge ■




## Angled Mounting

- the smallest adjustment increment is 0.0016 mm in the ∅ above vernier
- easy adjustment from the front
- high precision setting
- no clamping required
- compact, rigid design
- two mounting sizes
- significant saving in setting times
- extensive range of inserts with positive chip geometry provides the right type of cutting for the material

| min. turning Ø D5 | Order No. | kg | Insert W32 L.H. size ▽▽ | Insert W32 neutral size ▽▽ | Insert W58 neutral size ▽▽ | Assembly parts Clamping screw Order No. Article | Accessories Screwdriver Order No. Article | Assembly parts Location screw 2× DIN7991 Order No. Article | Accessories Wrench Order No. Article |
|---|---|---|---|---|---|---|---|---|---|
| 25,4 | **M31 01122** | 0,02 | **W32 03150..** TPHX 0601.. | **W32 03.....** TPHB 0601.. | **W58 03.....** TPGX 0601.. | **N00 56021** S/M2×3,8-6IP 0,62 Nm | **L05 00810** 6IP | **M31 00020.18** M3×6 sim. DIN7991 | **18589 10010** SW10 |
| 36,5 | **M31 01153** | 0,04 | **W32 13150..** TPHX 0902.. | **W32 13.....** TPHB 0902.. | **W58 13.....** TPGX 0902.. | **N00 56101** S/M2,6×5,2-8IP 1,28 Nm | **L05 00830** 8IP | **55021 03008** M3×8 | **18589 10010** SW10 |
| 73 | **M31 01162** | 0,25 | **W32 23150..** TPHX 1303.. | **W32 23.....** TPHB 1303.. | **W58 23.....** TPGX 1303.. | **N00 56201** S/M3,5×6,2-10IP 2,8 Nm | **L05 00850** 10IP | **55021 05012** M5×12 | **18589 10017** SW17 |

**Supply includes:**
Micro-adjustable cartridge with assembly parts. Please order accessories and inserts (chapter 7) separately.

## Mounting dimension

| for cartridges | D1 | D2 | D3 | D4 | D6 min. | L | L1 | for R0,4 L2 | L3 min. | L4 | L5 | G | N | ISO dimension for R | V | O | X | X1 | X2 | X3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M31 01122 | 19 | 15 | 3,2 | 4,5 | 23 | 9,1 | 3,2 | 11,1 | 12,7 | 13 | 1,6 | M3 | 1,5 | 0,4 | 0,8 | 0,68 | 9,2 | 0,6 | 9,5 | 8,8 |
| M31 01153 | 24,6 | 19,05 | 3,5 | 6 | 33 | 14,54 | 3,96 | 14,94 | 19 | 10 | 1,5 | M3 | 2 | 0,4 | 1,3 | 0,9 | 12,15 | 0,95 | 12,3 | 11,3 |
| M31 01162 | 46 | 31,75 | 5,5 | 10 | 65 | 29,65 | 6,35 | 27 | 37 | 12 | 1,5 | M5 | 2 | 0,4 | 4,7 | 0,9 | 20,8 | 3,75 | 23 | 19,8 |

# Machining aluminium with DIHART® tools

## Application example: cylinder head

### The task

Cam shaft bores
- Machining aluminium
- Maximum tolerance requirements
- Allowance up to 1.5 mm
- Large scale production
- Solutions for machining centres and transfer lines



### Our solution

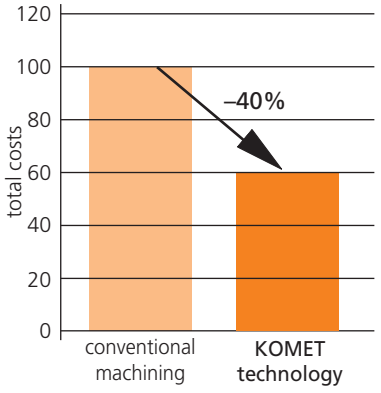
Ready-to-use solution from tool design to putting into operation
- Development of multiple insert PCD tools with up to eight cutting edges
- Pre-machining with multiple insert pilot PCD tool
- Finish machining with multiple insert PCD tool with carbide guide pad and internal coolant supply



### Customer use

Complete result in just a few weeks
- 50% reduction of main time
- Increase in tool life to up to 80,000 parts per tool
- No setting
- Easy handling
- Approx. 40% reduction in production costs

Production costs
Cam shaft bores



# Machining aluminium with JEL® tools

## The future

The conventional filter will be replaced by a new generation of oil filters; these are already in use on new car models. This consists mainly of an aluminium housing fitted with the appropriate filter elements.

**Cast aluminium filter housing:**
Material: G - AlSi9Cu3

**Machined with:**
TOMILL thread milling tool GWF S80×3 with PCD inserts

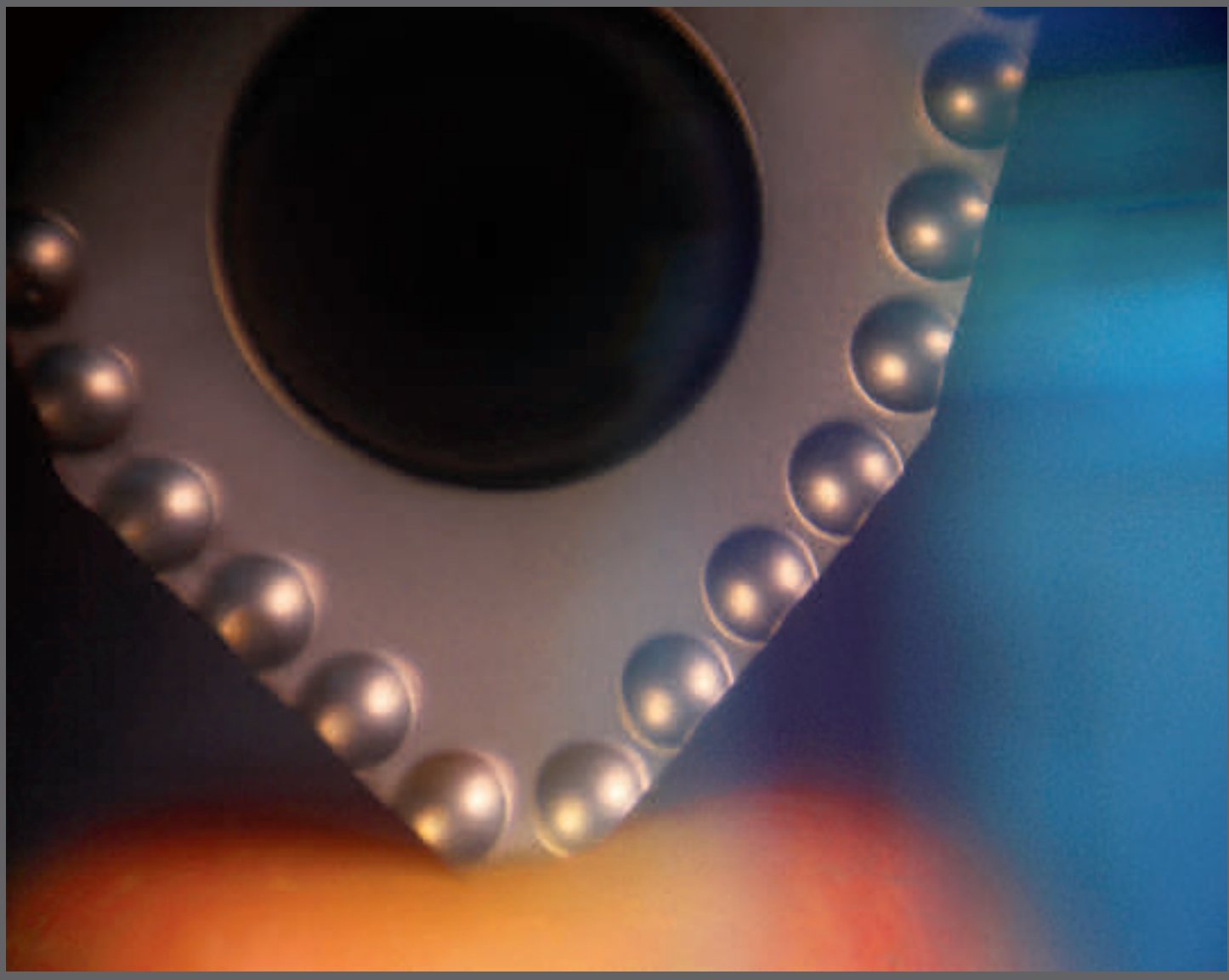


**Special solutions:**
Special VABOS (variable boring and counterboring system) with PCD inserts for complete face machining on filter housing.



# KOMET®

## Inserts



KOMET® inserts and the appropriate tools provide the user with an efficient system for machining any materials.








| KOMET® | | Page |
|---|---|---|
| Programme Summary | | 606 – 607 |
| Cutting Materials | | 608 – 616 |
| **Unisix® Inserts** | | |
| W00, W01, W04 | 84° | 617 – 626 |
| W29 | | 633 – 641 |
| **Unisix® Inserts** | | |
| W24, W27 | 95° | 627 – 632 |
| **Inserts** | | |
| W30, W32, W34, W37 | | 642 – 663 |
| W57, W58, W59 | | 664 – 668 |
| C84 ISO insert | 60° | 701 |
| Q12 Milling insert | | 715 – 718 |
| **Inserts** | | |
| W60, W79 | 55° | 669 / 677 |
| C86 ISO insert | | 703 |
| **Inserts** | | |
| W78, W89 | 35° | 674 / 698 |
| **Inserts** | | |
| W80, W82, W83 | | 679 – 689 |
| C83 ISO insert | 90° | 700 |
| Q09 Milling insert | | 712 – 714 |
| **Inserts** | | |
| W85 | | 690 – 697 |
| C85 ISO insert | 80° | 702 |
| Q15 Milling insert | | 719 |
| **Inserts** | | |
| Q36 Milling insert | 85° | 720 – 721 |
| **Tangential Inserts** | | |
| Q80 | 90° | 722 |
| Inserts H60 / H62 | | 704 – 710 |
| Inserts H80 | | 711 |
| Numerical Coding | | 723 – 725 |
| Clamping screws | | Chapter 8 |

# Programme Summary – Inserts

## Unisix® W00 – WOHX standard



| L.H. cutting form | R.H. cutting form | neutral cutting form |
|---|---|---|
| ▸ 617 | ▸ 617 | ▸ 617 |

## Unisix® W01 – WOHX strengthened



| L.H. cutting form | R.H. cutting form | neutral cutting form | PCD / CBN | Power insert 90° / 75° | Milling insert |
|---|---|---|---|---|---|
| ▸ 618 | ▸ 619 | ▸ 620 | ▸ 621 | ▸ 622 | ▸ 624 |

## Unisix® W04 – WNHX P6 cutting edges



| L.H. cutting form | R.H. cutting form |
|---|---|
| ▸ 625 | ▸ 626 |

## Unisix® W24



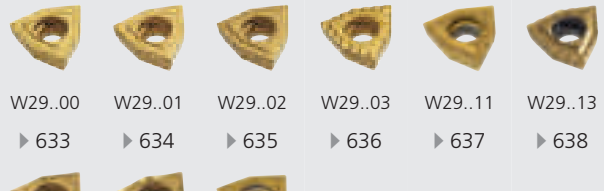
| W24..01 | W24..11 | W24..13 |
|---|---|---|
| ▸ 627 | ▸ 628 | ▸ 629 |

## Unisix® W27



| W27..00 | W27..01 | W27..10 |
|---|---|---|
| ▸ 630 | ▸ 631 | ▸ 632 |

## Unisix® W29 – WOEX



| W29..00 | W29..01 | W29..02 | W29..03 | W29..11 | W29..13 |
|---|---|---|---|---|---|
| ▸ 633 | ▸ 634 | ▸ 635 | ▸ 636 | ▸ 637 | ▸ 638 |



| W29..15 | W29..16 | W29..20 |
|---|---|---|
| ▸ 639 | ▸ 640 | ▸ 641 |

## W30 – TOHX / TOGX



| L.H. cutting form | R.H. cutting form | neutral cutting form | cutting form "F" | W30..82 L.H. cutting | W30..83 R.H. cutting |
|---|---|---|---|---|---|
| ▸ 642 | ▸ 644 | ▸ 645 | ▸ 646 | ▸ 647 | ▸ 648 |



| W30.....31 UF L.H. | W30.....39 ZZ L.H. | W30.....32 US L.H. | W30..94 PCD /CBN | W30..98 PCD | W30..99 PCD / CBN |
|---|---|---|---|---|---|
| ▸ 649 | ▸ 650 | ▸ 651 – 652 | ▸ 653 | ▸ 654 | ▸ 654 |

## W57 – TOHX / TOGX



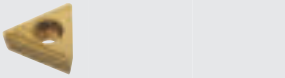
| W57..14 | W57..18 |
|---|---|
| ▸ 665 | ▸ 666 |

## W34 – TOHT



| W34..66 |
|---|
| ▸ 662 |

## W59 – TOHT



| W59..05 |
|---|
| ▸ 668 |

## W32 – TPHX machining aluminium



| W32..15 L.H. cutting | W32..45 R.H. cutting | W32..60 neutral cutting | W32..94 PCD / CBN | W32..98 PCD | W32..99 PCD |
|---|---|---|---|---|---|
| ▸ 656 | ▸ 657 | ▸ 658 | ▸ 659 | ▸ 660 | ▸ 661 |

## W37 – TPHB



| W37..60 machining aluminium |
|---|
| ▸ 663 |

## W57 – TOGX



| W57..12 machining aluminium |
|---|
| ▸ 664 |

## W58 – TPGX



| W58..12 machining aluminium |
|---|
| ▸ 667 |

## W83 – SPGT / SPGW machining aluminium



| SPGT | SPGW | SPGW |
|---|---|---|
| ▸ 686 | ▸ 687 | ▸ 688 |

## W85 – CPGT / CPGW machining aluminium



| CPGT "L" | CPGT "R" | CPGW | CPGW "L" | CPGW "R" |
|---|---|---|---|---|
| ▸ 690 | ▸ 691 | ▸ 692 | ▸ 693 | ▸ 694 |



| CPGW | W85..98 |
|---|---|
| ▸ 695 | ▸ 696 |

## W83 – SCGW



| hard machining and cast iron machining |
|---|
| ▸ 689 |

## W85 – CCGW



| hard machining and cast iron machining |
|---|
| ▸ 697 |

## W60 – DOHT / DOHW / DOWG



| L.H. cutting form | R.H. cutting form | neutral cutting form | W60..98 PCD | W60..99 PCD / CBN |
|---|---|---|---|---|
| ▸ 669 | ▸ 670 | ▸ 671 | ▸ 672 | ▸ 673 |

## W78 – VOHT / VOGW



| W78..07 | W78..98 PCD | W78..99 PCD / CBN |
|---|---|---|
| ▸ 674 | ▸ 675 | ▸ 676 |

## W89 – VCMT / VBMT



| ▸ 698 |
|---|

## W79 – DOHT



| W79..06 | W79..04 |
|---|---|
| ▸ 678 | ▸ 677 |

### W80 – SOGX



W80..01

▸ 679

### W82 – SOHX



W82..21

▸ 680

### W83 – SOEX



W83..01 | W83..03 | W83..13 | W83..21 | W83..32/33

▸ 681 ▸ 682 ▸ 683 ▸ 684 ▸ 685

## ISO Inserts

### C83 – SCMT / SCGT



SCMT-01 | SCMT-05 | SCGT-12 | SCMT-14

▸ 700

### C84 – TCMT / TCGT



TCMT-01 | TCMT-05 | TCGT-14 | TCMT-15

▸ 701

### C85 – CCMT / CCGT



CCMT-01 | CCMT-05 | CCGT-12 | CCMT-14 | CCMT-15

▸ 702

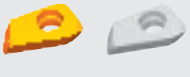
### C86 – DCMT / DCGT



DCMT-05 | DCGT-12 | DCMT-14 | DCMT-15

▸ 703

### H60 / H62 – XOHX



XOHX | machining aluminium

▸ 704 ▸ 704

### H80 – LNGU / LNHX



LNGU LNHX-01

▸ 711

### Q09 – SPGW / SPMT / SEHW / SEHT



SPGW | SPMT | SEHW | SEHT

▸ 712 ▸ 713 ▸ 714 ▸ 714

### Q12 – TCAA / TCAX / TNAA / TNAX / TPAX



TCAA/TNAA | TCAX/TNAX | TNAX | TPAX/TCAX/TNAX

▸ 715 ▸ 716 ▸ 718 ▸ 717

### Q15 – CPMT / CPMW



CPMT/CPMW

▸ 719

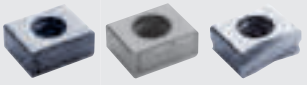
### Q36 – APKT



APKT | APKT

▸ 720 ▸ 721

### Q80 – LNGU / LNHU tangential inserts



LNGU-05 | LNGU-17 | LNHU

▸ 722 ▸ 722 ▸ 722

# Summary and list of codes

## Guidelines
for selecting inserts

All dimensions shown are subject to tolerance in accordance with the relevant requirement.

| Workpiece material | |
|---|---|
| Mild steel/tool steel | P |
| Stainless and acid-resistant steel | M |
| Grey cast iron, spheroidal cast iron | K |
| Non-ferrous metals | N |
| Heat-resistant steels | S |
| Hardened tool steel | H |

## Key
Abbreviations used

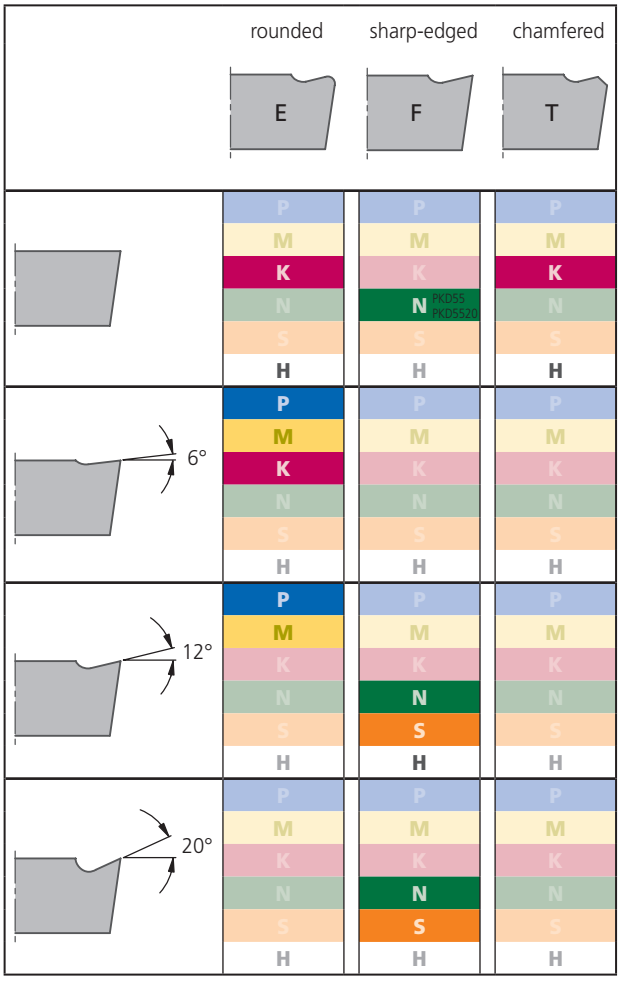
| | | |
|---|---|---|
| d1 | mm | Incircle diameter |
| s | mm | Indexable insert thickness |
| l | mm | theoretical usable length of cutting edge |
| γ | ° | Rake angle |
| f | mm | Construction auxiliary dimension |
| R | mm | Corner radius |
| d2 | mm | Hole diameter |

New 4-digit cutting material code e.g.

BK6115
- toughness grade (05...50)
- coating type (e.g. CVD $Al_2O_3$)
- cutting material type: carbide + coating

## Selecting the top rake
Recommendations for using inserts with ground chip grooves

(W00, W01, W04, W30, W32, W34, W37, W60)



## uncoated

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | Application range: Wear resistance + / Toughness factor − |
|---|---|---|---|---|---|---|---|---|---|
| P10 | 01 | | | | T | | uncoated:<br>• turning operations with medium to low cutting depths without interrupted cut | HW-P10 | P, M, K, N, S, H |
| P25 | 12 | | | | T | | uncoated:<br>• with excellent wear resistance and good toughness factor<br>• suitable for medium to high cutting speeds for roughing and finishing<br>• for non-alloy steel, malleable cast iron, stainless steel and cast iron | HW-P25 | P, M, K, N, S, H |
| P25M | 03 | D | R | F | T | M | uncoated:<br>• with excellent wear resistance and good toughness factor<br>• suitable for medium to high cutting speeds for roughing and finishing, also for interrupted cut<br>• for non-alloy steel, malleable cast iron, stainless steel and cast steel | HW-P25 | P, M, K, N, S, H |
| P30 | 13 | | | | T | | uncoated:<br>• good toughness factor with reasonable wear resistance<br>• for universal use | HW-P30 | P, M, K, N, S, H |
| P35 | 14 | | | | T | | uncoated:<br>• for turning operations with suitable toughness factor and good resistance to wear | HW-P35 | P, M, K, N, S, H |
| P40 | 04 | D | R | | T | M | uncoated:<br>• with medium wear resistance at optimum toughness factor<br>• low to medium cutting speeds for roughing and with heavily interrupted cut<br>• also for unstable working conditions<br>• for non-alloy steel, die steel and stainless steels | HW-P40 | P, M, K, N, S, H |
| K10 | 21 | D | R | F | T | M | uncoated:<br>• chamfered and neutral cutter geometry suitable for all grades of cast iron<br>• positively sintered (PD) and ground geometry is used for aluminium. e.g.: 12° and 20° top rake, ground sharply and not rounded | HW-K10 | P, M, K, N, S, H |
| K10 / fine grain | 23 | | | F | | | uncoated:<br>• fine grain carbide with high wear and thermal resistance<br>• mainly for machining aluminium; PVD coated, also suitable for machining general steels and rust-resistant materials | HW-M10<br>HW-K15 | P, M, K, N, S, H |
| K20 | 22 | | | | | M | uncoated:<br>• with large application range for cast iron materials<br>• medium to high cutting speeds for roughing and finishing<br>• wet and dry machining also possible<br>• for cast iron, malleable cast iron, aluminium/copper/brass and bronze alloys; main application area in milling | HW-K20 | P, M, K, N, S, H |

Application range: 01 05 10 15 20 25 30 35 40 45 50

main area of application — suitable in some cases

# Summary and list of codes

## CVD coated

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | Application range: Wear resistance + / Toughness factor − … Wear resistance − / Toughness factor + (01 05 10 15 20 25 30 35 40 45 50) |
|---|---|---|---|---|---|---|---|---|---|
| BK50 | 50 | D | R | F | | | diamond coating:<br>• crystalline diamond coating<br>• for cutting aluminium alloys, abrasive materials, graphite, plastics and bonded materials at high cutting speeds | HC-K10<br>P M K N S H | N: 01–15 |
| BK60 | 60 | D | R | F | T | | CVD-TiC-TiCN-TiN:<br>• multiple coating on P25M carbide base<br>• high tool life, even in the higher cutting speed range | HC-M10<br>P M K N S H | P: 15–50<br>M: 10–25 |
| BK61 | 61 | D | R | F | | | CVD-TiC-$Al_2O_3$:<br>• aluminium oxide coating (ceramic) for higher cutting speeds in all cast iron materials<br>• only suitable for interrupted cut to limited extent<br>• not for use with aluminium materials ! | HC-K15<br>P M K N S H | K: 05–25<br>H: < 52 HRC |
| BK6110 | 6110 | | | F | | | CVD-TiCN-TiN-$Al_2O_3$:<br>• for final machining bores in cast iron and steel materials<br>• excellent dimensional stability due to combination of wear resistant substrate and ceramic, surface treated coating | HC-P10<br>HC-K10<br>P M K N S H | P: 05–20<br>K: 05–25<br>H: < 52 HRC |
| BK6115 | 6115 | D | R | | | | CVD-TiCN-TiN-$Al_2O_3$:<br>• high quality, surface treated coating<br>• mainly for machining cast iron materials under standard to stable conditions, also at high cutting speeds | HC-P20<br>HC-K20<br>P M K N S H | P: 15–30<br>K: 10–25<br><52HRC |
| BK6130 | 6130 | D | R | | | | CVD-TiCN-TiN-$Al_2O_3$:<br>• high quality, surface treated coating<br>• mainly for machining cast iron materials<br>• thanks to stabilised cutting edge excellent suitability for steel and stainless steel | HC-P30<br>P M K N S H | P: 15–35<br>M: 20–30<br>K: 10–30<br>S: 10–20 |
| BK62 | 62 | D | R | F | | | CVD-TiN-TiCN-$Al_2O_3$:<br>• for higher cutting speeds in all types of cast iron materials<br>• only limited suitability for extreme interrupted cut<br>• not suitable for aluminium materials | HC-K15<br>P M K N S H | K: 05–25<br><52HRC |
| BK63 | 63 | D | R | | | | CVD-TiCN-TiN:<br>• multiple coating on P 25 base<br>• only available as dimple inserts | HC-P25<br>P M K N S H | P: 15–30<br>M: 20–30 |
| BK64 | 64 | D | R | F | | M | CVD-TiC-TiN:<br>• multiple coating on P 40 carbide base<br>• suitable for interrupted cut | HC-P35<br>HC-M15<br>P M K N S H | P: 25–40<br>M: 15–25 |

main area of application — suitable in some cases

## CVD coated

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | Application range: Wear resistance + / Toughness factor − |
|---|---|---|---|---|---|---|---|---|---|
| BK6420 | 6420 | D | R | | T | | CVD-TiCN-$Al_2O_3$-TiN:<br>• good toughness factor with maximum wear resistance<br>• for full cut at high cutting speeds in steel, cast steel and stainless steels | HC-P20 | P, M, K, N, S, H |
| BK6425 | 6425 | D | R | | | | MT-CVD-TiCN-$Al_2O_3$-TiN:<br>• standard grades (grain)<br>• maximum wear resistance in all steel and stainless steel materials | HC-P25<br>HC-M15 | P, M, K, N, S, H |
| BK66 | 66 | | | | T | | CVD-TiC-TiCN-TiN:<br>• for turning | HC-P35 | P, M, K, N, S, H |
| BK72 | 72 | D | R | | | | CVD-TiCN-TiC-$Al_2O_3$-TiN:<br>• cutting material with tough substrate<br>• for machining non-alloy and alloy steels, die steels and cast steel<br>• ensures long tool life even at high cutting speeds | HC-P30 | P, M, K, N, S, H |
| BK73 | 73 | D | R | | | | CVD-TiCN/TiC/TiN-$Al_2O_3$-TiN:<br>• tough carbide substrate<br>• for machining rust-resistant and stainless steel materials, plus alloyed steels, even at higher cutting speeds | HC-M20 | P, M, K, N, S, H |
| BK74 | 74 | D | R | | | | CVD-TiCN-TiC-$Al_2O_3$:<br>• extremely tough carbide substrate<br>• for machining rust-resistant and stainless steels | HC-M25 | P, M, K, N, S, H |
| BK75 | 75 | | | | T | | CVD-TiCN-TiC-$Al_2O_3$-TiN:<br>• tough carbide substrate<br>• for turning non-alloy and alloy steels, die steels and cast steel | HC-P25 | P, M, K, N, S, H |
| BK7525 | 7525 | | | | T | | CVD-TiCN-$Al_2O_3$-TiN:<br>• Grade for universal use with balanced wear and toughness properties | HC-P30 | P, M, K, N, S, H |
| BK76 | 76 | | | | T | | CVD-TiCN-TiC-$Al_2O_3$:<br>• for turning stainless steels, carbide steels with low tensile strength and cast materials | HC-P20 | P, M, K, N, S, H |

Application range: 01 05 10 15 20 25 30 35 40 45 50

main area of application — suitable in some cases

# Summary and list of codes

## CVD coated

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | Application range: Wear resistance + / Toughness factor − (01 05 10 15 20 25 30 35 40 45 50) |
|---|---|---|---|---|---|---|---|---|---|
| BK7610 | 7610 | | | | T | | CVD-TiCN-$Al_2O_3$:<br>• high wear-resistant grade for machining grey cast iron, S.G. cast iron and cast iron material | HC-K10 | P M K N S H |
| BK7615 | 7615 | D | R | F | M | T | CVD-TiCN-$Al_2O_3$:<br>• main high wear-resistant grade for wet and dry machining of all cast iron materials<br>• extremely good edge stability due to new type of surface finish<br>• can therefore also be used for interrupted cut<br>• highly productive cutting material grade | | P M K N S H <52HRC |

## PVD coated

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | Application range: Wear resistance + / Toughness factor − (01 05 10 15 20 25 30 35 40 45 50) |
|---|---|---|---|---|---|---|---|---|---|
| BK2710 | 2710 | | | F | | | PVD-TiAlN:<br>• extremely wear resistant carbide<br>• for bore end machining stainless steels, structural and tool steels and cast materials<br>• excellent dimensional stability due to combination of hard substrate and TiAln coating with high aluminium content | HC-K10 | P M K N S H < 52 HRC |
| BK2715 | 2715 | D | | | | | PVD-TiAlN: for KUB Duon® only<br>• extremely fine grade carbide with nano-structured coating<br>• for maximum resistance against thermal and mechanical wear<br>• maximum performance with double insert solid drilling in grey cast iron and SG cast iron grades and can also be used for high tensile strength steels and non ferrous metals | HC-K20 | P M K N S H |
| BK2730 | 2730 | D | R | | | | PVD-TiAlN:<br>• extremely fine grades<br>• extremely good edge stability and maximum wear resistance at medium and high speed ranges | HC-M25 | P M K N S H |
| BK2740 | 2740 | D | | | | | PVD-TiAlN:<br>• coating with high aluminium content on extremely tough substrate<br>• completes the grades for solid drilling steel materials in the medium cutting speed ranges | HC-P35 | P M K N S H |
| BK68 | 68 | | | | | M | PVD-TiCN:<br>• multiple coating on carbide<br>• medium to high cutting speeds for roughing and finishing and with interrupted cut<br>• for non-alloy steel, cast steel, die steel and cast iron | HC-P20 | P M K N S H |
| BK77 | 77 | D | R | F | | | PVD-TiN:<br>• tough PVD coated grade<br>• for cutting aluminium alloys and plastics at medium cutting speeds<br>• tough characteristics and a high resistance to build-up of cutting edges | HC-K10 | P M K N S H |

main area of application — suitable in some cases

## PVD coated

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | |
|---|---|---|---|---|---|---|---|---|---|
| BK7710 | 7710 | D | R | F | | | PVD-$TiB_2$:<br>• coating on extremely high wear resistance K10 carbide<br>• for finish and rough machining aluminium up to approx. 10% Si content and titanium alloys<br>• optimum coating properties to prevent build-up on cutting edges | HC-K10 | P M K N S H |
| BK78 | 78 | | | | | M | PVD-TiAlN:<br>• coated carbide on P25M base with extremely high wear resistance<br>• medium to high cutting speed for roughing and finishing and with interrupted cut<br>• for non alloy steel, cast steel and die steels | HC-P25 | P M K N S H |
| BK79 | 79 | D | R | | | | PVD-TiAlN:<br>• coated carbide on P40 base with extremely high wear resistance<br>• low to medium cutting speed for roughing and finishing and with interrupted cut<br>• for non-alloy steel, cast steel, die steels and rust-proof and stainless steels | HC-M35 | P M K N S H |
| BK7930 | 7930 | D | R | | | | PVD-TiAlN:<br>• extremely efficient combination of extremely fine grade carbide<br>• for use on solid drills for stainless and acid resistant steels | HC-M25 | P M K N S H |
| BK80 | 80 | | | | | M | PVD-TiCN:<br>• for milling with a wide range of applications in steel and cast iron materials<br>• excellent balance between wear resistance and srength makes this suitable for universal use | HC-P35 | P M K N S H |
| BK8125 | 8125 | D | | | | | PVD-TiCN: for KUB Duon® only<br>• coated K20/30 extremely fine grade carbide with good hardness level for extremely high resistance to fracturing<br>• for double insert solid drilling in steel materials, particularly at low and medium cutting speeds with high requirements for cutting edge stability | HC-P25 | P M K N S H |
| BK8140 | 8140 | D | | | | | PVD-TiCN:<br>• coating on extremely tough substrate<br>• for optimum cutting edge stability particularly suitable for low and medium cutting speeds and also with interrupted cut and under difficult conditions | HC-P40<br>HC-M15 | P M K N S H |
| BK82 | 82 | | | | T | | PVD-TiN: for UniTurn® only<br>• coated extremely fine grade carbide with extremely good wear resistance and good toughness factor<br>• for machining cast iron and steel | HC-K15 | P M K N S H |
| BK84 | 84 | D | R | F | | M | PVD-TiCN/TiN:<br>• grade which combines toughness with good wear resistance<br>• for machining steel, cast steel and stainless steel | HC-P25 | P M K N S H |

Application range: Wear resistance (+ / −) ↔ Toughness factor (− / +)

01 05 10 15 20 25 30 35 40 45 50

< 52 HRC

main area of application — suitable in some cases

# Summary and list of codes

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | | Application range: Wear resistance + / Toughness factor − ← 01 05 10 15 20 25 30 35 40 45 50 → Wear resistance − / Toughness factor + |
|---|---|---|---|---|---|---|---|---|---|---|
| **PVD coated** | | | | | | | | | | |
| BK8425 | 8425 | D | R | F | | M | PVD-TiAlN/TiN:<br>• grade for universal application with increased wear resistance due to innovative PVD coating | HC-P25 | P, M, K, N, S, H | |
| BK8430 | 8430 | D | R | F | | | PVD-TiAlN/TiN:<br>• extremely fine grades<br>• extremely good edge stability and maximum wear resistance at medium and high speed ranges | HC-P30 | P, M, K, N, S, H | |
| BK8440 | 8440 | D | | | | | PVD-TiCN/TiN:<br>• coating on extremely tough substrate<br>• for medium cutting speeds and also suitable for interrupted cut | HC-P35 | P, M, K, N, S, H | |
| BK8445 | 8445 | D | | | | | PVD-TiCN/TiN: for pilot V95 only<br>• extremely tough carbide with very fine grain<br>• extremely good wear due to coating<br>• for use on non-alloy and alloy steels and on stainless materials | HC-P35 | P, M, K, N, S, H | |
| BK85 | 85 | | | | T | M | PVD-TiCN/TiN:<br>• coated carbide with optimum wear resistance and high toughness factor<br>• medium and high cutting speeds for roughing and finishing<br>• for non-alloy and alloy steels and cast steel | HC-P20 | P, M, K, N, S, H | |
| BK8530 | 8530 | | R | | T | | PVD-TiAlN+TiN:<br>• extremely fine grades<br>• extremely good edge stability and maximum wear resistance at medium and high speed ranges<br>• optimised PVD grades | HC-P30 | P, M, K, N, S, H | |
| BK87 | 87 | | | | | M | PVD-TiN:<br>• coated carbide on P40 base<br>• medium to high cutting speeds for roughing and finishing and with interrupted cut<br>• for non alloy steel, cast steel and die steels | HC-P35 | P, M, K, N, S, H | |
| BK89 | 89 | D | | | | | PVD-TiN: only for pilot V95<br>• coated HSS-E high quality, high speed steel<br>• first choice for steel and aluminium<br>• used for low cutting speeds with medium to high feed rates<br>• coolant essential! | HSS-Co. | P, M, K, N, S, H | |
| BK90 | 90 | D | | | | | PVD-TiAlN: only for pilot V95<br>• coated HSS-E high quality, high speed steel<br>• first choice for stainless steel and iron cast<br>• good suited for unusual materials, Ti alloys, Ni and Co alloys<br>• coolant essential! | HSS-Co. | P, M, K, N, S, H | |

main area of application — suitable in some cases

## Super-Hard CBN

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | Application range: Wear resistance + / Toughness factor − … Wear resistance − / Toughness factor + (01 05 10 15 20 25 30 35 40 45 50) |
|---|---|---|---|---|---|---|---|---|---|
| CBN40 | 40 | | | F | T | | uncoated:<br>• cubic boron nitride material<br>• for turning hardened steels with an HRC of over 45, high heat resistant alloys on nickel or cobalt base | BN-H05 (P M K N S H) | ≥ 52 HRC |
| CBN57 | 57 | | R | F | T | | uncoated:<br>• cubic boron nitride<br>• for machining cast materials, powder metallurgical materials and high temperature alloys | BN-K05 (P M K N S H) | |

## Super-Hard PCD

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | Application range (01 05 10 15 20 25 30 35 40 45 50) |
|---|---|---|---|---|---|---|---|---|---|
| PKD55 | 55 | D | R | F | T | M | uncoated:<br>• polycristalline diamond cutting material<br>• for turning aluminium, ceramics and plastics | DP-K05 (P M K N S H) | |
| PKD5520 | 5520 | | R | | T | | uncoated:<br>• polycristalline diamond cutting material with extremely high edge stability<br>• for machining aluminium materials also at extremely high cutting values and with interrupted cut and for other non ferrous metals | DP-K10 (P M K N S H) | |

main area of application  suitable in some cases

## Ceramic uncoated

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | Application range: Wear resistance + / Toughness factor − … Wear resistance − / Toughness factor + (01 05 10 15 20 25 30 35 40 45 50) |
|---|---|---|---|---|---|---|---|---|---|
| SK44 | 44 | | R | | | M | uncoated:<br>• silicon nitride<br>• ceramic material with extremely high wear resistance and high toughness factor<br>• for roughing and finishing cast iron<br>• high to very high cutting speeds | CN-K30 (P M K N S H) | |

## Ceramic coated

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | Application range (01 05 10 15 20 25 30 35 40 45 50) |
|---|---|---|---|---|---|---|---|---|---|
| SK45 | 45 | | R | | | | CVD-$Al_2O_3$-multilayer:<br>• coated silicon nitride cutting material<br>• for high performance cutting of grey cast iron and SG cast iron materials<br>• for high cutting speeds in conjunction with high feed rates; also for interrupted cut | CC-K20 (P M K N S H) | |

main area of application  suitable in some cases

# Summary and list of codes

## Cermet uncoated

| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | Application range: Wear resistance + / Toughness factor – | Wear resistance – / Toughness factor + |
|---|---|---|---|---|---|---|---|---|---|---|
| CK30 | 30 | | | F | | | uncoated:<br>• for fine and finish turning<br>• high toughness factor, low wear and comparatively high cutting speeds produce longer tool life and high surface quality | HT-P15 | 01 05 10 15 20 25 30 35 40 45 50 | |
| CK32 | 32 | | | F | T | | uncoated:<br>• for fine and finish turning<br>• low wear and higher cutting speed producing longer tool life and good surface finish<br>• cutting material for high productivity in the upper cutting speed range | HT-P15 | 01 05 10 15 20 25 30 35 40 45 50 | |
| CK3210 | 3210 | | R | F | | | uncoated:<br>• for fine and finish turning<br>• low wear and higher cutting speed producing longer tool life and good surface finish<br>• cutting material for high productivity in the upper cutting speed range | | 01 05 10 15 20 25 30 35 40 45 50 | |
| CK3215 | 3215 | | | F | T | | uncoated:<br>• wear-resistant grade with the necessary strength for machining steel and stainless steel and for cast iron materials | HT-P10 | 01 05 10 15 20 25 30 35 40 45 50 | |
| CK3230 | 3230 | | R | F | | | uncoated:<br>• extremely tough behaviour and good wear resistance<br>• also suitable for use in interrupted cut | | 01 05 10 15 20 25 30 35 40 45 50 | |
| CK37 | 37 | | R | F | T | M | uncoated:<br>• good balance of wear resistance and toughness<br>• allows interrupted cuts and light roughing operations | HT-P20 | 01 05 10 15 20 25 30 35 40 45 50 | |

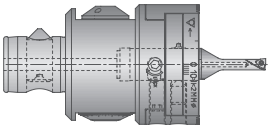
## Cermet coated

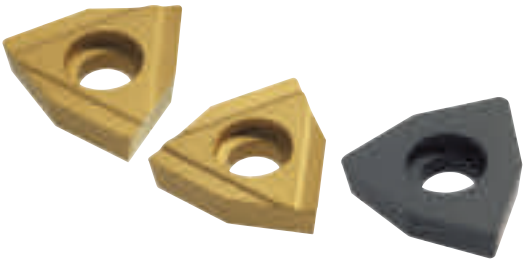
| Cutting material code | Order No. | Application: Drilling | Roughing | Fine Boring | Turning | Milling | Properties | Norm code | Application range: Wear resistance + / Toughness factor – | Wear resistance – / Toughness factor + |
|---|---|---|---|---|---|---|---|---|---|---|
| CK38 | 38 | | | F | | | PVD-TiCN/TiN:<br>• high toughness factor and extremely good wear resistance<br>• his cutting material has a wide range of applications in non-alloy and alloy steel, die steel, rust-resistant and stainless steels and cast irons | HC-P10 | 01 05 10 15 20 25 30 35 40 45 50 | |
| CK39 | 39 | | | | T | | PVD-TiCN/TiN:<br>• for fine and finish turning<br>• high toughness factor, low wear and comparatively high cutting speeds produce longer tool life and high surface quality | HC-P15 | 01 05 10 15 20 25 30 35 40 45 50 | |

P M K N S H

main area of application  suitable in some cases

## Application range:

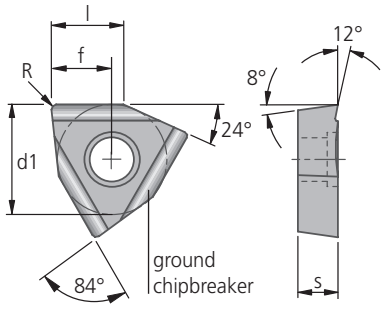




- MicroKom® *BluFlex*™ and MicroKom® *hi.flex* Ø 6-8 mm
- External and internal turning
- Special tools
- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

## Cutter geometry:

### L.H. cutting form „L“



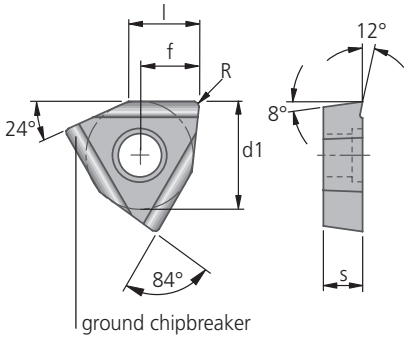

| Article ISO Description | Order No. | Carbide grades: uncoated P40 E 04 | uncoated K10 F 21 | PVD coated BK2710 E 2710 | PVD coated BK8440 E 8440 | CVD coated BK64 E 64 | d1 | s | l | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WOHX 02T001..L-G12 | W00 04120.01.. | ▲ | ▲ | ▲ | ▲ | ▲ | 4,0 | 1,2 | 2,6 | 12° | 2,20 | 0,1 |
| WOHX 02T002..L-G12 | W00 04120.02.. | | | ▲ | ▲ | | | | | | 2,19 | 0,2 |

Cutting edge design E = rounded F = sharp ▼ — enter carbide code ▼

| | | | | | | |
|---|---|---|---|---|---|---|
| Mild steel/tool steel | P | ● | ◐ | ● | ● | ● |
| Stainless and acid-resistant steel | M | ○ | | ○ | ○ | ◑ |
| Grey cast iron, spheroidal cast iron | K | | ● | ● | | |
| Non-ferrous metals | N | | ● | | | |
| Heat-resistant steels | S | | ● | | | |
| Hardened tool steel | H | | | ○ | | |

Order example:
Article
WOHX 02T001 FL-G12
Carbide grade
K10
Order No.
W00 04120.0121

### R.H. cutting form „R“



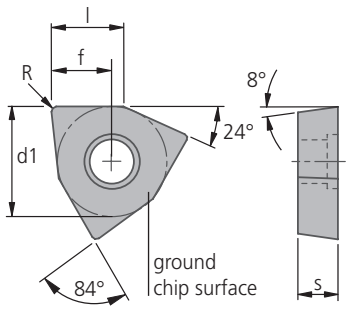

| Article ISO Description | Order No. | Carbide grades: uncoated P40 E 04 | PVD coated BK2710 E 2710 | PVD coated BK8440 E 8440 | d1 | s | l | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|---|
| WOHX 02T001..R-G12 | W00 04420.01.. | ▲ | ▲ | ▲ | 4,0 | 1,2 | 2,6 | 12° | 2,20 | 0,1 |
| WOHX 02T002..R-G12 | W00 04420.02.. | | ▲ | ▲ | | | | | 2,19 | 0,2 |

Cutting edge design E = rounded ▼ — enter carbide code ▼

| | | | | |
|---|---|---|---|---|
| Mild steel/tool steel | P | ● | ● | ● |
| Stainless and acid-resistant steel | M | ○ | ○ | ○ |
| Grey cast iron, spheroidal cast iron | K | | ● | |
| Non-ferrous metals | N | | | |
| Heat-resistant steels | S | | | |
| Hardened tool steel | H | | ○ | |

Order example:
Article
WOHX 02T001 ER-G12
Carbide grade
BK2710
Order No.
W00 04420.012710

### neutral cutting form „N“




| Article ISO Description | Order No. | Carbide grades: uncoated K10 E 21 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| WOHX 02T001 EN | W00 04600.01.. | ▲ | 4,0 | 1,2 | 2,6 | 2,21 | 0,1 |

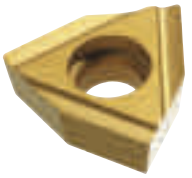
Cutting edge design E = rounded ▼ — enter carbide code ▼

| | | |
|---|---|---|
| Mild steel/tool steel | P | ◐ |
| Stainless and acid-resistant steel | M | |
| Grey cast iron, spheroidal cast iron | K | ● |
| Non-ferrous metals | N | ● |
| Heat-resistant steels | S | ● |
| Hardened tool steel | H | |

Order example:
Article
WOHX 02T001 EN
Carbide grade
K10
Order No.
W00 04600.0121

## Inserts

■ L.H. cutting form „L“

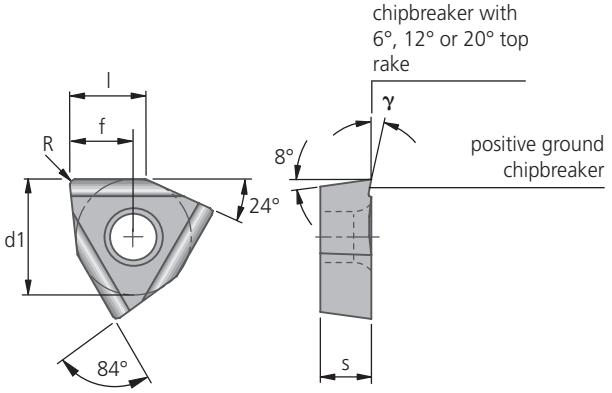


## Application range:

- External and internal turning
- TwinKom® Double Insert Tools
- Special tools
- Kometric® mounted seatings

- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: uncoated P25M E | uncoated K10 E | uncoated K10 F | CVD coated BK60 E | CVD coated BK61 E | CVD coated BK6115 E | CVD coated BK64 E | PVD BK8425 E | d1 | s | l | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded F = sharp | enter carbide code | 03 | 21 | 21 | 60 | 61 | 6115 | 64 | 8425 | | | | | | |
| WOHX 030204..L-G06 | W01 10060.04.. | ▲ | | | ▲ | ▲ | | | ▲ | 5,0 | 2,3 | 3,2 | 6° | 2,73 | 0,4 |
| WOHX 030204..L-G12 | W01 10120.04.. | ▲ | | ▲ | ▲ | | | | ▲ | | | | 12° | 2,72 | 0,4 |
| WOHX 040304..L-G06 | W01 18060.04.. | ▲ | | | ▲ | ▲ | | | ▲ | 6,35 | 3,18 | 4,1 | 6° | 3,48 | 0,4 |
| WOHX 040304..L-G12 | W01 18120.04.. | ▲ | | ▲ | ▲ | | | | ▲ | | | | 12° | 3,47 | 0,4 |
| WOHX 05T302..L-G06 | W01 24060.02.. | ▲ | ▲ | | ▲ | | | | ▲ | 8,0 | 3,8 | 5,3 | 6° | 4,42 | 0,2 |
| WOHX 05T304..L-G06 | W01 24060.04.. | | | | | | ▲ | | | | | | | 4,40 | 0,4 |
| WOHX 05T302..L-G12 | W01 24120.02.. | ▲ | | | ▲ | | | | ▲ | 8,0 | 3,8 | 5,3 | 12° | 4,42 | 0,2 |
| WOHX 05T304..L-G12 | W01 24120.04.. | ▲ | | ▲ | ▲ | | | ▲ | ▲ | | | | | 4,40 | 0,4 |
| WOHX 06T302..L-G06 | W01 34060.02.. | ▲ | ▲ | | ▲ | | | | ▲ | 10,0 | 3,8 | 6,6 | 6° | 5,53 | 0,2 |
| WOHX 06T304..L-G06 | W01 34060.04.. | | | | | | ▲ | | ▲ | | | | | 5,51 | 0,4 |
| WOHX 06T302..L-G12 | W01 34120.02.. | ▲ | | | | | | | ▲ | 10,0 | 3,8 | 6,6 | 12° | 5,53 | 0,2 |
| WOHX 06T304..L-G12 | W01 34120.04.. | ▲ | | ▲ | ▲ | | | | ▲ | | | | | 5,51 | 0,4 |
| WOHX 080402..L-G06 | W01 42060.02.. | ▲ | | | ▲ | | | | ▲ | 12,0 | 4,8 | 7,9 | 6° | 6,64 | 0,2 |
| WOHX 080404..L-G06 | W01 42060.04.. | | ▲ | | | | ▲ | | ▲ | | | | | 6,62 | 0,4 |
| WOHX 080402..L-G12 | W01 42120.02.. | | | | ▲ | | | | ▲ | 12,0 | 4,8 | 7,9 | 12° | 6,64 | 0,2 |
| WOHX 080404..L-G12 | W01 42120.04.. | ▲ | | ▲ | ▲ | | | | ▲ | | | | | 6,62 | 0,4 |
| WOHX 100504..L-G06 | W01 50060.04.. | ▲ | ▲ | | ▲ | | | | ▲ | 15,0 | 5,3 | 9,9 | 6° | 8,29 | 0,4 |
| WOHX 100504..L-G12 | W01 50120.04.. | | | ▲ | | | | | ▲ | | | | 12° | 8,29 | 0,4 |
| WOHX 120606..L-G06 | W01 58060.06.. | | | | | | | | ▲ | 17,6 | 6,0 | 11,6 | 6° | 9,71 | 0,6 |
| WOHX 120606..L-G12 | W01 58120.06.. | | | | | | | | ▲ | | | | 12° | 9,71 | 0,6 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Mild steel/tool steel | P | ● | ◐ | ◐ | ● | | ◐ | ● | ● |
| Stainless and acid-resistant steel | M | ● | | | ● | | | ◑ | ● |
| Grey cast iron, spheroidal cast iron | K | | ● | ● | | ● | ● | | |
| Non-ferrous metals | N | | ● | ● | | | | | |
| Heat-resistant steels | S | | ● | ● | | | | | |
| Hardened tool steel | H | | | | | ◑ | ◑ <52 HRC | | |

Order example:
Article
WOHX 030204 EL-G06
Carbide grade
P25M
Order No.
W01 10060.0403



▲ Availability: for delivery see current price and stock list

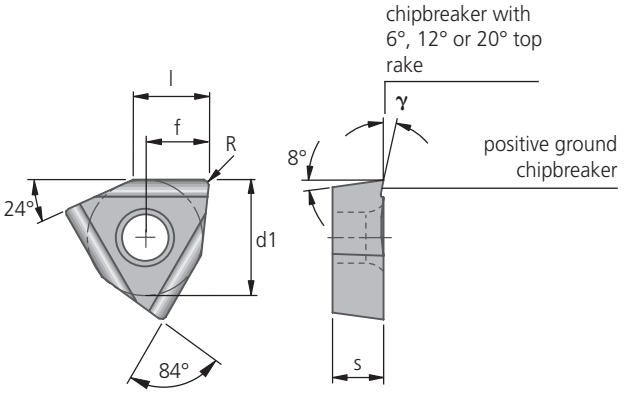


## Application range:

- External and internal turning
- TwinKom® Double Insert Tools
- Special tools
- Kometric® mounted seatings

- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

## Cutter geometry:

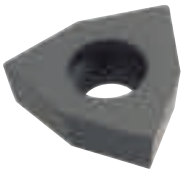



| Article ISO Description | Order No. | Carbide grades: uncoated P25M E 03 | uncoated K10 F 21 | CVD coated BK60 E 60 | CVD coated BK61 E 61 | CVD coated BK6115 E 6115 | PVD coated BK8425 E 8425 | d1 | s | l | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded F = sharp | enter carbide code | | | | | | | | | | | | |
| WOHX 030204..R-G06 | W01 10360.04.. | ▲ | | ▲ | ▲ | | ▲ | 5,0 | 2,3 | 3,2 | 6° | 2,73 | 0,4 |
| WOHX 030204..R-G12 | W01 10420.04.. | ▲ | ▲ | ▲ | | | ▲ | | | | 12° | 2,72 | 0,4 |
| WOHX 040304..R-G06 | W01 18360.04.. | | | ▲ | ▲ | | ▲ | 6,35 | 3,18 | 4,1 | 6° | 3,48 | 0,4 |
| WOHX 040304..R-G12 | W01 18420.04.. | | ▲ | | | | ▲ | | | | 12° | 3,47 | 0,4 |
| WOHX 05T304..R-G06 | W01 24360.04.. | | | | | ▲ | | 8,0 | 3,8 | 5,3 | 6° | 4,40 | 0,4 |
| WOHX 05T302..R-G12 | W01 24420.02.. | ▲ | ▲ | ▲ | | | ▲ | | | | 12° | 4,42 | 0,2 |
| WOHX 06T302..R-G06 | W01 34360.02.. | ▲ | | | | | | 10,0 | 3,8 | 6,6 | 6° | 5,53 | 0,2 |
| WOHX 06T304..R-G06 | W01 34360.04.. | | | | | ▲ | | | | | | 5,51 | 0,4 |
| WOHX 06T302..R-G12 | W01 34420.02.. | ▲ | | ▲ | | | ▲ | 10,0 | 3,8 | 6,6 | 12° | 5,53 | 0,2 |
| WOHX 080402..R-G06 | W01 42360.02.. | ▲ | | | | | | 12,0 | 4,8 | 7,9 | 6° | 6,64 | 0,2 |
| WOHX 080404..R-G06 | W01 42360.04.. | | | | | ▲ | | | | | | 6,62 | 0,4 |
| WOHX 080402..R-G12 | W01 42420.02.. | ▲ | ▲ | ▲ | | | ▲ | 12,0 | 4,8 | 7,9 | 12° | 6,64 | 0,2 |
| WOHX 080404..R-G12 | W01 42420.04.. | | | | | | ▲ | | | | | 6,62 | 0,4 |
| WOHX 100504..R-G06 | W01 50360.04.. | ▲ | | | | | | 15,0 | 5,3 | 9,9 | 6° | 8,29 | 0,4 |
| WOHX 100504..R-G12 | W01 50420.04.. | ▲ | | | | | ▲ | | | | 12° | 8,29 | 0,4 |
| Mild steel/tool steel P | | ● | ◐ | ● | | ◐ | ● | | | | | | |
| Stainless and acid-resistant steel M | | ○ | | ○ | | | ○ | | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | ● | ● | | | | | | | |
| Non-ferrous metals N | | | ● | | | | | | | | | | |
| Heat-resistant steels S | | | ● | | | | | | | | | | |
| Hardened tool steel H | | | | | ◐ | ◐ <52 HRC | | | | | | | |

Order example:
Article
WOHX 030204 ER-G06
Carbide grade
P25M
Order No.
W01 10360.0403

## Inserts

■ neutral cutting form „N“

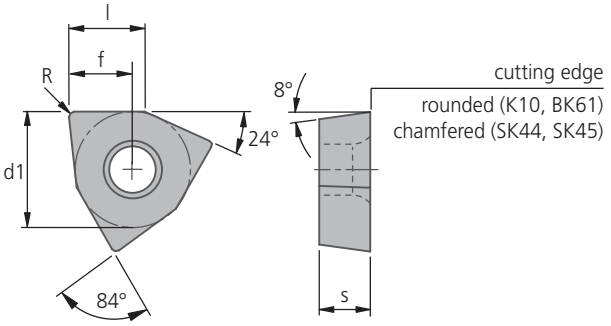


## Application range:

**Rough boring and turning operations on grey cast iron and SG cast iron materials**

- roughing and standard machining under difficult operating conditions (interrupted cut or variations in machining allowances)
- grey cast iron and SG cast iron materials
- can be used on G01 twin cutting tools and on special tools
- extremely efficient because of high cutting speeds

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades uncoated | Carbide grades CVD coated | Silicon nitride uncoated | Silicon nitride CVD coated | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded T = chamfered | enter carbide code | K10 E 21 | BK61 E 61 | SK44 T 44 | SK45 T 45 | | | | | |
| WOHX 030204 EN | W01 10600.04.. | ▲ | ▲ | | | 5,0 | 2,3 | 3,2 | 2,73 | 0,4 |
| WOHX 040304 EN | W01 18600.04.. | ▲ | ▲ | | | 6,35 | 3,18 | 4,1 | 3,48 | 0,4 |
| WOHX 05T304 ..N | W01 24600.04.. | ▲ | ▲ | ▲ | ▲ | 8,0 | 3,8 | 5,3 | 4,40 | 0,4 |
| WOHX 05T308 ..N | W01 24600.08.. | | ▲ | ▲ | ▲ | | | | 4,35 | 0,8 |
| WOHX 06T304 EN | W01 34600.04.. | ▲ | ▲ | | | 10,0 | 3,8 | 6,6 | 5,51 | 0,4 |
| WOHX 06T308 EN | W01 34600.08.. | | ▲ | | | | | | 5,47 | 0,8 |
| WOHX 080404 EN | W01 42600.04.. | | ▲ | | | 12,0 | 4,8 | 7,9 | 6,62 | 0,4 |
| WOHX 080408 EN | W01 42600.08.. | | ▲ | | | | | | 6,58 | 0,8 |
| Mild steel/tool steel P | | ◐ | | | | | | | | |
| Stainless and acid-resistant steel M | | | | | | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | ● | ● | ● | | | | | |
| Non-ferrous metals N | | ● | | | | | | | | |
| Heat-resistant steels S | | ● | | | | | | | | |
| Hardened tool steel H | | | ◐ <52HRC | | | | | | | |

Order example:
Article
WOHX 030204 EN
Carbide grade
K10
Order No.
W01 10600.0421



▲ Availability: for delivery see current price and stock list



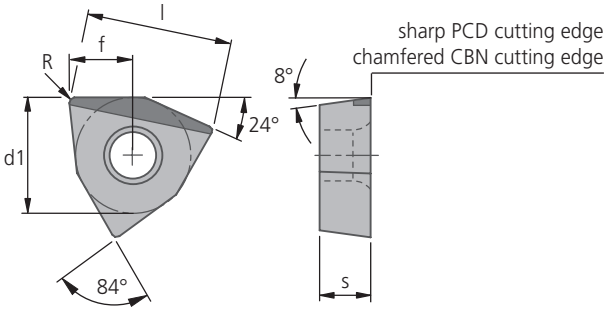
## Application range:

**PCD application range**
Machining non-ferrous metals, plastics, composites, rubber, graphite, etc.

**CBN application range (CBN57)**
Machining cast iron materials etc.

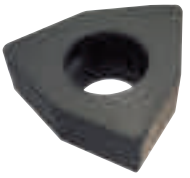
Inserts with PCD and CBN cutting edges have the following advantages:
- high cutting speeds
- high dimensional consistency
- enormously long tool life
- above-average surface finish

## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp<br>S = chamfered+rounded | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>PKD55<br>F<br>55 | CBN tipped<br>CBN57<br>S<br>57 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|
| WOGX 05T304 .. | W01 24940.04.. | ▲ | ▲ | 8,0 | 3,8 | 10,1 | 4,40 | 0,4 |
| WOGX 06T304 .. | W01 34940.04.. | ▲ | ▲ | 10,0 | 3,8 | 12,7 | 5,51 | 0,4 |
| WOGX 080404 .. | W01 42940.04.. | ▲ | ▲ | 12,0 | 4,8 | 15,3 | 6,62 | 0,4 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | ●<br>◐ | Order example:<br>Article<br>WOGX 05T304 S<br>Cutting material<br>CBN57<br>Order No.<br>W01 24940.0457 | | | | |

## Inserts



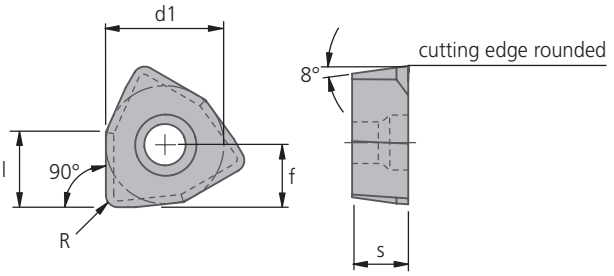
- for clockwise-rotating tools
- approach angle $\varkappa$ = 90°
- L.H. cutting form „L“

## Anwendungsbereich:

**Rough boring with double and multiple inserts**

- roughing and finishing operations
- grey cast iron, SG cast iron and CGI materials
- high feed rates
- extremely good form and surface qualities

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades CVD coated  BK6115 E 6115 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded ▼ | enter carbide code ▼ | | | | | | |
| WOHX 05T3PN EL | **W01 24600.90..** | ▲ | 8,0 | 3,8 | 5,1 | 4,23 | 0,8 |
| WOHX 06T3PN EL | **W01 34600.90..** | ▲ | 10,0 | 3,8 | 6,4 | 5,34 | 0,8 |
| WOHX 0804PN EL | **W01 42600.90..** | ▲ | 12,0 | 4,8 | 7,7 | 6,45 | 0,8 |
| WOHX 1005PN EL | **W01 50600.90..** | ▲ | 15,0 | 5,3 | 9,7 | 8,12 | 0,8 |
| Mild steel/tool steel P | | | | | | | |
| Stainless and acid-resistant steel M | | | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | | | | |
| Non-ferrous metals N | | | | | | | |
| Heat-resistant steels S | | | | | | | |
| Hardened tool steel H | | ◐ <52HRC | | | | | |

Order example:
Article
WOHX 05T3PN EL
Carbide grade
BK61
Order No.
W01 24600.906115

EP 1311363 and other patents (support land)



▲ Availability: for delivery see current price and stock list



## Inserts

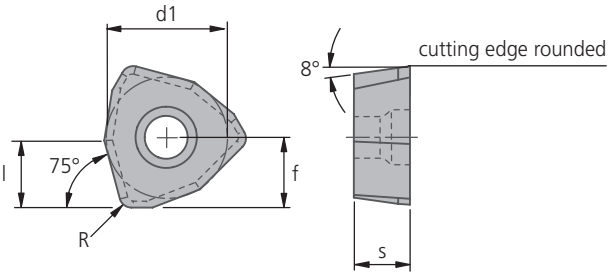
for clockwise-rotating tools ■
approach angle ϰ = 75° ■
L.H. cutting form „L“ ■

## Application range:

**Rough boring with double and multiple inserts**

- roughing and finishing operations
- grey cast iron, SG cast iron and CGI materials
- high feed rates
- extremely good form and surface qualities

## Cutter geometry:




| Article<br>ISO Description | Order No. | Carbide grades<br>CVD coated<br>BK6115 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| Cutting edge design<br>E = rounded ▼ | enter carbide code ▼ | E<br>6115 | | | | | |
| WOHX 05T3EN EL | **W01 24600.75..** | ▲ | 8,0 | 3,8 | 4,4 | 4,63 | 0,8 |
| WOHX 06T3EN EL | **W01 34600.75..** | ▲ | 10,0 | 3,8 | 5,7 | 5,96 | 0,8 |
| WOHX 0804EN EL | **W01 42600.75..** | ▲ | 12,0 | 4,8 | 6,9 | 7,29 | 0,8 |
| WOHX 1005EN EL | **W01 50600.75..** | ▲ | 15,0 | 5,3 | 8,9 | 9,29 | 0,8 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ●<br>◐ <52HRC | Order example:<br>Article<br>WOHX 05T3EN EL<br>Carbide grade<br>BK61<br>Order No.<br>W01 24600.756115 | | | | |

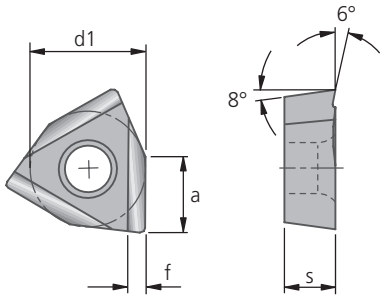
EP 1311363 and other patents (support land)

## Inserts

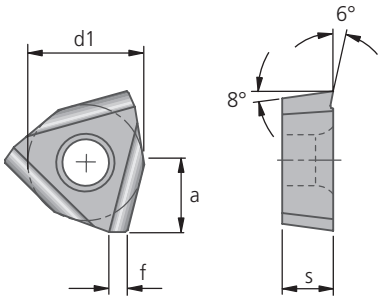
■ for corner milling cutter and face milling cutter



## Cutter geometry:




Approach angle 90°
for corner milling cutter F020

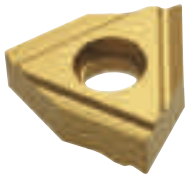



Approach angle 75°
for face milling cutter F020

| Article<br>ISO Description | Order No. | Carbide grades<br>uncoated | | CVD coated | d1 | s | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design<br>E = rounded | enter carbide code | P25M<br>E<br>03 | K10<br>E<br>21 | BK64<br>E<br>64 | | | | | |
| WOHX 06T3PA ER-G06 | W01 34360.34.. | ▲ | ▲ | ▲ | 10,0 | 3,8 | 6° | 1,4 | 6,0 |
| WOHX 06T3EA ER-G06 | W01 34360.35.. | | ▲ | | | | | | 5,9 |
| WOHX 0804PA ER-G06 | W01 42360.34.. | ▲ | ▲ | | 12,0 | 4,8 | 6° | 1,4 | 7,0 |
| Mild steel/tool steel P | | ● | ◐ | ● | Order example:<br>Article<br>WOHX 06T3PA ER-G06<br>Carbide grade<br>P25M<br>Order No.<br>W01 34360.3403 | | | | |
| Stainless and acid-resistant steel M | | ● | | ◐ | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | | | | | |
| Non-ferrous metals N | | | ● | | | | | | |
| Heat-resistant steels S | | | ● | | | | | | |
| Hardened tool steel H | | | | | | | | | |



▲ Availability: for delivery see current price and stock list



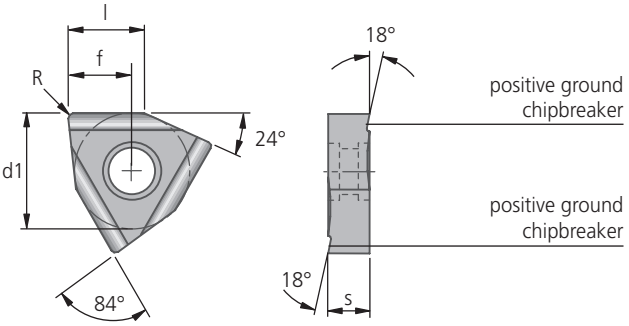
## Inserts

positive ground chipbreaker ■
L.H. cutting form „L“ ■
P6 cutting edges ■

## Application range:

**Internal and external turning**
The Unisix® insert with 6 cutting edges is an efficient and economic insert. The six cutting edges can be used because of the negative insert seating.
The positively ground chipbreakers guarantee a good chip form and a soft cut.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: uncoated P25 E 12 | uncoated P40 E 04 | uncoated K10 F 21 | CVD coated BK60 E 60 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded F = sharp | enter carbide code | | | | | | | | | |
| WNHX 060302..L-G18 | W04 34180.02.. | ▲ | | | | 10,0 | 3,5 | 6,5 | 5,53 | 0,2 |
| WNHX 08T302..L-G18 | W04 42180.02.. | ▲ | ▲ | ▲ | ▲ | 12,0 | 4,5 | 7,5 | 6,64 | 0,2 |
| WNHX 100404..L-G18 | W04 50180.04.. | ▲ | ▲ | | ▲ | 15,0 | 5,0 | 9,5 | 8,29 | 0,4 |
| Mild steel/tool steel P | | ● | ● | ◐ | ● | | | | | |
| Stainless and acid-resistant steel M | | ○ | ○ | | ○ | | | | | |
| Grey cast iron, spheroidal cast iron K | | | | ● | | | | | | |
| Non-ferrous metals N | | | | ● | | | | | | |
| Heat-resistant steels S | | | | ● | | | | | | |
| Hardened tool steel H | | | | | | | | | | |

Order example:
Article
WNHX 060302 EL-G18
Carbide grade
P25
Order No.
W04 34180.0212

# KOMET Unisix® W04

WNHX

## Inserts



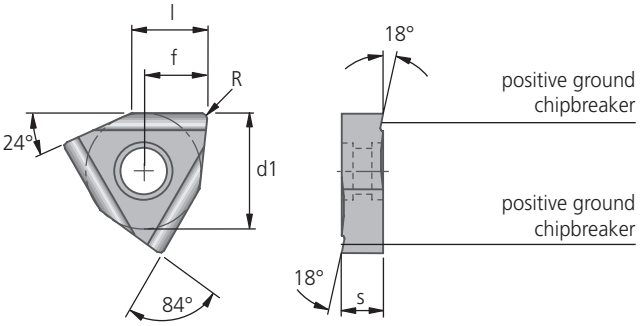
- positive ground chipbreaker
- R.H. cutting form „R“
- P6 cutting edges

## Application range:

**Internal and external turning**

The Unisix® insert with 6 cutting edges is an efficient and economic insert. The six cutting edges can be used because of the negative insert seating.
The positively ground chipbreakers guarantee a good chip form and a soft cut.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades uncoated P10 E 01 | uncoated P25 E 12 | uncoated P40 E 04 | uncoated K10 F 21 | CVD coated BK60 E 60 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded F = sharp | enter carbide code | | | | | | | | | | |
| WNHX 060302..R-G18 | W04 34480.02.. | | ▲ | | | | 10,0 | 3,5 | 6,5 | 5,53 | 0,2 |
| WNHX 08T302..R-G18 | W04 42480.02.. | ▲ | ▲ | ▲ | ▲ | ▲ | 12,0 | 4,5 | 7,5 | 6,64 | 0,2 |
| WNHX 08T304..R-G18 | W04 42480.04.. | | ▲ | | | | | | | 6,62 | 0,4 |
| WNHX 100404..R-G18 | W04 50480.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | 15,0 | 5,0 | 9,5 | 8,29 | 0,4 |
| WNHX 120606..R-G18 | W04 58480.06.. | | ▲ | | | | 17,6 | 6,0 | 11,5 | 9,71 | 0,6 |
| Mild steel/tool steel P | | ● | ● | ● | ◐ | ● | Order example: Article WNHX 060302ER-G18 Carbide grade P25 Order No. W04 34480.0212 | | | | |
| Stainless and acid-resistant steel M | | ○ | ○ | ○ | | ○ | | | | | |
| Grey cast iron, spheroidal cast iron K | | | | | ● | | | | | | |
| Non-ferrous metals N | | | | | ● | | | | | | |
| Heat-resistant steels S | | | | | ● | | | | | | |
| Hardened tool steel H | | | | | | | | | | | |



▲ Availability: for delivery see current price and stock list

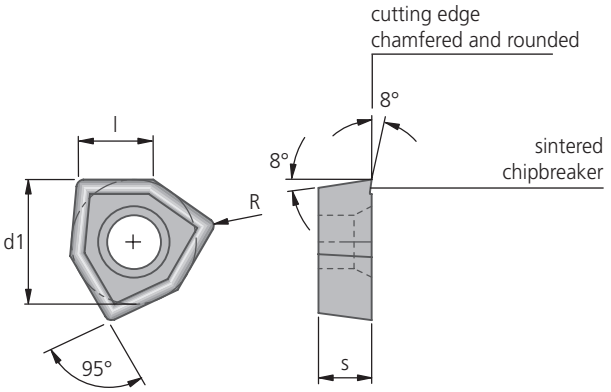


## Application range:

- Drilling into the solid
- Special tools

Excellent for all roughing operations for which turning accuracy of peripheral ground inserts is not essential. Suitable for medium and high tensile strength steels and cast irons, subject to grade.

## Cutter geometry:




**Please note:**
These inserts are being replaced by W27 ..01...

| Order No. | Carbide grades | | | d1 | s | l | R |
|---|---|---|---|---|---|---|---|
| | CVD coated | PVD coated | | | | | |
| |  |  |  | | | | |
| enter carbide code | BK64 **64** | BK79 **79** | BK84 **84** | | | | |
| W24 12010.04.. | | ▲ | | 5,5 | 2,3 | 3,40 | 0,4 |
| W24 20010.04.. | ▲ | ▲ | ▲ | 7,0 | 3,0 | 4,31 | 0,4 |
| Mild steel/tool steel P | ● | ● | ● | Order example: Carbide grade BK79 Order No. W24 12010.0464 | | | |
| Stainless and acid-resistant steel M | ◐ | ○ | ○ | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | | | |
| Non-ferrous metals N | | | | | | | |
| Heat-resistant steels S | | ◐ | | | | | |
| Hardened tool steel H | | | | | | | |

# KOMET Unisix® W24..11

## Inserts

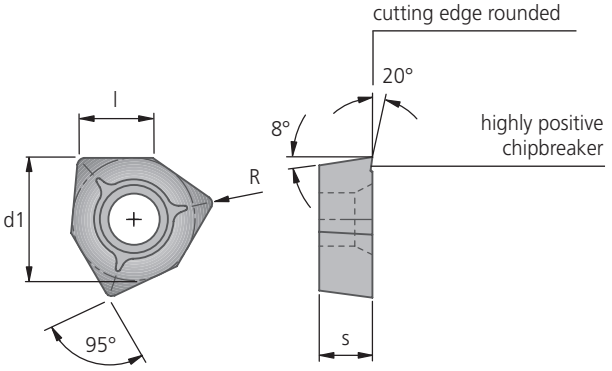


## Application range:

**with BK77 coating**
For cutting aluminium alloys and plastics at medium cutting speeds. Tough characteristics with a high resistance to build-up on cutting edges.

**with BK50 coating**
For cutting aluminium alloys, abrasive materials, graphite, plastics and bonded materials at high cutting speeds.

## Cutter geometry:




| Order No. | Carbide grades | | | d1 | s | l | R |
|---|---|---|---|---|---|---|---|
| | uncoated | diamond coated | PVD coated | | | | |
| enter carbide code | K10<br>21 | BK50<br>50 | BK77<br>77 | | | | |
| W24 12110.04.. | | ▲ | ▲ | 5,5 | 2,3 | 3,40 | 0,4 |
| W24 20110.04.. | ▲ | ▲ | ▲ | 7,0 | 3,0 | 4,31 | 0,4 |
| Mild steel/tool steel P | ◐ | | | | | | |
| Stainless and acid-resistant steel M | | | | | | | |
| Grey cast iron, spheroidal cast iron K | ● | | | | | | |
| Non-ferrous metals N | ● | ● | ● | | | | |
| Heat-resistant steels S | ● | | ● | | | | |
| Hardened tool steel H | | | | | | | |

Order example:
Carbide grade
BK77
Order No.
W24 12110.0477



▲ Availability: for delivery see current price and stock list

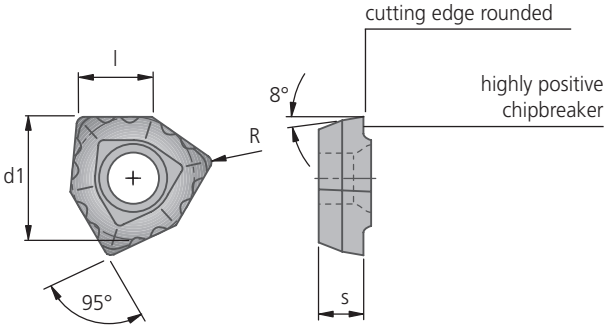


## Application range:

**with BK71 coating**
Multiple layer CVD coating with maximum wear resistance on a tough substrate. Drilling into the solid in the medium to high cutting speed range in structural and carbon steels and in stainless and acid-resistant steels.

**with BK79 coating**
A wear-resistant PVD coating on a tough P40 substrate. Drilling into the solid in the low to medium cutting speed range. Particularly suitable as internal inserts and with interrupted cut.

## Cutter geometry:




**Note:** Because of the special cutting edge geometry, the inserts W24..13 can only be used for R.H. cutting KUB® drills.

| Order No. | Carbide grades | | d1 | s | l | R |
|---|---|---|---|---|---|---|
| | CVD coated  | PVD coated  | | | | |
| enter carbide code | BK71 **71** | BK79 **79** | | | | |
| **W24 12130.04..** | ▲ | ▲ | 5,5 | 2,3 | 3,40 | 0,4 |
| **W24 20130.04..** | ▲ | ▲ | 7,0 | 3,0 | 4,31 | 0,4 |
| Mild steel/tool steel P | ● | ● | Order example: Carbide grade BK71 Order No. W24 12130.0471 | | | |
| Stainless and acid-resistant steel M | ● | ● | | | | |
| Grey cast iron, spheroidal cast iron K | | | | | | |
| Non-ferrous metals N | | | | | | |
| Heat-resistant steels S | | ◐ | | | | |
| Hardened tool steel H | | | | | | |

EP 0 792 201 and other patents (geometry)

# KOMET Unisix® W27..00

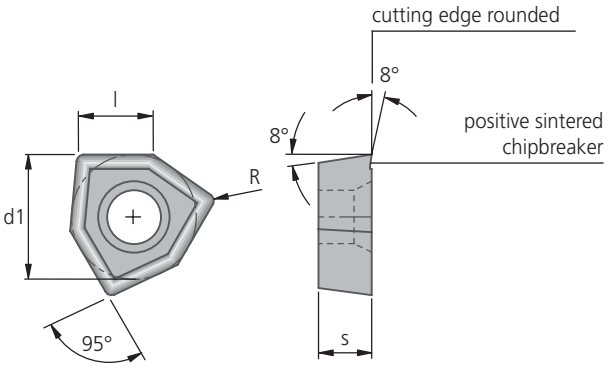
## Inserts



## Application range:

**Drilling into the solid < Ø 24 mm**
A mixture of parts are normally used on solid boring tools. Here a coated insert is used as the external cutting edge and an uncoated insert for the internal cutting edge. The 95° cutting angle increases the stability of the insert and produces a clear improvement in machining safety. Optimum chip form at a feed of f ≦ 0.06 mm. Used as a central insert only.

## Cutter geometry:




| Order No. | Carbide grades | | d1 | s | l | R |
|---|---|---|---|---|---|---|
| | uncoated | CVD coated | | | | |
| |  |  | | | | |
| enter carbide code | K10 21 | BK64 64 | | | | |
| W27 12000.04.. | | ▲ | 5,5 | 2,3 | 3,40 | 0,4 |
| W27 20000.04.. | ▲ | ▲ | 7,0 | 3,0 | 4,31 | 0,4 |
| Mild steel/tool steel P | ◐ | ● | | | | |
| Stainless and acid-resistant steel M | | ◐ | | | | |
| Grey cast iron, spheroidal cast iron K | ● | | | | | |
| Non-ferrous metals N | ● | | | | | |
| Heat-resistant steels S | ● | | | | | |
| Hardened tool steel H | | | | | | |

Order example:
Carbide grade
BK64
Order No.
W27 12000.0464



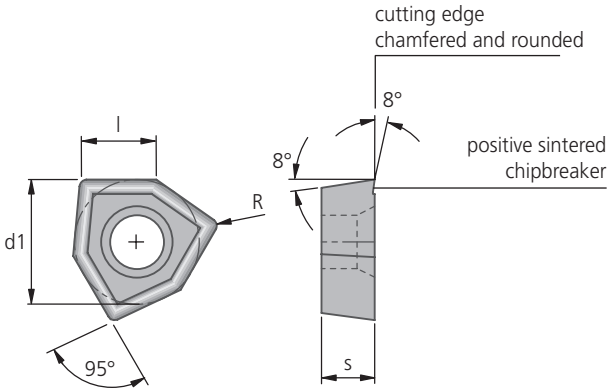
▲ Availability: for delivery see current price and stock list



## Application range:

**Drilling into the solid < Ø 24 mm**
A mixture of parts are normally used on solid boring tools. Here a coated insert is used as the external cutting edge and an uncoated insert for the internal cutting edge.
The 95° cutting angle increases the stability of the insert and produces a clear improvement in machining safety.
Additional chamfering prevents insert fracturing.

## Cutter geometry:



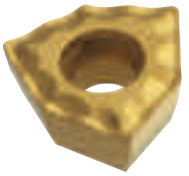

| Order No. | Carbide grades | | | | | | | | | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | uncoated | | | CVD coated | | | | PVD coated | | | | | |
| enter carbide code | P25M 03 | P40 04 | K10 21 | BK60 60 | BK61 61 | BK64 64 | BK69 69 | BK79 79 | BK84 84 | | | | |
| W27 12010.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 5,5 | 2,3 | 3,40 | 0,4 |
| W27 20010.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 7,0 | 3,0 | 4,31 | 0,4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Mild steel/tool steel P | ● | ● | ◐ | ● | | ● | ● | ● | ● |
| Stainless and acid-resistant steel M | ○ | ○ | | ○ | | ◑ | ○ | ○ | ○ |
| Grey cast iron, spheroidal cast iron K | | | ● | | ● | | ◑ | | ● |
| Non-ferrous metals N | | | ● | | | | | | |
| Heat-resistant steels S | | | ● | | | | | ◐ | |
| Hardened tool steel H | | | | | ◐ <52 HRC | | | | |

Order example:
Carbide grade
P25M
Order No.
W27 12010.0403

# KOMET Unisix® W27..10

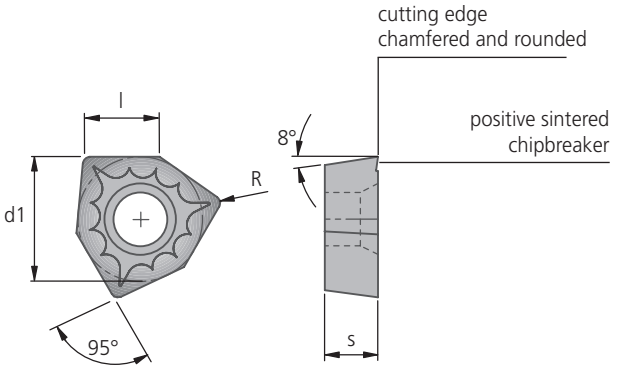
## Inserts



## Application range:

**Drilling into the solid < Ø 24 mm**
A mixture of parts are normally used on solid boring tools. Here a coated insert is used as the external cutting edge and an uncoated insert for the internal cutting edge.
The 95° cutting angle increases the stability of the insert and produces a clear improvement in machining safety.
The chip is compressed in cross section and tends to break more easily.

## Cutter geometry:




| Order No. | Carbide grades | | d1 | s | l | R |
|---|---|---|---|---|---|---|
| | CVD coated | PVD coated | | | | |
| |  |  | | | | |
| enter carbide code | BK64 **64** | BK79 **79** | | | | |
| W27 12100.04.. | ▲ | ▲ | 5,5 | 2,3 | 3,40 | 0,4 |
| W27 20100.04.. | ▲ | ▲ | 7,0 | 3,0 | 4,31 | 0,4 |
| Mild steel/tool steel P | ● | ● | Order example: Carbide grade BK64 Order No. W27 12100.0464 | | | |
| Stainless and acid-resistant steel M | ◐ | ○ | | | | |
| Grey cast iron, spheroidal cast iron K | | | | | | |
| Non-ferrous metals N | | | | | | |
| Heat-resistant steels S | | ◐ | | | | |
| Hardened tool steel H | | | | | | |



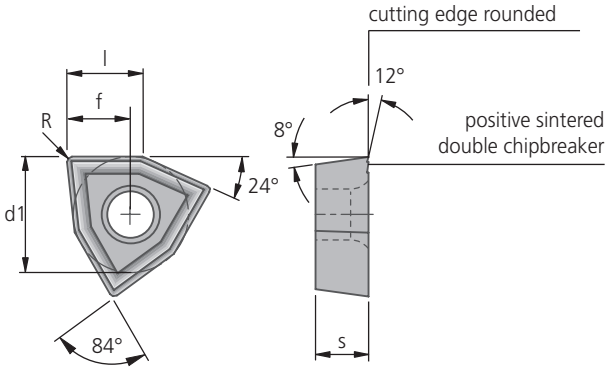
▲ Availability: for delivery see current price and stock list



## Application range:

- External and internal turning
- TwinKom® Double Insert Tools
- Special tools
- Kometric® mounted seatings
- as outer cutter with KUB® solid drill bit
- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: uncoated P25M 03 | uncoated K10 21 | CVD coated BK60 60 | CVD coated BK61 61 | CVD coated BK6115 6115 | CVD coated BK62 62 | CVD coated BK64 64 | PVD coated BK8425 8425 | Cermet uncoated CK37 37 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WOEX 05T304-00 | W29 24000.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | ▲ | 8,0 | 3,8 | 5,3 | 4,40 | 0,4 |
| WOEX 06T304-00 | W29 34000.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 10,0 | 3,8 | 6,6 | 5,51 | 0,4 |
| WOEX 080404-00 | W29 42000.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | | 12,0 | 4,8 | 7,9 | 6,62 | 0,4 |
| WOEX 100504-00 | W29 50000.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | | 15,0 | 5,3 | 9,9 | 8,29 | 0,4 |
| WOEX 100508-00 | W29 50000.08.. | | | | | ▲ | | ▲ | | | | | | 8,24 | 0,8 |
| WOEX 120608-00 | W29 58000.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | | 17,6 | 6,0 | 11,6 | 9,69 | 0,8 |
| Mild steel/tool steel P | | ● | ◐ | ● | | ● | | ● | ● | ● | | | | | |
| Stainless and acid-resistant steel M | | ○ | | ○ | | ◑ | | ◑ | ○ | ○ | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | ● | ● | ● | | ● | ◐ | | | | | |
| Non-ferrous metals N | | | ● | | | | | | | ◑ | | | | | |
| Heat-resistant steels S | | | ● | | | | | | | | | | | | |
| Hardened tool steel H | | | | | ◐ | | ◐ <52 HRC | | | | | | | | |
| External cutting edge | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Internal cutting edge *Recommendation* | | *W29..01 – BK8425* | | | | | | | | | | | | | |

Order example:
Article
WOEX 05T304-00
Carbide grade
P25M
Order No.
W29 24000.0403

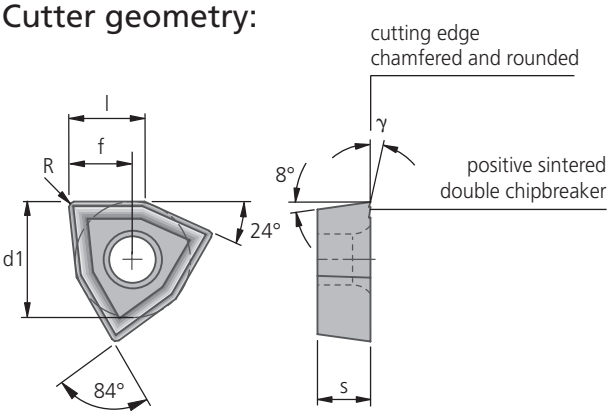
## Inserts



## Application range:

- External and internal turning
- KUB® solid drill
- TwinKom® Double Insert Tools
- Special tools
- Kometric® mounted seatings
- positive cutter geometry produces efficient cutting results
- particularly suitable for low output machines and unstable workpieces
- good, controllable chip formation in materials with low tensile strength

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: uncoated | | | CVD coated | | | | | | | PVD coated | | | d1 | s | l | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | enter carbide code ▼ | P25M 03 | P40 04 | K10 21 | BK 60 | BK 61 | BK 6115 | BK 62 | BK 64 | BK 6420 | BK 72 | BK 79 | BK 7930 | BK 8425 | | | | | | |
| WOEX 020102-01 | W29 04010.02.. | | | | | | | | | | | ▲ | | ▲ | 4,0 | 1,6 | 2,6 | 12° | 2,19 | 0,2 |
| WOEX 030204-01 | W29 10010.04.. | | ▲ | ▲ | | | ▲ | ▲ | | | ▲ | | ▲ | ▲ | 5,0 | 2,3 | 3,2 | 8° | 2,73 | 0,4 |
| WOEX 040304-01 | W29 18010.04.. | | ▲ | ▲ | | | ▲ | ▲ | | | ▲ | | ▲ | ▲ | 6,35 | 3,18 | 4,1 | 8° | 3,48 | 0,4 |
| WOEX 05T304-01 | W29 24010.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | 8,0 | 3,8 | 5,3 | 12° | 4,40 | 0,4 |
| WOEX 05T308-01 | W29 24010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | | | | | 4,35 | 0,8 |
| WOEX 06T304-01 | W29 34010.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | 10,0 | 3,8 | 6,6 | 12° | 5,51 | 0,4 |
| WOEX 06T308-01 | W29 34010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | | | | | 5,47 | 0,8 |
| WOEX 080404-01 | W29 42010.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | 12,0 | 4,8 | 7,9 | 12° | 6,62 | 0,4 |
| WOEX 080408-01 | W29 42010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | | | | | 6,58 | 0,8 |
| WOEX 100504-01 | W29 50010.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | 15,0 | 5,3 | 9,9 | 12° | 8,29 | 0,4 |
| WOEX 100508-01 | W29 50010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | | | | | 8,24 | 0,8 |
| WOEX 120608-01 | W29 58010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | 17,6 | 6,0 | 11,6 | 12° | 9,69 | 0,8 |
| Mild steel/tool steel P | | ● | ● | ◐ | ● | | ● | | ● | ● | ● | ● | ● | ● | Order example: | | | | | |
| Stainless and acid-resistant steel M | | ○ | ○ | | ○ | | ◐ | | ◐ | ○ | ◐ | ○ | ○ | ○ | Article | | | | | |
| Grey cast iron, spheroidal cast iron K | | | | ● | | ● | ● | ● | | ◐ | | | ◐ | ● | WOEX 05T304-01 | | | | | |
| Non-ferrous metals N | | | | ● | | | | | | | | | | | Carbide grade | | | | | |
| Heat-resistant steels S | | | | ● | | | | | | | | | | | P25M | | | | | |
| Hardened tool steel H | | | | | | ◐ | | ◐ <52 HRC | | | | | | | Order No. | | | | | |
| | | | | | | | | | | | | | | | W29 24010.0403 | | | | | |
| External cutting edge | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | |
| Internal cutting edge *Recommendation* | | ✓ | ✓ | ✓ | ✓ | ✓ | *BK 8425* | ✓ | ✓ | *BK 8425* | ✓ | ✓ | ✓ | ✓ | | | | | | |



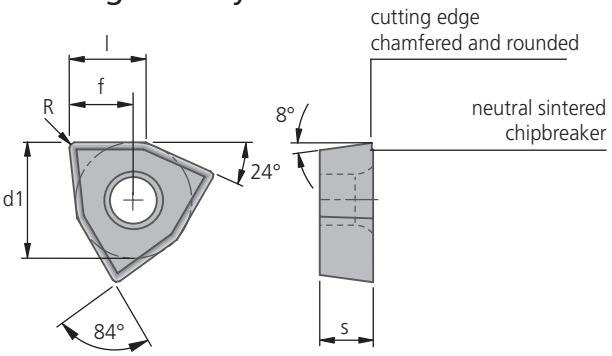
▲ Availability: for delivery see current price and stock list



## Application range:

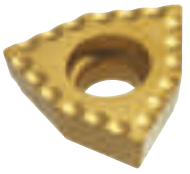
- TwinKom® Double Insert Tools
- Special tools
- as outer cutter with KUB® solid drill bit
- excellent for interrupted cut because of stable cutting angle (82°) (top rake 0°) and chamfered cutting edge. A first class chipbreaker also produces good chip formation even from difficult materials.
- cutting edge chamfered and rounded.
- for cutting depths of < 1.5 mm

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades uncoated P25M 03 | CVD coated BK60 60 | CVD coated BK6115 6115 | CVD coated BK64 64 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|---|
| | enter carbide code ▼ | | | | | | | | | |
| WOEX 05T304-02 | W29 24020.04.. | | ▲ | ▲ | ▲ | 8,0 | 3,8 | 5,3 | 4,40 | 0,4 |
| WOEX 05T308-02 | W29 24020.08.. | | | | ▲ | | | | 4,35 | 0,8 |
| WOEX 06T304-02 | W29 34020.04.. | ▲ | ▲ | | ▲ | 10,0 | 3,8 | 6,6 | 5,51 | 0,4 |
| WOEX 06T308-02 | W29 34020.08.. | | | | ▲ | | | | 5,47 | 0,8 |
| WOEX 080404-02 | W29 42020.04.. | ▲ | | | ▲ | 12,0 | 4,8 | 7,9 | 6,62 | 0,4 |
| WOEX 080408-02 | W29 42020.08.. | | | | ▲ | | | | 6,58 | 0,8 |
| WOEX 100504-02 | W29 50020.04.. | ▲ | | | ▲ | 15,0 | 5,3 | 9,9 | 8,29 | 0,4 |
| WOEX 100508-02 | W29 50020.08.. | | | | ▲ | | | | 8,24 | 0,8 |
| WOEX 120608-02 | W29 58020.08.. | ▲ | | | ▲ | 17,6 | 6,0 | 11,6 | 9,69 | 0,8 |
| Mild steel/tool steel P | | ● | ● | ● | ● | Order example: Article WOEX 05T304-02 Carbide grade BK64 Order No. W29 24020.0464 | | | | |
| Stainless and acid-resistant steel M | | ● | ● | ◐ | ◐ | | | | | |
| Grey cast iron, spheroidal cast iron K | | | | ● | | | | | | |
| Non-ferrous metals N | | | | | | | | | | |
| Heat-resistant steels S | | | | | | | | | | |
| Hardened tool steel H | | | | | | | | | | |
| External cutting edge | | ✓ | ✓ | ✓ | ✓ | | | | | |
| Internal cutting edge *Recommendation* | | *W29..01 – BK8425* | | | | | | | | |

## Inserts

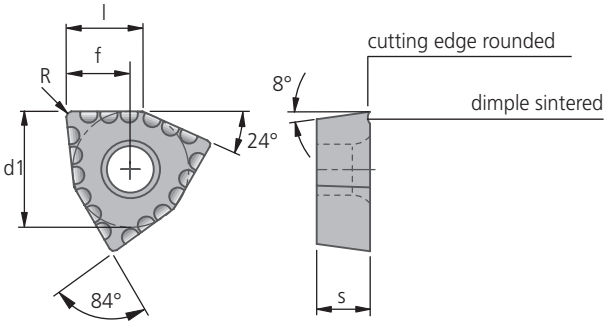


## Application range:

- KUB® solid drill
- TwinKom® Double Insert Tools
- Special tools
- Internal and external machining

The dimple shaped chipbreaker causes a different chip flow action.
The chip is compressed in cross section and tends to break more rapidly.

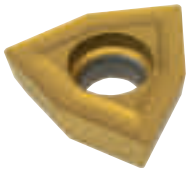
## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: uncoated | CVD coated | PVD coated | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|
| | enter carbide code ▼ | P25M 03 | BK6425 6425 | BK8425 8425 | | | | | |
| WOEX 030204-03 | W29 10030.04.. | | ▲ | ▲ | 5,0 | 2,3 | 3,2 | 2,73 | 0,4 |
| WOEX 040304-03 | W29 18030.04.. | | ▲ | ▲ | 6,35 | 3,18 | 4,1 | 3,48 | 0,4 |
| WOEX 05T304-03 | W29 24030.04.. | ▲ | ▲ | ▲ | 8,0 | 3,8 | 5,3 | 4,40 | 0,4 |
| WOEX 05T308-03 | W29 24030.08.. | | ▲ | | | | | 4,35 | 0,8 |
| WOEX 06T304-03 | W29 34030.04.. | ▲ | ▲ | ▲ | 10,0 | 3,8 | 6,6 | 5,51 | 0,4 |
| WOEX 06T308-03 | W29 34030.08.. | | ▲ | ▲ | | | | 5,47 | 0,8 |
| WOEX 080404-03 | W29 42030.04.. | ▲ | ▲ | ▲ | 12,0 | 4,8 | 7,9 | 6,62 | 0,4 |
| WOEX 080408-03 | W29 42030.08.. | | ▲ | ▲ | | | | 6,58 | 0,8 |
| WOEX 100504-03 | W29 50030.04.. | ▲ | ▲ | ▲ | 15,0 | 5,3 | 9,9 | 8,29 | 0,4 |
| WOEX 100508-03 | W29 50030.08.. | | ▲ | ▲ | | | | 8,24 | 0,8 |
| WOEX 120608-03 | W29 58030.08.. | ▲ | ▲ | ▲ | 17,6 | 6,0 | 11,6 | 9,69 | 0,8 |
| Mild steel/tool steel P | | ● | ● | ● | Order example: Article WOEX 030201-03 Carbide grade BK6420 Order No. W29 10030.046420 | | | | |
| Stainless and acid-resistant steel M | | ● | ● | ● | | | | | |
| Grey cast iron, spheroidal cast iron K | | | | ● | | | | | |
| Non-ferrous metals N | | | | | | | | | |
| Heat-resistant steels S | | | | | | | | | |
| Hardened tool steel H | | | | | | | | | |
| External cutting edge | | ✓ | ✓ | ✓ | | | | | |
| Internal cutting edge *Recommendation* | | *W29..01 – BK8425* | | | | | | | |



▲ Availability: for delivery see current price and stock list

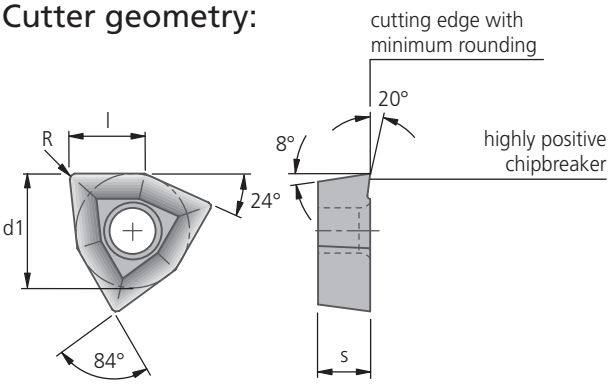


## Application range:

- KUB® solid drill
- TwinKom® Double Insert Tools
- Special tools
- Internal and external machining

The highly positive chip groove with minimal chamfer for soft cutting operations, mainly on aluminium

## Cutter geometry:




| Article ISO Description | Order No. enter carbide code | Carbide grades: uncoated K10 21 | diamond coated BK50 50 | PVD coated BK77 77 | PVD coated BK7710 7710 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|---|
| WOEX 030204-11 | W29 10110.04.. | ▲ | ▲ | ▲ | ▲ | 5,0 | 2,3 | 3,2 | 0,4 |
| WOEX 040304-11 | W29 18110.04.. | ▲ | ▲ | ▲ | ▲ | 6,35 | 3,18 | 4,1 | 0,4 |
| WOEX 05T304-11 | W29 24110.04.. | ▲ | ▲ | ▲ | ▲ | 8,0 | 3,8 | 5,3 | 0,4 |
| WOEX 06T304-11 | W29 34110.04.. | ▲ | ▲ | ▲ | ▲ | 10,0 | 3,8 | 6,6 | 0,4 |
| WOEX 080404-11 | W29 42110.04.. | ▲ | ▲ | ▲ | ▲ | 12,0 | 4,8 | 7,9 | 0,4 |
| WOEX 100504-11 | W29 50110.04.. | ▲ | ▲ | ▲ | ▲ | 15,0 | 5,3 | 9,9 | 0,4 |
| Mild steel/tool steel P | | ◐ | | | | Order example: Article WOEX 030204-11 Carbide grade K10 Order No. W29 10110.0421 | | | |
| Stainless and acid-resistant steel M | | | | | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | | | | | | |
| Non-ferrous metals N | | ● | ● | ● | ● | | | | |
| Heat-resistant steels S | | ● | | ● | | | | | |
| Hardened tool steel H | | | | | | | | | |

## Inserts



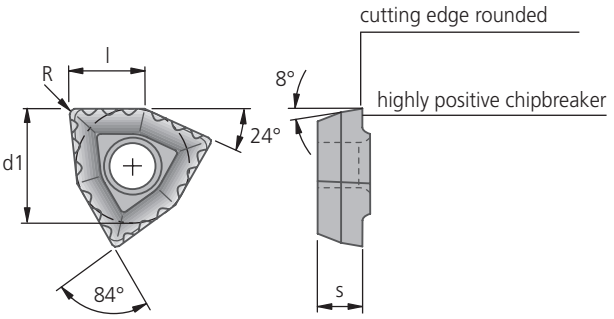
## Application range:

- KUB® solid drill
- TwinKom® Double Insert Tools
- Special tools
- Internal and external machining

The dimple shaped chipbreaker causes a different chip flow action.

The chip is compressed in cross section and tends to break more rapidly.

## Cutter geometry:




| Article ISO Description | Order No. enter carbide code | Carbide grades: uncoated P40 04 | CVD coated BK73 73 | PVD coated BK79 79 | PVD coated BK8425 8425 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|---|
| WOEX 030204-13 | W29 10130.04.. | ▲ | ▲ | ▲ | ▲ | 5,0 | 2,3 | 3,2 | 0,4 |
| WOEX 040304-13 | W29 18130.04.. | ▲ | ▲ | ▲ | ▲ | 6,35 | 3,18 | 4,1 | 0,4 |
| WOEX 05T304-13 | W29 24130.04.. | ▲ | ▲ | ▲ | ▲ | 8,0 | 3,8 | 5,3 | 0,4 |
| WOEX 06T304-13 | W29 34130.04.. | ▲ | ▲ | ▲ | ▲ | 10,0 | 3,8 | 6,6 | 0,4 |
| WOEX 080404-13 | W29 42130.04.. | ▲ | ▲ | ▲ | ▲ | 12,0 | 4,8 | 7,9 | 0,4 |
| WOEX 100504-13 | W29 50130.04.. | | ▲ | ▲ | ▲ | 15,0 | 5,3 | 9,9 | 0,4 |
| WOEX 120608-13 | W29 58130.08.. | ▲ | | ▲ | ▲ | 17,6 | 6,0 | 11,6 | 0,8 |
| Mild steel/tool steel P | | ● | ● | ● | ● | Order example: Article WOEX 030204-13 Carbide grade P40 Order No. W29 10130.0404 | | | |
| Stainless and acid-resistant steel M | | ● | ● | ● | ● | | | | |
| Grey cast iron, spheroidal cast iron K | | | | | ● | | | | |
| Non-ferrous metals N | | | | | | | | | |
| Heat-resistant steels S | | | | ◐ | | | | | |
| Hardened tool steel H | | | | | | | | | |

EP 0 792 201 and other patents (geometry)



▲ Availability: for delivery see current price and stock list

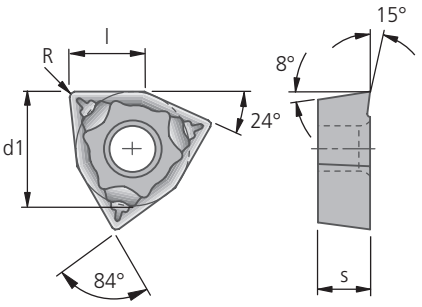


## Application range:

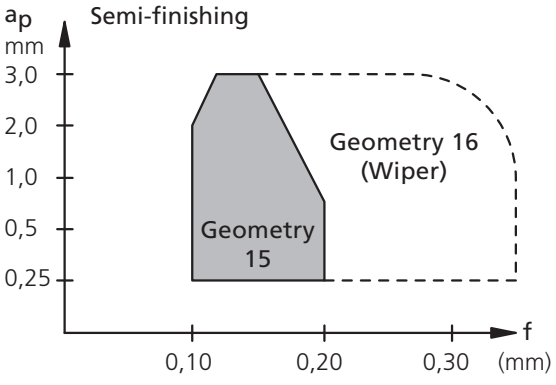
- TwinKom® Double Insert Tools
- Special tools
- Internal and external machining

Optimum chip formation for cutting depths from 0.25 mm.

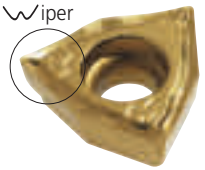
## Cutter geometry:




| Article<br>ISO Description | Order No.<br>enter carbide code ▼ | Carbide grades<br>CVD coated<br>BK60<br>60 | <br><br>BK73<br>73 | PVD coated<br>BK84<br>84 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|
| WOGX 030204-15 | W29 10150.04.. | ▲ | ▲ | ▲ | 5,0 | 2,3 | 3,2 | 0,4 |
| WOGX 040304-15 | W29 18150.04.. | ▲ | ▲ | ▲ | 6,35 | 3,18 | 4,1 | 0,4 |
| WOGX 05T304-15 | W29 24150.04.. | ▲ | ▲ | ▲ | 8,0 | 3,8 | 5,3 | 0,4 |
| WOGX 06T304-15 | W29 34150.04.. | ▲ | ▲ | ▲ | 10,0 | 3,8 | 6,6 | 0,4 |
| WOGX 080404-15 | W29 42150.04.. | ▲ | ▲ | ▲ | 12,0 | 4,8 | 7,9 | 0,4 |
| Mild steel/tool steel P | | ● | ● | ● | Order example:<br>Article<br>WOGX 030204-15<br>Carbide grade<br>BK60<br>Order No.<br>W29 10150.0460 | | | |
| Stainless and acid-resistant steel M | | | ● | ● | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | ◐ | | | | |
| Non-ferrous metals N | | | | | | | | |
| Heat-resistant steels S | | | | | | | | |
| Hardened tool steel H | | | | | | | | |



## Inserts

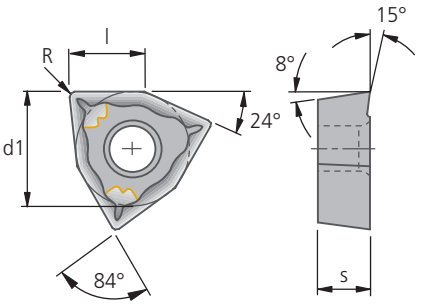



## Application range:

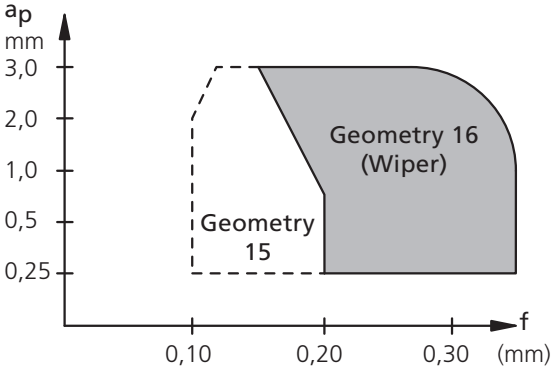
- TwinKom® Double Insert Tools
- Special tools
- Internal and external machining

Optimum chip formation for cutting depths from 0.25 mm.

## Cutter geometry:

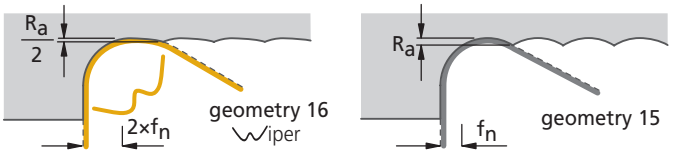


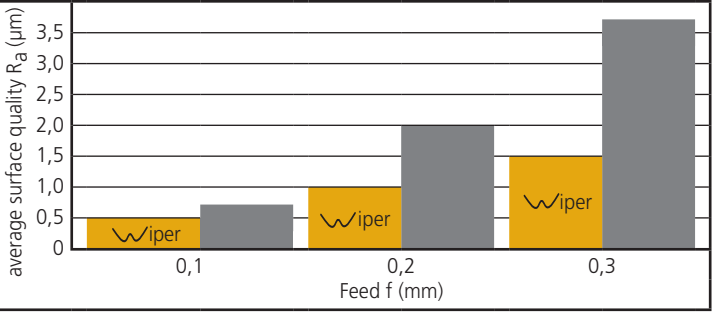

| Article ISO Description | Order No. | Carbide grades: CVD coated BK60 | Carbide grades: CVD coated BK73 | Carbide grades: PVD coated BK84 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|
| | enter carbide code ▼ | 60 | 73 | 84 | | | | |
| WOGX 030204-16 | W29 10160.04.. | ▲ | ▲ | ▲ | 5,0 | 2,3 | 3,2 | 0,4 |
| WOGX 040304-16 | W29 18160.04.. | ▲ | ▲ | ▲ | 6,35 | 3,18 | 4,1 | 0,4 |
| WOGX 05T304-16 | W29 24160.04.. | ▲ | ▲ | ▲ | 8,0 | 3,8 | 5,3 | 0,4 |
| WOGX 06T304-16 | W29 34160.04.. | ▲ | ▲ | ▲ | 10,0 | 3,8 | 6,6 | 0,4 |
| WOGX 080404-16 | W29 42160.04.. | ▲ | ▲ | ▲ | 12,0 | 4,8 | 7,9 | 0,4 |
| Mild steel/tool steel P | | ● | ● | ● | Order example: Article WOGX 030204-16 Carbide grade BK60 Order No. W29 10160.0460 | | | |
| Stainless and acid-resistant steel M | | | ● | ● | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | ◐ | | | | |
| Non-ferrous metals N | | | | | | | | |
| Heat-resistant steels S | | | | | | | | |
| Hardened tool steel H | | | | | | | | |




### Surface quality results:

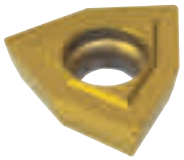
Comparison of surface quality results for "Wiper" – R04 for ϰ = 90° in X40Cr13 / 1.4034





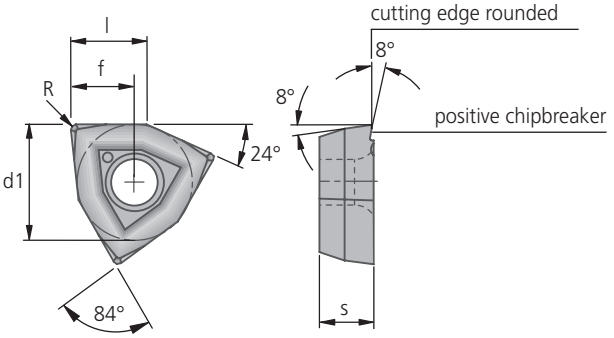

▲ Availability: for delivery see current price and stock list



## Application range:

- External and internal turning
- KUB® solid drill
- TwinKom® Double Insert Tools
- Kometric® mounted seatings

## Cutter geometry:

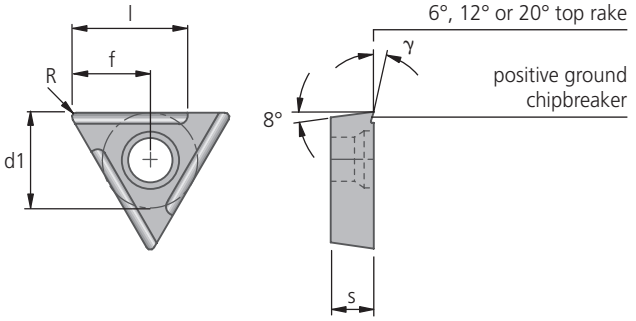


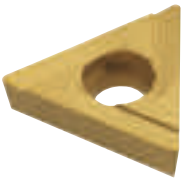

| Article<br>ISO Description | Order No.<br>enter carbide code ▼ | Carbide grades<br>PVD coated<br>BK2730<br>**2730** | BK8430<br>**8430** | d1 | s | l | R |
|---|---|---|---|---|---|---|---|
| WOEX 030204-20 | **W29 10200.04..** | ▲ | ▲ | 5,0 | 2,3 | 3,2 | 0,4 |
| WOEX 040304-20 | **W29 18200.04..** | ▲ | ▲ | 6,35 | 3,18 | 4,1 | 0,4 |
| WOEX 05T304-20 | **W29 24200.04..** | ▲ | ▲ | 8,0 | 3,8 | 5,3 | 0,4 |
| WOEX 06T304-20 | **W29 34200.04..** | ▲ | ▲ | 10,0 | 3,8 | 6,6 | 0,4 |
| WOEX 080404-20 | **W29 42200.04..** | ▲ | ▲ | 12,0 | 4,8 | 7,9 | 0,4 |
| WOEX 100504-20 | **W29 50200.04..** | ▲ | ▲ | 15,0 | 5,3 | 9,9 | 0,4 |
| Mild steel/tool steel P | | ◐ | ● | Order example:<br>Article<br>WOEX 030204-20<br>Carbide grade<br>BK2730<br>Order No.<br>W29 10200.042730 | | | |
| Stainless and acid-resistant steel M | | ● | ● | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | ◑ | | | | |
| Non-ferrous metals N | | ◐ | ◐ | | | | |
| Heat-resistant steels S | | ◐ | ◐ | | | | |
| Hardened tool steel H | | ◑ | | | | | |

## Inserts

L.H. cutting form „L“

## Cutter geometry:



| Article ISO Description | Order No. | Carbide grades | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | uncoated | | | | | CVD coated | | | |
| Cutting edge design E = rounded F = sharp | enter carbide code | P10 E 01 | P25M E 03 | P40 E 04 | K10 E 21 | K10 F 21 | BK60 E 60 | BK7615 E 7615 | BK6110 E 6110 | BK64 E 64 |
| TOHX 06T100..L-G06 | W30 04060.30.. | | | | ▲ | | ▲ | | | |
| TOHX 06T102..L-G06 | W30 04060.02.. | | ▲ | | | ▲ | ▲ | ▲ | ▲ | ▲ |
| TOHX 06T103..L-G06 | W30 04060.03.. | | ▲ | ▲ | | ▲ | ▲ | ▲ | ▲ | ▲ |
| TOHX 06T104..L-G06 | W30 04060.04.. | | ▲ | | | ▲ | ▲ | | | ▲ |
| TOHX 06T100..L-G12 | W30 04120.30.. | | | | | | ▲ | | | |
| TOHX 06T102..L-G12 | W30 04120.02.. | | ▲ | | | ▲ | ▲ | ▲ | | ▲ |
| TOHX 06T103..L-G12 | W30 04120.03.. | | ▲ | | | ▲ | ▲ | ▲ | | ▲ |
| TOHX 06T104..L-G12 | W30 04120.04.. | | ▲ | | | ▲ | ▲ | | | ▲ |
| TOHX 06T102..L-G20 | W30 04200.02.. | | | | | ▲ | ▲ | | | |
| TOHX 06T103..L-G20 | W30 04200.03.. | | | | | ▲ | ▲ | | | |
| TOHX 090200..L-G06 | W30 14060.30.. | | | | ▲ | | ▲ | | | |
| TOHX 090202..L-G06 | W30 14060.02.. | | ▲ | | ▲ | | ▲ | ▲ | ▲ | ▲ |
| TOHX 090204..L-G06 | W30 14060.04.. | | ▲ | | ▲ | | ▲ | ▲ | ▲ | ▲ |
| TOHX 090208..L-G06 | W30 14060.08.. | | | | ▲ | | ▲ | ▲ | ▲ | |
| TOHX 090200..L-G12 | W30 14120.30.. | | | | ▲ | | ▲ | | | ▲ |
| TOHX 090202..L-G12 | W30 14120.02.. | | ▲ | | | ▲ | ▲ | ▲ | | ▲ |
| TOHX 090204..L-G12 | W30 14120.04.. | ▲ | ▲ | | ▲ | | ▲ | ▲ | | ▲ |
| TOHX 090208..L-G12 | W30 14120.08.. | | | | | ▲ | ▲ | | | |
| TOHX 090202..L-G20 | W30 14200.02.. | | ▲ | | | ▲ | ▲ | | | |
| TOHX 090204..L-G20 | W30 14200.04.. | | | | | ▲ | ▲ | | | |
| TOHX 140302..L-G06 | W30 26060.02.. | | ▲ | | ▲ | | ▲ | ▲ | ▲ | |
| TOHX 140304..L-G06 | W30 26060.04.. | | ▲ | | ▲ | | ▲ | ▲ | ▲ | ▲ |
| TOHX 140305..L-G06 | W30 26060.05.. | | ▲ | | ▲ | | ▲ | ▲ | ▲ | ▲ |
| TOHX 140308..L-G06 | W30 26060.08.. | | | | | | ▲ | ▲ | ▲ | |
| TOHX 140302..L-G12 | W30 26120.02.. | | ▲ | | | ▲ | ▲ | ▲ | | ▲ |
| TOHX 140304..L-G12 | W30 26120.04.. | | ▲ | | | ▲ | ▲ | | | |
| TOHX 140305..L-G12 | W30 26120.05.. | | ▲ | | | ▲ | ▲ | ▲ | | ▲ |
| TOHX 140308..L-G12 | W30 26120.08.. | | | | | | ▲ | | | |
| TOHX 140302..L-G20 | W30 26200.02.. | | | | | ▲ | | | | |
| TOHX 140304..L-G20 | W30 26200.04.. | | | | | ▲ | | | | |
| TOHX 140305..L-G20 | W30 26200.05.. | | | | | ▲ | | | | |
| TOHX 22T308..L-G06 | W30 44060.08.. | | ▲ | | | | | | | |
| TOHX 22T308..L-G12 | W30 44120.08.. | | | | | | | | | |
| Mild steel/tool steel P | | ● | ● | ● | ◐ | ◐ | ● | | ◐ | ● |
| Stainless and acid-resistant steel M | | ○ | ○ | ○ | | | ○ | | | ◐ |
| Grey cast iron, spheroidal cast iron K | | | | | ● | ● | | ● | ● | |
| Non-ferrous metals N | | | | | ● | ● | | | | |
| Heat-resistant steels S | | | | | ● | ● | | | | |
| Hardened tool steel H | | | | | | | | ◐ | ◐ | |



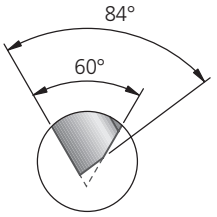
▲ Availability: for delivery see current price and stock list

## Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of ground chipbreakers and carbides suitable for almost any materials.

**Important note! The cutting edge on Cermet inserts is rounded.**




Version for R = 0,0 mm

| Carbide grades | | Cermet | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PVD coated | | uncoated | | | PVD coated | | | | | | |
| BK2710 E 2710 | BK8425 E 8425 | CK30 E 30 | CK32 E 32 | CK37 E 37 | CK38 E 38 | d1 | s | l | γ | f | R |
| | ▲ | | | | | 4,0 | 1,8 | 1 | 6° | 3,25 | 0,0 |
| ▲ | ▲ | | | | | | | | | 3,32 | 0,2 |
| ▲ | ▲ | | | | | | | | | 3,25 | 0,3 |
| | | | | | | | | | | 3,17 | 0,4 |
| | ▲ | | | | | 4,0 | 1,8 | 1 | 12° | 3,25 | 0,0 |
| | ▲ | ▲ | ▲ | ▲ | ▲ | | | | | 3,32 | 0,2 |
| | ▲ | | ▲ | ▲ | | | | | | 3,25 | 0,3 |
| | ▲ | ▲ | | | ▲ | | | | | 3,17 | 0,4 |
| | ▲ | | | | | 4,0 | 1,8 | 1 | 20° | 3,32 | 0,2 |
| | | | | | | | | | | 3,25 | 0,3 |
| | ▲ | | | | | 5,6 | 2,5 | 2,5 | 6° | 4,55 | 0,0 |
| ▲ | ▲ | | | | | | | | | 4,70 | 0,2 |
| ▲ | ▲ | | | | | | | | | 4,56 | 0,4 |
| ▲ | ▲ | | | | | | | | | 4,26 | 0,8 |
| | ▲ | | | | | 5,6 | 2,5 | 2,5 | 12° | 4,55 | 0,0 |
| | ▲ | ▲ | ▲ | ▲ | ▲ | | | | | 4,70 | 0,2 |
| | ▲ | ▲ | ▲ | ▲ | ▲ | | | | | 4,56 | 0,4 |
| | ▲ | | | | | | | | | 4,26 | 0,8 |
| | ▲ | | | | | 5,6 | 2,5 | 2,5 | 20° | 4,70 | 0,2 |
| | | | | | | | | | | 4,56 | 0,4 |
| ▲ | ▲ | | | | | 8,2 | 3,0 | 4,5 | 6° | 6,96 | 0,2 |
| ▲ | ▲ | | | | | | | | | 6,81 | 0,4 |
| ▲ | ▲ | | | | | | | | | 6,74 | 0,5 |
| ▲ | ▲ | | | | | | | | | 6,52 | 0,8 |
| | ▲ | ▲ | ▲ | ▲ | ▲ | 8,2 | 3,0 | 4,5 | 12° | 6,96 | 0,2 |
| | ▲ | ▲ | | | ▲ | | | | | 6,81 | 0,4 |
| | ▲ | | ▲ | ▲ | | | | | | 6,74 | 0,5 |
| | ▲ | | | | | | | | | 6,52 | 0,8 |
| | | | | | | 8,2 | 3,0 | 4,5 | 20° | 6,96 | 0,2 |
| | | | | | | | | | | 6,81 | 0,4 |
| | | | | | | | | | | 6,74 | 0,5 |
| | ▲ | | | | | 12,7 | 4,3 | 10,5 | 6° | 10,41 | 0,8 |
| | ▲ | | | | | 12,7 | 4,3 | 10,5 | 12° | 10,41 | 0,8 |
| 🔵 🟡 🔴 ○ | 🔵 🟡 🔴 | 🔵 🟡 ◐ | 🔵 🟡 ◐ ◐ | 🔵 🟡 ◐ ◐ | 🔵 🟡 ◐ | Order example:<br>Article<br>TOHX 06T100 EL-G06<br>Carbide grade<br>BK60<br>Order No.<br>W30 04060.3060 | | | | | |

## Inserts

R.H. cutting form „R"



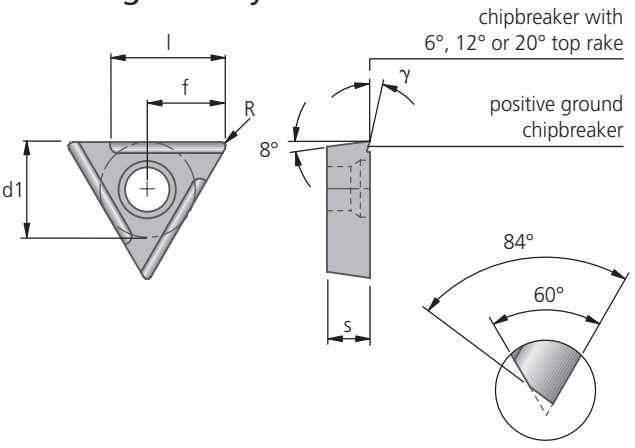
## Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of ground chipbreakers and carbides suitable for almost any materials.

**Important note! The cutting edge on Cermet inserts is rounded.**

## Cutter geometry:




Version for R = 0,0 mm

| Article ISO Description | Order No. | Carbide grades: uncoated P25M E 03 | K10 E 21 | K10 F 21 | CVD coated BK60 E 60 | BK60 F 60 | BK7615 E 7615 | BK64 E 64 | BK8425 E 8425 | Cermet: uncoated CK30 E 30 | CK32 E 32 | CK37 E 37 | PVD coated CK38 E 38 | d1 | s | l | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOHX 06T102 ..R-G06 | W30 04360.02.. | ▲ | ▲ | | ▲ | | | | ▲ | | | | | | | | | 3,32 | 0,2 |
| TOHX 06T103 ..R-G06 | W30 04360.03.. | ▲ | ▲ | | ▲ | | ▲ | ▲ | ▲ | | | | | 4,0 | 1,8 | 1 | 6° | 3,25 | 0,3 |
| TOHX 06T104 ..R-G06 | W30 04360.04.. | | | | ▲ | | | | ▲ | | | | | | | | | 3,17 | 0,4 |
| TOHX 06T102 ..R-G12 | W30 04420.02.. | ▲ | | ▲ | ▲ | | | | ▲ | ▲ | ▲ | ▲ | ▲ | | | | | 3,32 | 0,2 |
| TOHX 06T103 ..R-G12 | W30 04420.03.. | ▲ | | ▲ | ▲ | | | ▲ | ▲ | | ▲ | ▲ | | 4,0 | 1,8 | 1 | 12° | 3,25 | 0,3 |
| TOHX 06T104 ..R-G12 | W30 04420.04.. | | | | ▲ | | | | ▲ | ▲ | | | ▲ | | | | | 3,17 | 0,4 |
| TOHX 06T102 ..R-G20 | W30 04500.02.. | | | ▲ | | | | | ▲ | | | | | 4,0 | 1,8 | 1 | 20° | 3,32 | 0,2 |
| TOHX 06T103 ..R-G20 | W30 04500.03.. | | | ▲ | | | | | ▲ | | | | | | | | | 3,25 | 0,3 |
| TOHX 090200 ..R-G06 | W30 14360.30.. | ▲ | | | | | | | | | | | | | | | | 4,55 | 0,0 |
| TOHX 090202 ..R-G06 | W30 14360.02.. | ▲ | ▲ | | ▲ | | | | ▲ | | | | | 5,6 | 2,5 | 2,5 | 6° | 4,70 | 0,2 |
| TOHX 090204 ..R-G06 | W30 14360.04.. | ▲ | ▲ | | ▲ | | ▲ | ▲ | ▲ | | | | | | | | | 4,56 | 0,4 |
| TOHX 090202 ..R-G12 | W30 14420.30.. | | | ▲ | | | | | | | | | | | | | | 4,55 | 0,0 |
| TOHX 090202 ..R-G12 | W30 14420.02.. | ▲ | | ▲ | ▲ | | ▲ | | ▲ | ▲ | ▲ | ▲ | ▲ | 5,6 | 2,5 | 2,5 | 12° | 4,70 | 0,2 |
| TOHX 090204 ..R-G12 | W30 14420.04.. | ▲ | | ▲ | ▲ | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | | | | 4,56 | 0,4 |
| TOHX 090202 ..R-G20 | W30 14500.02.. | | | ▲ | | | | | | | | | | 5,6 | 2,5 | 2,5 | 20° | 4,70 | 0,2 |
| TOHX 090204 ..R-G20 | W30 14500.04.. | | | ▲ | | ▲ | | | | | | | | | | | | 4,56 | 0,4 |
| TOHX 140302 ..R-G06 | W30 26360.02.. | | ▲ | | | | | | ▲ | | | | | | | | | 6,96 | 0,2 |
| TOHX 140304 ..R-G06 | W30 26360.04.. | | | | ▲ | | | | | | | | | 8,2 | 3,0 | 4,5 | 6° | 6,81 | 0,4 |
| TOHX 140305 ..R-G06 | W30 26360.05.. | ▲ | ▲ | | ▲ | | | ▲ | ▲ | | | | | | | | | 6,74 | 0,5 |
| TOHX 140302 ..R-G12 | W30 26420.02.. | | | ▲ | ▲ | | | | ▲ | ▲ | ▲ | ▲ | ▲ | | | | | 6,96 | 0,2 |
| TOHX 140304 ..R-G12 | W30 26420.04.. | | | | | | | | | ▲ | | | ▲ | 8,2 | 3,0 | 4,5 | 12° | 6,81 | 0,4 |
| TOHX 140305 ..R-G12 | W30 26420.05.. | ▲ | | ▲ | ▲ | | | | ▲ | | ▲ | ▲ | | | | | | 6,74 | 0,5 |
| TOHX 140305 ..R-G20 | W30 26500.05.. | | | | | | | | ▲ | | | | | 8,2 | 3,0 | 4,5 | 20° | 6,74 | 0,5 |
| TOHX 22T308 ..R-G06 | W30 44360.08.. | ▲ | | | | | | | ▲ | | | | | 12,7 | 4,3 | 10,5 | 6° | 10,41 | 0,8 |
| TOHX 22T308 ..R-G12 | W30 44420.08.. | | | | | | | | ▲ | | | | | 12,7 | 4,3 | 10,5 | 12° | 10,41 | 0,8 |

Cutting edge design: E = rounded, F = sharp

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mild steel/tool steel | P | ● | ◐ | ● | | ● | ● | ● | ● | ● | ● |
| Stainless and acid-resistant steel | M | ○ | | ○ | | ◐ | ○ | ○ | ○ | ○ | ○ |
| Grey cast iron, spheroidal cast iron | K | | ● | | ● | | ● | ◐ | ◐ | ◐ | ◐ |
| Non-ferrous metals | N | | ● | | | | | | ◐ | ◐ | |
| Heat-resistant steels | S | | ● | | | | | | | | |
| Hardened tool steel | H | | | | ◐ | | | | | | |

Order example:
Article
TOHX 06T102 ER-G06
Carbide grade
P25M
Order No.
W30 04360.0203



▲ Availability: for delivery see current price and stock list

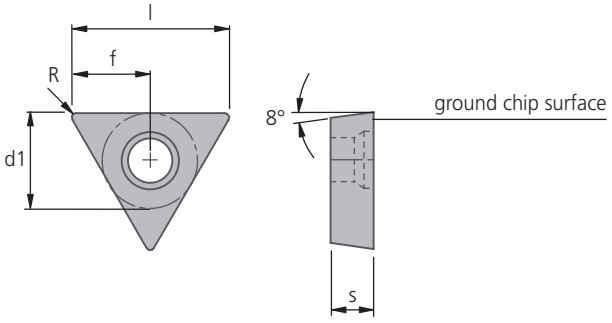


## Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact.

## Cutter geometry:




| Article<br>ISO Description | Order No. | Carbide grades<br>uncoated | | CVD coated | | | PVD coated | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design<br>E = rounded | enter carbide code | P25M<br>E<br>03 | K10<br>E<br>21 | BK60<br>E<br>60 | BK7615<br>E<br>7615 | BK62<br>E<br>62 | BK8425<br>E<br>8425 | | | | | |
| TOHX 06T102 EN | W30 04600.02.. | | ▲ | | | | | 4,0 | 1,8 | 6,5 | 3,32 | 0,2 |
| TOHX 06T103 EN | W30 04600.03.. | ▲ | ▲ | ▲ | ▲ | | ▲ | | | 6,5 | 3,25 | 0,3 |
| TOHX 090202 EN | W30 14600.02.. | | ▲ | | | | | 5,6 | 2,5 | 8,2 | 4,70 | 0,2 |
| TOHX 090204 EN | W30 14600.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | | 8,0 | 4,56 | 0,4 |
| TOHX 090208 EN | W30 14600.08.. | | | | ▲ | | | | | 7,6 | 4,26 | 0,8 |
| TOHX 140302 EN | W30 26600.02.. | | | | ▲ | | | 8,2 | 3,0 | 12,1 | 6,96 | 0,2 |
| TOHX 140304 EN | W30 26600.04.. | | | | ▲ | | | | | 11,9 | 6,81 | 0,4 |
| TOHX 140305 EN | W30 26600.05.. | ▲ | ▲ | | ▲ | | ▲ | | | 11,8 | 6,74 | 0,5 |
| TOHX 140308 EN | W30 26600.08.. | | ▲ | ▲ | ▲ | | | | | 11,5 | 6,52 | 0,8 |
| TOHX 22T308 EN | W30 44600.08.. | | ▲ | | ▲ | | | 12,7 | 4,3 | 20,8 | 10,41 | 0,8 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mild steel/tool steel | P | ● | ◐ | ● | | | ● |
| Stainless and acid-resistant steel | M | ● | | ● | | | ● |
| Grey cast iron, spheroidal cast iron | K | | ● | | ● | ● | ● |
| Non-ferrous metals | N | | ● | | | | |
| Heat-resistant steels | S | | ● | | | | |
| Hardened tool steel | H | | | | ◐ | ◐ <52 HRC | |

Order example:
Article
TOHX 06T103 EN
Carbide grade
K10
Order No.
W30 04600.0321

## Inserts

cutting form „F"

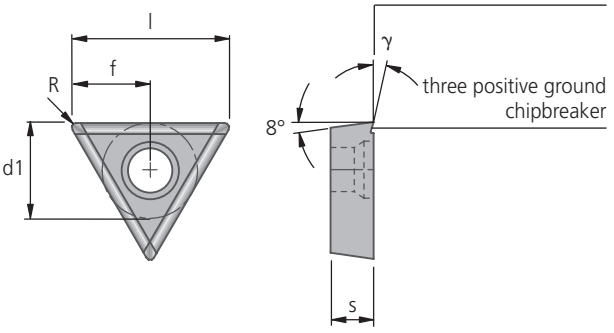


## Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of ground chipbreakers and carbides suitable for almost any materials.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: uncoated P25M E | uncoated P40 E | uncoated K10 E | uncoated K10 F | CVD coated BK60 E | CVD coated BK7615 E | CVD coated BK64 E | PVD coated BK8425 E | d1 | s | l | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded F = sharp | enter carbide code | 03 | 04 | 21 | 21 | 60 | 7615 | 64 | 8425 | | | | | | |
| TOHX 06T103 ..N-G06 | W30 04660.03.. | ▲ | | ▲ | | ▲ | | ▲ | ▲ | 4,0 | 1,8 | 6,5 | 6° | 3,25 | 0,3 |
| TOHX 06T103 ..N-G12 | W30 04720.03.. | ▲ | | | ▲ | ▲ | | | | | | | 12° | 3,25 | 0,3 |
| TOHX 090202 ..N-G06 | W30 14660.02.. | | | | | | | | ▲ | 5,6 | 2,5 | 9,1 | 6° | 4,70 | 0,2 |
| TOHX 090204 ..N-G06 | W30 14660.04.. | ▲ | ▲ | ▲ | | ▲ | ▲ | ▲ | ▲ | | | | | 4,56 | 0,4 |
| TOHX 090204 ..N-U8.77 | W30 14660.33.. | ▲ | | ▲ | | ▲ | ▲ | ▲ | ▲ | | | | | 4,56 | 0,4 |
| TOHX 090202 ..N-G12 | W30 14720.02.. | | | | | ▲ | | | | 5,6 | 2,5 | 9,4 | 12° | 4,70 | 0,2 |
| TOHX 090204 ..N-G12 | W30 14720.04.. | ▲ | | | ▲ | ▲ | | ▲ | ▲ | 5,6 | 2,5 | 9,1 | 12° | 4,56 | 0,4 |
| TOHX 090204 ..N-G20 | W30 14800.04.. | | | | ▲ | | | | | | | | 20° | 4,56 | 0,4 |
| TOHX 140305 ..N-G06 | W30 26660.05.. | ▲ | | ▲ | | ▲ | ▲ | ▲ | ▲ | 8,2 | 3,0 | 13,5 | 6° | 6,74 | 0,5 |
| TOHX 140305 ..N-G12 | W30 26720.05.. | ▲ | | | ▲ | ▲ | | | | | | | 12° | 6,74 | 0,5 |
| TOHX 22T308 ..N-G06 | W30 44660.08.. | ▲ | | ▲ | | ▲ | ▲ | ▲ | | 12,7 | 4,3 | 20,8 | 6° | 10,41 | 0,8 |
| TOHX 22T308 ..N-G12 | W30 44720.08.. | | | | ▲ | | | | | | | | 12° | 10,41 | 0,8 |
| Mild steel/tool steel P | | ● | ● | ◐ | ◐ | ● | | ● | ● | | | | | | |
| Stainless and acid-resistant steel M | | ○ | ○ | | | ○ | | ◑ | ○ | | | | | | |
| Grey cast iron, spheroidal cast iron K | | | | ● | ● | | ● | | ● | | | | | | |
| Non-ferrous metals N | | | | ● | ● | | | | | | | | | | |
| Heat-resistant steels S | | | | ● | ● | | | | | | | | | | |
| Hardened tool steel H | | | | | | | ◑ | | | | | | | | |

Order example:
Article
TOHX 06T103 EN-G06
Carbide grade
P25M
Order No.
W30 04660.0303



▲ Availability: for delivery see current price and stock list

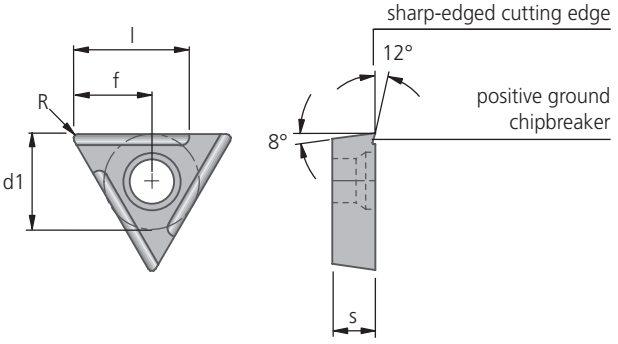


## Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of ground chipbreakers and carbides suitable for almost any materials.

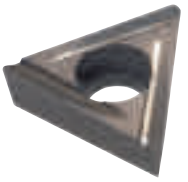
## Cutter geometry:




| Article<br>ISO Description | Order No. | Cermet | | | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|
| | | uncoated | | PVD coated | | | | | |
| Cutting edge design<br>F = sharp | enter carbide code | CK30<br>F<br>30 | CK32<br>F<br>32 | CK38<br>F<br>38 | | | | | |
| TOHX 06T102 FL-G12 | W30 04820.02.. | ▲ | ▲ | ▲ | 4,0 | 1,8 | 1 | 3,32 | 0,2 |
| TOHX 06T103 FL-G12 | W30 04820.03.. | | ▲ | | | | | 3,25 | 0,3 |
| TOHX 06T104 FL-G12 | W30 04820.04.. | ▲ | | ▲ | | | | 3,17 | 0,4 |
| TOHX 090202 FL-G12 | W30 14820.02.. | ▲ | ▲ | ▲ | 5,6 | 2,5 | 2,5 | 4,70 | 0,2 |
| TOHX 090204 FL-G12 | W30 14820.04.. | ▲ | ▲ | ▲ | | | | 4,56 | 0,4 |
| TOHX 140302 FL-G12 | W30 26820.02.. | ▲ | ▲ | ▲ | 8,2 | 3,0 | 4,5 | 6,96 | 0,2 |
| TOHX 140304 FL-G12 | W30 26820.04.. | ▲ | | ▲ | | | | 6,81 | 0,4 |
| TOHX 140305 FL-G12 | W30 26820.05.. | | ▲ | | | | | 6,74 | 0,5 |
| Mild steel/tool steel P | | ● | ● | ● | Order example:<br>Article<br>TOHX 06T102 FL-G12<br>Carbide grade<br>CK30<br>Order No.<br>W30 04820.0230 | | | | |
| Stainless and acid-resistant steel M | | ● | ● | ● | | | | | |
| Grey cast iron, spheroidal cast iron K | | ◐ | ◐ | ◐ | | | | | |
| Non-ferrous metals N | | | | | | | | | |
| Heat-resistant steels S | | | | | | | | | |
| Hardened tool steel H | | | | | | | | | |

## Inserts

R.H. cutting form „R“

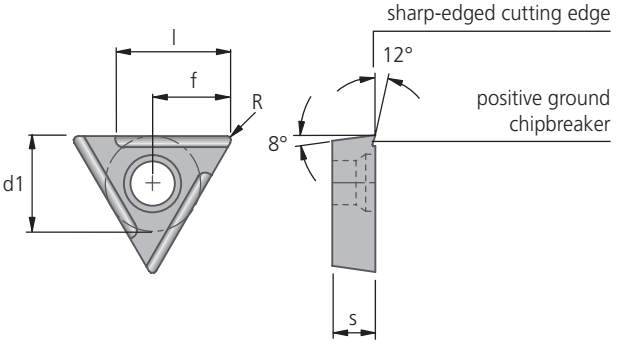


## Application range:

- Internal and external turning
- Small boring bars
- Fine machining, internal and external
- Countersink tools, end mill cutters

Peripheral ground triangular insert. Can be turned over with high changeover accuracy because of precision 2-sided contact. Large selection of ground chipbreakers and carbides suitable for almost any materials.

## Cutter geometry:




| Article ISO Description | Order No. | Cermet uncoated CK30 F 30 | Cermet uncoated CK32 F 32 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|
| Cutting edge design F = sharp ▼ | enter carbide code ▼ | | | | | | | |
| TOHX 06T102 FR-G12 | W30 04830.02.. | | ▲ | 4,0 | 1,8 | 1 | 3,32 | 0,2 |
| TOHX 090202 FR-G12 | W30 14830.02.. | | ▲ | 5,6 | 2,5 | 2,5 | 4,70 | 0,2 |
| TOHX 090204 FR-G12 | W30 14830.04.. | ▲ | | | | | 4,56 | 0,4 |
| Mild steel/tool steel P | | ● | ● | Order example: Article TOHX 06T102 FR-G12 Carbide grade CK30 Order No. W30 04830.0230 | | | | |
| Stainless and acid-resistant steel M | | ● | ● | | | | | |
| Grey cast iron, spheroidal cast iron K | | ◐ | ◐ | | | | | |
| Non-ferrous metals N | | | | | | | | |
| Heat-resistant steels S | | | | | | | | |
| Hardened tool steel H | | | | | | | | |



▲ Availability: for delivery see current price and stock list

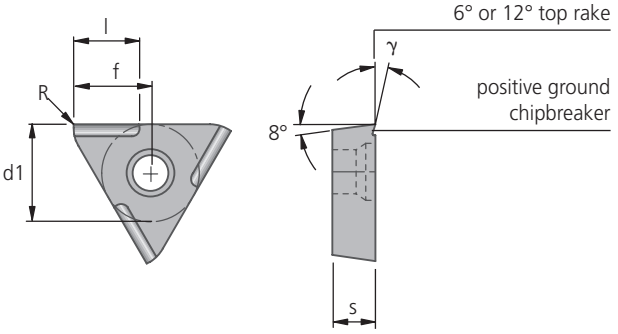


## Application range:

**Internal turning**
with high feed rates for stable conditions for tools up to a max. of 2.5 × D

Ideal cutting depths:
Steel $a_p$ = 0.1 – 0.25 mm
Cast iron $a_p$ = 0.15 – 0.3 mm

## Cutter geometry:




**Important note!**
The cutting edge on Cermet inserts is rounded.

| Article<br>ISO Description | Order No. | Carbide grades: uncoated | | CVD coated | | | PVD coated | Cermet: uncoated | PVD coated | d1 | s | l | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design<br>E = rounded<br>F = sharp | enter carbide code | K10<br>E<br>21 | K10<br>F<br>21 | BK60<br>E<br>60 | BK7615<br>E<br>7615 | BK64<br>E<br>64 | BK8425<br>E<br>8425 | CK30<br>E<br>30 | CK38<br>E<br>38 | | | | | | |
| TOHX 06T102..L-UF06 | **W30 04060.31..** | | | ▲ | ▲ | ▲ | | | | 4,0 | 1,8 | 2,8 | 6° | 3,24 | 2,0 |
| TOHX 06T102..L-UF12 | **W30 04120.31..** | | ▲ | ▲ | | | ▲ | ▲ | ▲ | | | | 12° | 3,24 | 2,0 |
| TOHX 090200..L-UF06 | **W30 14060.31..** | ▲ | | ▲ | ▲ | ▲ | | | | 5,6 | 2,5 | 4,0 | 6° | 4,31 | 3,0 |
| TOHX 090202..L-UF12 | **W30 14120.31..** | | | ▲ | | ▲ | ▲ | ▲ | ▲ | | | | 12° | 4,30 | 3,0 |
| TOHX 140302..L-UF06 | **W30 26060.31..** | ▲ | | ▲ | ▲ | ▲ | ▲ | | ▲ | 8,2 | 3,0 | 5,5 | 6° | 6,46 | 3,0 |
| TOHX 140302..L-UF12 | **W30 26120.31..** | | | ▲ | | ▲ | ▲ | ▲ | | | | | 12° | 6,45 | 3,0 |
| Mild steel/tool steel P | | ● | ● | ● | | ● | ● | ● | ● | | | | | | |
| Stainless and acid-resistant steel M | | | | ○ | | ◐ | ○ | ○ | ○ | | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | ● | | ● | | ● | ◐ | ◐ | | | | | | |
| Non-ferrous metals N | | ● | ● | | | | | | | | | | | | |
| Heat-resistant steels S | | ● | ● | | | | | | | | | | | | |
| Hardened tool steel H | | | | | | | | | | | | | | | |

Order example:
Article
TOHX06T102 EL-UF06
Carbide grade
BK60
Order No.
W30 04060.3160

## Inserts

L.H. cutting form „L“

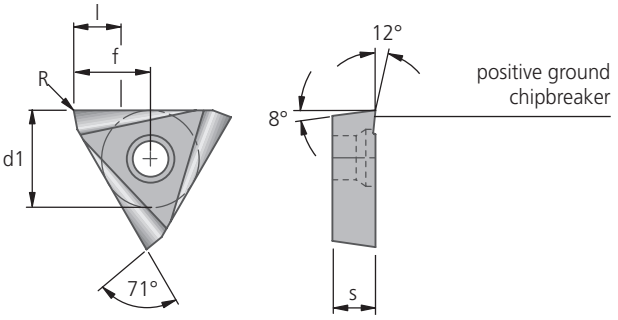


## Application range:

**Sharp cutting edge**
Insert with 0.05 mm centre radius for internal machining for tools with long overhang.

Ideal cutting depths:
Steel $a_p$ = 0.02 – 0.1 mm
Non-ferrous metal $a_p$ = 0.05 – 0.25 mm

## Cutter geometry:

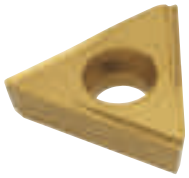



| Article ISO Description | Order No. | Carbide grades PVD coated | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| Cutting edge design F = sharp | enter carbide code | BK77 F 77 | | | | | |
| TOHX 06T1ZZ FL-39G12 | W30 04120.39.. | ▲ | 4,0 | 1,8 | 2,0 | 3,18 | 0,05 |
| TOHX 0902ZZ FL-39G12 | W30 14120.39.. | ▲ | 5,6 | 2,5 | 3,0 | 4,45 | 0,05 |
| TOHX 1403ZZ FL-39G12 | W30 26120.39.. | ▲ | 8,2 | 3,0 | 4,0 | 6,60 | 0,05 |

| | | |
|---|---|---|
| Mild steel/tool steel P | | Order example: Article TOHX 06T1ZZ FL-39G12 Carbide grade BK77 Order No. W30 04120.3977 |
| Stainless and acid-resistant steel M | | |
| Grey cast iron, spheroidal cast iron K | | |
| Non-ferrous metals N | ● | |
| Heat-resistant steels S | ● | |
| Hardened tool steel H | | |



▲ Availability: for delivery see current price and stock list



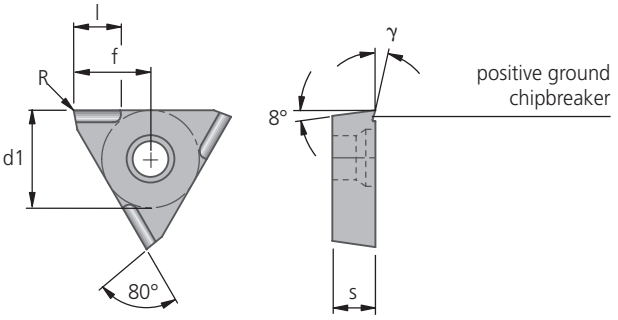
## Application range:

- Small boring bars
- Internal fine machinig

Because of the positive cutting edge geometry, cutting is very efficient. A deeper, narrow chipbreaker produces a controlled chip even from materials which produce long chips and at narrow cutting depths.
A flat ground secondary cutting edge provides increased corner stability.

**Important note!**
**The cutting edge on Cermet inserts is rounded.**
Also be supplied in Cermet for sharp-edged version.

## Cutter geometry:




| Article<br>ISO Description | Order No. | Carbide grades | | | Cermet | | | | d1 | s | l | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CVD coated | | PVD coated | uncoated | | | PVD coated | | | | | | |
| Cutting edge design<br>E = rounded | enter carbide code | BK60<br>E<br>60 | BK64<br>E<br>64 | BK8425<br>E<br>8425 | CK30<br>E<br>30 | CK32<br>E<br>32 | CK37<br>E<br>37 | CK38<br>E<br>38 | | | | | | |
| TOHX 06T102EL-US12 | W30 04120.32.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 4,0 | 1,8 | 1,5 | 12° | 2,95 | 0,2 |
| TOHX 090202EL-US12 | W30 14120.32.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 5,6 | 2,5 | 2,0 | 12° | 4,28 | 0,2 |
| TOHX 140302EL-US12 | W30 26120.32.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 8,2 | 3,0 | 2,0 | 12° | 6,44 | 0,2 |
| Mild steel/tool steel P | | ● | ● | ● | ● | ● | ● | ● | Order example:<br>Article<br>TOHX 06T102 EL-US12<br>Carbide grade<br>BK60<br>Order No.<br>W30 04120.3260 | | | | | |
| Stainless and acid-resistant steel M | | ○ | ◐ | ○ | ○ | ○ | ○ | ○ | | | | | | |
| Grey cast iron, spheroidal cast iron K | | | | ● | ◐ | ◐ | ◐ | ◐ | | | | | | |
| Non-ferrous metals N | | | | | | ◐ | ◐ | | | | | | | |
| Heat-resistant steels S | | | | | | | | | | | | | | |
| Hardened tool steel H | | | | | | | | | | | | | | |

Ideal Cutting depth:
Steel $a_p$ = 0.01 – 0.15 mm
Only suitable for non-ferrous metals in certain circumstances.

## Inserts

L.H. cutting form „L“
sharp-edged cutting edge



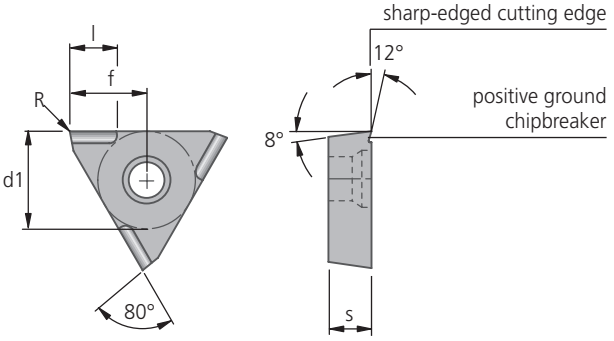
## Application range:

- Small boring bars
- Internal fine machinig

Because of the positive cutting edge geometry, cutting is very efficient. A deeper, narrow chipbreaker produces a controlled chip even from materials which produce long chips and at narrow cutting depths.
A flat ground secondary cutting edge provides increased corner stability.
Also be supplied in Cermet for rounded version.

Ideal Cutting depth:
Steel $a_p$ = 0.01 – 0.15 mm
Only suitable for non-ferrous metals in certain circumstances.

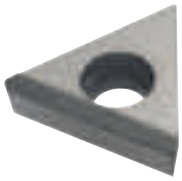
## Cutter geometry:




| Article ISO Description | Order No. | Cermet uncoated CK30 F 30 | Cermet uncoated CK32 F 32 | Cermet PVD coated CK38 F 38 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design F = sharp ▼ | enter carbide code ▼ | | | | | | | | |
| TOHX 06T102 FL-US12 | W30 04820.32.. | ▲ | | ▲ | 4,0 | 1,8 | 1,5 | 2,95 | 0,2 |
| TOHX 090202 FL-US12 | W30 14820.32.. | ▲ | ▲ | ▲ | 5,6 | 2,5 | 2,0 | 4,28 | 0,2 |
| TOHX 140302 FL-US12 | W30 26820.32.. | ▲ | | ▲ | 8,2 | 3,0 | 2,0 | 6,44 | 0,2 |
| Mild steel/tool steel P | | ● | ● | ● | Order example: | | | | |
| Stainless and acid-resistant steel M | | ● | ● | ● | Article | | | | |
| Grey cast iron, spheroidal cast iron K | | ◐ | ◐ | ◐ | TOHX 06T102 FL-US12 | | | | |
| Non-ferrous metals N | | | ◐ | | Carbide grade | | | | |
| Heat-resistant steels S | | | | | CK30 | | | | |
| Hardened tool steel H | | | | | Order No. | | | | |
| | | | | | W30 04820.3230 | | | | |



▲ Availability: for delivery see current price and stock list

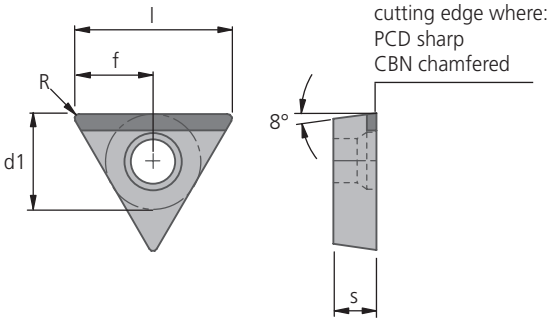


## Application range:

**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

**CBN:** Internal and external machining, fine turning. Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.
**CBN 57:** Preferably for cast materials and alloys on a nickel cobalt base.

## Cutter geometry:



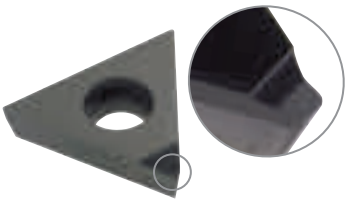

| Article<br>ISO Description<br>Cutting edge design<br>F = sharp<br>T = chamfered | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>  <br>PKD55<br>F<br>55 | <br>CBN tipped<br>  <br>CBN57<br>T<br>57 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|
| TOGX 090204 .. | W30 14940.04.. | ▲ | ▲ | 5,6 | 2,5 | 9,12 | 4,56 | 0,4 |
| TOGX 140305 .. | W30 26940.05.. | ▲ | ▲ | 8,2 | 3,0 | 13,5 | 6,74 | 0,5 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | ●<br>◐<br>○ < 52 HRC | Order example:<br>Article<br>TOGX 090204 T<br>Cutting material<br>CBN57<br>Order No.<br>W30 14940.0457 | | | | |

# KOMET® W30..98

## Inserts

PCD chip topography

TOGX

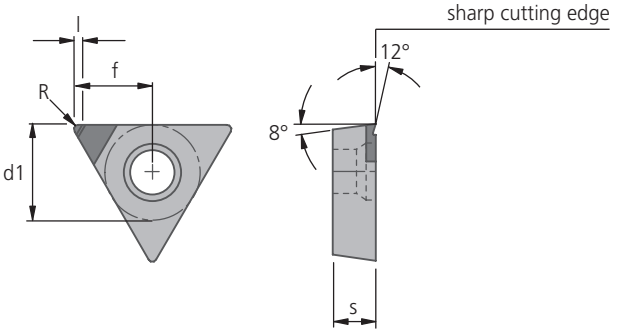


## Application range:

Version with chip breaker for optimum chip control. Particularly well-suited for long-chipping non-ferrous metals, mainly aluminium, wrought alloys and die casting alloys.

**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

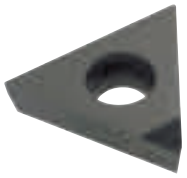
## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>PKD55<br>F<br>55 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| TOGX 06T103 FN | **W30 04980.03..** | ▲ | 4,0 | 1,8 | 0,6 | 3,25 | 0,3 |
| TOGX 090204 FN | **W30 14980.04..** | ▲ | 5,6 | 2,5 | 0,6 | 4,56 | 0,4 |
| TOGX 140305 FN | **W30 26980.05..** | ▲ | 8,2 | 3,0 | 0,6 | 6,74 | 0,5 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | Order example:<br>Article<br>TOGX 06T103 FN<br>Cutting material<br>PKD55<br>Order No.<br>W30 04980.0355 | | | | |



▲ Availability: for delivery see current price and stock list

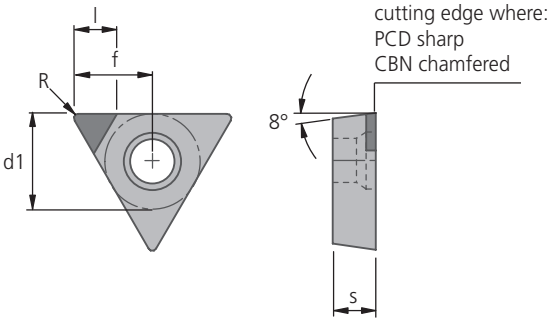


## Application range:

**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

**CBN:** Internal and external machining, fine turning. Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.
**CBN 57:** Preferably for cast materials and alloys on a nickel cobalt base.
**CBN 40:** For machining hardened steels (harder than 45 HRC)

## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp<br>T = chamfered | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>PKD55<br>F<br>55 | CBN tipped<br>CBN57<br>T<br>57 | CBN40<br>T<br>40 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|
| TOGX 06T102 ..N | W30 04990.02.. | ▲ | ▲ | ▲ | 4,0 | 1,8 | 1,8 | 3,32 | 0,2 |
| TOGX 06T103 ..N | W30 04990.03.. | ▲ | ▲ | | | | | 3,25 | 0,3 |
| TOGX 06T104 ..N | W30 04990.04.. | ▲ | | | | | | 3,17 | 0,4 |
| TOGX 090202 ..N | W30 14990.02.. | ▲ | ▲ | ▲ | 5,6 | 2,5 | 2,7 | 4,70 | 0,2 |
| TOGX 090204 ..N | W30 14990.04.. | ▲ | ▲ | ▲ | | | | 4,56 | 0,4 |
| TOGX 090208 ..N | W30 14990.08.. | ▲ | ▲ | | | | | 4,26 | 0,8 |
| TOGX 140302 ..N | W30 26990.02.. | ▲ | ▲ | | 8,2 | 3,0 | 2,7 | 6,96 | 0,2 |
| TOGX 140304 ..N | W30 26990.04.. | ▲ | ▲ | ▲ | | | | 6,81 | 0,4 |
| TOGX 140305 ..N | W30 26990.05.. | ▲ | ▲ | | | | | 6,74 | 0,5 |

| | | | |
|---|---|---|---|
| Mild steel/tool steel P | ● | ● | ◐ ○ ≥ 52 HRC |
| Stainless and acid-resistant steel M | | | |
| Grey cast iron, spheroidal cast iron K | | | |
| Non-ferrous metals N | | | |
| Heat-resistant steels S | | ◐ | |
| Hardened tool steel H | | | |

Order example:
Article
TOGX 06T102 TN
Cutting material
CBN57
Order No.
W30 04990.0257

## Inserts

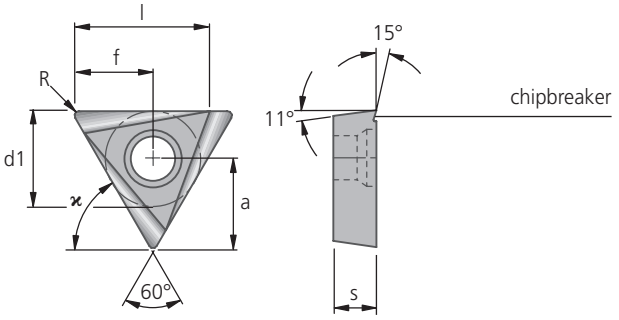
L.H. cutting form „L“
for machining aluminium



## Application range:

11° TPHX insert with chip surface (polished ground for uncoated carbide) for softer aluminium materials and other non-ferrous metals.
10 – 15° top rake with axial and radial tilt.

## Cutter geometry:




**Please note:**
Should a TPHB be used instead of this insert, dimension "a" changes according to angle "ϰ"

$$a = \cos(\varkappa - 60°) \times (d1 - 2R) + R - \left(\frac{\varkappa}{90°} \times \Delta\right)$$

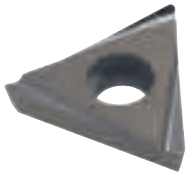
Δ 0.03 for R = 0.4
Δ 0.06 for R = 0.8

| Article ISO Description | Order No. | Carbide grades: uncoated | diamond coated | PVD coated | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design F = sharp | enter carbide code | K10 F 21 | BK50 F 50 | BK7710 F 7710 | | | | ϰ=90° | |
| TPHX 060104 FL-P15 | W32 03150.04.. | ▲ | ▲ | ▲ | 3,97 | 1,60 | 3,3 | 3,12 | 0,4 |
| TPHX 090204 FL-P15 | W32 13150.04.. | ▲ | ▲ | ▲ | 5,56 | 2,38 | 4,5 | 4,49 | 0,4 |
| TPHX 090208 FL-P15 | W32 13150.08.. | ▲ | ▲ | ▲ | | | 4,2 | 4,17 | 0,8 |
| TPHX 110204 FL-P15 | W32 18150.04.. | ▲ | ▲ | ▲ | 6,35 | 2,38 | 4,6 | 5,17 | 0,4 |
| TPHX 110208 FL-P15 | W32 18150.08.. | ▲ | ▲ | ▲ | | | 4,3 | 4,87 | 0,8 |
| TPHX 130304 FL-P15 | W32 23150.04.. | ▲ | ▲ | ▲ | 7,94 | 3,18 | 5,0 | 6,55 | 0,4 |
| TPHX 130308 FL-P15 | W32 23150.08.. | ▲ | ▲ | ▲ | | | 4,7 | 6,25 | 0,8 |
| TPHX 160304 FL-P15 | W32 32150.04.. | ▲ | ▲ | ▲ | 9,52 | 3,18 | 8,0 | 7,92 | 0,4 |
| TPHX 160308 FL-P15 | W32 32150.08.. | ▲ | ▲ | ▲ | | | 7,7 | 7,60 | 0,8 |
| TPHX 220408 FL-P15 | W32 44150.08.. | | | ▲ | 12,7 | 4,30 | 10,4 | 10,35 | 0,8 |
| Mild steel/tool steel P | | ◐ | | | | | | | |
| Stainless and acid-resistant steel M | | | | | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | | | | | | |
| Non-ferrous metals N | | ● | ● | ● | | | | | |
| Heat-resistant steels S | | ● | | ● | | | | | |
| Hardened tool steel H | | | | | | | | | |

Order example:
Article
TPHX 060104 FL-P15
Carbide grade
K10
Order No.
W32 03150.0421



▲ Availability: for delivery see current price and stock list



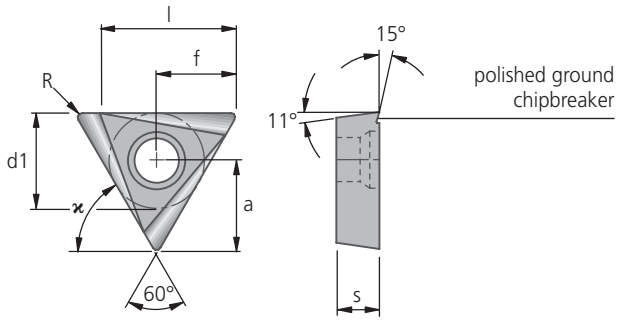
## Inserts

R.H. cutting form „R“
for machining aluminium

## Application range:

11° TPHX insert with polished ground chip surface for softer aluminium materials and other non-ferrous metals.
10 – 15° top rake with axial and radial tilt.

## Cutter geometry:




**Please note:**
Should a TPHB be used instead of this insert, dimension "a" changes according to angle "ϰ"

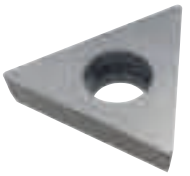
$$a = \cos(\varkappa - 60°) \times (d1 - 2R) + R - \left(\frac{\varkappa}{90°} \times \Delta\right)$$

Δ 0.03 for R = 0.4
Δ 0.06 for R = 0.8

| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Carbide grades<br>uncoated<br>  <br>K10<br>F<br>21 | d1 | s | l | f<br>ϰ=90° | R |
|---|---|---|---|---|---|---|---|
| TPHX 060104 FR-P15 | **W32 03450.04..** | ▲ | 3,97 | 1,60 | 3,3 | 3,12 | 0,4 |
| TPHX 090204 FR-P15 | **W32 13450.04..** | ▲ | 5,56 | 2,38 | 4,5 | 4,49 | 0,4 |
| TPHX 110204 FR-P15 | **W32 18450.04..** | ▲ | 6,35 | 2,38 | 4,6 | 5,17 | 0,4 |
| TPHX 130304 FR-P15 | **W32 23450.04..** | ▲ | 7,94 | 3,18 | 5,0 | 6,55 | 0,4 |
| TPHX 160304 FR-P15 | **W32 32450.04..** | ▲ | 9,52 | 3,18 | 8,0 | 7,92 | 0,4 |
| TPHX 220408 FR-P15 | **W32 44450.08..** | ▲ | 12,7 | 4,30 | 10,4 | 10,35 | 0,8 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ◐<br><br>●<br>●<br>● | Order example:<br>Article<br>TPHX 060104 FL-P15<br>Carbide grade<br>K10<br>Order No.<br>W32 03150.0421 | | | | |

## Inserts

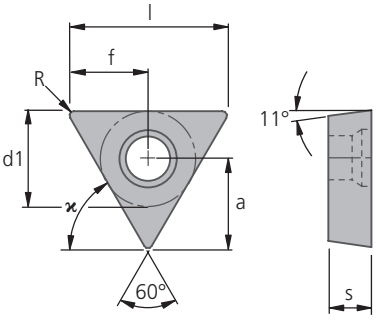
neutral cutting form „N“
for machining aluminium



## Application range:

11° TPHB insert (polished chip surface for uncoated carbide) for high tensile strength cast aluminium alloys. 5° top rake due to axial tilt for cutting speed range of ≦ 300 m/min.

## Cutter geometry:




$a = \cos(\varkappa - 60°) \times (d1 - 2R) + R$

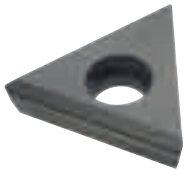
| Article ISO Description | Order No. | Carbide grades uncoated K10 F 21 | Carbide grades diamond coated BK50 F 50 | d1 | s | l | f ϰ=90° | R |
|---|---|---|---|---|---|---|---|---|
| Cutting edge design F = sharp | enter carbide code | | | | | | | |
| TPHB 060104 FN-P | W32 03600.04.. | ▲ | ▲ | 3,97 | 1,60 | 6,29 | 3,15 | 0,4 |
| TPHB 090204 FN-P | W32 13600.04.. | ▲ | ▲ | 5,56 | 2,38 | 9,04 | 4,52 | 0,4 |
| TPHB 090208 FN-P | W32 13600.08.. | ▲ | ▲ | | | 8,46 | 4,23 | 0,8 |
| TPHB 110204 FN-P | W32 18600.04.. | ▲ | ▲ | 6,35 | 2,38 | 10,41 | 5,21 | 0,4 |
| TPHB 110208 FN-P | W32 18600.08.. | ▲ | ▲ | | | 9,83 | 4,91 | 0,8 |
| TPHB 130304 FN-P | W32 23600.04.. | ▲ | ▲ | 7,94 | 3,18 | 13,17 | 6,58 | 0,4 |
| TPHB 130308 FN-P | W32 23600.08.. | ▲ | ▲ | | | 12,58 | 6,29 | 0,8 |
| TPHB 160304 FN-P | W32 32600.04.. | ▲ | ▲ | 9,52 | 3,18 | 15,9 | 7,95 | 0,4 |
| TPHB 160308 FN-P | W32 32600.08.. | ▲ | ▲ | | | 15,32 | 7,66 | 0,8 |
| TPHB 220404 FN-P | W32 44600.04.. | ▲ | ▲ | 12,7 | 4,30 | 21,41 | 10,71 | 0,4 |
| TPHB 220408 FN-P | W32 44600.08.. | ▲ | ▲ | | | 20,83 | 10,41 | 0,8 |

| | | | |
|---|---|---|---|
| Mild steel/tool steel | P | ◐ | |
| Stainless and acid-resistant steel | M | | |
| Grey cast iron, spheroidal cast iron | K | ● | |
| Non-ferrous metals | N | ● | ● |
| Heat-resistant steels | S | ● | |
| Hardened tool steel | H | | |

Order example:
Article
TPHB 060104 FN-P
Carbide grade
K10
Order No.
W32 03600.0421



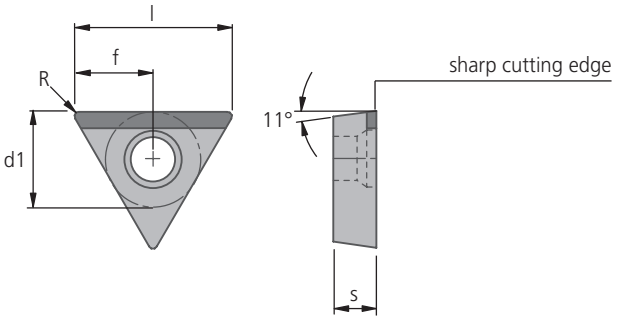
▲ Availability: for delivery see current price and stock list



## Application range:

**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

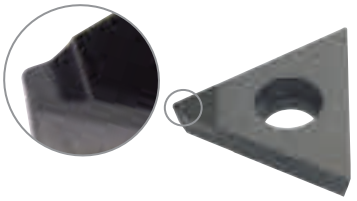
## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>  <br>PKD55<br>F<br>55 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| TPHB 090204 F | W32 13940.04.. | ▲ | 5,56 | 2,38 | 9,05 | 4,52 | 0,4 |
| TPHB 110204 F | W32 18940.04.. | ▲ | 6,35 | 2,38 | 10,41 | 5,21 | 0,4 |
| TPHB 130304 F | W32 23940.04.. | ▲ | 7,94 | 3,18 | 13,17 | 6,59 | 0,4 |
| TPHB 160304 F | W32 32940.04.. | ▲ | 9,52 | 3,18 | 15,9 | 7,95 | 0,4 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | Order example:<br>Article<br>TPHB 090204 F<br>Cutting material<br>PKD55<br>Order No.<br>W32 13940.0455 | | | | |

## Inserts

PCD chip topography
for machining aluminium

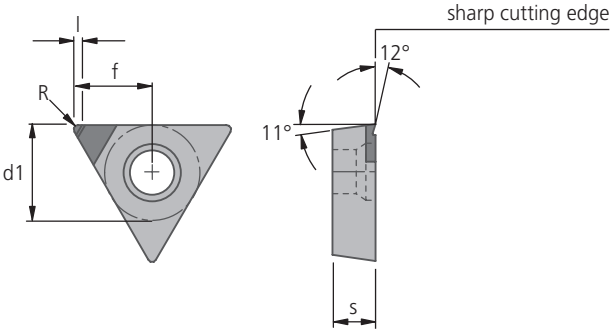


## Application range:

Version with chip breaker for optimum chip control. Particularly well-suited for long-chipping non-ferrous metals, mainly aluminium, wrought alloys and die casting alloys.

**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>PKD55<br>F<br>55 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| TPHB 060104 FN | **W32 03980.04..** | ▲ | 3,97 | 1,60 | 0,6 | 3,15 | 0,4 |
| TPHB 090204 FN | **W32 13980.04..** | ▲ | 5,56 | 2,38 | 0,6 | 4,52 | 0,4 |
| TPHB 110204 FN | **W32 18980.04..** | ▲ | 6,35 | 2,38 | 0,6 | 5,21 | 0,4 |
| TPHB 130304 FN | **W32 23980.04..** | ▲ | 7,94 | 3,18 | 0,6 | 6,59 | 0,4 |
| TPHB 160304 FN | **W32 32980.04..** | ▲ | 9,52 | 3,18 | 0,6 | 7,95 | 0,4 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | Order example:<br>Article<br>TPHB 060104 FN<br>Cutting material<br>PKD55<br>Order No.<br>W32 03990.0455 | | | | |



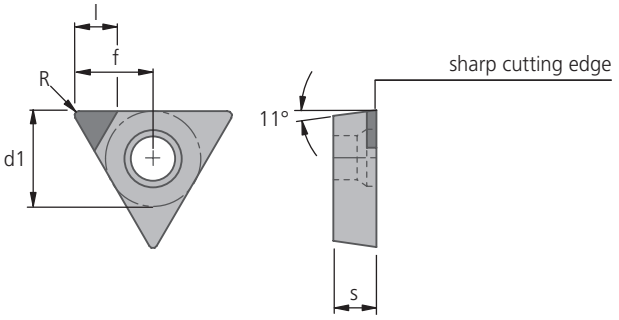
▲ Availability: for delivery see current price and stock list



## Application range:

**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

## Cutter geometry:




| Article<br>ISO Description | Order No. | Cutting material<br>PCD tipped<br>  <br>PKD55<br>F<br>55 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| Cutting edge design<br>F = sharp ▼ | enter carbide code ▼ | | | | | | |
| TPHB 060104 FN | W32 03990.04.. | ▲ | 3,97 | 1,60 | 1,8 | 3,15 | 0,4 |
| TPHB 090204 FN | W32 13990.04.. | ▲ | 5,56 | 2,38 | 2,7 | 4,52 | 0,4 |
| TPHB 110204 FN | W32 18990.04.. | ▲ | 6,35 | 2,38 | 3,8 | 5,21 | 0,4 |
| TPHB 130304 FN | W32 23990.04.. | ▲ | 7,94 | 3,18 | 3,8 | 6,59 | 0,4 |
| TPHB 160304 FN | W32 32990.04.. | ▲ | 9,52 | 3,18 | 3,8 | 7,95 | 0,4 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | Order example:<br>Article<br>TPHB 060104 FN<br>Cutting material<br>PKD55<br>Order No.<br>W32 03990.0455 | | | | |

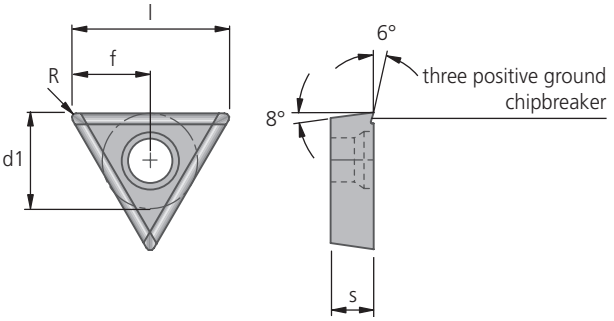
## Inserts



## Application range:

Peripheral and surface ground triangular insert for roughing and facing operations:
2-sided contact produces a very high changeover accuracy when changing the insert.

## Cutter geometry:

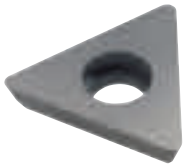



| Article ISO Description | Order No. | Carbide grades: uncoated P25M E 03 | uncoated K10 E 21 | CVD coated BK60 E 60 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded | enter carbide code | | | | | | | | |
| TOHT 110304 EN-G06 | W34 18660.04.. | ▲ | ▲ | ▲ | 6,35 | 3,18 | 10,4 | 5,21 | 0,4 |
| Mild steel/tool steel P | | ● | ◐ | ● | | | | | |
| Stainless and acid-resistant steel M | | ○ | | ○ | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | | | | | |
| Non-ferrous metals N | | | ● | | | | | | |
| Heat-resistant steels S | | | ● | | | | | | |
| Hardened tool steel H | | | | | | | | | |

Order example:
Article
TOHT 110304 EN-G06
Carbide grade
P25M
Order No.
W34 18660.0403



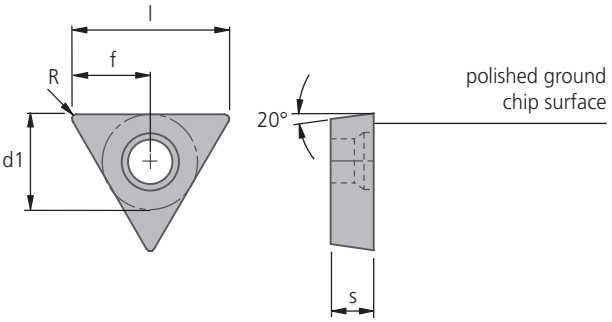
▲ Availability: for delivery see current price and stock list



## Application range:

20° TEHB insert with polished chip surface for softer aluminium materials and other non-ferrous metals.
10 – 12° top rake with axial and radial tilt.

## Cutter geometry:




| Article<br>ISO Description | Order No. | Carbide grades<br>uncoated | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| Cutting edge design<br>F = sharp | enter carbide code | K10<br>F<br>21 | | | | | |
| TEHB 110204 FN-P | W37 18600.04.. | ▲ | 6,35 | 2,38 | 10,4 | 5,21 | 0,4 |
| TEHB 110208 FN-P | W37 18600.08.. | ▲ | | | 9,8 | 4,91 | 0,8 |
| TEHB 130308 FN-P | W37 23600.08.. | ▲ | 7,94 | 3,18 | 12,6 | 6,29 | 0,8 |
| Mild steel/tool steel P | | ◐ | Order example:<br>Article<br>TEHB 110204 FN-P<br>Carbide grade<br>K10<br>Order No.<br>W37 18600.0421 | | | | |
| Stainless and acid-resistant steel M | | | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | | | | |
| Non-ferrous metals N | | ● | | | | | |
| Heat-resistant steels S | | ● | | | | | |
| Hardened tool steel H | | | | | | | |

## Inserts

for machining aluminium

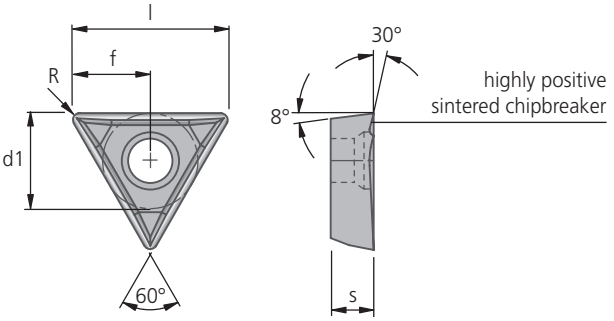


## Application range:

- Internal and external turning
- Fine finish turning for aluminium machining
- Aluminium materials, in particular soft wrought alloys

The highly positive cutting edge geometry and the peripheral ground clearance faces guarantee controlled chip formation and the best surface quality with low cutting forces.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades uncoated K10 F 23 | Carbide grades PVD coated BK7710 F 7710 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|
| Cutting edge design F = sharp | enter carbide code | | | | | | | |
| TOGX 06T102 FN-12 | W57 04120.02.. | ▲ | ▲ | 4,00 | 1,80 | 6,64 | 3,32 | 0,2 |
| TOGX 090204 FN-12 | W57 14120.04.. | ▲ | ▲ | 5,60 | 2,50 | 9,12 | 4,56 | 0,4 |
| TOGX 140304 FN-12 | W57 26120.04.. | ▲ | ▲ | 8,20 | 3,00 | 13,62 | 6,81 | 0,4 |

| | | | |
|---|---|---|---|
| Mild steel/tool steel | P | ◐ | |
| Stainless and acid-resistant steel | M | | |
| Grey cast iron, spheroidal cast iron | K | | |
| Non-ferrous metals | N | ● | ● |
| Heat-resistant steels | S | ● | |
| Hardened tool steel | H | | |

Order example:
Article
TOGX 06T102 FN-12
Carbide grade
K10
Order No.
W57 04120.0223



▲ Availability: for delivery see current price and stock list

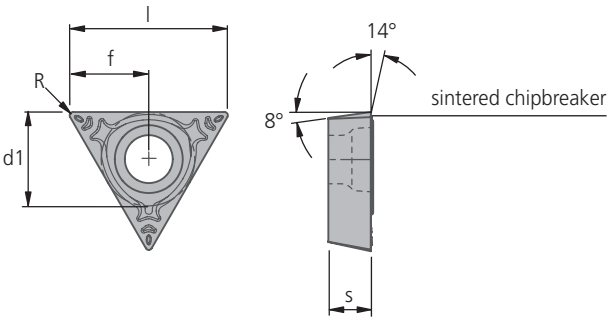


## Application range:

- Internal and external machining
- Special tools
- Fine boring

Controlled chip formation for fine and high precision machining.Wear resistant grades: CVD and PVD coated and uncoated Cermet.
CK3210: Extremely high resistance to wear
CK3230: Optimum toughness, suitable for interrupted cutting

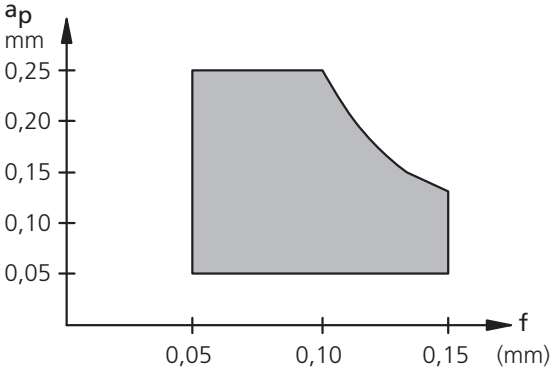
## Cutter geometry:



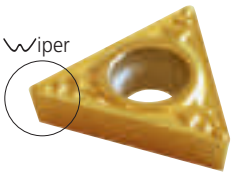

| Article ISO Description | Order No. | Carbide grades CVD coated BK60 E 60 | Carbide grades PVD coated BK8430 E 8430 | Cermet uncoated CK3210 E 3210 | Cermet uncoated CK3230 E 3230 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded | enter carbide code | | | | | | | | | |
| TOGX 06T102 EN-14 | W57 04140.02.. | ▲ | ▲ | ▲ | ▲ | 4,0 | 1,8 | 6,64 | 3,32 | 0,2 |
| TOGX 06T104 EN-14 | W57 04140.04.. | ▲ | ▲ | ▲ | ▲ | | | 6,35 | 3,17 | 0,4 |
| TOGX 090202 EN-14 | W57 14140.02.. | ▲ | ▲ | ▲ | ▲ | 5,6 | 2,5 | 9,41 | 4,70 | 0,2 |
| TOGX 090204 EN-14 | W57 14140.04.. | ▲ | ▲ | ▲ | ▲ | | | 9,12 | 4,56 | 0,4 |
| TOGX 140302 EN-14 | W57 26140.02.. | ▲ | ▲ | ▲ | ▲ | 8,2 | 3,0 | 13,91 | 6,96 | 0,2 |
| TOGX 140304 EN-14 | W57 26140.04.. | ▲ | ▲ | ▲ | ▲ | | | 13,62 | 6,81 | 0,4 |
| Mild steel/tool steel P | | ● | ● | ● | ● | | | | | |
| Stainless and acid-resistant steel M | | | ● | ● | ● | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | ◐ | | | | | | | |
| Non-ferrous metals N | | | | ◐ | ◐ | | | | | |
| Heat-resistant steels S | | | | | | | | | | |
| Hardened tool steel H | | | | | | | | | | |

Order example:
Article
TOGX 06T102 EN-14
Carbide grade
BK60
Order No.
W57 04140.0260

## Application area



## Inserts

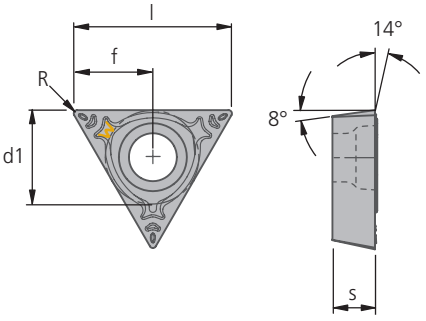



## Application range:

- Internal and external machining
- Special tools
- Fine boring

Controlled chip formation for fine and high precision machining with optimised feed:surface ratio for best surface finish.
Wear resistant grades: Finest grade carbide + PVD coating and uncoated Cermet.

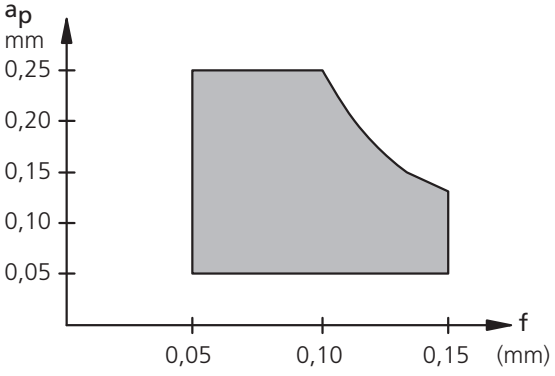
## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades PVD coated | Cermet uncoated | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded | enter carbide code | BK8430 E 8430 | CK32 E 32 | | | | | |
| TOGX 060104 EN-18 | W57 04180.04.. | ▲ | ▲ | 4,0 | 1,8 | 6,3 | 3,17 | 0,4 |
| TOGX 090204 EN-18 | W57 14180.04.. | ▲ | ▲ | 5,6 | 2,5 | 9,1 | 4,56 | 0,4 |
| TOGX 140304 EN-18 | W57 26180.04.. | ▲ | ▲ | 8,2 | 3,0 | 13,6 | 6,81 | 0,4 |
| Mild steel/tool steel P | | ● | ● | | | | | |
| Stainless and acid-resistant steel M | | ● | ● | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | ◑ | | | | | |
| Non-ferrous metals N | | | ◑ | | | | | |
| Heat-resistant steels S | | ◑ | | | | | | |
| Hardened tool steel H | | ◑ | | | | | | |

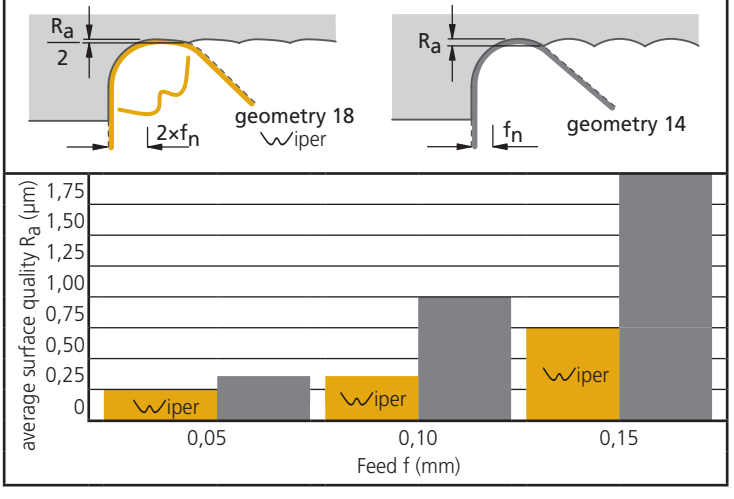
Order example:
Article
TOGX 060104 EN-18
Carbide grade
BK8430
Order No.
W57 04180.048430

## Application area



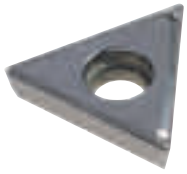

### Surface quality results:

Comparison of surface quality results for "Wiper" – R04 for ϰ = 90°
in X40Cr13 / 1.4034






▲ Availability: for delivery see current price and stock list

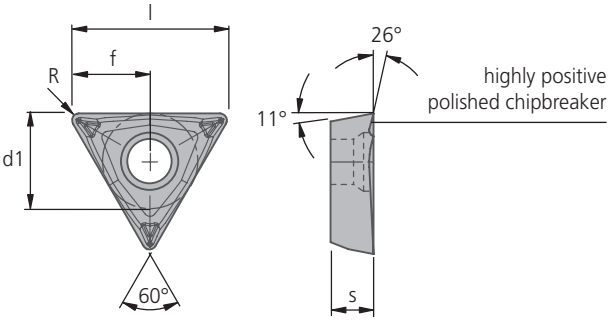


## Application range:

- Internal and external turning
- Fine finish turning for aluminium machining
- Aluminium materials, in particular soft wrought alloys

The highly positive cutting edge geometry and the peripheral ground clearance faces guarantee controlled chip formation and the best surface quality with low cutting forces.

## Cutter geometry:




| Article<br>ISO Description<br><br>Cutting edge design<br>F = sharp | Order No.<br><br>enter carbide code | Carbide grades<br>uncoated<br>  <br>K10<br>F<br>**23** | <br>PVD coated<br>  <br>BK7710<br>F<br>**7710** | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|
| TPGX 060104 FN-12 | **W58 03120.04..** | ▲ | ▲ | 3,97 | 1,60 | 6,29 | 3,15 | 0,4 |
| TPGX 090204 FN-12 | **W58 13120.04..** | ▲ | ▲ | 5,56 | 2,38 | 9,05 | 4,52 | 0,4 |
| TPGX 110204 FN-12 | **W58 18120.04..** | ▲ | ▲ | 6,35 | 2,38 | 10,41 | 5,21 | 0,4 |
| TPGX 130304 FN-12 | **W58 23120.04..** | ▲ | ▲ | 7,94 | 3,18 | 13,17 | 6,58 | 0,4 |
| TPGX 160304 FN-12 | **W58 32120.04..** | ▲ | ▲ | 9,52 | 3,18 | 15,90 | 7,95 | 0,4 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ◐<br><br><br>●<br>● | ● | Order example:<br>Article<br>TPGX 060104 FN-12<br>Carbide grade<br>K10<br>Order No.<br>W58 03120.0423 | | | | |

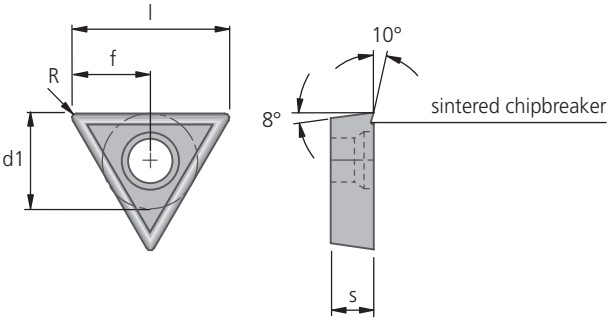
## Inserts



## Application range:

Peripheral and surface ground triangular insert for roughing and facing operations:
2-sided contact produces a very high changeover accuracy when changing the insert.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: uncoated P25M E 03 | uncoated K10 E 21 | CVD coated BK60 E 60 | CVD coated BK7615 E 7615 | CVD coated BK64 E 64 | PVD coated BK79 E 79 | PVD coated BK8425 E 8425 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded | enter carbide code | | | | | | | | | | | | |
| TOHT 110304 EN-05 | W59 18050.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 6,35 | 3,18 | 10,4 | 5,21 | 0,4 |
| TOHT 160405 EN-05 | W59 32050.05.. | ▲ | | | | | | | 9,52 | 4,76 | 15,8 | 7,88 | 0,5 |
| TOHT 160408 EN-05 | W59 32050.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | | 15,3 | 7,66 | 0,8 |
| Mild steel/tool steel P | | ● | ◐ | ● | | ● | ● | ● | | | | | |
| Stainless and acid-resistant steel M | | ○ | | ○ | | ◑ | ○ | ○ | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | ● | | | ● | | | | | |
| Non-ferrous metals N | | | ● | | | | | | | | | | |
| Heat-resistant steels S | | | ● | | | | ◐ | | | | | | |
| Hardened tool steel H | | | | | ◑ < 52 HRC | | | | | | | | |

Order example:
Article
TOHT 110304 EN-05
Carbide grade
P25M
Order No.
W59 18050.0403



▲ Availability: for delivery see current price and stock list

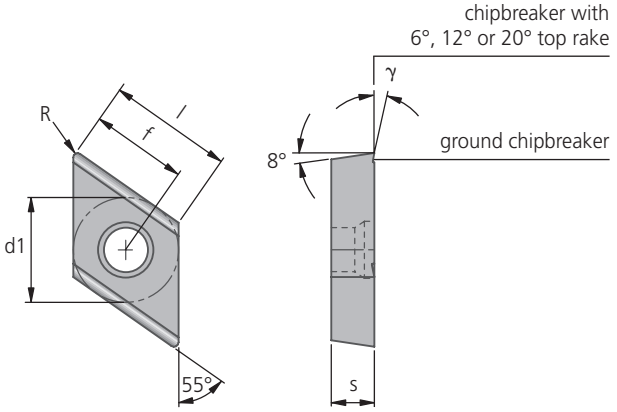


## Application range:

- External and internal copy turning

Because of the positive cutting edge geometry, cutting is very efficient. Particularly suitable for long overhang and for thin-walled materials. The large selection of ground chipbreakers and carbides will suit almost any materials.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: uncoated P25M E 03 | uncoated K10 F 21 | CVD coated BK60 E 60 | d1 | s | l | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded F = sharp | enter carbide code | | | | | | | | | |
| DOHT 070202..L-G06 | W60 18060.02.. | ▲ | | | 6,35 | 2,4 | 7,4 | 6° | 5,92 | 0,2 |
| DOHT 070204..L-G06 | W60 18060.04.. | | | ▲ | | | | | 5,73 | 0,4 |
| DOHT 070202..L-G12 | W60 18120.02.. | ▲ | ▲ | ▲ | 6,35 | 2,4 | 7,4 | 12° | 5,92 | 0,2 |
| DOHT 070204..L-G12 | W60 18120.04.. | ▲ | ▲ | ▲ | | | | | 5,73 | 0,4 |
| DOHT 070202..L-G20 | W60 18200.02.. | | ▲ | | 6,35 | 2,4 | 7,4 | 20° | 5,92 | 0,2 |
| DOHT 11T302..L-G12 | W60 32120.02.. | ▲ | ▲ | ▲ | 9,52 | 4,0 | 11,2 | 12° | 8,96 | 0,2 |
| DOHT 11T304..L-G12 | W60 32120.04.. | ▲ | ▲ | ▲ | | | | | 8,78 | 0,4 |
| DOHT 11T308..L-G12 | W60 32120.08.. | | | ▲ | | | | | 8,41 | 0,8 |
| Mild steel/tool steel P | | ● | ◐ | ● | | | | | | |
| Stainless and acid-resistant steel M | | ● | | ● | | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | | | | | | |
| Non-ferrous metals N | | | ● | | | | | | | |
| Heat-resistant steels S | | | ● | | | | | | | |
| Hardened tool steel H | | | | | | | | | | |

Order example:
Article
DOHT 070202 EL-G06
Carbide grade
P25M
Order No.
W60 18060.0203

## Inserts

R.H. cutting form „R“

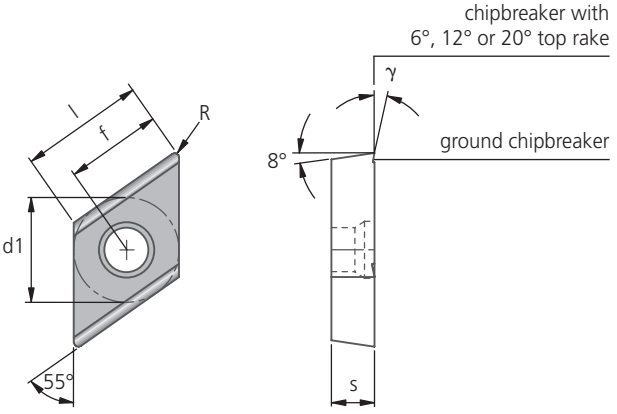


## Application range:

- External and internal copy turning

Because of the positive cutting edge geometry, cutting is very efficient. Particularly suitable for long overhang and for thin-walled materials. The large selection of ground chipbreakers and carbides will suit almost any materials.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: uncoated P25M E 03 | uncoated K10 F 21 | CVD coated BK60 E 60 | d1 | s | l | γ | f | R |
|---|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design E = rounded F = sharp | enter carbide code | | | | | | | | | |
| DOHT 070202..R-G06 | W60 18360.02.. | ▲ | | ▲ | 6,35 | 2,4 | 7,4 | 6° | 5,92 | 0,2 |
| DOHT 070204..R-G06 | W60 18360.04.. | | | ▲ | | | | | 5,73 | 0,4 |
| DOHT 070202..R-G12 | W60 18420.02.. | ▲ | ▲ | ▲ | 6,35 | 2,4 | 7,4 | 12° | 5,92 | 0,2 |
| DOHT 070204..R-G12 | W60 18420.04.. | ▲ | ▲ | ▲ | | | | | 5,73 | 0,4 |
| DOHT 070202..R-G20 | W60 18500.02.. | | ▲ | | 6,35 | 2,4 | 7,4 | 20° | 5,92 | 0,2 |
| DOHT 070204..R-G20 | W60 18500.04.. | | ▲ | | | | | | 5,73 | 0,4 |
| DOHT 11T308..R-G06 | W60 32360.08.. | | | ▲ | 9,52 | 4,0 | 11,2 | 6° | 8,41 | 0,8 |
| DOHT 11T302..R-G12 | W60 32420.02.. | ▲ | ▲ | ▲ | 9,52 | 4,0 | 11,2 | 12° | 8,96 | 0,2 |
| DOHT 11T304..R-G12 | W60 32420.04.. | ▲ | ▲ | ▲ | | | | | 8,78 | 0,4 |
| DOHT 11T308..R-G12 | W60 32420.08.. | | | ▲ | | | | | 8,41 | 0,8 |

| | | | |
|---|---|---|---|
| Mild steel/tool steel | P | ● | ● |
| Stainless and acid-resistant steel | M | ○ | ○ |
| Grey cast iron, spheroidal cast iron | K | ● | |
| Non-ferrous metals | N | ● | |
| Heat-resistant steels | S | ● | |
| Hardened tool steel | H | | |

Order example:
Article
DOHT 070202 ER-G06
Carbide grade
P25M
Order No.
W60 18360.0203



▲ Availability: for delivery see current price and stock list

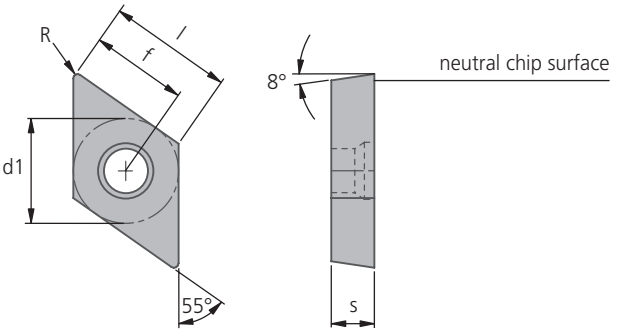


## Application range:

- External and internal copy turning

Because of the positive cutting edge geometry, cutting is very efficient. Particularly suitable for long overhang and for thin-walled materials.

## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>E = rounded | Order No.<br>enter carbide code | Carbide grades<br>uncoated<br>K10<br>E<br>21 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| DOHW 070202 EN | W60 18600.02.. | ▲ | 6,35 | 2,4 | 7,4 | 5,20 | 0,2 |
| DOHW 070204 EN | W60 18600.04.. | ▲ | | | | 5,73 | 0,4 |
| DOHW 11T302 EN | W60 32600.02.. | ▲ | 9,52 | 4,0 | 11,2 | 8,96 | 0,2 |
| DOHW 11T304 EN | W60 32600.04.. | ▲ | | | | 8,78 | 0,4 |
| Mild steel/tool steel P | | ◐ | Order example:<br>Article<br>DOHW 070202 EN<br>Carbide grade<br>K10<br>Order No.<br>W60 18600.0221 | | | | |
| Stainless and acid-resistant steel M | | | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | | | | |
| Non-ferrous metals N | | ● | | | | | |
| Heat-resistant steels S | | ● | | | | | |
| Hardened tool steel H | | | | | | | |

## Inserts

PCD chip topography

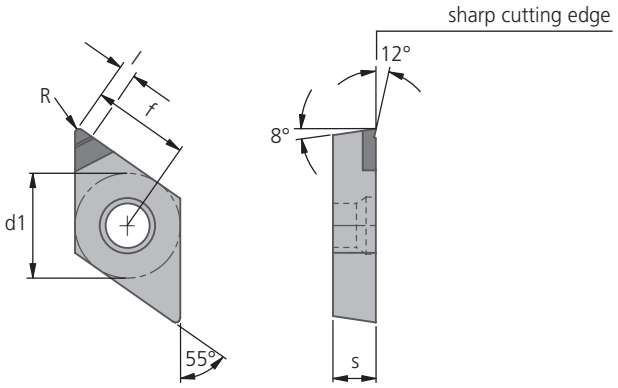


## Application range:

Version with chip breaker for optimum chip control. Particularly well-suited for long-chipping non-ferrous metals, mainly aluminium, wrought alloys and die casting alloys.

**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

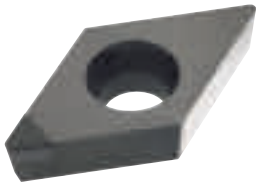
## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>  <br>PKD55<br>F<br>55 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| DOGW 070204 FN | **W60 18980.04..** | ▲ | 6,35 | 2,4 | 0,6 | 5,73 | 0,4 |
| DOGW 11T304 FN | **W60 32980.04..** | ▲ | 9,52 | 4,0 | 0,6 | 8,78 | 0,4 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | Order example:<br>Article<br>DOGW 070204 FN<br>Cutting material<br>PKD55<br>Order No.<br>W60 18980.0455 | | | | |



▲ Availability: for delivery see current price and stock list

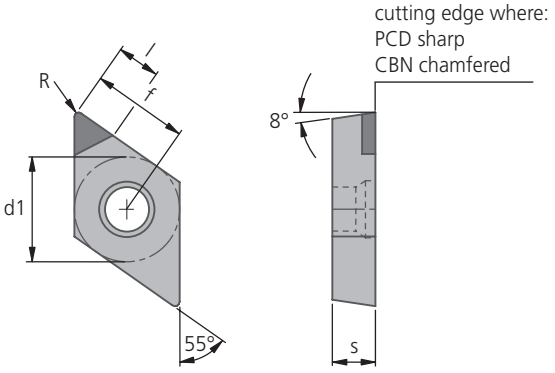


## Application range:

**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

**CBN:** Internal and external machining, fine turning. Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.
**CBN 57:** Preferably for cast materials and alloys on a nickel cobalt base.
**CBN 40:** For machining hardened steels (over 52 HRC).

## Cutter geometry:




| Article<br>ISO Description | Order No. | Cutting material | | | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|
| | | PCD tipped | CBN tipped | | | | | | |
| Cutting edge design<br>F = sharp<br>T = chamfered | enter carbide code | PKD55<br>F<br>55 | CBN57<br>T<br>57 | CBN40<br>T<br>40 | | | | | |
| DOGW 070202 ..N | W60 18990.02.. | ▲ | ▲ | ▲ | 6,35 | 2,4 | 3,0 | 5,92 | 0,2 |
| DOGW 070204 ..N | W60 18990.04.. | ▲ | ▲ | ▲ | | | | 5,73 | 0,4 |
| DOGW 11T302 ..N | W60 32990.02.. | ▲ | ▲ | ▲ | 9,52 | 4,0 | 3,0 | 8,96 | 0,2 |
| DOGW 11T304 ..N | W60 32990.04.. | ▲ | ▲ | ▲ | | | | 8,78 | 0,4 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | ● ◐ | ◐ ○ ≥ 52 HRC | Order example:<br>Article<br>DOGW 070202 FN<br>Cutting material<br>PKD55<br>Order No.<br>W60 18990.0255 | | | | |

## Inserts

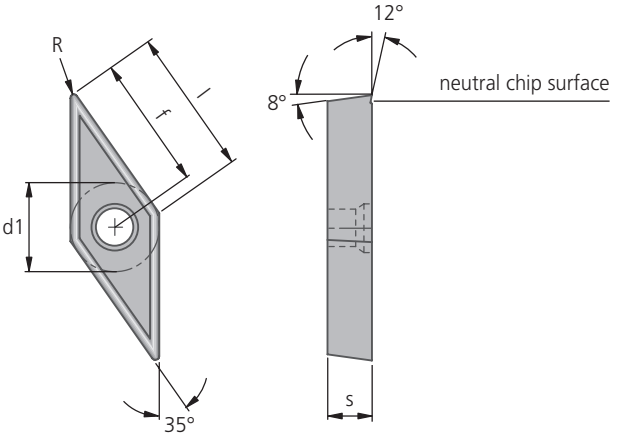


## Application range:

- External and internal copy turning

The sintered chipbreaker allows universal use.
The positive cutter geometry and peripheral ground clearance faces produce low cutting forces with high changeover accuracy.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades | | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|
| | | uncoated | CVD coated | | | | | |
| | enter carbide code ▼ | P35 **14** | BK66 **66** | | | | | |
| VOHT 110302-07 | **W78 18070.02..** | ▲ | ▲ | 6,35 | 3,18 | 11 | 9,64 | 0,2 |
| VOHT 110304-07 | **W78 18070.04..** | ▲ | ▲ | | | | 9,20 | 0,4 |
| VOHT 160404-07 | **W78 32070.04..** | ▲ | ▲ | 9,52 | 4,76 | 16 | 14,23 | 0,4 |
| VOHT 160408-07 | **W78 32070.08..** | ▲ | ▲ | | | | 13,36 | 0,8 |
| Mild steel/tool steel P | | ● | ● | Order example: Article VOHT 110302-07 Carbide grade P35 Order No. W78 18070.0214 | | | | |
| Stainless and acid-resistant steel M | | ● | ◐ | | | | | |
| Grey cast iron, spheroidal cast iron K | | | | | | | | |
| Non-ferrous metals N | | | | | | | | |
| Heat-resistant steels S | | | | | | | | |
| Hardened tool steel H | | | | | | | | |



▲ Availability: for delivery see current price and stock list

# VOGW

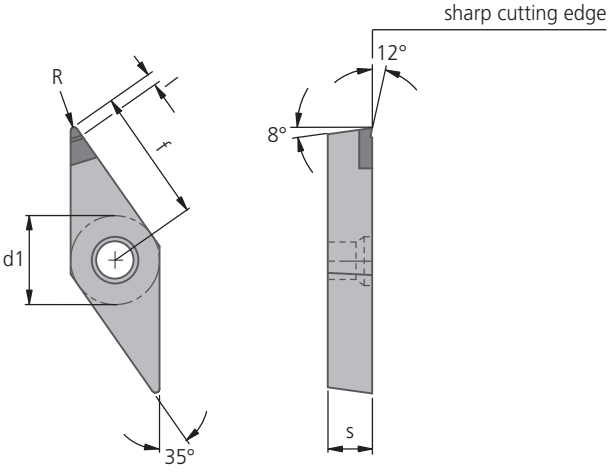


## Application range:

Version with chip breaker for optimum chip control. Particularly well-suited for long-chipping non-ferrous metals, mainly aluminium, wrought alloys and die casting alloys.

**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>  <br>PKD55<br>F<br>55 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|
| VOGW 110304 FN | W78 18980.04.. | ▲ | 6,35 | 3,18 | 0,6 | 9,20 | 0,4 |
| VOGW 160408 FN | W78 32980.08.. | ▲ | 9,52 | 4,76 | 0,6 | 13,36 | 0,8 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | Order example:<br>Article<br>VOGW 110304 FN<br>Cutting material<br>PKD55<br>Order No.<br>W78 18980.0455 | | | | |

## Inserts

PCD or CBN cutting edge

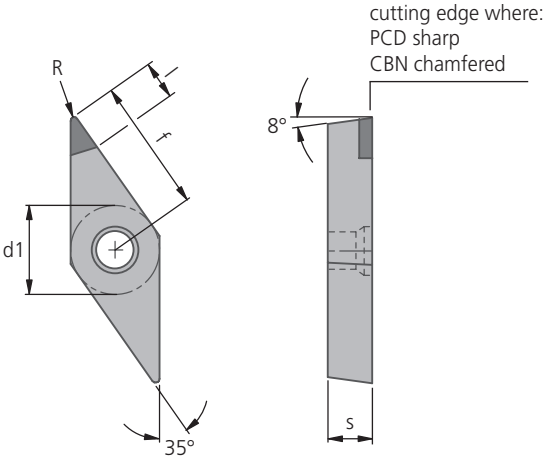


## Application range:

**PCD:** Internal and external machining, fine turning of non-ferrous metals, plastics, composites, rubber, graphites, etc. High cutting speeds, good dimensional accuracy, above-average surface finish and extremely good tool life are all features of these PCD tipped inserts.

**CBN:** Internal and external machining, fine turning. Inserts with cutting edges have the following advantages: high cutting speeds, high dimensional consistency, extremely long tool life and above-average surface finish.
**CBN 57:** Preferably for cast materials and alloys on a nickel cobalt base.

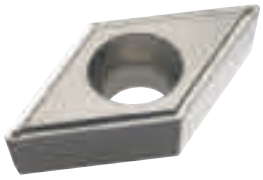
## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp<br>T = chamfered | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>  <br>PKD55<br>F<br>55 | Cutting material<br>CBN tipped<br>  <br>CBN57<br>T<br>57 | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|
| VOGW 110304 ..N | W78 18990.04.. | ▲ | ▲ | 6,35 | 3,18 | 2,5 | 9,20 | 0,4 |
| VOGW 160408 ..N | W78 32990.08.. | ▲ | ▲ | 9,52 | 4,76 | 3,5 | 13,36 | 0,8 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | ● ◐ | Order example:<br>Article<br>VOGW 110304 FN<br>Cutting material<br>PKD55<br>Order No.<br>W78 18990.0455 | | | | |



▲ Availability: for delivery see current price and stock list

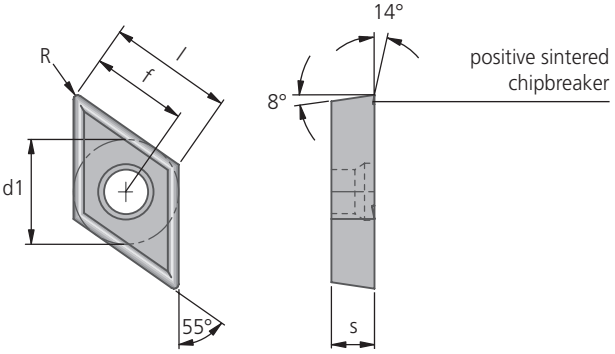


## Application range:

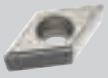
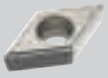
- External and internal copy turning

The sintered chipbreaker allows universal use.
The positive cutter geometry and peripheral ground clearance faces produce low cutting forces with high changeover accuracy.

## Cutter geometry:




**Important note!** The cutting edge on Cermet inserts is rounded.

| Article ISO Description | Order No. | Cermet uncoated | | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|
| | enter carbide code ▼ |  CK32 32 |  CK37 37 | | | | | |
| DOHT 070204-04 | W79 18040.04.. | ▲ | ▲ | 6,35 | 2,4 | 7,4 | 5,73 | 0,4 |
| DOHT 11T307-04 | W79 32040.04.. | ▲ | ▲ | 9,52 | 4,0 | 11,2 | 8,78 | 0,4 |
| Mild steel/tool steel P | | ● | ● | Order example: Article DOHT 070204-04 Quality CK32 Order No. W79 18040.0432 | | | | |
| Stainless and acid-resistant steel M | | ● | ● | | | | | |
| Grey cast iron, spheroidal cast iron K | | ◐ | ◐ | | | | | |
| Non-ferrous metals N | | ◐ | ◐ | | | | | |
| Heat-resistant steels S | | | | | | | | |
| Hardened tool steel H | | | | | | | | |

## Inserts

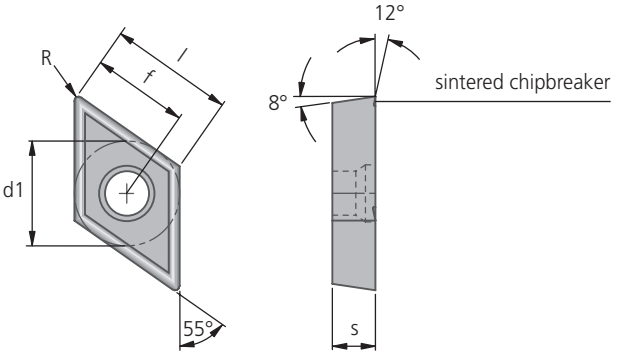


## Application range:

- External and internal copy turning

The sintered chipbreaker allows universal use.
The positive cutter geometry and peripheral ground clearance faces produce low cutting forces with high changeover accuracy.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades | | | | | d1 | s | l | f | R |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | uncoated | | | CVD coated | | | | | | |
| | enter carbide code ▼ | P25M 03 | K10 21 | BK60 60 | BK7615 7615 | BK64 64 | | | | | |
| DOHT 070202-06 | W79 18060.02.. | ▲ | ▲ | ▲ | | ▲ | 6,35 | 2,4 | 7,4 | 5,92 | 0,2 |
| DOHT 070204-06 | W79 18060.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | | | | 5,73 | 0,4 |
| DOHT 070208-06 | W79 18060.08.. | | | ▲ | | ▲ | | | | 5,36 | 0,8 |
| DOHT 11T302-06 | W79 32060.02.. | ▲ | ▲ | ▲ | | | 9,52 | 4,0 | 11,2 | 8,96 | 0,2 |
| DOHT 11T304-06 | W79 32060.04.. | ▲ | ▲ | ▲ | | ▲ | | | | 8,78 | 0,4 |
| DOHT 11T308-06 | W79 32060.08.. | ▲ | ▲ | ▲ | | ▲ | | | | 8,41 | 0,8 |
| Mild steel/tool steel P | | ● | ◐ | ● | | ● | Order example: Article DOHT 070202-06 Carbide grade P25M Order No. W79 18060.0203 | | | | |
| Stainless and acid-resistant steel M | | ○ | | ○ | | ◑ | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | ● | | | | | | |
| Non-ferrous metals N | | | ● | | | | | | | | |
| Heat-resistant steels S | | | ● | | | | | | | | |
| Hardened tool steel H | | | | | ◑ < 52 HRC | | | | | | |



▲ Availability: for delivery see current price and stock list

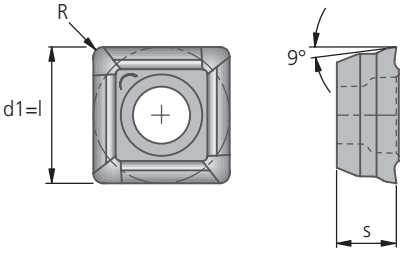


## Application range:

- Solid drilling with KUB Pentron®
- Special tools

All-round geometry for KUB Pentron®:
wear-resistant indexable insert for universal use

## Cutter geometry:

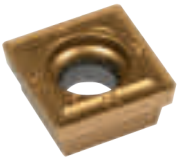



| Article ISO Description | Order No. | Carbide grades | | | | | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CVD coated | | PVD coated | | | | | | |
| | enter carbide code ▼ | BK6115 6115 | BK6425 6425 | BK2730 2730 | BK7710 7710 | BK8425 8425 | | | | |
| SOGX 040204-01 | W80 10010.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | 4,8 | 2,2 | 4,8 | 0,4 |
| SOGX 050204-01 | W80 12010.04.. | ▲ | ▲ | ▲ | ▲ | ▲ | 5,5 | 2,4 | 5,5 | 0,4 |
| SOGX 060206-01 | W80 18010.06.. | ▲ | ▲ | ▲ | ▲ | ▲ | 6,2 | 2,75 | 6,2 | 0,6 |
| SOGX 07T208-01 | W80 20010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | 7,1 | 2,97 | 7,1 | 0,8 |
| SOGX 080308-01 | W80 24010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | 8,0 | 3,4 | 8,0 | 0,8 |
| SOGX 09T308-01 | W80 28010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | 8,9 | 3,9 | 8,9 | 0,8 |
| SOGX 100408-01 | W80 32010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | 9,8 | 4,2 | 9,8 | 0,8 |
| SOGX 110408-01 | W80 38010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | 10,9 | 4,5 | 10,9 | 0,8 |
| SOGX 120408-01 | W80 42010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | 12,0 | 4,8 | 12,0 | 0,8 |
| SOGX 130508-01 | W80 46010.08.. | ▲ | ▲ | ▲ | ▲ | ▲ | 13,2 | 5,2 | 13,2 | 0,8 |
| Mild steel/tool steel P | | ◐ | ● | | | ● | Order example: | | | |
| Stainless and acid-resistant steel M | | ◐ | ● | ● | | ● | Article | | | |
| Grey cast iron, spheroidal cast iron K | | ● | ◐ | ◐ | | ◐ | SOGX 050204-01 | | | |
| Non-ferrous metals N | | | | | ● | ◐ | Carbide grade | | | |
| Heat-resistant steels S | | | | ◐ | | | BK6115 | | | |
| Hardened tool steel H | | ◐ | | | | | Order No. | | | |
| | | | | | | | W80 12010.046115 | | | |
| External cutting edge | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Internal cutting edge *Recommendation* | | *BK8425* | *BK8425* | ✓ | ✓ | ✓ | | | | |

# KOMET® W82..21

## Inserts

SOHX

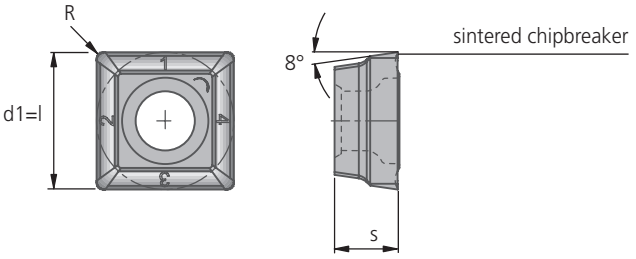


## Application range:

- Special tools
- Roughing
- Precision boring
- Turning

Reduced cutting forces thanks high positive chip forming step, four effective cutting edges. High indexing and repeatability due to precision-ground circumference. Compatible with SOEX indexable inserts, additional labelling for easy identification.

## Cutter geometry:




| Article<br>ISO Description | Order No.<br>enter carbide code ▼ | Carbide grades<br>PVD coated<br>BK2730<br>**2730** | BK8530<br>**8530** | BK7710<br>**7710** | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|
| SOHX 090404-21 | **W82 32210.04..** | ▲ | ▲ | ▲ | 9,52 | 4,37 | 9,52 | 0,4 |
| SOHX 090408-21 | **W82 32210.08..** | ▲ | ▲ | | | | | 0,8 |
| Mild steel/tool steel P | | ◐ | ● | | | | | |
| Stainless and acid-resistant steel M | | ● | ◑ | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | | | | | |
| Non-ferrous metals N | | | | ● | | | | |
| Heat-resistant steels S | | | | ◐ | | | | |
| Hardened tool steel H | | | | | | | | |

Order example:
Article
SOHX 090404-21
Carbide grade
BK2730
Order No.
W82 32210.042730



▲ Availability: for delivery see current price and stock list

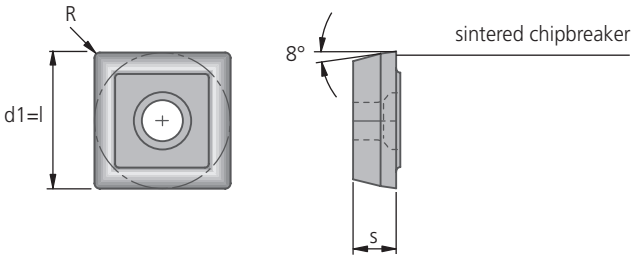


## Application range:

- Solid drilling
- Special tools
- TwinKom® Double Insert Tools
- Kometric® mounted seatings

Optimum solution for all roughing operations.
Suitable for medium and strong steels and cast iron according to quality.
**All-round geometry:**
Wear-resistant insert for universal use for internal and external cutting.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: CVD coated BK61 61 | BK6115 6115 | BK6420 6420 | BK74 74 | PVD coated BK79 79 | BK8425 8425 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | enter carbide code ▼ | | | | | | | | | | |
| SOEX 050204-01 | W83 13000.01.. | ▲ | ▲ | | ▲ | ▲ | | 5,56 | 2,38 | 5,56 | 0,4 |
| | W83 13010.04.. | | | ▲ | | | ▲ | | | | |
| SOEX 060306-01 | W83 18000.09.. | ▲ | ▲ | | ▲ | ▲ | | 6,35 | 3,18 | 6,35 | 0,6 |
| | W83 18010.06.. | | | ▲ | | | ▲ | | | | |
| SOEX 07T308-01 | W83 23000.01.. | ▲ | ▲ | | ▲ | ▲ | | 7,94 | 3,58 | 7,94 | 0,8 |
| | W83 23010.08.. | | | ▲ | | | ▲ | | | | |
| SOEX 090408-01 | W83 32000.15.. | ▲ | ▲ | | ▲ | ▲ | | 9,52 | 4,37 | 9,52 | 0,8 |
| | W83 32010.08.. | | | ▲ | | | ▲ | | | | |
| SOEX 120508-01 | W83 44000.18.. | ▲ | ▲ | | ▲ | ▲ | | 12,7 | 5,16 | 12,7 | 0,8 |
| | W83 44010.08.. | | | ▲ | | | ▲ | | | | |
| Mild steel/tool steel P | | | ◐ | ● | ◐ | ● | ● | Order example: Article SOEX 050204-01 Carbide grade BK6420 Order No. W83 13010.046420 | | | |
| Stainless and acid-resistant steel M | | | | ● | ● | ● | ● | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | ● | ◐ | | | ● | | | | |
| Non-ferrous metals N | | | | | | | | | | | |
| Heat-resistant steels S | | | | | ● | ◐ | | | | | |
| Hardened tool steel H | | ◐ | ◐ <52HRC | | | | | | | | |
| External cutting edge | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Internal cutting edge *Recommendation* | | ✓ | *BK8425* | *BK8425* | ✓ | ✓ | ✓ | | | | |

## Inserts



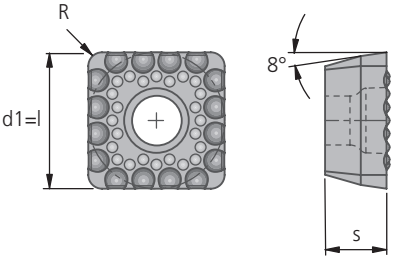
## Application range:

- Continuous drilling with KUB Quatron®
- Continuous drilling with KUB Centron® Powerline
- Special tools and Easy Special™

Generally suitable for all steels, in particular for long-chipping steel materials and stainless steels. The SOEX indexable insert topography is predestined for use in long-chipping materials, and, thanks to its optimum chip formation, ensures reliable removal of chips, even with high L/D ratios.

BK8430 all-round cutting material:
Wear-resistant, universal indexable insert for inner and outer cutters.

## Cutter geometry:

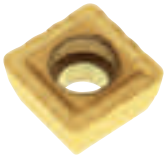



| Article ISO Description | Order No. enter carbide code | Carbide grades PVD coated BK8430 8430 | d1 | s | l | R |
|---|---|---|---|---|---|---|
| SOEX 050204-03 | W83 13030.04.. | ▲ | 5,56 | 2,38 | 5,56 | 0,4 |
| SOEX 060306-03 | W83 18030.06.. | ▲ | 6,35 | 3,18 | 6,35 | 0,6 |
| SOEX 07T308-03 | W83 23030.08.. | ▲ | 7,94 | 3,58 | 7,94 | 0,8 |
| SOEX 090408-03 | W83 32030.08.. | ▲ | 9,52 | 4,37 | 9,52 | 0,8 |
| SOEX 120508-03 | W83 44030.08.. | ▲ | 12,7 | 5,16 | 12,7 | 0,8 |
| Mild steel/tool steel P | | ● | Order example: Article SOEX 050204-03 Carbide grade BK8430 Order No. W83 13030.048430 | | | |
| Stainless and acid-resistant steel M | | ● | | | | |
| Grey cast iron, spheroidal cast iron K | | ◐ | | | | |
| Non-ferrous metals N | | ◐ | | | | |
| Heat-resistant steels S | | | | | | |
| Hardened tool steel H | | | | | | |

GSM EM 001773441 (geometry)



▲ Availability: for delivery see current price and stock list

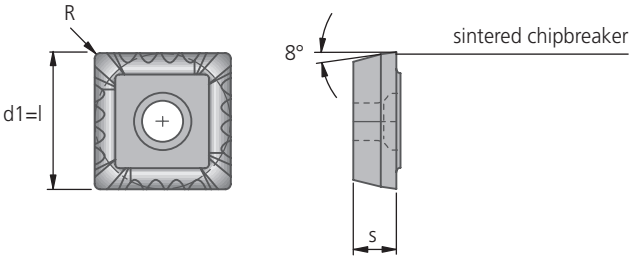


## Application range:

- Solid drilling
- Special tools
- TwinKom® Double Insert Tools
- Kometric® mounted seatings

Optimum solution for steel with low carbon content and for stainless steels. Suitable for medium to high cutting speeds for internal and external cutting edge.

## Cutter geometry:

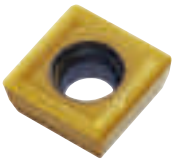



| Article ISO Description | Order No. | Carbide grades CVD coated BK6420 6420 | CVD coated BK74 74 | PVD coated BK79 79 | PVD coated BK8425 8425 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|---|
| | enter carbide code ▼ | | | | | | | | |
| SOEX 050204-13 | W83 13000.02.. | | ▲ | ▲ | | 5,56 | 2,38 | 5,56 | 0,4 |
| | W83 13130.04.. | ▲ | | | ▲ | | | | |
| SOEX 060306-13 | W83 18000.10.. | | ▲ | ▲ | | 6,35 | 3,18 | 6,35 | 0,6 |
| | W83 18130.06.. | ▲ | | | ▲ | | | | |
| SOEX 060308-13 | W83 18130.08.. | ▲ | ▲ | ▲ | ▲ | | | | 0,8 |
| SOEX 07T308-13 | W83 23000.02.. | | ▲ | ▲ | | 7,94 | 3,58 | 7,94 | 0,8 |
| | W83 23130.08.. | ▲ | | | ▲ | | | | |
| SOEX 090408-13 | W83 32000.17.. | | ▲ | ▲ | | 9,52 | 4,37 | 9,52 | 0,8 |
| | W83 32130.08.. | ▲ | | | ▲ | | | | |
| SOEX 110508-13 | W83 39130.08.. | ▲ | ▲ | ▲ | ▲ | 11,1 | 4,76 | 11,1 | 0,8 |
| SOEX 120508-13 | W83 44000.19.. | | ▲ | ▲ | | 12,7 | 5,16 | 12,7 | 0,8 |
| | W83 44130.08.. | ▲ | | | ▲ | | | | |
| Mild steel/tool steel P | | ● | ◐ | ● | ● | Order example: Article SOEX 050204-13 Carbide grade BK6420 Order No. W83 13130.046420 | | | |
| Stainless and acid-resistant steel M | | ● | ● | ● | ● | | | | |
| Grey cast iron, spheroidal cast iron K | | ◐ | | | ● | | | | |
| Non-ferrous metals N | | | | | | | | | |
| Heat-resistant steels S | | | ● | ◐ | | | | | |
| Hardened tool steel H | | | | | | | | | |
| External cutting edge | | ✓ | ✓ | ✓ | ✓ | | | | |
| Internal cutting edge *Recommendation* | | *BK8425* | ✓ | ✓ | ✓ | | | | |

EP 0 792 201 and other patents (geometry)

**Important: See chapter 8 for more application details and safety notes!**

## Inserts

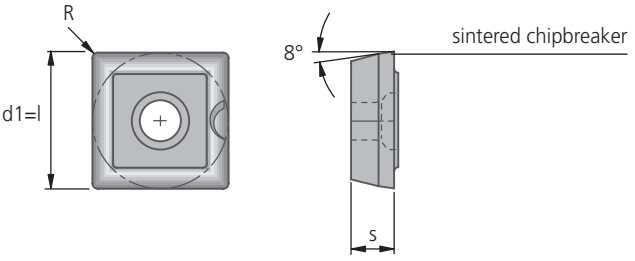


## Application range:

- Solid drilling
- Special tools
- TwinKom® Double Insert Tools
- Kometric® mounted seatings

For cutting stainless and general steels and aluminium materials.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades | | | | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|---|
| | | PVD coated | | | CVD coated | | | | |
| | enter carbide code ▼ | BK8430 **8430** | BK2730 **2730** | BK7710 **7710** | BK6130 **6130** | | | | |
| SOEX 050204-21 | **W83 13210.04..** | ▲ | ▲ | ▲ | ▲ | 5,56 | 2,38 | 5,56 | 0,4 |
| SOEX 060306-21 | **W83 18210.06..** | ▲ | ▲ | ▲ | ▲ | 6,35 | 3,18 | 6,35 | 0,6 |
| SOEX 060308-21 | **W83 18210.08..** | ▲ | ▲ | ▲ | ▲ | | | | 0,8 |
| SOEX 07T308-21 | **W83 23210.08..** | ▲ | ▲ | ▲ | ▲ | 7,94 | 3,58 | 7,94 | 0,8 |
| SOEX 090408-21 | **W83 32210.08..** | ▲ | ▲ | ▲ | ▲ | 9,52 | 4,37 | 9,52 | 0,8 |
| SOEX 110508-21 | **W83 39210.08..** | ▲ | ▲ | ▲ | ▲ | 11,1 | 4,76 | 11,1 | 0,8 |
| SOEX 120508-21 | **W83 44210.08..** | ▲ | ▲ | ▲ | ▲ | 12,7 | 5,16 | 12,7 | 0,8 |
| Mild steel/tool steel P | | ● | ● | | ● | Order example: Article SOEX 050204-21 Carbide grade BK2730 Order No. W83 13210.042730 | | | |
| Stainless and acid-resistant steel M | | ● | ● | | ● | | | | |
| Grey cast iron, spheroidal cast iron K | | ◐ | ◐ | | ◐ | | | | |
| Non-ferrous metals N | | ◐ | | ● | | | | | |
| Heat-resistant steels S | | ◐ | | | ◐ | | | | |
| Hardened tool steel H | | | | | | | | | |
| External cutting edge | | ✓ | ✓ | ✓ | ✓ | | | | |
| Internal cutting edge *Recommendation* | | ✓ | *W83..01 – BK8425* | ✓ | *W83..01 – BK8425* | | | | |



▲ Availability: for delivery see current price and stock list



## Application range:

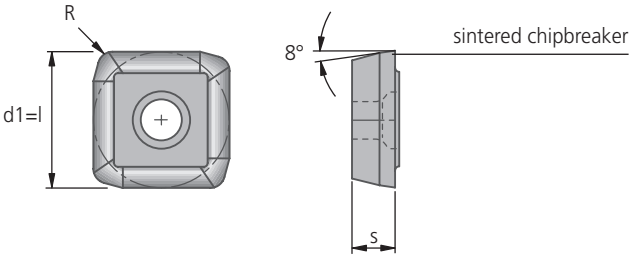
- Solid drilling
- Special tools

For cutting steel and cast iron materials.
Minimum burring at bore entrance and exit.

- Drive shaft machining
- Safe removal of disc produced during operation when drill is withdrawn
- Connecting rod machining C70 with minimised burring



## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades PVD coated BK79 79 | Carbide grades PVD coated BK8425 8425 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|
| | enter carbide code | | | | | | |
| SOEX 050204-BM2 | W83 13000.04.. | ▲ | | 5,56 | 2,38 | 5,56 | 0,4 |
| SOEX 050204-32 | W83 13320.04.. | | ▲ | | | | |
| SOEX 060306-BM2 | W83 18000.18.. | ▲ | | 6,35 | 3,18 | 6,35 | 0,6 |
| SOEX 060306-32 | W83 18320.06.. | | ▲ | | | | |
| SOEX 07T308-33 | W83 23330.08.. | ▲ | ▲ | 7,94 | 3,58 | 7,94 | 0,8 |
| SOEX 090408-BM2 | W83 32000.21.. | ▲ | | 9,52 | 4,37 | 9,52 | 0,8 |
| SOEX 090408-32 | W83 32320.08.. | | ▲ | | | | |
| SOEX 120508-BM2 | W83 44000.23.. | ▲ | | 12,7 | 5,16 | 12,7 | 0,8 |
| SOEX 120508-32 | W83 44320.08.. | | ▲ | | | | |
| Mild steel/tool steel P | | ● | ● | | | | |
| Stainless and acid-resistant steel M | | ● | ● | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | | | |
| Non-ferrous metals N | | | | | | | |
| Heat-resistant steels S | | ◐ | | | | | |
| Hardened tool steel H | | | | | | | |

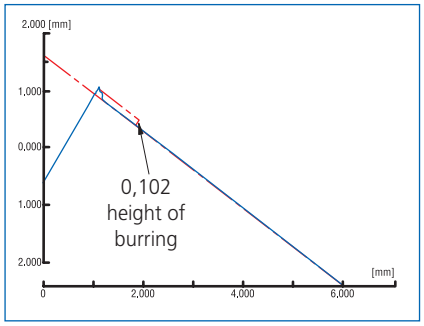
Order example:
Article
SOEX 050204-32
Carbide grade
BK6420
Order No.
W83 13320.046420

| Important Note: Because of design there is a nominal diameter reduction for standard KUB Quatron® | |
|---|---|
| Tool-Ø | Reduction |
| 14,0-16,0<br>16,1-17,5 | 0,05<br>0,08 |
| 17,6-21,5 | 0,10 |
| 21,6-27,0<br>44,1-52,0 | 0,09 |
| 27,1-33,0<br>52,1-65,0 | 0,11 |
| 33,1-44,0 | 0,13 |

EP 1525066 and other patents (drilling with minimum burring)

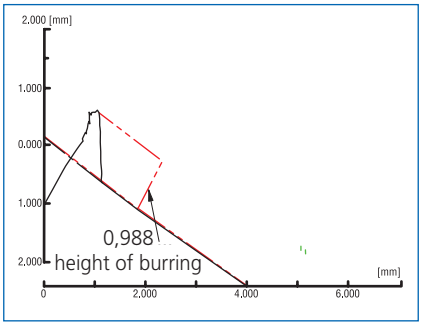
### Burring example 1

Material: C15 (1.0401)
Tool: KUB Quatron®
with burr minimising insert



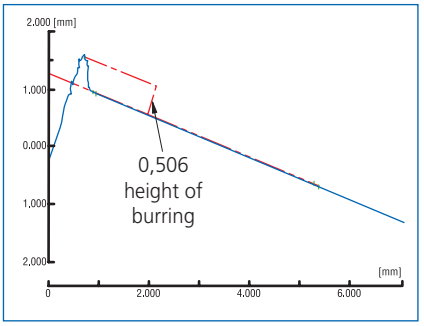

### Burring example 2

Material: C15 (1.0401)
Tool:
Insert drill: Competitor 1




### Burring example 3

Material: C15 (1.0401)
Tool:
Insert drill: Competitor 2

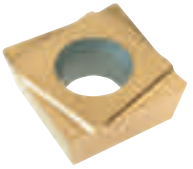


# KOMET® W83

## Inserts

for machining aluminium

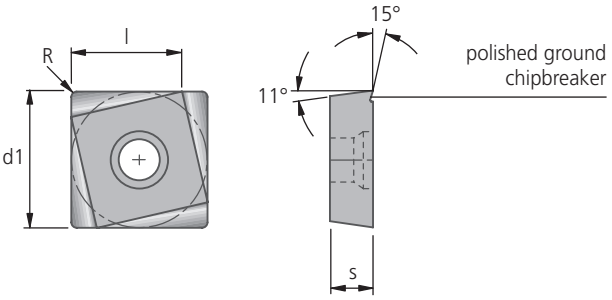
SPGT



## Application range:

**BK77-coating**
For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades and high resistance to build-up on cutting edges.

## Cutter geometry:

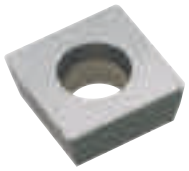



| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Carbide grades<br>diamond coated<br>BK50<br>F<br>50 | <br>PVD coated<br>BK77<br>F<br>77 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|
| SPGT 060202 FL-P15 | W83 18000.01.. | ▲ | | 6,35 | 2,38 | 4,53 | 0,2 |
| SPGT 120404 FL-P15 | W83 44000.14.. | ▲ | ▲ | 12,7 | 4,76 | 8,37 | 0,4 |
| SPGT 120408 FL-P15 | W83 44000.15.. | ▲ | ▲ | | | 8,02 | 0,8 |

| | | | |
|---|---|---|---|
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | ● | ●<br>● | Order example:<br>Article<br>SPGT 060202 FL-P15<br>Carbide grade<br>BK50<br>Order No.<br>W83 18000.0150 |



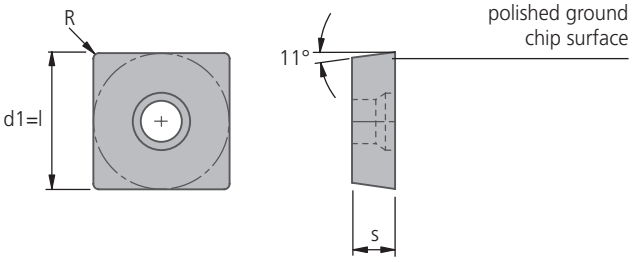
▲ Availability: for delivery see current price and stock list



## Application range:

**with K10**
For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades and high resistance to build-up on cutting edges.

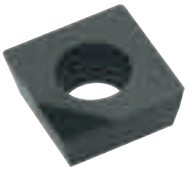
## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Carbide grades<br>uncoated<br>K10<br>F<br>21 | d1 | s | l | R |
|---|---|---|---|---|---|---|
| SPGW 060202 FN | W83 18000.15.. | ▲ | 6,35 | 2,38 | 6,35 | 0,2 |
| SPGW 060204 FN | W83 18000.16.. | ▲ | | | | 0,4 |
| SPGW 09T304 FN | W83 32000.18.. | ▲ | 9,52 | 3,97 | 9,52 | 0,4 |
| SPGW 09T308 FN | W83 32000.19.. | ▲ | | | | 0,8 |
| SPGW 120408 FN | W83 44000.21.. | ▲ | 12,7 | 4,76 | 12,7 | 0,8 |
| Mild steel/tool steel P | | ◐ | Order example:<br>Article<br>SPGW 060202 FN<br>Carbide grade<br>K10<br>Order No.<br>W83 18000.1521 | | | |
| Stainless and acid-resistant steel M | | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | | | |
| Non-ferrous metals N | | ● | | | | |
| Heat-resistant steels S | | ● | | | | |
| Hardened tool steel H | | | | | | |

## Inserts

PCD cutting edge
for machining aluminium

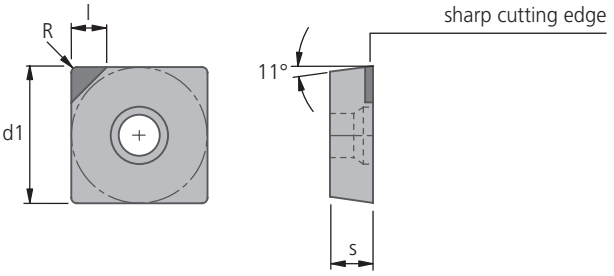


## Application range:

**PCD55**
Polycrystalline diamond cutting material for cutting aluminium materials, abrasive materials, plastics and compound materials at high cutting speeds.

**PCD5520**
Increased edge stability so can also be used, for example, in aluminium with 12% Si content and with interrupted cut.

## Cutter geometry:




| Article<br>ISO Description | Order No. | Cutting material<br>PCD tipped<br>  <br>PKD55<br>F<br>55 |  <br>PKD5520<br>F<br>5520 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|
| SPGW 060204 FN | W83 18000.13.. | | ▲ | 6,35 | 2,38 | 3,0 | 0,4 |
| SPGW 09T304 FN | W83 32000.13.. | ▲ | | 9,52 | 3,97 | 3,0 | 0,4 |
| SPGW 09T308 FN | W83 32000.14.. | | ▲ | | | | 0,8 |
| SPGW 120404 FN | W83 44000.16.. | ▲ | | 12,7 | 4,76 | 3,0 | 0,4 |
| SPGW 120408 FN | W83 44000.17.. | | ▲ | | | | 0,8 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | ● | Order example:<br>Article<br>SPGW 09T304 FN<br>Cutting material<br>PKD55<br>Order No.<br>W83 32000.1355 | | | |

Cutting edge design F = sharp
enter carbide code



▲ Availability: for delivery see current price and stock list



## Inserts

CBN cutting edge
for hard machining and cast iron machining

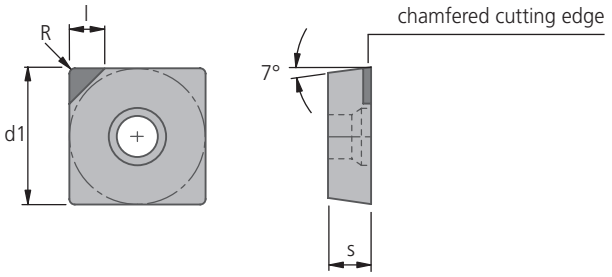
## Application range:

**CBN57**
for cutting cast iron (GJL) and alloyed cast iron (ferrite content <10%) and chilled cast iron and some heat resistant alloys

$v_c$ = 500 ... 800 (1500) m/min
f = 0.1 ... 0.5 mm
$a_p$ = 0.1 ... 1 mm

**CBN40**
for cutting hardened steels ≥ 52 HRC

## Cutter geometry:



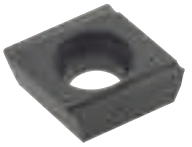

| Article<br>ISO Description<br>Cutting edge design<br>T = chamfered | Order No.<br>enter carbide code | Cutting material<br>CBN tipped<br>CBN40<br>T<br>40 | CBN57<br>T<br>57 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|
| SCGW 060204 TN | **W83 18000.20..** | ▲ | ▲ | 6,35 | 2,38 | 3,0 | 0,4 |
| SCGW 09T308 TN | **W83 32000.25..** | ▲ | ▲ | 9,52 | 3,97 | 3,0 | 0,8 |
| SCGW 120408 TN | **W83 44000.26..** | ▲ | ▲ | 12,7 | 4,76 | 3,0 | 0,8 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ◐<br>○ ≥ 52 HRC | ●<br>◐ | Order example:<br>Article<br>SCGW 060204 TN<br>Cutting material<br>CBN40<br>Order No.<br>W83 18000.2040 | | | |

# KOMET® W85

# CPGT

## Inserts

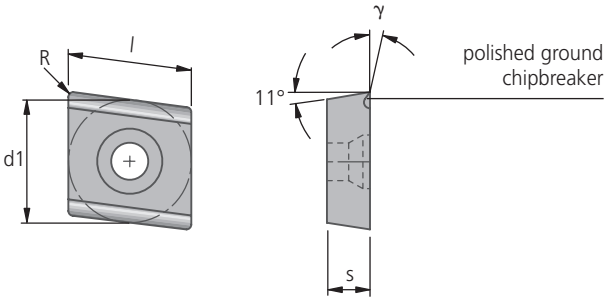
L.H. cutting form „L“
for machining aluminium



## Application range:

For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades, high edge stability and high resistance to build-up on cutting edges (coated).

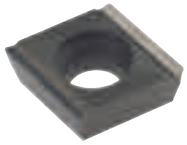
## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: uncoated | diamond coated | PVD coated | d1 | s | l | γ | R |
|---|---|---|---|---|---|---|---|---|---|
| Cutting edge design F = sharp | enter carbide code | K10 F 21 | BK50 F 50 | BK77 F 77 | | | | | |
| CPGT 040102 FL-P18 | W85 09000.01.. | ▲ | ▲ | ▲ | 4,76 | 1,59 | 4,8 | 18° | 0,2 |
| CPGT 040104 FL-P18 | W85 09000.03.. | ▲ | ▲ | ▲ | | | | | 0,4 |
| CPGT 04T102 FL-P18 | W85 09000.11.. | ▲ | | | 4,76 | 1,98 | 4,8 | 18° | 0,2 |
| CPGT 04T104 FL-P18 | W85 09000.12.. | ▲ | | | | | | | 0,4 |
| CPGT 060202 FL-P18 | W85 18000.06.. | ▲ | ▲ | ▲ | 6,35 | 2,38 | 6,45 | 18° | 0,2 |
| CPGT 060204 FL-P18 | W85 18000.08.. | ▲ | ▲ | ▲ | | | | | 0,4 |
| CPGT 080302 FL-P18 | W85 23000.01.. | ▲ | | | 7,94 | 3,18 | 8,06 | 18° | 0,2 |
| CPGT 080304 FL-P18 | W85 23000.02.. | ▲ | | | | | | | 0,4 |
| CPGT 09T304 FL-P18 | W85 32000.23.. | ▲ | ▲ | ▲ | 9,52 | 3,97 | 9,65 | 18° | 0,4 |
| CPGT 09T308 FL-P18 | W85 32000.24.. | ▲ | ▲ | ▲ | | | | | 0,8 |
| CPGT 120404 FL-P18 | W85 44000.29.. | ▲ | ▲ | ▲ | 12,7 | 4,76 | 12,9 | 18° | 0,4 |
| CPGT 120408 FL-P18 | W85 44000.30.. | ▲ | ▲ | ▲ | | | | | 0,8 |
| Mild steel/tool steel P | | ◐ | | | Order example: | | | | |
| Stainless and acid-resistant steel M | | | | | Article | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | | CPGT 040102 FL-P18 | | | | |
| Non-ferrous metals N | | ● | ● | ● | Carbide grade | | | | |
| Heat-resistant steels S | | ● | | ● | BK50 | | | | |
| Hardened tool steel H | | | | | Order No. | | | | |
| | | | | | W85 09000.0150 | | | | |



▲ Availability: for delivery see current price and stock list



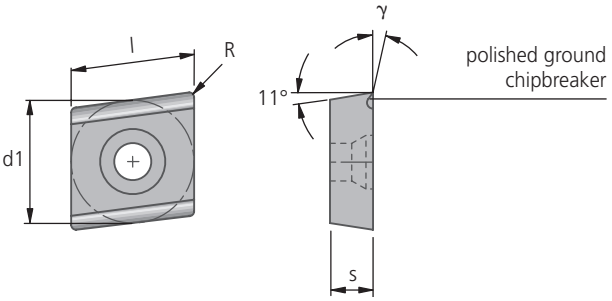
## Inserts

R.H. cutting form „R“
for machining aluminium

## Application range:

For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades, high edge stability and high resistance to build-up on cutting edges (coated).

## Cutter geometry:



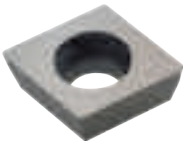

| Article<br>ISO Description | Order No. | Carbide grades<br>uncoated<br>K10<br>F<br>21 | d1 | s | l | γ | R |
|---|---|---|---|---|---|---|---|
| CPGT 040102 FR-P18 | W85 09000.09.. | ▲ | 4,76 | 1,59 | 4,8 | 18° | 0,2 |
| CPGT 040104 FR-P18 | W85 09000.10.. | ▲ | | | | | 0,4 |
| CPGT 04T102 FR-P18 | W85 09000.13.. | ▲ | 4,76 | 1,98 | 4,8 | 18° | 0,2 |
| CPGT 04T104 FR-P18 | W85 09000.14.. | ▲ | | | | | 0,4 |
| CPGT 060202 FR-P18 | W85 18000.27.. | ▲ | 6,35 | 2,38 | 6,45 | 18° | 0,2 |
| CPGT 060204 FR-P18 | W85 18000.28.. | ▲ | | | | | 0,4 |
| CPGT 080302 FR-P18 | W85 23000.03.. | ▲ | 7,94 | 3,18 | 8,06 | 18° | 0,2 |
| CPGT 080304 FR-P18 | W85 23000.04.. | ▲ | | | | | 0,4 |
| CPGT 09T304 FR-P18 | W85 32000.34.. | ▲ | 9,52 | 3,97 | 9,65 | 18° | 0,4 |
| CPGT 09T308 FR-P18 | W85 32000.35.. | ▲ | | | | | 0,8 |
| CPGT 120404 FR-P18 | W85 44000.38.. | ▲ | 12,7 | 4,76 | 12,9 | 18° | 0,4 |
| CPGT 120408 FR-P18 | W85 44000.39.. | ▲ | | | | | 0,8 |
| Mild steel/tool steel P | | ◐ | Order example:<br>Article<br>CPGT 040102 FR-P18<br>Carbide grade<br>K10<br>Order No.<br>W85 09000.0921 | | | | |
| Stainless and acid-resistant steel M | | | | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | | | | |
| Non-ferrous metals N | | ● | | | | | |
| Heat-resistant steels S | | ● | | | | | |
| Hardened tool steel H | | | | | | | |

Cutting edge design
F = sharp

enter carbide code

## Inserts

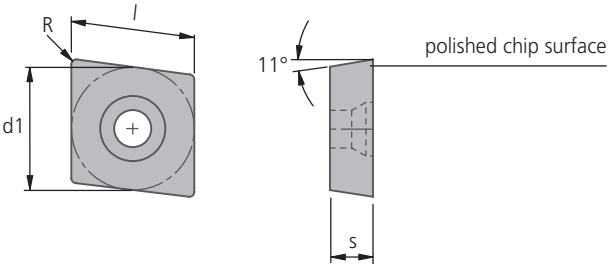
for machining aluminium



## Application range:

For cutting aluminium materials and plastics at up to medium cutting speeds. Tough grades and high resistance to build-up on cutting edges.

## Cutter geometry:



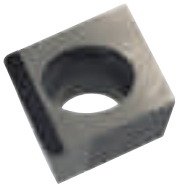

| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Carbide grades<br>uncoated<br>K10<br>F<br>21 | d1 | s | l | R |
|---|---|---|---|---|---|---|
| CPGW 060202 FN | W85 18000.17.. | ▲ | 6,35 | 2,38 | 6,45 | 0,2 |
| CPGW 060204 FN | W85 18000.18.. | ▲ | | | | 0,4 |
| CPGW 09T304 FN | W85 32000.26.. | ▲ | 9,52 | 3,97 | 9,65 | 0,4 |
| CPGW 09T308 FN | W85 32000.27.. | ▲ | | | | 0,8 |
| CPGW 120404 FN | W85 44000.32.. | ▲ | 12,7 | 4,76 | 12,9 | 0,4 |
| CPGW 120408 FN | W85 44000.33.. | ▲ | | | | 0,8 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ◐<br><br>●<br>●<br>●<br> | Order example:<br>Article<br>CPGW 060202 FN<br>Carbide grade<br>K10<br>Order No.<br>W85 18000.1721 | | | |



▲ Availability: for delivery see current price and stock list

# Inserts

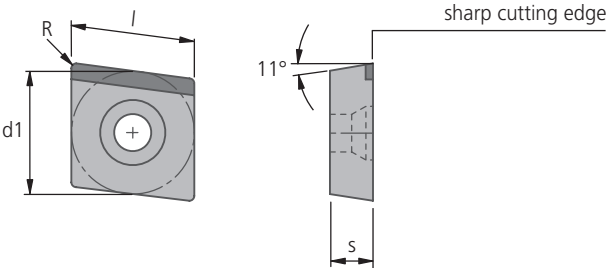
L.H. cutting form „L“
for machining aluminium



## Application range:

**PCD55**
Polycrystalline diamond cutting material for cutting aluminium materials, abrasive materials, plastics and compound materials at high cutting speeds.

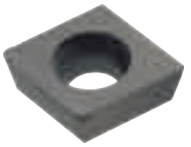
## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>PKD55<br>F<br>55 | d1 | s | l | R |
|---|---|---|---|---|---|---|
| CPGW 04T102 FL | W85 09000.15.. | ▲ | 4,76 | 1,98 | 4,8 | 0,2 |
| CPGW 060202 FL | W85 18000.30.. | ▲ | 6,35 | 2,38 | 6,45 | 0,2 |
| CPGW 060204 FL | W85 18000.21.. | ▲ | | | | 0,4 |
| CPGW 080302 FL | W85 23000.05.. | ▲ | 7,94 | 3,18 | 8,06 | 0,2 |
| CPGW 080304 FL | W85 23000.06.. | ▲ | | | | 0,4 |
| CPGW 09T304 FL | W85 32000.19.. | ▲ | 9,52 | 3,97 | 9,65 | 0,4 |
| CPGW 09T308 FL | W85 32000.20.. | ▲ | | | | 0,8 |
| CPGW 120404 FL | W85 44000.25.. | ▲ | 12,7 | 4,76 | 12,9 | 0,4 |
| CPGW 120408 FL | W85 44000.26.. | ▲ | | | | 0,8 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | Order example:<br>Article<br>CPGW 04T102 FL<br>Cutting material<br>PKD55<br>Order No.<br>W85 09000.1555 | | | |

## Inserts

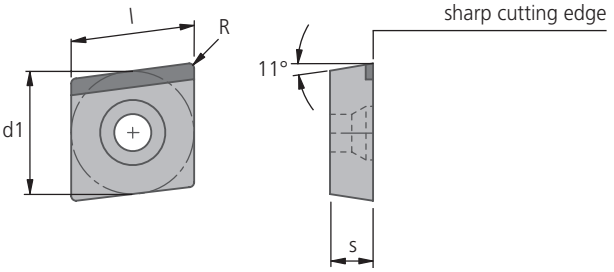
R.H. cutting form „R“
for machining aluminium



## Application range:

**PCD55**
Polycrystalline diamond cutting material for cutting aluminium materials, abrasive materials, plastics and compound materials at high cutting speeds.

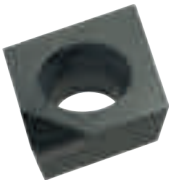
## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>PKD55<br>F<br>55 | d1 | s | l | R |
|---|---|---|---|---|---|---|
| CPGW 04T102 FR | W85 09000.16.. | ▲ | 4,76 | 1,98 | 4,8 | 0,2 |
| CPGW 060202 FR | W85 18000.31.. | ▲ | 6,35 | 2,38 | 6,45 | 0,2 |
| CPGW 060204 FR | W85 18000.29.. | ▲ | | | | 0,4 |
| CPGW 080302 FR | W85 23000.07.. | ▲ | 7,94 | 3,18 | 8,06 | 0,2 |
| CPGW 080304 FR | W85 23000.08.. | ▲ | | | | 0,4 |
| CPGW 09T304 FR | W85 32000.36.. | ▲ | 9,52 | 3,97 | 9,65 | 0,4 |
| CPGW 09T308 FR | W85 32000.37.. | ▲ | | | | 0,8 |
| CPGW 120404 FR | W85 44000.40.. | ▲ | 12,7 | 4,76 | 12,9 | 0,4 |
| CPGW 120408 FR | W85 44000.41.. | ▲ | | | | 0,8 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | Order example:<br>Article<br>CPGW 04T102 FL<br>Cutting material<br>PKD55<br>Order No.<br>W85 09000.1555 | | | |



▲ Availability: for delivery see current price and stock list

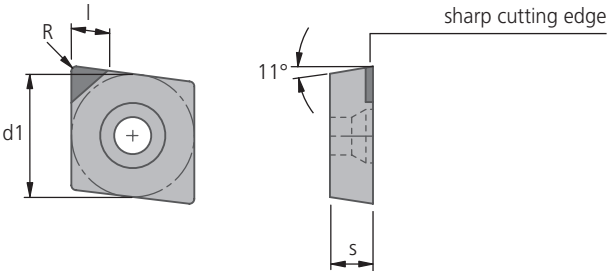


## Application range:

**PCD55**
Polycrystalline diamond cutting material for cutting aluminium materials, abrasive materials, plastics and compound materials at high cutting speeds.

**PCD5520**
Increased edge stability so can also be used, for example, in aluminium with 12% Si content and with interrupted cut.

## Cutter geometry:




| Article<br>ISO Description<br>Cutting edge design<br>F = sharp | Order No.<br>enter carbide code | Cutting material<br>PCD tipped<br>PKD55<br>F<br>55 | PKD5520<br>F<br>5520 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|
| CPGW 04T102 FN | W85 09000.07.. | | ▲ | 4,76 | 1,98 | 2,0 | 0,2 |
| CPGW 060201 FN | W85 18000.23.. | | ▲ | 6,35 | 2,38 | 3,0 | 0,1 |
| CPGW 060202 FN | W85 18000.24.. | | ▲ | | | | 0,2 |
| CPGW 060204 FN | W85 18000.16.. | | ▲ | | | | 0,4 |
| CPGW 09T302 FN | W85 32000.30.. | | ▲ | 9,52 | 3,97 | 3,0 | 0,2 |
| CPGW 09T304 FN | W85 32000.21.. | ▲ | ▲ | | | | 0,4 |
| CPGW 09T308 FN | W85 32000.22.. | ▲ | ▲ | | | | 0,8 |
| CPGW 120404 FN | W85 44000.27.. | ▲ | ▲ | 12,7 | 4,76 | 3,0 | 0,4 |
| CPGW 120408 FN | W85 44000.28.. | ▲ | ▲ | | | | 0,8 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | ● | Order example:<br>Article<br>CPGW 04T102 FN<br>Cutting material<br>PKD5520<br>Order No.<br>W85 09000.075520 | | | |

## Inserts

PCD chip topography
for machining aluminium

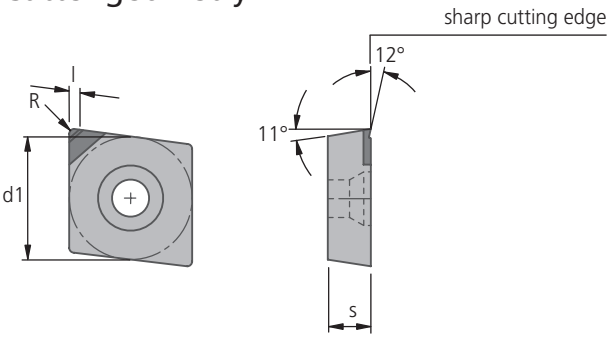


## Application range:

**PCD55**
Polycrystalline diamond cutting material for cutting aluminium materials, abrasive materials, plastics and compound materials at high cutting speeds.

**PCD5520**
Increased edge stability so can also be used, for example, in aluminium with 12% Si content and with interrupted cut.

## Cutter geometry:




| Article ISO Description | Order No. | Cutting material: PCD tipped PKD55 F 55 | Cutting material: PCD tipped PKD5520 F 5520 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|
| Cutting edge design F = sharp ▼ | enter carbide code ▼ | | | | | | |
| CPGW 060204 FN | W85 18980.04.. | | ▲ | 6,35 | 2,38 | 0,6 | 0,4 |
| CPGW 09T304 FN | W85 32980.04.. | ▲ | | 9,52 | 3,97 | 0,6 | 0,4 |
| CPGW 120404 FN | W85 44980.04.. | ▲ | | 12,7 | 4,76 | 0,6 | 0,4 |
| Mild steel/tool steel P | | | | | | | |
| Stainless and acid-resistant steel M | | | | | | | |
| Grey cast iron, spheroidal cast iron K | | | | | | | |
| Non-ferrous metals N | | ● | ● | | | | |
| Heat-resistant steels S | | | | | | | |
| Hardened tool steel H | | | | | | | |

Order example:
Article
CPGW 060204 FN
Cutting material
PKD5520
Order No.
W85 18980.045520



▲ Availability: for delivery see current price and stock list



## Inserts

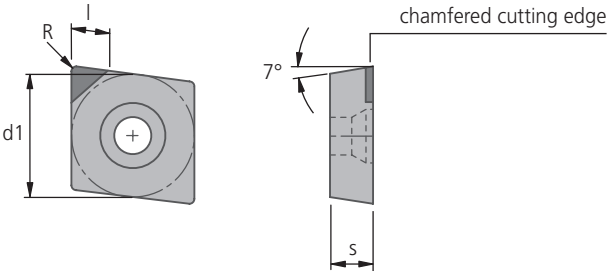
CBN cutting edge
for hard machining and cast iron machining

## Application range:

**CBN57**
for cutting cast iron (GJL) and alloyed cast iron (ferrite content <10%) and chilled cast iron and some heat resistant alloys
$v_c$ = 500 ... 800 (1500) m/min
f = 0.1 ... 0.5 mm
$a_p$ = 0.1 ... 1 mm

**CBN40**
for cutting hardened steels >48 HRC
$v_c$ = 100 ... 160 m/min
f = 0.1 ... 0.3 mm
$a_p$ = 0.1 ... 0.5 mm

## Cutter geometry:



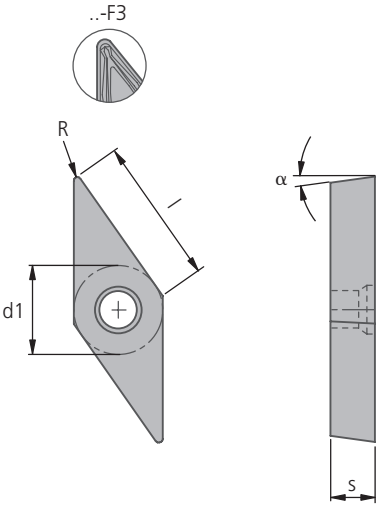

| Article<br>ISO Description | Order No. | Cutting material<br>CBN tipped<br>CBN40<br>T<br>40 | CBN57<br>T<br>57 | d1 | s | l | R |
|---|---|---|---|---|---|---|---|
| Cutting edge design<br>T = chamfered | enter carbide code | | | | | | |
| CCGW 04T102 TN | **W85 09000.08..** | ▲ | ▲ | 4,76 | 1,98 | 2,0 | 0,2 |
| CCGW 060204 TN | **W85 18000.26..** | ▲ | ▲ | 6,35 | 2,38 | 3,0 | 0,4 |
| CCGW 09T304 TN | **W85 32000.31..** | ▲ | ▲ | 9,52 | 3,97 | 3,0 | 0,4 |
| CCGW 09T308 TN | **W85 32000.32..** | ▲ | ▲ | | | | 0,8 |
| CCGW 09T312 TN | **W85 32000.33..** | | ▲ | | | | 1,2 |
| CCGW 120404 TN | **W85 44000.35..** | | ▲ | 12,7 | 4,76 | 3,0 | 0,4 |
| CCGW 120408 TN | **W85 44000.36..** | ▲ | ▲ | | | | 0,8 |
| Mild steel/tool steel P | | | | | | | |
| Stainless and acid-resistant steel M | | | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | | | |
| Non-ferrous metals N | | | | | | | |
| Heat-resistant steels S | | ◐ | ◐ | | | | |
| Hardened tool steel H | | ○ ≥ 52 HRC | | | | | |

Order example:
Article
CCGW 04T102 TN
Cutting material
CBN40
Order No.
W85 09000.0840

## Inserts



## Cutter geometry:




| Article<br>ISO Description | Order No.<br>enter carbide code | Carbide grades<br>CVD coated<br>BK75 **75** $v_c$ m/min | | BK76 **76** $v_c$ m/min | | Cermet<br>CK39 **39** $v_c$ m/min | | f<br>mm | $a_p$<br>mm | d1 | s | l | α | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCMT 160404-F3 | **W89 32000.05..** | 180-280 | 130-220 | 250-330 | 120-180 | 200-300 | 150-280 | 0,12-0,25 | 1,0-5,0 | 9,52 | 4,76 | 16,5 | 7° | 0,4 |
| VCMT 160408-F3 | **W89 32000.06..** | | | | | | | 0,12-0,30 | 1,0-5,0 | | | | | 0,8 |
| VBMT 160404 | **W89 32000.07..** | 80-190 | 80-180 | 120-270 | 60-150 | | | 0,12-0,35 | 1,0-5,0 | 9,52 | 4,76 | 16,6 | 5° | 0,4 |
| VBMT 160408 | **W89 32000.08..** | | | | | | | 0,14-0,4 | 1,0-5,0 | | | | | 0,8 |
| Mild steel/tool steel P | | ● | | ● | | ● | | | | | | | | |
| Stainless and acid-resistant steel M | | | ● | | | | ● | | | | | | | |
| Grey cast iron, spheroidal cast iron K | | | | | ● | | | | | | | | | |
| Non-ferrous metals N | | | | | | | | | | | | | | |
| Heat-resistant steels S | | | | | | | | | | | | | | |
| Hardened tool steel H | | | | | | | | | | | | | | |

Order example:
Article
VCMT 160404-F3
Carbide grade
BK75
Order No.
W89 32000.0575

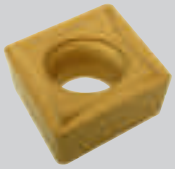


▲ Availability: for delivery see current price and stock list

# ISO Inserts

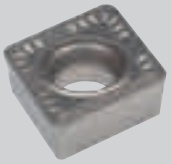
Geometries on example of ISO insertry C85

**Geometry -01**



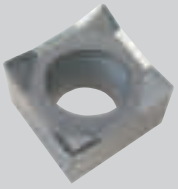
Rough machining
$a_p$ = 0,5 – 4,26 mm
f = 0,1 – 0,36 mm

**Geometry -05**



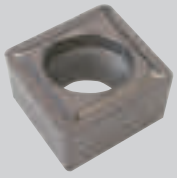
Roughing / semi-finishing
for machining cast iron
$a_p$ = 0,5 – 4,26 mm
f = 0,11 – 0,26 mm

**Geometry -12**



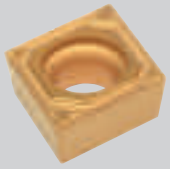
Semi-finishing
$a_p$ = 0,38 – 7,1 mm
f = 0,05 – 0,5 mm

**Geometry -14**



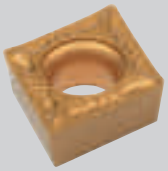
Finish machining
for Cermet
$a_p$ = 0,05 – 2,5 mm
f = 0,05 – 0,25 mm

**Geometry -14**



Finish machining
for coated carbide
$a_p$ = 0,14 – 1,16 mm
f = 0,02 – 0,11 mm

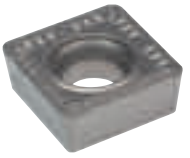
**Geometry -15**



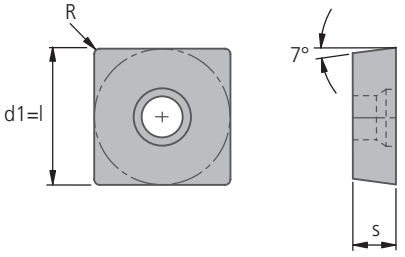
Semi-finishing
$a_p$ = 0,25 – 3,23 mm
f = 0,03 – 0,28 mm

Figures given depend on insert size and corner radius
(see pages 700 – 703)

## ISO Inserts



## Cutter geometry:




| Article ISO Description (R = Roughing, S = Semi-Finisching, F = Finishing) | | Order No. (enter carbide code) | Carbide grades: uncoated K10 23 $v_c$ m/min | | Carbide grades: CVD coated BK7525 7525 $v_c$ m/min | | | Carbide grades: CVD coated BK7610 7610 $v_c$ m/min | | Cermet CK3215 3215 $v_c$ m/min | | | feed f mm | cutting depth $a_p$ mm | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | SCMT 09T304-01 | C83 32010.04.. | | | 80-240 | 100-180 | 60-180 | | | | | | 0,1-0,18 | 0,5-3,0 | 9,52 | 3,97 | 9,52 | 0,4 |
| R | SCMT 09T308-01 | C83 32010.08.. | | | | | | | | | | | 0,2-0,36 | 1,0-3,0 | | | | 0,8 |
| R/S | SCMT 09T304-05 | C83 32050.04.. | | | | | | 120-270 | 60-270 | | | | 0,1-0,2 | 0,5-3,14 | 9,52 | 3,97 | 9,52 | 0,4 |
| R/S | SCMT 09T308-05 | C83 32050.08.. | | | | | | | | | | | 0,2-0,4 | 1,0-3,14 | | | | 0,8 |
| F | SCMT 09T304-14 | C83 32140.04.. | | | 80-240 | 100-180 | 60-180 | | | 120-270 | 100-220 | 160-300 | BK7525: 0,1-0,2 CK3215: 0,05-0,25 | BK7525: 0,05-1,5 CK3215: 0,05-2,50 | 9,52 | 3,97 | 9,52 | 0,4 |
| F | SCMT 09T308-14 | C83 32140.08.. | | | | | | | | | | | | | | | | 0,8 |
| R | SCMT 120404-01 | C83 44010.04.. | | | 80-240 | 100-180 | 60-180 | | | | | | 0,1-0,18 | 0,5-4,2 | 12,7 | 4,76 | 12,7 | 0,4 |
| R | SCMT 120408-01 | C83 44010.08.. | | | | | | | | | | | 0,2-0,36 | 1,0-4,2 | | | | 0,8 |
| R | SCMT 120412-01 | C83 44010.12.. | | | | | | | | | | | 0,3-0,45 | 1,5-5,0 | | | | 1,2 |
| R/S | SCMT 120404-05 | C83 44050.04.. | | | | | | 120-270 | 60-270 | | | | 0,11-0,21 | 0,5-4,19 | 12,7 | 4,76 | 12,7 | 0,4 |
| R/S | SCMT 120408-05 | C83 44050.08.. | | | | | | | | | | | 0,24-0,42 | 1,0-4,19 | | | | 0,8 |
| R/S | SCMT 120412-05 | C83 44050.12.. | | | | | | | | | | | 0,34-0,63 | 1,5-4,19 | | | | 1,2 |
| S | SCGT 120408FN-12 | C83 44120.08.. | 90-200 | 200-600 | | | | | | | | | 0,2-0,55 | 1,5-7,5 | 12,7 | 4,76 | 12,7 | 0,8 |
| F | SCMT 120408-14 | C83 44140.08.. | | | 80-240 | 100-180 | 60-180 | | | | | | 0,15-0,45 | 1,5-5,0 | 12,7 | 4,76 | 12,7 | 0,8 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mild steel/tool steel | P | | | ● | | | ◐ | | ● | | |
| Stainless and acid-resistant steel | M | | | | ○ | | | | | ○ | |
| Grey cast iron, spheroidal cast iron | K | ◐ | | | | ◐ | | ● | | | ◐ |
| Non-ferrous metals | N | | ● | | | | | | | | |
| Heat-resistant steels | S | | | | | | | | | | |
| Hardened tool steel | H | | | | | | | | | | |

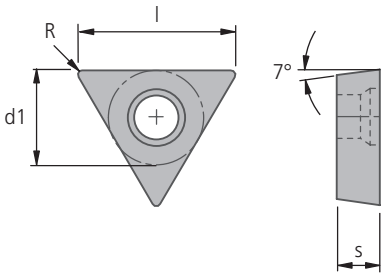
Order example:
Article
SCMT 09T304-01
Carbide grade
BK7525
Order No.
C83 32010.047525



▲ Availability: for delivery see current price and stock list



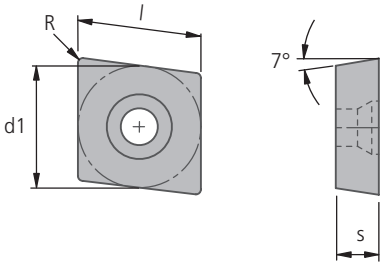
## Cutter geometry:

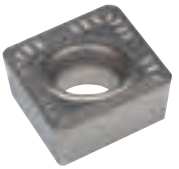



| Article ISO Description<br>R = Roughing<br>S = Semi-Finisching<br>F = Finishing | | Order No.<br>enter carbide code | Carbide grades<br>CVD coated<br>BK7525 7525 $v_c$ m/min | | | BK7610 7610 $v_c$ m/min | | Cermet<br>CK3215 3215 $v_c$ m/min | | | f feed mm | $a_p$ cutting depth mm | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R/S | TCMT 090204-05 | C84 13050.04.. | 80-240 | 100-180 | 60-180 | | | | | | 0,1-0,2 | 0,5-3,0 | 5,56 | 2,38 | 9,6 | 0,4 |
| R | TCMT 110208-01 | C84 18010.08.. | 80-240 | 100-180 | 60-180 | | | | | | 0,2-0,36 | 1,0-3,63 | 6,36 | 2,38 | 11,0 | 0,8 |
| R/S | TCMT 110204-05 | C84 18050.04.. | | | | 120-270 | 60-270 | | | | 0,1-0,2 | 0,5-3,63 | 6,36 | 2,38 | 11,0 | 0,4 |
| R/S | TCMT 110208-05 | C84 18050.08.. | | | | | | | | | 0,22-0,42 | 1,0-3,63 | | | | 0,8 |
| F | TCGT 110202-14 | C84 18140.02.. | | | | | | 120-270 | 100-220 | 160-300 | 0,05-0,25 | 0,05-2,5 | 6,36 | 2,38 | 11,0 | 0,2 |
| F | TCMT 110202-14 | C84 18140.02.. | 80-240 | 100-180 | 60-180 | | | | | | 0,16-0,56 | 0,14-1,32 | 6,36 | 2,38 | 11,0 | 0,2 |
| F | TCMT 110204-14 | C84 18140.04.. | 80-240 | 100-180 | 60-180 | | | 120-270 | 100-220 | 160-300 | BK7525: 0,03-0,11 CK3215: 0,05-0,25 | BK7525: 0,28-1,32 CK3215: 0,05-2,50 | 6,36 | 2,38 | 11,0 | 0,4 |
| F | TCMT 110208-14 | C84 18140.08.. | 80-240 | 100-180 | 60-180 | | | | | | 0,06-0,22 | 0,56-1,32 | 6,36 | 2,38 | 11,0 | 0,8 |
| S | TCMT 110202-15 | C84 18150.02.. | 80-240 | 100-180 | 60-180 | | | | | | 0,03-0,07 | 0,25-2,75 | 6,36 | 2,38 | | 0,2 |
| S | TCMT 110204-15 | C84 18150.04.. | | | | | | | | | 0,06-0,14 | 0,5-2,75 | | | | 0,4 |
| R | TCMT 16T304-01 | C84 32010.04.. | 80-240 | 100-180 | 60-180 | | | | | | 0,1-0,18 | 0,5-5,45 | 9,52 | 3,97 | 16,5 | 0,4 |
| R | TCMT 16T308-01 | C84 32010.08.. | | | | | | | | | 0,2-0,36 | 1,0-5,45 | | | | 0,8 |
| R/S | TCMT 16T304-05 | C84 32050.04.. | | | | 120-270 | 60-270 | | | | 0,11-0,21 | 0,5-5,45 | 9,52 | 3,97 | 16,5 | 0,4 |
| R/S | TCMT 16T308-05 | C84 32050.08.. | | | | | | | | | 0,22-0,42 | 1,0-5,45 | | | | 0,8 |
| F | TCMT 16T304-14 | C84 32140.04.. | 80-240 | 100-180 | 60-180 | | | | | | 0,03-0,11 | 0,88-1,98 | 9,52 | 3,97 | 16,5 | 0,4 |
| F | TCMT 16T308-14 | C84 32140.08.. | | | | | | | | | 0,06-0,22 | 0,56-1,98 | | | | 0,8 |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | | ● | ○ | ◐ | ◐ | ● | ● | ○ | ◐ | Order example:<br>Article<br>TCMT 090204-05<br>Carbide grade<br>BK7525<br>Order No.<br>C84 13050.047525 | | | | | |

## ISO Inserts

### Cutter geometry:



| Article ISO Description | | Order No. | Carbide grades | | | | | | | | Cermet | | | feed | cutting depth | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | uncoated | | CVD coated | | | | | | | | | | | | | | |
| | | enter carbide code | K10 23 $v_c$ m/min | | BK7525 7525 $v_c$ m/min | | | BK73 73 $v_c$ m/min | | BK7610 7610 $v_c$ m/min | | CK3215 3215 $v_c$ m/min | | | f mm | $a_p$ mm | | | | |
| R = Roughing<br>S = Semi-Finisching<br>F = Finishing | | | | | | | | | | | | | | | | | | | |
| R | CCMT 060204-01 | C85 18010.04.. | | | 80-240 | 100-180 | 60-180 | | | 120-270 | 60-270 | | | | 0,10-0,18 | 0,50-2,13 | 6,35 | 2,38 | 6,45 | 0,4 |
| S | CCGT 060202-12 | C85 18120.02.. | 90-200 | 200-600 | | | | | | | | | | | 0,05-0,13 | 0,38-3,55 | 6,35 | 2,38 | 6,45 | 0,2 |
| S | CCGT 060204-12 | C85 18120.04.. | | | | | | | | | | | | | 0,10-0,18 | 0,50-3,19 | | | | 0,4 |
| F | CCGT 060202-14 | C85 18140.02.. | | | | | | | | | | 120-270 | 100-220 | 160-300 | 0,05-0,25 | 0,05-2,50 | 6,35 | 2,38 | 6,45 | 0,2 |
| F | CCMT 060202-14 | C85 18140.02.. | | | 80-240 | 100-180 | 60-180 | | | | | | | | 0,02-0,06 | 0,14-0,77 | 6,35 | 2,38 | 6,45 | 0,2 |
| F | CCMT 060204-14 | C85 18140.04.. | | | 80-240 | 100-180 | 60-180 | | | | | 120-270 | 100-220 | 160-300 | BK7525: 0,03-0,11 CK3215: 0,05-0,25 | BK7525: 0,28-0,77 CK3215: 0,05-2,50 | 6,35 | 2,38 | 6,45 | 0,4 |
| S | CCMT 060202-15 | C85 18150.02.. | | | | | | 50-230 | 55-200 | | | | | | 0,03-0,07 | 0,25-1,61 | 6,35 | 2,38 | 6,45 | 0,2 |
| S | CCMT 060204-15 | C85 18150.04.. | | | | | | | | | | | | | 0,06-0,14 | 0,50-1,61 | | | | 0,4 |
| R | CCMT 09T304-01 | C85 32010.04.. | | | 80-240 | 100-180 | 60-180 | | | | | | | | 0,10-0,18 | 0,50-3,19 | 9,52 | 3,97 | 9,67 | 0,4 |
| R | CCMT 09T308-01 | C85 32010.08.. | | | | | | | | | | | | | 0,20-0,36 | 1,0-3,19 | | | | 0,8 |
| R/S | CCMT 09T304-05 | C85 32050.04.. | | | | | | | | 120-270 | 60-270 | | | | 0,11-0,21 | 0,50-3,19 | 9,52 | 3,97 | 9,67 | 0,4 |
| R/S | CCMT 09T308-05 | C85 32050.08.. | | | | | | | | | | | | | 0,22-0,42 | 1,0-3,19 | | | | 0,8 |
| S | CCGT 09T304-12 | C85 32120.04.. | 90-200 | 200-600 | | | | | | | | | | | 0,1-0,25 | 0,76-3,55 | 9,52 | 3,97 | 9,67 | 0,4 |
| S | CCGT 09T308-12 | C85 32120.08.. | | | | | | | | | | | | | 0,2-0,5 | 1,52-5,32 | | | | 0,8 |
| F | CCMT 09T304-14 | C85 32140.04.. | | | 80-240 | 100-180 | 60-180 | | | | | 120-270 | 100-220 | 160-300 | BK7525: 0,03-0,11 CK3215: 0,05-0,25 | BK7525: 0,28-1,16 CK3215: 0,05-2,50 | 9,52 | 3,97 | 9,67 | 0,4 |
| F | CCMT 09T308-14 | C85 32140.08.. | | | | | | | | | | 120-270 | 100-220 | 160-300 | 0,05-0,25 | 0,05-2,50 | 9,52 | 3,97 | 9,67 | 0,8 |
| S | CCMT 09T304-15 | C85 32150.04.. | | | | | | 50-230 | 55-200 | | | | | | 0,06-0,14 | 0,50-2,42 | 9,52 | 3,97 | 9,67 | 0,4 |
| S | CCMT 09T308-15 | C85 32150.08.. | | | 80-240 | 100-180 | 60-180 | 50-230 | 55-200 | | | | | | 0,13-0,28 | 1,0-2,42 | 9,52 | 3,97 | 9,67 | 0,8 |
| R | CCMT 120404-01 | C85 44010.04.. | | | 80-240 | 100-180 | 60-180 | | | | | | | | 0,10-0,18 | 0,50-4,26 | 12,7 | 4,76 | 12,9 | 0,4 |
| R | CCMT 120408-01 | C85 44010.08.. | | | | | | | | | | | | | 0,2-0,36 | 1,0-4,26 | | | | 0,8 |
| R/S | CCMT 120404-05 | C85 44050.04.. | | | | | | | | 120-270 | 60-270 | | | | 0,11-0,21 | 0,50-4,26 | 12,7 | 4,76 | 12,9 | 0,4 |
| R/S | CCMT 120408-05 | C85 44050.08.. | | | | | | | | | | | | | 0,22-0,42 | 1,0-3,63 | | | | 0,8 |
| R/S | CCMT 120412-05 | C85 44050.12.. | | | | | | | | | | | | | 0,34-0,62 | 1,5-4,26 | | | | 1,2 |
| S | CCGT 120404-12 | C85 44120.04.. | 90-200 | 200-600 | | | | | | | | | | | 0,1-0,25 | 0,76-7,10 | 12,7 | 4,76 | 12,9 | 0,4 |
| S | CCGT 120408-12 | C85 44120.08.. | | | | | | | | | | | | | 0,2-0,5 | 1,52-7,10 | | | | 0,8 |
| S | CCMT 120404-15 | C85 44150.04.. | | | 80-240 | 100-180 | 60-180 | | | | | | | | 0,06-0,14 | 0,50-3,23 | 12,7 | 4,76 | 12,9 | 0,4 |
| S | CCMT 120408-15 | C85 44150.08.. | | | | | | | | | | | | | 0,13-0,28 | 1,0-3,23 | | | | 0,8 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mild steel/tool steel | P | ● | | ● | ○ | ◐ | ◐ | ○ | ◐ | | ● | ○ | ◐ |
| Stainless and acid-resistant steel | M | | | | | | | | | | | | |
| Grey cast iron, spheroidal cast iron | K | ◐ | | | | ◐ | | | | ● | | | |
| Non-ferrous metals | N | | ● | | | | | | | | | | |
| Heat-resistant steels | S | | | | | | | | | | | | |
| Hardened tool steel | H | | | | | | | | | | | | |

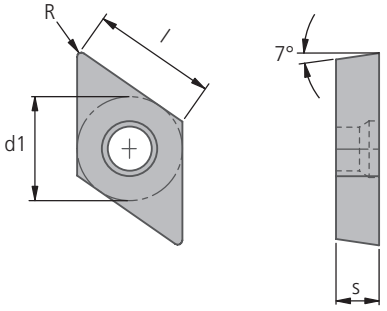
Order example:
Article
CCMT 060204-01
Carbide grade
BK7525
Order No.
C85 18010.047525



▲ Availability: for delivery see current price and stock list



## Cutter geometry:




| Article ISO Description<br>R = Roughing<br>S = Semi-Finisching<br>F = Finishing | | Order No.<br>enter carbide code | Carbide grades<br>uncoated<br>K10<br>23<br>$v_c$ m/min | | CVD coated<br>BK7525<br>7525<br>$v_c$ m/min | | | BK7610<br>7610<br>$v_c$ m/min | | Cermet<br>CK3215<br>3215<br>$v_c$ m/min | | | f feed mm | $a_p$ cutting depth mm | d1 | s | l | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R/S | DCMT 070204-01 | C86 18010.04.. | | | | | | 120-270 | 60-270 | | | | 0,03-0,11 | 0,28-2,56 | 6,35 | 2,38 | 7,75 | 0,4 |
| F | DCGT 070202-14 | C86 18140.02.. | | | | | | | | 120-270 | 100-220 | 160-300 | 0,05-0,25 | 0,05-2,50 | 6,35 | 2,38 | 7,75 | 0,2 |
| F | DCMT 070202-14 | C86 18140.02.. | | | 80-240 | 100-180 | 60-180 | | | | | | 0,02-0,06 | 0,14-0,93 | 6,35 | 2,38 | 7,75 | 0,2 |
| F | DCMT 070204-14 | C86 18140.04.. | | | 80-240 | 100-180 | 60-180 | | | 120-270 | 100-220 | 160-300 | BK7525: 0,03-0,11<br>CK3215: 0,05-0,25 | BK7525: 0,28-0,93<br>CK3215: 0,05-2,50 | 6,35 | 2,38 | 7,75 | 0,4 |
| S | DCMT 070202-15 | C86 18150.02.. | | | 80-240 | 100-180 | 60-180 | | | | | | 0,03-0,07 | 0,25-1,94 | 6,35 | 2,38 | 7,75 | 0,2 |
| S | DCMT 070204-15 | C86 18150.04.. | | | 80-240 | 100-180 | 60-180 | | | | | | 0,06-0,14 | 0,5-1,95 | | | | 0,4 |
| R/S | DCMT 11T304-05 | C86 32050.04.. | | | | | | 120-270 | 60-270 | | | | 0,11-0,21 | 0,5-3,84 | 9,52 | 3,97 | 11,63 | 0,4 |
| R/S | DCMT 11T308-05 | C86 32050.08.. | | | | | | | | | | | 0,22-0,42 | 1,0-3,84 | | | | 0,8 |
| S | DCGT 11T304-12 | C86 32120.04.. | 90-200 | 200-600 | | | | | | | | | 0,1-0,25 | 0,76-6,40 | 9,52 | 3,97 | 11,63 | 0,4 |
| S | DCGT 11T308-12 | C86 32120.08.. | | | | | | | | | | | 0,2-0,5 | 1,52-6,40 | | | | 0,8 |
| F | DCMT 11T304-14 | C86 32140.04.. | | | 80-240 | 100-180 | 60-180 | | | 120-270 | 100-220 | 160-300 | BK7525: 0,03-0,11<br>CK3215: 0,05-0,25 | BK7525: 0,28-1,4<br>CK3215: 0,05-2,50 | 9,52 | 3,97 | 11,63 | 0,4 |
| F | DCMT 11T308-14 | C86 32140.08.. | | | | | | | | | | | BK7525: 0,06-0,22<br>CK3215: 0,05-0,25 | BK7525: 0,56-1,4<br>CK3215: 0,05-2,50 | | | | 0,8 |
| S | DCMT 11T304-15 | C86 32150.04.. | | | 80-240 | 100-180 | 60-180 | | | | | | 0,06-0,14 | 0,5-2,91 | 9,52 | 3,97 | 11,63 | 0,4 |
| S | DCMT 11T308-15 | C86 32150.08.. | | | | | | | | | | | 0,13-0,28 | 1,0-2,91 | | | | 0,8 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mild steel/tool steel P | | | ● | | | ◐ | | ● | | | |
| Stainless and acid-resistant steel M | | | | ○ | | | | | ○ | | |
| Grey cast iron, spheroidal cast iron K | ◐ | | | | ◐ | | ● | | | ◐ | |
| Non-ferrous metals N | | ● | | | | | | | | | |
| Heat-resistant steels S | | | | | | | | | | | |
| Hardened tool steel H | | | | | | | | | | | |

Order example:
Article
DCMT 070204-01
Carbide grade
BK7610
Order No.
C86 18010.047610

# KOMET® H60 / H62

## Inserts Ø 17,3 - 21,2 mm

XOHX



**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.

EP 1 296 793 and other patents (KUB Duon)

| Carbide grades | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article<br>ISO Description<br>enter carbide<br>▾Ø | Order No. | PVD coated<br>BK8440<br>8440 | <br>BK2715<br>2715 | <br>BK84<br>84 | <br>BK8125<br>8125 | <br>BK2740<br>2740 | <br>BK8140<br>8140 | Article<br>ISO Description<br>enter carbide<br>▾Ø | Order No. | PVD coated<br>BK7710<br>7710 |
| XOHX0802-17,3.... | H60 17300. .. | | | | | | | XOHX0802-17,3-62... | H62 17300. .. | |
| XOHX0802-17,4.... | H60 17400. .. | | | | | | | XOHX0802-17,4-62... | H62 17400. .. | |
| **XOHX0802-17,5....** | **H60 17500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX0802-17,5-62...** | H62 17500. .. | **7710** |
| XOHX0802-17,6.... | H60 17600. .. | | | | | | | XOHX0802-17,6-62... | H62 17600. .. | |
| XOHX0802-17,7.... | H60 17700. .. | | | | | | | XOHX0802-17,7-62... | H62 17700. .. | |
| XOHX0802-17,8.... | H60 17800. .. | | | | | | | XOHX0802-17,8-62... | H62 17800. .. | |
| XOHX0802-17,9.... | H60 17900. .. | | | | | | | XOHX0802-17,9-62... | H62 17900. .. | |
| **XOHX0802-18,0....** | **H60 18000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX0802-18,0-62...** | H62 18000. .. | **7710** |
| XOHX0802-18,1.... | H60 18100. .. | | | | | | | XOHX0802-18,1-62... | H62 18100. .. | |
| XOHX0802-18,2.... | H60 18200. .. | | | | | | | XOHX0802-18,2-62... | H62 18200. .. | |
| XOHX0802-18,3.... | H60 18300. .. | | | | | | | XOHX0802-18,3-62... | H62 18300. .. | |
| XOHX0802-18,4.... | H60 18400. .. | | | | | | | XOHX0802-18,4-62... | H62 18400. .. | |
| **XOHX0802-18,5....** | **H60 18500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX0802-18,5-62...** | H62 18500. .. | **7710** |
| XOHX0802-18,6.... | H60 18600. .. | | | | | | | XOHX0802-18,6-62... | H62 18600. .. | |
| XOHX0802-18,7.... | H60 18700. .. | | | | | | | XOHX0802-18,7-62... | H62 18700. .. | |
| XOHX0802-18,8.... | H60 18800. .. | | | | | | | XOHX0802-18,8-62... | H62 18800. .. | |
| XOHX0802-18,9.... | H60 18900. .. | | | | | | | XOHX0802-18,9-62... | H62 18900. .. | |
| **XOHX0802-19,0....** | **H60 19000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX0802-19,0-62...** | H62 19000. .. | **7710** |
| XOHX0802-19,1.... | H60 19100. .. | | | | | | | XOHX0802-19,1-62... | H62 19100. .. | |
| XOHX0802-19,2.... | H60 19200. .. | | | | | | | XOHX0802-19,2-62... | H62 19200. .. | |
| XOHX0802-19,3.... | H60 19300. .. | | | | | | | XOHX0802-19,3-62... | H62 19300. .. | |
| XOHX0802-19,4.... | H60 19400. .. | | | | | | | XOHX0802-19,4-62... | H62 19400. .. | |
| **XOHX0802-19,5....** | **H60 19500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX0802-19,5-62...** | H62 19500. .. | **7710** |
| XOHX0802-19,6.... | H60 19600. .. | | | | | | | XOHX0802-19,6-62... | H62 19600. .. | |
| XOHX0802-19,7.... | H60 19700. .. | | | | | | | XOHX0802-19,7-62... | H62 19700. .. | |
| XOHX0802-19,8.... | H60 19800. .. | | | | | | | XOHX0802-19,8-62... | H62 19800. .. | |
| XOHX0802-19,9.... | H60 19900. .. | | | | | | | XOHX0802-19,9-62... | H62 19900. .. | |
| **XOHX0802-20,0....** | **H60 20000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX0802-20,0-62...** | H62 20000. .. | **7710** |
| XOHX0802-20,1.... | H60 20100. .. | | | | | | | XOHX0802-20,1-62... | H62 20100. .. | |
| XOHX0802-20,2.... | H60 20200. .. | | | | | | | XOHX0802-20,2-62... | H62 20200. .. | |
| XOHX0802-20,3.... | H60 20300. .. | | | | | | | XOHX0802-20,3-62... | H62 20300. .. | |
| XOHX0802-20,4.... | H60 20400. .. | | | | | | | XOHX0802-20,4-62... | H62 20400. .. | |
| **XOHX0802-20,5....** | **H60 20500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX0802-20,5-62...** | H62 20500. .. | **7710** |
| XOHX0802-20,6.... | H60 20600. .. | | | | | | | XOHX0802-20,6-62... | H62 20600. .. | |
| XOHX0802-20,7.... | H60 20700. .. | | | | | | | XOHX0802-20,7-62... | H62 20700. .. | |
| XOHX1003-20,8.... | H60 20800. .. | | | | | | | XOHX1003-20,8-62... | H62 20800. .. | |
| XOHX1003-20,9.... | H60 20900. .. | | | | | | | XOHX1003-20,9-62... | H62 20900. .. | |
| **XOHX1003-21,0....** | **H60 21000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-21,0-62...** | H62 21000. .. | **7710** |
| XOHX1003-21,1.... | H60 21100. .. | | | | | | | XOHX1003-21,1-62... | H62 21100. .. | |
| XOHX1003-21,2.... | H60 21200. .. | | | | | | | XOHX1003-21,2-62... | H62 21200. .. | |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | ◐ | ● | ● | ● | ● | Order example:<br>Article<br>XOHX0802-17,5<br>Carbide grade<br>BK8440<br>Order No.<br>H60 17500.8440 | P<br>M<br>K<br>N<br>S<br>H | ● |
| | | | ● | ◐ | ◐ | | | | | |
| | | | ◐ | ◐ | ◐ | | | | | |



**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.

EP 1 296 793 and other patents (KUB Duon)

| Carbide grades | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article<br>ISO Description<br>enter carbide<br>▾Ø | Order No. | PVD coated<br>BK8440<br>8440 | <br>BK2715<br>2715 | <br>BK84<br>84 | <br>BK8125<br>8125 | <br>BK2740<br>2740 | <br>BK8140<br>8140 | Article<br>ISO Description<br>enter carbide<br>▾Ø | Order No. | PVD coated<br>BK7710<br>7710 |
| XOHX1003-21,3.... | H60 21300. .. | | | | | | | XOHX1003-21,3-62... | H62 21300. .. | |
| XOHX1003-21,4.... | H60 21400. .. | | | | | | | XOHX1003-21,4-62... | H62 21400. .. | |
| **XOHX1003-21,5....** | **H60 21500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-21,5-62...** | **H62 21500. ..** | **7710** |
| XOHX1003-21,6.... | H60 21600. .. | | | | | | | XOHX1003-21,6-62... | H62 21600. .. | |
| XOHX1003-21,7.... | H60 21700. .. | | | | | | | XOHX1003-21,7-62... | H62 21700. .. | |
| XOHX1003-21,8.... | H60 21800. .. | | | | | | | XOHX1003-21,8-62... | H62 21800. .. | |
| XOHX1003-21,9.... | H60 21900. .. | | | | | | | XOHX1003-21,9-62... | H62 21900. .. | |
| **XOHX1003-22,0....** | **H60 22000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-22,0-62...** | **H62 22000. ..** | **7710** |
| XOHX1003-22,1.... | H60 22100. .. | | | | | | | XOHX1003-22,1-62... | H62 22100. .. | |
| XOHX1003-22,2.... | H60 22200. .. | | | | | | | XOHX1003-22,2-62... | H62 22200. .. | |
| XOHX1003-22,3.... | H60 22300. .. | | | | | | | XOHX1003-22,3-62... | H62 22300. .. | |
| XOHX1003-22,4.... | H60 22400. .. | | | | | | | XOHX1003-22,4-62... | H62 22400. .. | |
| **XOHX1003-22,5....** | **H60 22500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-22,5-62...** | **H62 22500. ..** | **7710** |
| XOHX1003-22,6.... | H60 22600. .. | | | | | | | XOHX1003-22,6-62... | H62 22600. .. | |
| XOHX1003-22,7.... | H60 22700. .. | | | | | | | XOHX1003-22,7-62... | H62 22700. .. | |
| XOHX1003-22,8.... | H60 22800. .. | | | | | | | XOHX1003-22,8-62... | H62 22800. .. | |
| XOHX1003-22,9.... | H60 22900. .. | | | | | | | XOHX1003-22,9-62... | H62 22900. .. | |
| **XOHX1003-23,0....** | **H60 23000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-23,0-62...** | **H62 23000. ..** | **7710** |
| XOHX1003-23,1.... | H60 23100. .. | | | | | | | XOHX1003-23,1-62... | H62 23100. .. | |
| XOHX1003-23,2.... | H60 23200. .. | | | | | | | XOHX1003-23,2-62... | H62 23200. .. | |
| XOHX1003-23,3.... | H60 23300. .. | | | | | | | XOHX1003-23,3-62... | H62 23300. .. | |
| XOHX1003-23,4.... | H60 23400. .. | | | | | | | XOHX1003-23,4-62... | H62 23400. .. | |
| **XOHX1003-23,5....** | **H60 23500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-23,5-62...** | **H62 23500. ..** | **7710** |
| XOHX1003-23,6.... | H60 23600. .. | | | | | | | XOHX1003-23,6-62... | H62 23600. .. | |
| XOHX1003-23,7.... | H60 23700. .. | | | | | | | XOHX1003-23,7-62... | H62 23700. .. | |
| XOHX1003-23,8.... | H60 23800. .. | | | | | | | XOHX1003-23,8-62... | H62 23800. .. | |
| XOHX1003-23,9.... | H60 23900. .. | | | | | | | XOHX1003-23,9-62... | H62 23900. .. | |
| **XOHX1003-24,0....** | **H60 24000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-24,0-62...** | **H62 24000. ..** | **7710** |
| XOHX1003-24,1.... | H60 24100. .. | | | | | | | XOHX1003-24,1-62... | H62 24100. .. | |
| XOHX1003-24,2.... | H60 24200. .. | | | | | | | XOHX1003-24,2-62... | H62 24200. .. | |
| XOHX1003-24,3.... | H60 24300. .. | | | | | | | XOHX1003-24,3-62... | H62 24300. .. | |
| XOHX1003-24,4.... | H60 24400. .. | | | | | | | XOHX1003-24,4-62... | H62 24400. .. | |
| **XOHX1003-24,5....** | **H60 24500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1003-24,5-62...** | **H62 24500. ..** | **7710** |
| XOHX1003-24,6.... | H60 24600. .. | | | | | | | XOHX1003-24,6-62... | H62 24600. .. | |
| XOHX1003-24,7.... | H60 24700. .. | | | | | | | XOHX1003-24,7-62... | H62 24700. .. | |
| XOHX12T3-24,8.... | H60 24800. .. | | | | | | | XOHX12T3-24,8-62... | H62 24800. .. | |
| XOHX12T3-24,9.... | H60 24900. .. | | | | | | | XOHX12T3-24,9-62... | H62 24900. .. | |
| **XOHX12T3-25,0....** | **H60 25000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-25,0-62...** | **H62 25000. ..** | **7710** |
| XOHX12T3-25,1.... | H60 25100. .. | | | | | | | XOHX12T3-25,1-62... | H62 25100. .. | |
| XOHX12T3-25,2.... | H60 25200. .. | | | | | | | XOHX12T3-25,2-62... | H62 25200. .. | |
| Mild steel/tool steel P | | ● | ◐ | ● | ● | ● | ● | Order example: P | | |
| Stainless and acid-resistant steel M | | | | | | | | Article M | | |
| Grey cast iron, spheroidal cast iron K | | | ● | ◐ | ◐ | | | XOHX1003-21,5 K | | |
| Non-ferrous metals N | | | ◐ | ◐ | ◐ | | | Carbide grade N | | ● |
| Heat-resistant steels S | | | | | | | | BK8440 S | | |
| Hardened tool steel H | | | | | | | | Order No. H | | |
| | | | | | | | | H60 21500.8440 | | |

# KOMET® H60 / H62

## Inserts Ø 25,3 - 29,2 mm

XOHX



**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.

EP 1 296 793 and other patents (KUB Duon)

| Carbide grades | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article ISO Description | Order No. | PVD coated | | | | | | Article ISO Description | Order No. | PVD coated | |
| enter carbide ▼ ▼Ø | | BK8440 8440 | BK2715 2715 | BK84 84 | BK8125 8125 | BK2740 2740 | BK8140 8140 | enter carbide ▼ ▼Ø | | BK7710 7710 | |
| XOHX12T3-25,3.... | H60 25300. .. | | | | | | | XOHX12T3-25,3-62... | H62 25300. .. | | |
| XOHX12T3-25,4.... | H60 25400. .. | | | | | | | XOHX12T3-25,4-62... | H62 25400. .. | | |
| **XOHX12T3-25,5....** | **H60 25500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-25,5-62...** | **H62 25500. ..** | **7710** | |
| XOHX12T3-25,6.... | H60 25600. .. | | | | | | | XOHX12T3-25,6-62... | H62 25600. .. | | |
| XOHX12T3-25,7.... | H60 25700. .. | | | | | | | XOHX12T3-25,7-62... | H62 25700. .. | | |
| XOHX12T3-25,8.... | H60 25800. .. | | | | | | | XOHX12T3-25,8-62... | H62 25800. .. | | |
| XOHX12T3-25,9.... | H60 25900. .. | | | | | | | XOHX12T3-25,9-62... | H62 25900. .. | | |
| **XOHX12T3-26,0....** | **H60 26000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-26,0-62...** | **H62 26000. ..** | **7710** | |
| XOHX12T3-26,1.... | H60 26100. .. | | | | | | | XOHX12T3-26,1-62... | H62 26100. .. | | |
| XOHX12T3-26,2.... | H60 26200. .. | | | | | | | XOHX12T3-26,2-62... | H62 26200. .. | | |
| XOHX12T3-26,3.... | H60 26300. .. | | | | | | | XOHX12T3-26,3-62... | H62 26300. .. | | |
| XOHX12T3-26,4.... | H60 26400. .. | | | | | | | XOHX12T3-26,4-62... | H62 26400. .. | | |
| **XOHX12T3-26,5....** | **H60 26500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-26,5-62...** | **H62 26500. ..** | **7710** | |
| XOHX12T3-26,6.... | H60 26600. .. | | | | | | | XOHX12T3-26,6-62... | H62 26600. .. | | |
| XOHX12T3-26,7.... | H60 26700. .. | | | | | | | XOHX12T3-26,7-62... | H62 26700. .. | | |
| XOHX12T3-26,8.... | H60 26800. .. | | | | | | | XOHX12T3-26,8-62... | H62 26800. .. | | |
| XOHX12T3-26,9.... | H60 26900. .. | | | | | | | XOHX12T3-26,9-62... | H62 26900. .. | | |
| **XOHX12T3-27,0....** | **H60 27000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-27,0-62...** | **H62 27000. ..** | **7710** | |
| XOHX12T3-27,1.... | H60 27100. .. | | | | | | | XOHX12T3-27,1-62... | H62 27100. .. | | |
| XOHX12T3-27,2.... | H60 27200. .. | | | | | | | XOHX12T3-27,2-62... | H62 27200. .. | | |
| XOHX12T3-27,3.... | H60 27300. .. | | | | | | | XOHX12T3-27,3-62... | H62 27300. .. | | |
| XOHX12T3-27,4.... | H60 27400. .. | | | | | | | XOHX12T3-27,4-62... | H62 27400. .. | | |
| **XOHX12T3-27,5....** | **H60 27500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-27,5-62...** | **H62 27500. ..** | **7710** | |
| XOHX12T3-27,6.... | H60 27600. .. | | | | | | | XOHX12T3-27,6-62... | H62 27600. .. | | |
| XOHX12T3-27,7.... | H60 27700. .. | | | | | | | XOHX12T3-27,7-62... | H62 27700. .. | | |
| XOHX12T3-27,8... | H62 27800. .. | | | | | | | XOHX12T3-27,8-62... | H62 27800. .. | | |
| XOHX12T3-27,9.... | H60 27900. .. | | | | | | | XOHX12T3-27,9-62... | H62 27900. .. | | |
| **XOHX12T3-28,0....** | **H60 28000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-28,0-62...** | **H62 28000. ..** | **7710** | |
| XOHX12T3-28,1.... | H60 28100. .. | | | | | | | XOHX12T3-28,1-62... | H62 28100. .. | | |
| XOHX12T3-28,2.... | H60 28200. .. | | | | | | | XOHX12T3-28,2-62... | H62 28200. .. | | |
| XOHX12T3-28,3.... | H60 28300. .. | | | | | | | XOHX12T3-28,3-62... | H62 28300. .. | | |
| XOHX12T3-28,4.... | H60 28400. .. | | | | | | | XOHX12T3-28,4-62... | H62 28400. .. | | |
| **XOHX12T3-28,5....** | **H60 28500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-28,5-62...** | **H62 28500. ..** | **7710** | |
| XOHX12T3-28,6.... | H60 28600. .. | | | | | | | XOHX12T3-28,6-62... | H62 28600. .. | | |
| XOHX12T3-28,7.... | H60 28700. .. | | | | | | | XOHX12T3-28,7-62... | H62 28700. .. | | |
| XOHX12T3-28,8.... | H60 28800. .. | | | | | | | XOHX12T3-28,8-62... | H62 28800. .. | | |
| XOHX12T3-28,9.... | H60 28900. .. | | | | | | | XOHX12T3-28,9-62... | H62 28900. .. | | |
| **XOHX12T3-29,0....** | **H60 29000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-29,0-62...** | **H62 29000. ..** | **7710** | |
| XOHX12T3-29,1.... | H60 29100. .. | | | | | | | XOHX12T3-29,1-62... | H62 29100. .. | | |
| XOHX12T3-29,2.... | H60 29200. .. | | | | | | | XOHX12T3-29,2-62... | H62 29200. .. | | |
| Mild steel/tool steel P | | ● | ◐ | ● | ● | ● | ● | Order example: | | | |
| Stainless and acid-resistant steel M | | | | | | | | Article | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | ◐ | ◐ | | | XOHX12T3-25,5 | | | |
| Non-ferrous metals N | | | ◐ | ◐ | ◐ | | | Carbide grade | | | ● |
| Heat-resistant steels S | | | | | | | | BK8440 | | | |
| Hardened tool steel H | | | | | | | | Order No. | | | |
| | | | | | | | | H60 25500.8440 | | | |



**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.

EP 1 296 793 and other patents (KUB Duon)

| Carbide grades | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article<br>ISO Description<br>enter carbide<br>▾Ø | Order No. | PVD coated<br>BK8440<br>8440 | <br>BK2715<br>2715 | <br>BK84<br>84 | <br>BK8125<br>8125 | <br>BK2740<br>2740 | <br>BK8140<br>8140 | Article<br>ISO Description<br>enter carbide<br>▾Ø | Order No. | PVD coated<br>BK7710<br>7710 |
| XOHX12T3-29,3.... | H60 29300. .. | | | | | | | XOHX12T3-29,3-62... | H62 29300. .. | |
| XOHX12T3-29,4.... | H60 29400. .. | | | | | | | XOHX12T3-29,4-62... | H62 29400. .. | |
| **XOHX12T3-29,5....** | **H60 29500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX12T3-29,5-62...** | **H62 29500. ..** | **7710** |
| XOHX12T3-29,6.... | H60 29600. .. | | | | | | | XOHX12T3-29,6-62... | H62 29600. .. | |
| XOHX12T3-29,7.... | H60 29700. .. | | | | | | | XOHX12T3-29,7-62... | H62 29700. .. | |
| XOHX1504-29,8.... | H60 29800. .. | | | | | | | XOHX1504-29,8-62... | H62 29800. .. | |
| XOHX1504-29,9.... | H60 29900. .. | | | | | | | XOHX1504-29,9-62... | H62 29900. .. | |
| **XOHX1504-30,0....** | **H60 30000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-30,0-62...** | **H62 30000. ..** | **7710** |
| XOHX1504-30,1.... | H60 30100. .. | | | | | | | XOHX1504-30,1-62... | H62 30100. .. | |
| XOHX1504-30,2.... | H60 30200. .. | | | | | | | XOHX1504-30,2-62... | H62 30200. .. | |
| XOHX1504-30,3.... | H60 30300. .. | | | | | | | XOHX1504-30,3-62... | H62 30300. .. | |
| XOHX1504-30,4.... | H60 30400. .. | | | | | | | XOHX1504-30,4-62... | H62 30400. .. | |
| **XOHX1504-30,5....** | **H60 30500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-30,5-62...** | **H62 30500. ..** | **7710** |
| XOHX1504-30,6.... | H60 30600. .. | | | | | | | XOHX1504-30,6-62... | H62 30600. .. | |
| XOHX1504-30,7.... | H60 30700. .. | | | | | | | XOHX1504-30,7-62... | H62 30700. .. | |
| XOHX1504-30,8.... | H60 30800. .. | | | | | | | XOHX1504-30,8-62... | H62 30800. .. | |
| XOHX1504-30,9.... | H60 30900. .. | | | | | | | XOHX1504-30,9-62... | H62 30900. .. | |
| **XOHX1504-31,0....** | **H60 31000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-31,0-62...** | **H62 31000. ..** | **7710** |
| XOHX1504-31,1.... | H60 31100. .. | | | | | | | XOHX1504-31,1-62... | H62 31100. .. | |
| XOHX1504-31,2.... | H60 31200. .. | | | | | | | XOHX1504-31,2-62... | H62 31200. .. | |
| XOHX1504-31,3.... | H62 31300. .. | | | | | | | XOHX1504-31,3-62... | H62 31300. .. | |
| XOHX1504-31,4.... | H60 31400. .. | | | | | | | XOHX1504-31,4-62... | H62 31400. .. | |
| **XOHX1504-31,5....** | **H60 31500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-31,5-62...** | **H62 31500. ..** | **7710** |
| XOHX1504-31,6.... | H60 31600. .. | | | | | | | XOHX1504-31,6-62... | H62 31600. .. | |
| XOHX1504-31,7.... | H60 31700. .. | | | | | | | XOHX1504-31,7-62... | H62 31700. .. | |
| XOHX1504-31,8.... | H60 31800. .. | | | | | | | XOHX1504-31,8-62... | H62 31800. .. | |
| XOHX1504-31,9.... | H60 31900. .. | | | | | | | XOHX1504-31,9-62... | H62 31900. .. | |
| **XOHX1504-32,0....** | **H60 32000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-32,0-62...** | **H62 32000. ..** | **7710** |
| XOHX1504-32,1.... | H60 32100. .. | | | | | | | XOHX1504-32,1-62... | H62 32100. .. | |
| XOHX1504-32,2.... | H60 32200. .. | | | | | | | XOHX1504-32,2-62... | H62 32200. .. | |
| XOHX1504-32,3.... | H60 32300. .. | | | | | | | XOHX1504-32,3-62... | H62 32300. .. | |
| XOHX1504-32,4.... | H60 32400. .. | | | | | | | XOHX1504-32,4-62... | H62 32400. .. | |
| **XOHX1504-32,5....** | **H60 32500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-32,5-62...** | **H62 32500. ..** | **7710** |
| XOHX1504-32,6.... | H60 32600. .. | | | | | | | XOHX1504-32,6-62... | H62 32600. .. | |
| XOHX1504-32,7.... | H60 32700. .. | | | | | | | XOHX1504-32,7-62... | H62 32700. .. | |
| XOHX1504-32,8.... | H60 32800. .. | | | | | | | XOHX1504-32,8-62... | H62 32800. .. | |
| XOHX1504-32,9.... | H60 32900. .. | | | | | | | XOHX1504-32,9-62... | H62 32900. .. | |
| **XOHX1504-33,0....** | **H60 33000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-33,0-62...** | **H62 33000. ..** | **7710** |
| XOHX1504-33,1.... | H60 33100. .. | | | | | | | XOHX1504-33,1-62... | H62 33100. .. | |
| XOHX1504-33,2.... | H60 33200. .. | | | | | | | XOHX1504-33,2-62... | H62 33200. .. | |
| Mild steel/tool steel P | | ● | ◐ | ● | ● | ● | ● | Order example: P | | |
| Stainless and acid-resistant steel M | | | | | | | | Article M | | |
| Grey cast iron, spheroidal cast iron K | | | ● | ◐ | ◐ | | | XOHX12T3-29,5 K | | |
| Non-ferrous metals N | | | ◐ | ◐ | ◐ | | | Carbide grade N | | ● |
| Heat-resistant steels S | | | | | | | | BK8440 S | | |
| Hardened tool steel H | | | | | | | | Order No. H | | |
| | | | | | | | | H60 29500.8440 | | |

# KOMET® H60 / H62

## Inserts Ø 33,3 - 37,2 mm

XOHX



**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.

EP 1 296 793 and other patents (KUB Duon)

| Carbide grades | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article<br>ISO Description<br>enter carbide<br>▾Ø | Order No. | PVD coated<br>BK8440<br>8440 | <br>BK2715<br>2715 | <br>BK84<br>84 | <br>BK8125<br>8125 | <br>BK2740<br>2740 | <br>BK8140<br>8140 | Article<br>ISO Description<br>enter carbide<br>▾Ø | Order No. | PVD coated<br>BK7710<br>7710 |
| XOHX1504-33,3.... | H60 33300. .. | | | | | | | XOHX1504-33,3-62... | H62 33300. .. | |
| XOHX1504-33,4.... | H60 33400. .. | | | | | | | XOHX1504-33,4-62... | H62 33400. .. | |
| **XOHX1504-33,5....** | **H60 33500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX1504-33,5-62... | H62 33500. .. | **7710** |
| XOHX1504-33,6.... | H60 33600. .. | | | | | | | XOHX1504-33,6-62... | H62 33600. .. | |
| XOHX1504-33,7.... | H60 33700. .. | | | | | | | XOHX1504-33,7-62... | H62 33700. .. | |
| XOHX1504-33,8.... | H60 33800. .. | | | | | | | XOHX1504-33,8-62... | H62 33800. .. | |
| XOHX1504-33,9.... | H60 33900. .. | | | | | | | XOHX1504-33,9-62... | H62 33900. .. | |
| **XOHX1504-34,0....** | **H60 34000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-34,0-62...** | **H62 34000. ..** | **7710** |
| XOHX1504-34,1.... | H60 34100. .. | | | | | | | XOHX1504-34,1-62... | H62 34100. .. | |
| XOHX1504-34,2.... | H60 34200. .. | | | | | | | XOHX1504-34,2-62... | H62 34200. .. | |
| XOHX1504-34,3.... | H60 34300. .. | | | | | | | XOHX1504-34,3-62... | H62 34300. .. | |
| XOHX1504-34,4.... | H60 34400. .. | | | | | | | XOHX1504-34,4-62... | H62 34400. .. | |
| **XOHX1504-34,5....** | **H60 34500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-34,5-62...** | **H62 34500. ..** | **7710** |
| XOHX1504-34,6.... | H60 34600. .. | | | | | | | XOHX1504-34,6-62... | H62 34600. .. | |
| XOHX1504-34,7.... | H60 34700. .. | | | | | | | XOHX1504-34,7-62... | H62 34700. .. | |
| XOHX1504-34,8... | H62 34800. .. | | | | | | | XOHX1504-34,8-62... | H62 34800. .. | |
| XOHX1504-34,9.... | H60 34900. .. | | | | | | | XOHX1504-34,9-62... | H62 34900. .. | |
| **XOHX1504-35,0....** | **H60 35000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX1504-35,0-62... | H62 35000. .. | **7710** |
| XOHX1504-35,1.... | H60 35100. .. | | | | | | | XOHX1504-35,1-62... | H62 35100. .. | |
| XOHX1504-35,2.... | H60 35200. .. | | | | | | | XOHX1504-35,2-62... | H62 35200. .. | |
| XOHX1504-35,3.... | H60 35300. .. | | | | | | | XOHX1504-35,3-62... | H62 35300. .. | |
| XOHX1504-35,4.... | H60 35400. .. | | | | | | | XOHX1504-35,4-62... | H62 35400. .. | |
| **XOHX1504-35,5....** | **H60 35500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-35,5-62...** | **H62 35500. ..** | **7710** |
| XOHX1504-35,6.... | H60 35600. .. | | | | | | | XOHX1504-35,6-62... | H62 35600. .. | |
| XOHX1504-35,7.... | H60 35700. .. | | | | | | | XOHX1504-35,7-62... | H62 35700. .. | |
| XOHX1504-35,8.... | H60 35800. .. | | | | | | | XOHX1504-35,8-62... | H62 35800. .. | |
| XOHX1504-35,9.... | H60 35900. .. | | | | | | | XOHX1504-35,9-62... | H62 35900. .. | |
| **XOHX1504-36,0....** | **H60 36000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX1504-36,0-62...** | **H62 36000. ..** | **7710** |
| XOHX1504-36,1.... | H60 36100. .. | | | | | | | XOHX1504-36,1-62... | H62 36100. .. | |
| XOHX1504-36,2.... | H60 36200. .. | | | | | | | XOHX1504-36,2-62... | H62 36200. .. | |
| XOHX2205-36,3.... | H60 36300. .. | | | | | | | XOHX2205-36,3-62... | H62 36300. .. | |
| XOHX2205-36,4.... | H60 36400. .. | | | | | | | XOHX2205-36,4-62... | H62 36400. .. | |
| **XOHX2205-36,5....** | **H60 36500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-36,5-62... | H62 36500. .. | **7710** |
| XOHX2205-36,6.... | H60 36600. .. | | | | | | | XOHX2205-36,6-62... | H62 36600. .. | |
| XOHX2205-36,7.... | H60 36700. .. | | | | | | | XOHX2205-36,7-62... | H62 36700. .. | |
| XOHX2205-36,8.... | H60 36800. .. | | | | | | | XOHX2205-36,8-62... | H62 36800. .. | |
| XOHX2205-36,9.... | H60 36900. .. | | | | | | | XOHX2205-36,9-62... | H62 36900. .. | |
| **XOHX2205-37,0....** | **H60 37000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-37,0-62... | H62 37000. .. | **7710** |
| XOHX2205-37,1.... | H60 37100. .. | | | | | | | XOHX2205-37,1-62... | H62 37100. .. | |
| XOHX2205-37,2.... | H60 37200. .. | | | | | | | XOHX2205-37,2-62... | H62 37200. .. | |
| Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | ◐ | ● | ● | ● | ● | Order example:<br>Article<br>XOHX1504-33,5<br>Carbide grade<br>BK8440<br>Order No.<br>H60 33500.8440 | | ● |



**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.

EP 1 296 793 and other patents (KUB Duon)

| Carbide grades | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article<br>ISO Description<br>enter carbide<br>▾Ø | Order No. | PVD coated<br>BK8440<br>8440 | <br>BK2715<br>2715 | <br>BK84<br>84 | <br>BK8125<br>8125 | <br>BK2740<br>2740 | <br>BK8140<br>8140 | Article<br>ISO Description<br>enter carbide<br>▾Ø | Order No. | PVD coated<br>BK7710<br>7710 |
| XOHX2205-37,3.... | H60 37300. .. | | | | | | | XOHX2205-37,3-62... | H62 37300. .. | |
| XOHX2205-37,4.... | H60 37400. .. | | | | | | | XOHX2205-37,4-62... | H62 37400. .. | |
| **XOHX2205-37,5....** | **H60 37500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-37,5-62... | H62 37500. .. | **7710** |
| XOHX2205-37,6.... | H60 37600. .. | | | | | | | XOHX2205-37,6-62... | H62 37600. .. | |
| XOHX2205-37,7.... | H60 37700. .. | | | | | | | XOHX2205-37,7-62... | H62 37700. .. | |
| XOHX2205-37,8.... | H60 37800. .. | | | | | | | XOHX2205-37,8-62... | H62 37800. .. | |
| XOHX2205-37,9.... | H60 37900. .. | | | | | | | XOHX2205-37,9-62... | H62 37900. .. | |
| **XOHX2205-38,0....** | **H60 38000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-38,0-62... | H62 38000. .. | **7710** |
| XOHX2205-38,1.... | H60 38100. .. | | | | | | | XOHX2205-38,1-62... | H62 38100. .. | |
| XOHX2205-38,2.... | H60 38200. .. | | | | | | | XOHX2205-38,2-62... | H62 38200. .. | |
| XOHX2205-38,3.... | H62 38300. .. | | | | | | | XOHX2205-38,3-62... | H62 38300. .. | |
| XOHX2205-38,4.... | H60 38400. .. | | | | | | | XOHX2205-38,4-62... | H62 38400. .. | |
| **XOHX2205-38,5....** | **H60 38500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-38,5-62...** | **H62 38500. ..** | **7710** |
| XOHX2205-38,6.... | H60 38600. .. | | | | | | | XOHX2205-38,6-62... | H62 38600. .. | |
| XOHX2205-38,7.... | H60 38700. .. | | | | | | | XOHX2205-38,7-62... | H62 38700. .. | |
| XOHX2205-38,8.... | H60 38800. .. | | | | | | | XOHX2205-38,8-62... | H62 38800. .. | |
| XOHX2205-38,9.... | H60 38900. .. | | | | | | | XOHX2205-38,9-62... | H62 38900. .. | |
| **XOHX2205-39,0....** | **H60 39000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-39,0-62...** | **H62 39000. ..** | **7710** |
| XOHX2205-39,1.... | H60 39100. .. | | | | | | | XOHX2205-39,1-62... | H62 39100. .. | |
| XOHX2205-39,2.... | H60 39200. .. | | | | | | | XOHX2205-39,2-62... | H62 39200. .. | |
| XOHX2205-39,3.... | H60 39300. .. | | | | | | | XOHX2205-39,3-62... | H62 39300. .. | |
| XOHX2205-39,4.... | H60 39400. .. | | | | | | | XOHX2205-39,4-62... | H62 39400. .. | |
| **XOHX2205-39,5....** | **H60 39500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-39,5-62... | H62 39500. .. | **7710** |
| XOHX2205-39,6.... | H60 39600. .. | | | | | | | XOHX2205-39,6-62... | H62 39600. .. | |
| XOHX2205-39,7.... | H60 39700. .. | | | | | | | XOHX2205-39,7-62... | H62 39700. .. | |
| XOHX2205-39,8.... | H60 39800. .. | | | | | | | XOHX2205-39,8-62... | H62 39800. .. | |
| XOHX2205-39,9.... | H60 39900. .. | | | | | | | XOHX2205-39,9-62... | H62 39900. .. | |
| **XOHX2205-40,0....** | **H60 40000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-40,0-62...** | **H62 40000. ..** | **7710** |
| XOHX2205-40,1.... | H60 40100. .. | | | | | | | XOHX2205-40,1-62... | H62 40100. .. | |
| XOHX2205-40,2.... | H60 40200. .. | | | | | | | XOHX2205-40,2-62... | H62 40200. .. | |
| XOHX2205-40,3.... | H60 40300. .. | | | | | | | XOHX2205-40,3-62... | H62 40300. .. | |
| XOHX2205-40,4.... | H60 40400. .. | | | | | | | XOHX2205-40,4-62... | H62 40400. .. | |
| **XOHX2205-40,5....** | **H60 40500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-40,5-62... | H62 40500. .. | **7710** |
| XOHX2205-40,6.... | H60 40600. .. | | | | | | | XOHX2205-40,6-62... | H62 40600. .. | |
| XOHX2205-40,7.... | H60 40700. .. | | | | | | | XOHX2205-40,7-62... | H62 40700. .. | |
| XOHX2205-40,8.... | H60 40800. .. | | | | | | | XOHX2205-40,8-62... | H62 40800. .. | |
| XOHX2205-40,9.... | H60 40900. .. | | | | | | | XOHX2205-40,9-62... | H62 40900. .. | |
| **XOHX2205-41,0....** | **H60 41000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-41,0-62... | H62 41000. .. | **7710** |
| XOHX2205-41,1.... | H60 41100. .. | | | | | | | XOHX2205-41,1-62... | H62 41100. .. | |
| XOHX2205-41,2.... | H60 41200. .. | | | | | | | XOHX2205-41,2-62... | H62 41200. .. | |
| Mild steel/tool steel P | | ● | ◐ | ● | ● | ● | ● | Order example: P | | |
| Stainless and acid-resistant steel M | | | | | | | | Article M | | |
| Grey cast iron, spheroidal cast iron K | | | ● | ◐ | ◐ | | | XOHX2205-37,5 K | | |
| Non-ferrous metals N | | | ◐ | ◐ | ◐ | | | Carbide grade N | | ● |
| Heat-resistant steels S | | | | | | | | BK8440 S | | |
| Hardened tool steel H | | | | | | | | Order No. H | | |
| | | | | | | | | H60 37500.8440 | | |

# KOMET® H60 / H62

# XOHX

## Inserts Ø 41,3 - 44,2 mm

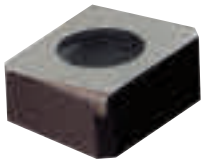


**Inserts shown in bold print are kept in stock.**
Intermediate dimensions can be supplied on request.

EP 1 296 793 and other patents (KUB Duon)

| Carbide grades | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Article<br>ISO Description | Order No. | PVD coated | | | | | | Article<br>ISO Description | Order No. | PVD coated | |
| enter carbide<br>▾Ø | | BK8440<br>8440 | BK2715<br>2715 | BK84<br>84 | BK8125<br>8125 | BK2740<br>2740 | BK8140<br>8140 | enter carbide<br>▾Ø | | BK7710<br>7710 | |
| XOHX2205-41,3.... | H60 41300. .. | | | | | | | XOHX2205-41,3-62... | H62 41300. .. | | |
| XOHX2205-41,4.... | H60 41400. .. | | | | | | | XOHX2205-41,4-62... | H62 41400. .. | | |
| **XOHX2205-41,5....** | **H60 41500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-41,5-62... | H62 41500. .. | **7710** | |
| XOHX2205-41,6.... | H60 41600. .. | | | | | | | XOHX2205-41,6-62... | H62 41600. .. | | |
| XOHX2205-41,7.... | H60 41700. .. | | | | | | | XOHX2205-41,7-62... | H62 41700. .. | | |
| XOHX2205-41,8.... | H62 41800. .. | | | | | | | XOHX2205-41,8-62... | H62 41800. .. | | |
| XOHX2205-41,9.... | H60 41900. .. | | | | | | | XOHX2205-41,9-62... | H62 41900. .. | | |
| **XOHX2205-42,0....** | **H60 42000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-42,0-62...** | **H62 42000. ..** | **7710** | |
| XOHX2205-42,1.... | H60 42100. .. | | | | | | | XOHX2205-42,1-62... | H62 42100. .. | | |
| XOHX2205-42,2.... | H60 42200. .. | | | | | | | XOHX2205-42,2-62... | H62 42200. .. | | |
| XOHX2205-42,3.... | H60 42300. .. | | | | | | | XOHX2205-42,3-62... | H62 42300. .. | | |
| XOHX2205-42,4.... | H60 42400. .. | | | | | | | XOHX2205-42,4-62... | H62 42400. .. | | |
| **XOHX2205-42,5....** | **H60 42500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-42,5-62...** | **H62 42500. ..** | **7710** | |
| XOHX2205-42,6.... | H60 42600. .. | | | | | | | XOHX2205-42,6-62... | H62 42600. .. | | |
| XOHX2205-42,7.... | H60 42700. .. | | | | | | | XOHX2205-42,7-62... | H62 42700. .. | | |
| XOHX2205-42,8.... | H60 42800. .. | | | | | | | XOHX2205-42,8-62... | H62 42800. .. | | |
| XOHX2205-42,9.... | H60 42900. .. | | | | | | | XOHX2205-42,9-62... | H62 42900. .. | | |
| **XOHX2205-43,0....** | **H60 43000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-43,0-62... | H62 43000. .. | **7710** | |
| XOHX2205-43,1.... | H60 43100. .. | | | | | | | XOHX2205-43,1-62... | H62 43100. .. | | |
| XOHX2205-43,2.... | H60 43200. .. | | | | | | | XOHX2205-43,2-62... | H62 43200. .. | | |
| XOHX2205-43,3.... | H60 43300. .. | | | | | | | XOHX2205-43,3-62... | H62 43300. .. | | |
| XOHX2205-43,4.... | H60 43400. .. | | | | | | | XOHX2205-43,4-62... | H62 43400. .. | | |
| **XOHX2205-43,5....** | **H60 43500. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | XOHX2205-43,5-62... | H62 43500. .. | **7710** | |
| XOHX2205-43,6.... | H60 43600. .. | | | | | | | XOHX2205-43,6-62... | H62 43600. .. | | |
| XOHX2205-43,7.... | H60 43700. .. | | | | | | | XOHX2205-43,7-62... | H62 43700. .. | | |
| XOHX2205-43,8.... | H60 43800. .. | | | | | | | XOHX2205-43,8-62... | H62 43800. .. | | |
| XOHX2205-43,9.... | H60 43900. .. | | | | | | | XOHX2205-43,9-62... | H62 43900. .. | | |
| **XOHX2205-44,0....** | **H60 44000. ..** | **8440** | **2715** | **84** | **8125** | **2740** | **8140** | **XOHX2205-44,0-62...** | **H62 44000. ..** | **7710** | |
| XOHX2205-44,1.... | H60 44100. .. | | | | | | | XOHX2205-44,1-62... | H62 44100. .. | | |
| XOHX2205-44,2.... | H60 44200. .. | | | | | | | XOHX2205-44,2-62... | H62 44200. .. | | |
| Mild steel/tool steel P | | ● | ◐ | ● | ● | ● | ● | Order example: P | | | |
| Stainless and acid-resistant steel M | | | | | | | | Article M | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | ◐ | ◐ | | | XOHX2205-41,5 K | | | |
| Non-ferrous metals N | | | ◐ | ◐ | ◐ | | | Carbide grade N | | | ● |
| Heat-resistant steels S | | | | | | | | BK8440 S | | | |
| Hardened tool steel H | | | | | | | | Order No. H | | | |
| | | | | | | | | H60 41500.8440 | | | |

## Inserts Ø 32 - 61,99 mm



**Inserts are kept in stock.**

Patented design (PreciKom WSP-Verstellung)

| Carbide grades | | | | |
|---|---|---|---|---|
| Ø D | Article<br>ISO Description | Order No. | CVD<br>coated<br>  <br>BK6110 | PVD<br>coated<br>  <br>BK2710 |
| 32 – 34,99 | LNGU0904 | **H80 32000.01....** | **6110** | **2710** |
| 35 – 37,49 | LNGU0904 | **H80 35000.01....** | | |
| 37,5 – 39,99 | LNGU0904 | **H80 37500.01....** | | |
| 40 – 41,99 | LNGU0904 | **H80 40000.01....** | | |
| 42 – 43,99 | LNHX120510-01 | **H80 42000.01....** | **6110** | **2710** |
| 44 – 45,99 | LNHX120510-01 | **H80 44000.01....** | | |
| 46 – 47,99 | LNHX120510-01 | **H80 46000.01....** | | |
| 48 – 49,99 | LNHX120510-01 | **H80 48000.01....** | | |
| 50 – 51,99 | LNHX120510-01 | **H80 50000.01....** | | |
| 52 – 53,99 | LNHX120510-01 | **H80 52000.01....** | | |
| 54 – 55,99 | LNHX120510-01 | **H80 54000.01....** | | |
| 56 – 57,99 | LNHX120510-01 | **H80 56000.01....** | | |
| 58 – 59,99 | LNHX120510-01 | **H80 58000.01....** | | |
| 60 – 61,99 | LNHX120510-01 | **H80 60000.01....** | | |
| Order example:<br>for Ø D<br>32,00 mm<br>Carbide grade<br>BK6110<br>Order No.<br>H80 32000.016110 | Mild steel/tool steel P<br>Stainless and acid-resistant steel M<br>Grey cast iron, spheroidal cast iron K<br>Non-ferrous metals N<br>Heat-resistant steels S<br>Hardened tool steel H | | ● | ● |

# Inserts

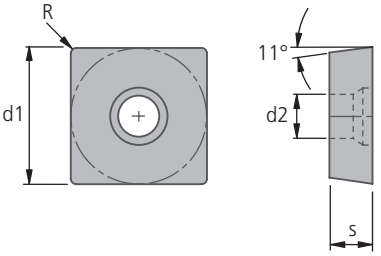


## Application range:

T slot cutter

Precision inserts ground on all sides with rounded cutting edges. Suitable for machining steel and cast iron materials in conjunction with positive axial position.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades | | d1 | d2 | s | R |
|---|---|---|---|---|---|---|---|
| | | uncoated | uncoated | | | | |
| | |  P25M |  K20 | | | | |
| | enter carbide code ▼ | 03 | 22 | | | | |
| SPGW 050204 | Q09 13000.01.. | ▲ | ▲ | 5,57 | 2,8 | 2,38 | 0,4 |
| Mild steel/tool steel P | | ● | | Order example: Article SPGW 050204 Carbide grade P25M Order No. Q09 13000.0103 | | | |
| Stainless and acid-resistant steel M | | ● | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | | | |
| Non-ferrous metals N | | | ● | | | | |
| Heat-resistant steels S | | | | | | | |
| Hardened tool steel H | | | | | | | |



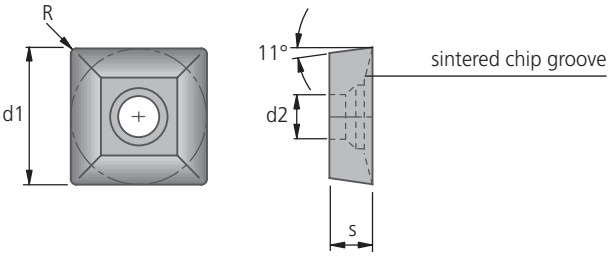
▲ Availability: for delivery see current price and stock list



## Application range:

**Chamfering**
Inserts with sintered positive chip groove and rounded cutting edge. Because of its positive chip geometry, this insert produces a good cutting result even under difficult and critical cutting conditions.

## Cutter geometry:

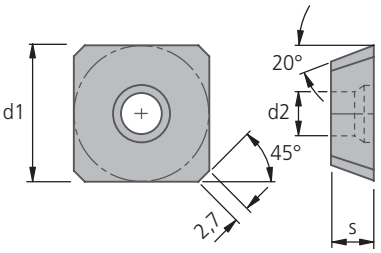



| Article<br>ISO Description | Order No.<br>enter carbide code ▼ | Carbide grades<br>uncoated<br>K20<br>22 | PVD coated<br>BK2725<br>2725 | PVD coated<br>BK87<br>87 | d1 | d2 | s | R |
|---|---|---|---|---|---|---|---|---|
| SPMT 060304 | Q09 18000.17.. | ▲ | ▲ | ▲ | 6,35 | 2,8 | 3,18 | 0,4 |
| Mild steel/tool steel P | | | ● | ● | Order example:<br>Article<br>SPMT 060304<br>Carbide grade<br>BK2725<br>Order No.<br>Q09 18000.172725 | | | |
| Stainless and acid-resistant steel M | | | ● | ◐ | | | | |
| Grey cast iron, spheroidal cast iron K | | ● | | | | | | |
| Non-ferrous metals N | | ● | | | | | | |
| Heat-resistant steels S | | | | | | | | |
| Hardened tool steel H | | | | | | | | |

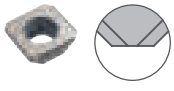
## Application range:

**Face milling cutter**
Insert precision ground on all sides.

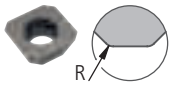
## Cutter geometry:



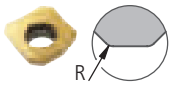

| Article ISO Description | Order No. | Carbide grades | | | | | HSS | SiN | Cermet | d1 | d2 | s | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | uncoated | | | coated CVD | coated PVD | coated | Silicon nitride | uncoated | | | | |
| | enter carbide code ▼ | P25M 03 | P40 04 | K20 22 | BK64 64 | BK8425 8425 | BK89 89 | SK44 44 | CK37 37 | | | | |
| SEHW 1204 AFTN | Q09 44000.13.. | ▲ | | ▲ | | ▲ | | | | 12,7 | 5,5 | 4,76 | – |
| SEHW 1204 AFFN-V | Q09 44000.02.. | | | ▲ | | | | | ▲ | | | | 1,0 |
| SEHW 1204 AFFN-V | Q09 44000.14.. | | | | | | ▲ | | | | | | 1,0 |
| SEHW 1204 AFTN-V | Q09 44000.15.. | ▲ | | | | ▲ | | | ▲ | | | | 1,0 |
| SEHW 1204 AFTN-20V | Q09 44000.03.. | | | | | | | ▲ | | | | | 1,0 |
| SEHT 1204 AFEN | Q09 44000.23.. | | | | ▲ | | | | | | | | 1,0 |
| Mild steel/tool steel P | | ● | ● | | ● | ● | | | ● | Order example: | | | |
| Stainless and acid-resistant steel M | | ○ | ○ | | ◐ | ◐ | ○ | | ○ | Article | | | |
| Grey cast iron, spheroidal cast iron K | | | | ● | | ◐ | | ● | ◐ | SEHW 1204 AFTN | | | |
| Non-ferrous metals N | | | | ● | | | ● | | | Carbide grade | | | |
| Heat-resistant steels S | | | | | | | | | | P25M | | | |
| Hardened tool steel H | | | | | | | | | | Order No. | | | |
| | | | | | | | | | | Q09 44000.1303 | | | |



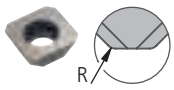
**Q09 44000.13.. : Without chamfering (blending radius) from main to secondary cutting edge, main edge chamfered.**
Main cutting edge stabilised by chamfering. Particularly suitable for heavy duty cutting through rolling mill or forge skin, at medium cutting speeds. Used particularly for steel and cast iron materials with medium to high tensile strength.



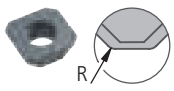
**Q09 44000.02.. : With chamfering (blending radius) from main to secondary cutting edge, sharp edged.**
The insert provides a specially shaped, positive cutter geometry for machining CrNi and unusual materials. Materials which tend to produce a build-up on the cutting edge can also be successfully machined with this geometry. Used in the lower cutting speed ranges with medium chip cross sections.



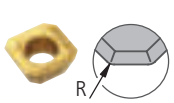
**Q09 44000.14.. : With chamfering (blending radius) from main to secondary cutting edge, sharp edged.**
The cutting edge geometry is designed for medium to high cutting speeds with medium to small chip cross section. Because of the blending radius, a finished surface is produced in conjunction with the facing chamfer.
**Not suitable for heavily interrupted cut.**



**Q09 44000.15.. : With chamfering (blending radius) from main to secondary cutting edge, main edge chamfered.**
For roughing and finishing at medium to high cutting speeds and feed rates. Main cutting edge stabilised by chamfer. The rounded transition to the sharp secondary cutting edge produces a high quality surface finish. The wide application range is particular suitable for steel and cast iron materials.



**Q09 44000.03.. : With chamfering (blending radius) from main to secondary cutting edge, main and secondary edge chamfered.** A chamfer around the cutting edge prevents fracturing and produces good tool life, even for heavily interrupted cutting. When machining cast material with silicon nitride at high cutting speed, this chamfer produces a high degree of stability on the cutting edge.





Q09 44000.23..



▲ Availability: for delivery see current price and stock list

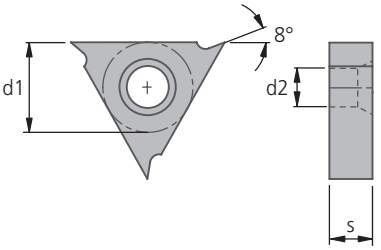


## Application range:

**Slot milling cutter**
**Slot milling cutter adaptor**

Positive chip angle produces soft cut. The cutting edge is designed for machining steel or cast iron/aluminium.

## Cutter geometry:




| Article ISO Description | Order No. enter carbide code ▼ | Carbide grades uncoated P25M 03 | Carbide grades uncoated K20 22 | Carbide grades PVD coated BK8425 8425 | d1 | d2 | s | for milling width |
|---|---|---|---|---|---|---|---|---|
| TCAA 1102ZZ R | Q12 18000.01.. | ▲ | ▲ | ▲ | 6,35 | 2,8 | 2,6 | 4 - 5 |
| TCAA 1102ZZ L | Q12 18000.02.. | ▲ | ▲ | ▲ | | | | |
| TCAA 1103ZZ R | Q12 18000.03.. | ▲ | ▲ | ▲ | 6,35 | 2,8 | 3,2 | 6 |
| TCAA 1103ZZ L | Q12 18000.04.. | ▲ | ▲ | ▲ | | | | |
| TNAA 16T3ZZ R | Q12 32000.05.. | ▲ | ▲ | ▲ | 9,52 | 4,4 | 3,97 | 7 |
| TNAA 16T3ZZ L | Q12 32000.06.. | ▲ | ▲ | ▲ | | | | |
| TNAA 1604ZZ N | Q12 32000.07.. | ▲ | ▲ | ▲ | 9,52 | 3,4 | 4,76 | 8 - 9 |
| TNAA 1604ZZ R | Q12 32000.52.. | | ▲ | ▲ | 9,52 | 4,4 | 4,76 | 8 - 9 |
| TNAA 1604ZZ L | Q12 32000.53.. | | ▲ | ▲ | | | | |
| TNAA 1606ZZ R | Q12 32000.08.. | ▲ | ▲ | ▲ | 9,52 | 4,4 | 6,4 | 10 - 12 |
| TNAA 1606ZZ L | Q12 32000.09.. | ▲ | ▲ | ▲ | | | | |
| Mild steel/tool steel P | | ● | | ● | Order example: Article TCAA 1102ZZ R Carbide grade P25M Order No. Q12 18000.0103 | | | |
| Stainless and acid-resistant steel M | | ● | | ◐ | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | ◐ | | | | |
| Non-ferrous metals N | | | ● | | | | | |
| Heat-resistant steels S | | | | | | | | |
| Hardened tool steel H | | | | | | | | |

## Inserts



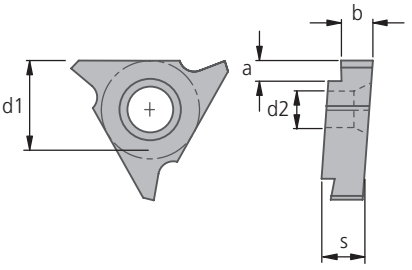
## Application range:

### Circular milling

Internal and external circular milling of longitudinal or annular slots for circlips/safety rings.
The cutting edge geometry produces a good machining result for steel, cast iron and aluminium when used with the appropriate carbide grades.

**Design:**
Dimension b is aligned with the slot width to H13 tolerance for circlips to DIN 471 and DIN 472. This relates to the upper tolerance limit for the slot widths which can be still be produced to the correct dimension after wear.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades uncoated P25M | Carbide grades uncoated K20 | d1 | d2 | s | $b^{H13}$ | a max |
|---|---|---|---|---|---|---|---|---|
| | enter carbide code ▼ | 03 | 22 | | | | | |
| TCAX 1103ZZ R-160 | Q12 18000.11.. | ▲ | ▲ | 6,35 | 2,8 | 3,2 | 1,60 | 1,4 |
| TCAX 1103ZZ R-185 | Q12 18000.12.. | ▲ | ▲ | | | | 1,85 | 1,7 |
| TCAX 1103ZZ R-215 | Q12 18000.13.. | ▲ | ▲ | | | | 2,15 | 2,0 |
| TCAX 1103ZZ R-265 | Q12 18000.14.. | ▲ | | | | | 2,65 | 2,2 |
| TNAX 1604ZZ R-265 | Q12 32000.18.. | ▲ | | 9,52 | 3,4 | 4,76 | 2,65 | 2,2 |
| TNAX 1604ZZ R-315 | Q12 32000.19.. | ▲ | | | | | 3,15 | 2,2 |
| TNAX 1604ZZ R-415 | Q12 32000.20.. | ▲ | | | | | 4,15 | 3,2 |
| TNAX 2206ZZ R-415 | Q12 44000.21.. | ▲ | ▲ | 12,7 | 5,5 | 6,4 | 4,15 | 4,0 |
| TNAX 2206ZZ R-465 | Q12 44000.22.. | ▲ | | | | | 4,65 | 4,5 |
| TNAX 2206ZZ R-515 | Q12 44000.23.. | ▲ | ▲ | | | | 5,15 | 4,5 |
| TNAX 2206ZZ R-620 | Q12 44000.25.. | ▲ | | | | | 6,20 | 6,0 |

Mild steel/tool steel P
Stainless and acid-resistant steel M
Grey cast iron, spheroidal cast iron K
Non-ferrous metals N
Heat-resistant steels S
Hardened tool steel H

Order example:
Article
TCAX 1103ZZ R-160
Carbide grade
P25M
Order No.
Q12 18000.1103



▲ Availability: for delivery see current price and stock list



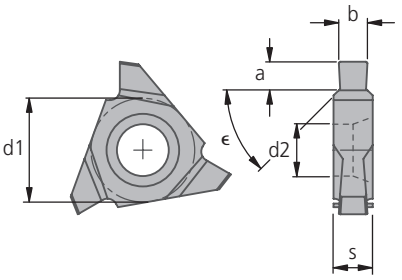
## Application range:

### Circular milling

Internal and external circular milling of longitudinal or annular slots for circlips/safety rings.
The cutting edge geometry produces a good machining result for steel, cast iron and aluminium when used with the appropriate carbide grades.

**Design:**
Dimension b is aligned with the slot width to H13 tolerance for circlips to DIN 471 and DIN 472. This relates to the upper tolerance limit for the slot widths which can be still be produced to the correct dimension after wear.

## Cutter geometry:




Dimensions "a" and "b" apply for the resulting workpiece contour.

| Article ISO Description | Order No. enter carbide code ▼ | Carbide grades uncoated P25M 03 | uncoated K20 22 | coated BK8425 8425 | d1 | d2 | s | $b^{H13}$ | a | chamfer ϵ |
|---|---|---|---|---|---|---|---|---|---|---|
| TPAX 1103ZZ R-110F | Q12 18000.10.. | ▲ | ▲ | ▲ | 6,35 | 2,9 | 3,2 | 1,1 | 0,9 | – |
| TNAX 1103ZZ R-160F | Q12 18000.31.. | ▲ | ▲ | ▲ | 6,35 | 2,9 | 3,2 | 1,6 | 1,0 | 45° |
| TNAX 1103ZZ R-185F | Q12 18000.32.. | ▲ | ▲ | ▲ | | | | 1,85 | 1,25 | |
| TNAX 1103ZZ R-215F | Q12 18000.33.. | ▲ | ▲ | ▲ | | | | 2,15 | 1,5 | |
| TNAX 1103ZZ R-265F | Q12 18000.34.. | ▲ | ▲ | ▲ | | | | 2,65 | 1,75 | |
| TCAX 16T3ZZ R-110F | Q12 32000.15.. | ▲ | ▲ | ▲ | 9,52 | 4,4 | 3,96 | 1,1 | 0,9 | – |
| TCAX 16T3ZZ R-130F | Q12 32000.16.. | ▲ | ▲ | ▲ | | | | 1,3 | 1,3 | |
| TCAX 16T3ZZ R-160F | Q12 32000.17.. | ▲ | ▲ | ▲ | | | | 1,6 | 1,4 | |
| TNAX 1604ZZ R-265F | Q12 32000.41.. | | ▲ | ▲ | 9,52 | 4,4 | 4,76 | 2,65 | 1,75 | 45° |
| TNAX 1604ZZ R-315F | Q12 32000.42.. | ▲ | ▲ | ▲ | | | | 3,15 | 1,75 | |
| TNAX 1604ZZ R-415F | Q12 32000.43.. | ▲ | ▲ | ▲ | | | | 4,15 | 2,5 | |
| TNAX 2206ZZ R-415F | Q12 44000.84.. | | ▲ | ▲ | 12,7 | 5,5 | 6,4 | 4,15 | 2,5 | 45° |
| TNAX 2206ZZ R-465F | Q12 44000.85.. | | | ▲ | | | | 4,65 | 3,4 | |
| TNAX 2206ZZ R-515F | Q12 44000.86.. | | | ▲ | | | | 5,15 | 4,0 | |
| TNAX 2206ZZ R-515F | Q12 44000.87.. | | | ▲ | | | | 5,15 | 4,0 | |

| | | | |
|---|---|---|---|
| Mild steel/tool steel | P | ● | ● |
| Stainless and acid-resistant steel | M | ● | ◑ |
| Grey cast iron, spheroidal cast iron | K | ● | ◑ |
| Non-ferrous metals | N | ● | |
| Heat-resistant steels | S | | |
| Hardened tool steel | H | | |

Order example:
Article
TPAX 1103ZZ R-110F
Carbide grade
P25M
Order No.
Q12 18000.1003

## Inserts



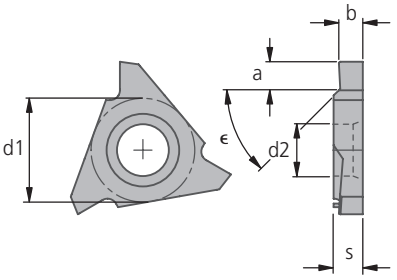
## Application range:

### Circular milling

Internal and external circular milling of longitudinal or annular slots for circlips/safety rings.
The cutting edge geometry produces a good machining result for steel, cast iron and aluminium when used with the appropriate carbide grades.

**Design:**
Dimension b is aligned with the slot width to H13 tolerance for circlips to DIN 471 and DIN 472. This relates to the upper tolerance limit for the slot widths which can be still be produced to the correct dimension after wear.

## Cutter geometry:

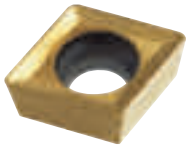



Dimensions "a" and "b" apply for the resulting workpiece contour.

| Article ISO Description | Order No. | Carbide grades uncoated P25M 03 | uncoated K20 22 | coated BK8425 8425 | d1 | d2 | s | $b^{H13}$ | a | chamfer ϵ |
|---|---|---|---|---|---|---|---|---|---|---|
| | enter carbide code ▼ | | | | | | | | | |
| TNAX 1103ZZ R-265F | **Q12 18000.36..** | ▲ | ▲ | ▲ | 6,35 | 2,9 | 3,2 | 2,65 | 1,75 | 45° |
| TNAX 1604ZZ R-415F | **Q12 32000.38..** | | ▲ | ▲ | 9,52 | 4,4 | 4,76 | 4,15 | 2,5 | 45° |
| Mild steel/tool steel P | | ● | | ● | Order example: | | | | | |
| Stainless and acid-resistant steel M | | ● | | ◑ | Article | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | ◐ | TNAX 1103ZZ R-265F | | | | | |
| Non-ferrous metals N | | | ● | | Carbide grade | | | | | |
| Heat-resistant steels S | | | | | P25M | | | | | |
| Hardened tool steel H | | | | | Order No. | | | | | |
| | | | | | Q12 18000.3603 | | | | | |



▲ Availability: for delivery see current price and stock list



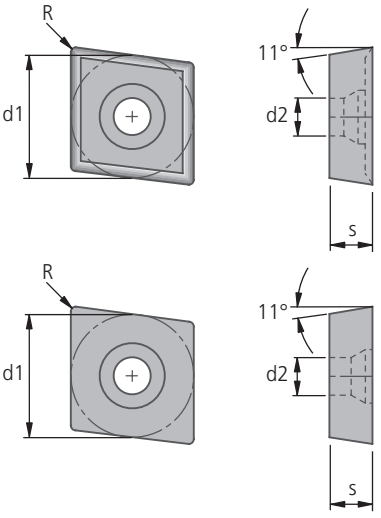
## Application range:

T slot cutter

**CPMT:**
Inserts with sintered peripheral positive chip guide and chamfered cutting edge. Particularly suitable for T slot cutting for steel materials.

**CPMW:**
Insert with chamfered cutting edge.
Because of its cutting geometry, particularly suitable for machining cast iron materials.

## Cutter geometry:




| Article<br>ISO Description | Order No.<br>enter carbide code ▼ | Carbide grades<br>uncoated<br>P25M<br>03 | P40<br>04 | K20<br>22 | coated<br>BK61<br>61 | BK8425<br>8425 | BK8440<br>8440 | d1 | d2 | s | R |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CPMT 060304 | Q15 18000.01.. | | ▲ | | | ▲ | ▲ | 6,35 | 2,8 | 3,18 | 0,4 |
| CPMW 060304 | Q15 18000.02.. | | | | ▲ | | | | | | |
| CPMW 09T308 | Q15 32000.03.. | | | ▲ | | | | 9,52 | 4,3 | 3,97 | 0,8 |
| CPMT 09T308 | Q15 32000.04.. | ▲ | | | | ▲ | ▲ | | | | |
| Mild steel/tool steel P | | ● | ● | | | ● | ● | Order example:<br>Article<br>CPMT 060304<br>Carbide grade<br>P40<br>Order No.<br>Q15 18000.0104 | | | |
| Stainless and acid-resistant steel M | | ◐ | ◐ | | | ◐ | ◐ | | | | |
| Grey cast iron, spheroidal cast iron K | | | | ● | ● | ◐ | | | | | |
| Non-ferrous metals N | | | | ● | | | | | | | |
| Heat-resistant steels S | | | | | | | | | | | |
| Hardened tool steel H | | | | | ◐ < 52 HRC | | | | | | |

## Inserts

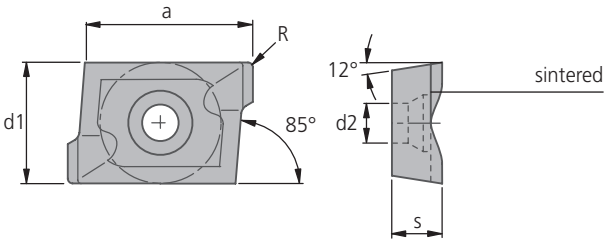


## Application range:

- Corner milling cutter
- Shell end face milling cutter
- End milling cutter
- Face milling cutter 75°

Highly positive cutter geometry with specially designed face cutter allows high feed rates and a good surface quality.
Soft cutting also possible even with unstable machining conditions. The special cutter geometry allows the insert to be used universally in the appropriate grades both for machining steel, cast iron and aluminium.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades: uncoated | | CVD coated | | PVD coated | | | d1 | d2 | s | a | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | enter carbide code ▼ | P25M 03 | K10 21 | BK6110 6110 | BK64 64 | BK78 78 | BK80 80 | BK8425 8425 | | | | | |
| APKT 1003PD-R | Q36 18000.01.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 6,7 | 2,8 | 3,5 | 9 | 0,35 |
| APKT 1203PD-R | Q36 24000.02.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 8,0 | 3,5 | 3,8 | 11 | 0,6 |
| APKT 1605PD-RM | Q36 38000.07.. | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 11,1 | 4,5 | 5,26 | 15 | 0,8 |
| Mild steel/tool steel P | | ● | ◐ | ◐ | ● | ● | ● | ● | | | | | |
| Stainless and acid-resistant steel M | | ○ | | | ◑ | ○ | ○ | ○ | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | ● | | | | ● | | | | | |
| Non-ferrous metals N | | | ● | | | | | | | | | | |
| Heat-resistant steels S | | | ● | | | | | | | | | | |
| Hardened tool steel H | | | | | | | | | | | | | |

Order example:
Article
APKT 1003PD-R
Carbide grade
P25M
Order No.
Q36 18000.0103



▲ Availability: for delivery see current price and stock list

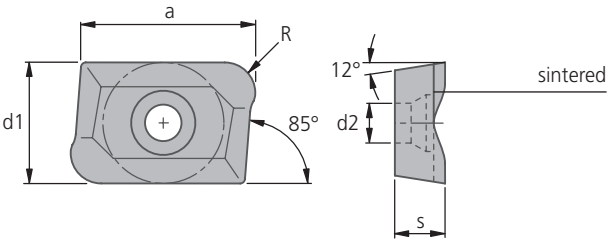


## Application range:

**Copy end milling cutter**

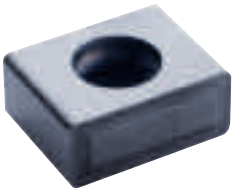
A special cutter geometry whose main feature is a positive peripheral top rake, produces a soft cut particularly in the radius range of the insert; this requires low cutting forces and produces good chip formation.
The insert can be used universally in various carbide grades both for steel and cast iron.

## Cutter geometry:




| Article ISO Description | Order No. | Carbide grades | | | | d1 | d2 | s | a | R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | uncoated | | CVD coated | PVD coated | | | | | |
| | enter carbide code ▼ | P25M 03 | K10 21 | BK64 64 | BK68 68 | | | | | |
| APKT 120316PD-R | Q36 24000.04.. | ▲ | ▲ | ▲ | ▲ | 8,0 | 3,5 | 3,8 | 11 | 1,6 |
| APKT 120324PD-R | Q36 24000.05.. | ▲ | ▲ | ▲ | ▲ | | | | | 2,4 |
| APKT 120332PD-R | Q36 24000.06.. | ▲ | ▲ | ▲ | ▲ | | | | | 3,2 |
| Mild steel/tool steel P | | ● | ◐ | ● | ● | Order example: Article APKT 120316PD-R Carbide grade P25M Order No. Q36 24000.0403 | | | | |
| Stainless and acid-resistant steel M | | ◐ | | ◐ | | | | | | |
| Grey cast iron, spheroidal cast iron K | | | ● | | ◐ | | | | | |
| Non-ferrous metals N | | | ● | | | | | | | |
| Heat-resistant steels S | | | | | | | | | | |
| Hardened tool steel H | | | | | | | | | | |

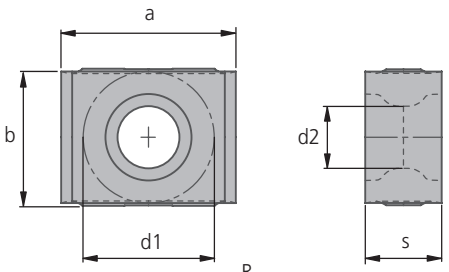
## Tangential Inserts



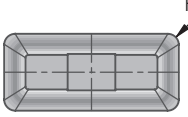
## Application range:

- Roughing
- Milling

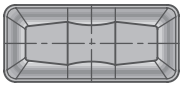
## Cutter geometry:




**Geometry 05:** Cast materials, some steel materials



**Geometry 17:** Steel materials, also stainless



**Geometry -G30:** Aluminium materials, version with 30° rake angle. Left, neutral and right cutting edge shape




| Article ISO Description | | Order No. | Carbide grades: uncoated | PVD coated | | CVD coated | d1 | d2 | a | b | s | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | enter carbide code ▼ | K10 23 | BK2715 2715 | BK2730 2730 | | BK6115 6115 | | | | | | |
| LNGU 120508 EN-05 |  | Q80 32000.01.. | | ▲ | ▲ | | ▲ | 9,52 | 4,5 | 12,7 | 9,69 | 5,56 | 0,8 |
| LNGU 120508 EN-17 |  | Q80 32000.02.. | | | | ▲ | | 9,52 | 4,5 | 12,7 | 9,69 | 5,56 | 0,8 |
| LNHU 120508 FL-G30 |  | Q80 32230.08.. | ▲ | | | | | 9,52 | 4,5 | 12,7 | 9,69 | 5,56 | 0,8 |
| LNHU 120508 FN-G30 |  | Q80 32530.08.. | ▲ | | | | | | | | | | |
| LNHU 120508 FR-G30 |  | Q80 32630.08.. | ▲ | | | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Mild steel/tool steel | P | ◐ | ● | ◐ | | Order example: |
| Stainless and acid-resistant steel | M | ◑ | ◑ | | | Article |
| Grey cast iron, spheroidal cast iron | K | ● | ● | ◐ | ● | LNGU 120508 EN-05 |
| Non-ferrous metals | N | ● | | | | Carbide grade |
| Heat-resistant steels | S | | | | | BK2715 |
| Hardened tool steel | H | | | | | Order No. |
| | | | | | | Q80 32000.012715 |



▲ Availability: for delivery see current price and stock list

| W | N | M | G | 0 8 | 0 4 | 0 8 | F | L | – | 0 1 |
|---|---|---|---|---|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | | ⑩ |

## ① Form

| Code | | |
|---|---|---|
| R | | |
| S | 90° | |
| L | 90° | |
| A | 85° | |
| T | 60° | |
| C | 80° / 100° | |
| E | 75° | |
| D | 55° | |
| V | 35° | |
| W | 80° | |

## ② Clearance angle

| Code | | |
|---|---|---|
| N | 0° | |
| B | 5° | |
| C | 7° | |
| O | 8° | |
| P | 11° | |
| E | 20° | |

## ③ Tolerance

| Code | *m* | *s* | *d* |
|---|---|---|---|
| A | ±0,005 | ±0,025 | ±0,025 |
| E | ±0,025 | ±0,025 | ±0,025 |
| G | ±0,025 | ±0,13 | ±0,025 |
| H | ±0,013 | ±0,025 | ±0,013 |
| K | ±0,013 | ±0,025 | ±0,05...±0,15 |
| M | ±0,08...±0,18[1)] | ±0,13 | ±0,05...±0,13[1)] |
| U | ±0,13...±0,38[1)] | ±0,13 | ±0,08...±0,25[1)] |

Tolerance in mm

| ∅ *d1* IC | at *m* Class M | at *m* Class U | at *d1* Class M | at *d1* Class U |
|---|---|---|---|---|
| 6,35 | ±0,08 | ±0,13 | d±0,05 | ±0,08 |
| 9,52 | ±0,08 | ±0,13 | d±0,05 | ±0,08 |
| 12,70 | ±0,13 | ±0,20 | ±0,08 | ±0,13 |
| 15,87 | ±0,15 | ±0,27 | ±0,10 | ±0,18 |
| 19,05 | ±0,15 | ±0,27 | ±0,10 | ±0,18 |
| 25,40 | ±0,18 | ±0,38 | ±0,13 | ±0,25 |

## ④ Type

| Code | |
|---|---|
| A | no chipformer, with hole |
| M | chipformer on one side, with hole |
| G | chipformer both sides, with hole |
| R | chipformer on one side, no hole |
| B | no chipformer, with counter-sunk hole |
| T, H | chipformer on one side with countersunk hole |
| P | neg/pos. one or two sides, with hole |
| U | chipformer both sides, with countersunk hole |
| X | special design, drawing required |

## ⑤ Cutting edge length *l*

Code

| *d1* | at code | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *mm* | A | C | D | L | R | S | T | V | W |
| 3,97 | | | | | | | 06 | | 02 |
| 4,80 | | 04 | | | | | | | 03 |
| 5,56 | | 05 | | | | 05 | 09 | | |
| 6,35 | 10 | 06 | 07 | | | 06 | 11 | 11 | 04 |
| 7,94 | | 08 | | | | 07 | 13 | 13 | |
| 8,00 | 12 | | | | 08 | 08 | 14 | | 05 |
| 9,52 | | 09 | 11 | 12 | | 09 | 16 | 16 | |
| 10,00 | | | | | 10 | | | | 06 |
| 10,90 | 16 | | | | | | | | |
| 12,00 | | | | | 12 | | | | 08 |
| 12,70 | | 12 | 15 | | | 12 | 22 | 22 | |
| 15,00 | | | | | | | | | 10 |
| 15,88 | | | | | | 15 | 27 | | |
| 16,00 | | | | | 16 | | | | |
| 17,60 | | | | | | | | | 12 |
| 19,05 | | 19 | | | | 19 | 33 | | 13 |
| 20,00 | | | | | 20 | | | | |
| 25,00 | | | | | 25 | | | | |
| 25,40 | | | | | | 25 | | | |

## ⑥ Thickness *s*

| Code | |
|---|---|
| T0 | 1,20 mm |
| 01 | 1,59 mm |
| T1 | 1,80 mm |
| 02 | 2,38 mm |
| T2 | 2,97 mm |
| 03 | 3,18 mm |
| T3 | 3,97 mm |
| 04 | 4,76 mm |
| 05 | 5,30 mm |
| 06 | 6,35 mm |
| 07 | 7,94 mm |

## ⑦ Corner radius *R*

| Code | |
|---|---|
| 00 | 0,0 mm |
| 01 | 0,1 mm |
| 02 | 0,2 mm |
| 03 | 0,3 mm |
| 04 | 0,4 mm |
| 05 | 0,5 mm |
| 06 | 0,6 mm |
| 08 | 0,8 mm |
| 12 | 1,2 mm |
| 16 | 1,6 mm |
| 20 | 2,0 mm |
| 24 | 2,4 mm |
| ZZ | Face cutting edge |

## ⑧ Cutting edge design

| Code | |
|---|---|
| F | sharp |
| E | rounded |
| T | chamfered (negative) |
| S | chamfered + rounded |

## ⑨ Cutting direction of insert

| Code | |
|---|---|
| R | R.H. |
| L | L.H. |
| N | R.H. and L.H. |

## ⑩ Chipfomer

| Code | |
|---|---|
| -01 | medium |
| -05 | Cast iron |
| -11 | Aluminium |
| -13 | |
| -14 | finishing |
| -15 | semi-finishing |
| -21 | |
| -32 | |
| -33 | |

# Numerical Coding for Inserts C.. / W..

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | 8 | 5 | 1 | 8 | 0 | 1 | 0 | . | 0 | 4 | 7 | 5 | 2 | 5 |
| W | 6 | 0 | 3 | 2 | 0 | 6 | 0 | . | 0 | 8 | 6 | 0 | | |
| W | 2 | 9 | 2 | 4 | 0 | 1 | 0 | . | 0 | 4 | 8 | 4 | 2 | 5 |
| ① | ② | | ③ | | ④ | | ⑤ | | ⑥ | | ⑦ | | | |

## ① Main group for standard inserts

Code

## ② Secondary group number insert geometry

| | Code | Form | Version | peripheral | Chip groove | Clearance angle,other |
|---|---|---|---|---|---|---|
| | 00 | Unisix® | standard | ground | ground | |
| | 01 | Unisix® | strengthened | ground | ground | |
| | 04 | Unisix® | 6 edged | ground | ground | 0° |
| | 05 | Unisix® | 6 edged | ground | ground | 0°, wide flute |
| 84° | 24 | Unisix® 95° | strengthened | sintered | sintered | |
| | 25 | Unisix® | standard | sintered | sintered | |
| | 27 | Unisix® 95° | strengthened | ground | sintered | |
| | 28 | Unisix® | standard | ground | sintered | |
| | 29 | Unisix® | strengthened | | sintered | |
| | 30 | triangular | | ground | ground | 8° |
| | 32 | triangular | | ground | ground | 11° |
| | 34 | triangular | strengthened | ground | ground | |
| 60° | 36 | triangular | 6 edged | ground | ground | 0° |
| | 37 | triangular | | ground | ground | 20° |
| | 57 | triangular | | ground | sintered | 11° |
| | 58 | triangular | | ground | sintered | IC tolerance ±0,025 |
| | 59 | triangular | strengthened | ground | sintered | |
| 55° | 60 | rhomboid | | ground | ground | |
| 35° | 78 | rhomboid | | ground | sintered | |
| 55° | 79 | rhomboid | | ground | sintered | |
| | 80 | square | | sintered | sintered | |
| 90° | 82 | square | | ground | sintered | |
| | 83 | square | | sintered | sintered | |

## ③ Inscribed circle *d1*

| Code | |
|---|---|
| 03 | 3,97 mm |
| 04 | 4,0 mm |
| 10 | 4,8 / 5,0 mm |
| 12 | 5,5 mm |
| 13 | 5,56 mm |
| 14 | 5,6 mm |
| 17 | 6,0 mm |
| 18 | 6,2 / 6,35 mm |
| 20 | 7,0 / 7,1 mm |
| 22 | 7,7 mm |
| 23 | 7,94 mm |
| 24 | 8,0 mm |
| 26 | 8,2 mm |
| 28 | 8,9 mm |
| 32 | 9,52 / 9,8 mm |
| 34 | 10,0 mm |
| 38 | 10,9 / 11,1 mm |
| 42 | 12,0 mm |
| 44 | 12,7 mm |
| 46 | 13,2 mm |
| 50 | 15,0 mm |
| 53 | 15,88 mm |
| 58 | 17,6 mm |

## ⑤ Modification code

| 1 ... 9 | Code |
|---|---|

## ⑥ Geometry of cutting edge

| Code | |
|---|---|
| 01 | R 0,1 mm |
| 02 | R 0,2 mm |
| 03 | R 0,3 mm |
| 04 | R 0,4 mm |
| 05 | R 0,5 mm |
| 06 | R 0,6 mm |
| 08 | R 0,8 mm |
| 12 | R 1,2 mm |
| 30 | U8.00 R 0 |
| 31 | UF |
| 32 | US |
| 33 | U8.77 15° clearance angle additional cutt. edge form for Unisix® mill. cutter inserts |
| 34 | F / KUF 90° |
| 35 | F / KUF 75° |
| 36 | F / KUF 60° |
| 39 | R 0,05 mm |
| 40 | 45° corner for chamfering cartridge |
| 75 | Support chamfer 75° L.H. |
| 90 | Support chamfer 90° L.H. |

## ④ Type of chip groove / chip surface

| Code **ground** | | Code sintered | |
|---|---|---|---|
| 00 | L.H. cutting, neutral | 00 | Double chip groove (PD), cutting edge rounded |
| 06 | L.H. cutting, 6° | 01 | Double chip groove (K), cutting edge chamfered and rounded |
| 12 | L.H. cutting, 12° | 02 | Step geometry (KS), cutting edge chamfered and rounded |
| 15 | L.H. cutting, 15° | 03 | Dimple geometry (KX), cutting edge rounded |
| 18 | L.H. cutting, 18° | 04 | Finished geometry |
| 20 | L.H. cutting, 20° | 05 | 10° chip groove (T), cutting edge rounded |
| 30 | R.H. cutting, neutral | 06 | 12° chip groove (C), cutting edge rounded |
| 36 | R.H. cutting, 6° | 07 | Finished geometry |
| 42 | R.H. cutting, 12° | 10 | Shank geometry, cutting edge chamfered and rounded |
| 45 | R.H. cutting, 15° | 11 | 20° chip groove, cutting edge rounded |
| 48 | R.H. cutting, 18° | 12 | AI / finished geometry |
| 50 | R.H. cutting, 20° | 13 | Shank geometry, cutting edge rounded |
| 60 | neutral | 14 | Finishing-Topographie |
| 66 | 3× ground, 6° | 15 | Semi-finishing Topographie |
| 70 | 3× ground, 10° | 16 | Semi-finishing Topographie with "Wiper" corner |
| 72 | 3× ground, 12° | 17 | 22° Topographie / tangential insert |
| 80 | 3× ground, 20° | 18 | Finishing-Topographie with "Wiper" corner |
| 82 | L.H. cutting, 12° sharp-edged | 20 | Universal topography 8° top rake |
| 83 | R.H. cutting, 12° sharp-edged | 21 | 20° Highly positive "Technology 21" |
| 94 | neutral, bright complete, L.H. and R.H. cutting | 32 | peripheral ground with minimal burring |
| 98 | bright with flute on corner, L.H. and R.H. cutting | 33 | peripheral sintered with minimal burring |
| 99 | neutral, bright on corner, L.H. and R.H. cutting | | |

## ⑦ Material grade

| Code | | Code | |
|---|---|---|---|
| 03 | P25M | 2715 | BK2715 |
| 04 | P40 | 2730 | BK2730 |
| 22 | K20 | 6115 | BK6115 |
| 60 | BK60 | ... | |

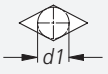
# Numerical Coding for Inserts W..

## Programme ISO

| W | 8 5 | 1 8 | 0 0 | 0 | . | 0 8 | 8 4 2 5 |
|---|---|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | | ⑥ | ⑦ |

| ① | Main group for standard inserts<br>Code |
|---|---|

| ② Secondary group number insert geometry | |
|---|---|
| Code | ISO basic forms |
| 83 | S... square 90° |
| 84 | T... triangular 60° |
| 85 | C... rhomboid 80° |
| 86 | D... rhomboid 55° |
| 89 | V... rhomboid 35° |
| 90 | W... hexagonal 80° |
| 95 | R... round |
| 97 | threaded |

| ③ Inscribed circle *d1* | | |
|---|---|---|
| | Code | |
|  | 13 | 5,56 mm |
| | 18 | 6,35 mm |
| | 24 | 8,0 mm |
|  | 32 | 9,52 mm |
| | 38 | 11,1 mm |
| | 44 | 12,7 mm |
|  | 53 | 15,88 mm |
| | 62 | 19,05 mm |

| ④ Serial number | |
|---|---|
| 00 ... 99 | Code |

| ⑤ Modification code | |
|---|---|
| 1 ... 9 | Code |

| ⑥ Serial number | |
|---|---|
| 01 ... 99 | Code |

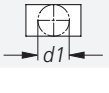
| ⑦ Material grade | |
|---|---|
| Code | |
| 03 | P25M |
| 04 | P40 |
| 22 | K20 |
| 2715 | BK2715 |
| 2730 | BK2730 |
| 6115 | BK6115 |
| ... | |

# Numerical Coding for Inserts Q..

| Q | 2 1 | 4 4 | 0 0 | 0 | . | 0 1 | 2 7 3 0 |
|---|---|---|---|---|---|---|---|
| Q | 8 0 | 3 2 | 0 0 | 0 | . | 0 1 | 6 1 1 5 |
| ① | ② | ③ | ④ | ⑤ | | ⑥ | ⑦ |

| ① | Main group for standard inserts<br>Code |
|---|---|

| ② Secondary group number insert geometry | |
|---|---|
| Code | ISO basic forms |
| 09 | S... square 90° |
| 12 | T... triangular 60° |
| 15 | C... rhomboid 80° |
| 21 | E... rhomboid 75° |
| 36 | A... rhomboid form |
| 80 | L... square 90° |

| ③ Inscribed circle *d1* | | |
|---|---|---|
| | Code | |
|  | 13 | 5,56 mm |
| | 18 | 6,35 mm |
| | 24 | 8,0 mm |
|  | 32 | 9,52 mm |
| | 38 | 11,1 mm |
| | 44 | 12,7 mm |
|  | 53 | 15,88 mm |

| ④ Serial number | |
|---|---|
| 00 ... 99 | Code |

| ⑤ Modification code | |
|---|---|
| 1 ... 9 | Code |

| ⑥ Serial number | |
|---|---|
| 01 ... 99 | Code |

| ⑦ Material grade | |
|---|---|
| Code | |
| 03 | P25M |
| 04 | P40 |
| 22 | K20 |
| 2715 | BK2715 |
| 2730 | BK2730 |
| 6115 | BK6115 |
| ... | |

# IDEEN-FABRIK +










## The ideas factory

The IDEEN-FABRIK reflects the evolution of the KOMET GROUP from a tool manufacturer into a creative expert for solutions covering all aspects of boring, reaming, thread milling and mechatronic tools.

The central objective is to offer our customers and employees scope for creative working and learning.

On a total area of 2,500 m², we have created a modern, multi-storey factory environment. The IDEEN-FABRIK was deliberately not constructed as a separate, detached training building, but integrated directly above a manufacturing business.

While the metal swarf flies down below, ideas are exchanged above. By this, we aim to demonstrate that the work here is always associated with new ideas and creative ambition.

With the IDEEN-FABRIK and the comprehensive seminar programme for customers and employee qualification, we aim to offer you a measurable and permanent competitive advantage in your markets.

Ask for our no-obligation specialist seminar brochure.



TOOLS+IDEAS®

The KOMET GROUP is the worldwide technology leader for innovative tool concepts and complete solutions for drilling machining.

Our customers know us as a manufacturer of premium tools, and know the ideas behind our solutions. The further creativity is still unused, and remains to be discovered. We have set ourselves the objective of exploiting the added value thus created for the benefit of our customers.

We call this TOOLS+IDEAS. A new and different way of being able to offer our customers long-term, sustainable advantages through a plus in support and services.

Our IDEEN-FABRIK in Besigheim is the first step in this direction.

KOMET®

## Informations


| | Page |
|---|---|
| Performation Calculation | 728 – 731 |
| **Notes** | |
| Pre-drilling / Rough Boring Dimensions | 732 |
| Dimensional variation | 733 |
| Usage and Safety Notes | 734 |
| Types of Wear on Inserts | 737 |
| **Accessories** | |
| ABS® | 738 – 743 |
| HSK-A | 744 – 749 |
| KomLoc® HSK clamping system | 750 – 755 |
| Coolant transfer | 756 – 758 |
| Pull studs | 759 |
| Clamping screws | 760 – 764 |
| Torque keys | 765 |
| International Material Classification | 766 – 767 |
| Numerical Index | 768 – 785 |
| Order formulae | 786 |
| KOMET GROUP International Agencies | |

# Performation Calculation

The $k_c$ values depend on the feed rate. The table therefore shows the upper limits for these. This means the performance figure calculated may be slightly higher (~ 10 – 20%) than the actual performance required. This is necessary because of the variation in the effective level and provides a safeguard against bad results.

| Material group | | Strength Rm (N/mm²) | Hardness HB | Material | Material example, material code/DIN | Special cutting force $k_c$ (N/mm²) |
|---|---|---|---|---|---|---|
| P | 1.0 | ≤500 | | non-alloy steels | St37-2 / 1.0037; 9SMn28 / 1.0715; St44-2 / 1.0044 | 1740 |
| P | 2.0 | 500-900 | | non-alloy / low alloy steels | St52-2 / 1.0050, C55 / 1.0525, 16MnCr5 / 1.7131 | 2060 |
| P | 2.1 | <500 | | lead alloys | 9SMnPb28 / 1.0718 | 1250 |
| P | 3.0 | >900 | | non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels | 42CrMo4 / 1.7225, CK60 / 1.1221 | 2450 |
| P | 4.0 | >900 | | high alloy steels | X6CrMo4 / 1.2341, X165CrMoV12 / 1.2601 | 1820 |
| P | 4.1 | | | HSS | | 1860 |
| S | 5.0 | | 250 | special alloys: Inconel, Hastelloy, Nimonic, stc. | Inconel 718 / 2.4668, Nimonic 80A / 2.4631 | 2090 |
| S | 5.1 | 400 | | titanium, titanium alloys | TiAl5Sn2 / 3.7114 | 1370 |
| M | 6.0 | ≤600 | | stainless steels | X2CrNi189 / 1.4306, X5CrNiMo1810 / 1.4401 | 2400 |
| M | 6.1 | <900 | | stainless steels | X8CrNb17 / 1.4511, X10CrNiMoTi1810 / 1.4571 | 2530 |
| M | 7.0 | >900 | | stainless / fireproof steels | X10CrAl7 / 1.4713, X8CrS-38-18 / 1.4862 | 2580 |
| K | 8.0 | | 180 | gray cast iron | GG-25 / 0.6025, GG-35 / 0.6035 | 1140 |
| K | 8.1 | | 250 | alloy gray cast iron | GG-NiCr202 / 0.6660 | 1280 |
| K | 9.0 | ≤600 | 130 | spheroidal graphite cast iron, ferritic | GGG-40 / 0.7040 | 1080 |
| K | 9.1 | | 230 | spheroidal graphite cast iron, ferritic/perlitic | GGG-50 / 0.7050 GGG-55 / 0.7055 GTW-55 / 0.8055 | 1135 |
| K | 10.0 | >600 | 250 | spheroidal graphite cast iron, perlitic malleable iron | GGG-60 / 0.7060 GTS-65 / 0.8165 | 1050 |
| K | 10.1 | | 200 | alloyed spheroidal graphite cast iron | GGG-NiCr20-2 / 0.7661 | 1180 |
| K | 10.2 | | 300 | vermicular cast iron | GGV Ti < 0,2 GGV Ti > 0,2 | 1050 |
| N | 12.0 | | 90 | copper alloy, brass, lead-alloy bronze, lead bronze: good cut | CuZn36Pb3 / 2.1182, G-CuPb15Sn / 2.1182 | 780 |
| N | 12.1 | | 100 | copper alloy, brass, bronze: average cut | CuZn40Al1 / 2.0550, E-Cu57 / 2.0060 | 780 |
| N | 13.0 | | 60 | wrought aluminium alloys | AlMg1 / 3.3315, AlMnCu / 3.0517 | 650 |
| N | 13.1 | | 75 | cast alum. alloy: Si-content <10% magnesium alloy | G-AlMg5 / 3.3561, G-AlSi9Mg / 3.2373 | 780 |
| N | 14.0 | | 100 | cast alum.alloy: Si-content >10% | G-AlSi10Mg / 3.2381 | 830 |
| H | 15.0 | 1400 | | hardened steels < 45 HRC | | 2880 |
| H | 16.0 | 1800 | | hardened steels > 45 HRC | | 3300 |



Important: See page 734-735 for application details and safety notes!

## Drilling

The machine power in kW

$$P_a = \frac{v_c \times f \times D \times k_c}{1000 \times 60 \times 4 \times \eta}$$

The feed $F_f$ required is approx.:

$$F_f \approx 0{,}7 \times \frac{D}{2} \times f \times k_c$$

Example: Material 42CrMo4, bore 40 mm diameter

| | |
|---|---|
| f = feed in mm/rev | = 0,15 mm/rev |
| $k_c$ = special cutting force in N/mm² | = 2450 N/mm² |
| D = diameter in mm | = 40 mm |
| $v_c$ = cutting speed in m/min | = 180 m/min |
| $\eta$ = machine output 0,7-0,85 (0,8) | = 0,8 |

$$P_a = \frac{180 \times 0{,}15 \times 40 \times 2450}{1000 \times 60 \times 4 \times 0{,}8} = 13{,}8 \text{ kW}$$

$$F_f \approx 0{,}7 \times \frac{40}{2} \times 0{,}15 \times 2450 = 5145 \text{ N}$$

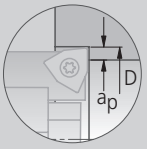
## Roughing / Fine Boring

The machine power in kW

$$P_a = \frac{a_p \times f \times k_c \times n\,(D - a_p)}{2000 \times 9550 \times \eta}$$

The feed $F_f$ required is approx.:

$$F_f \approx 0{,}7 \times a_p \times f \times k_c$$



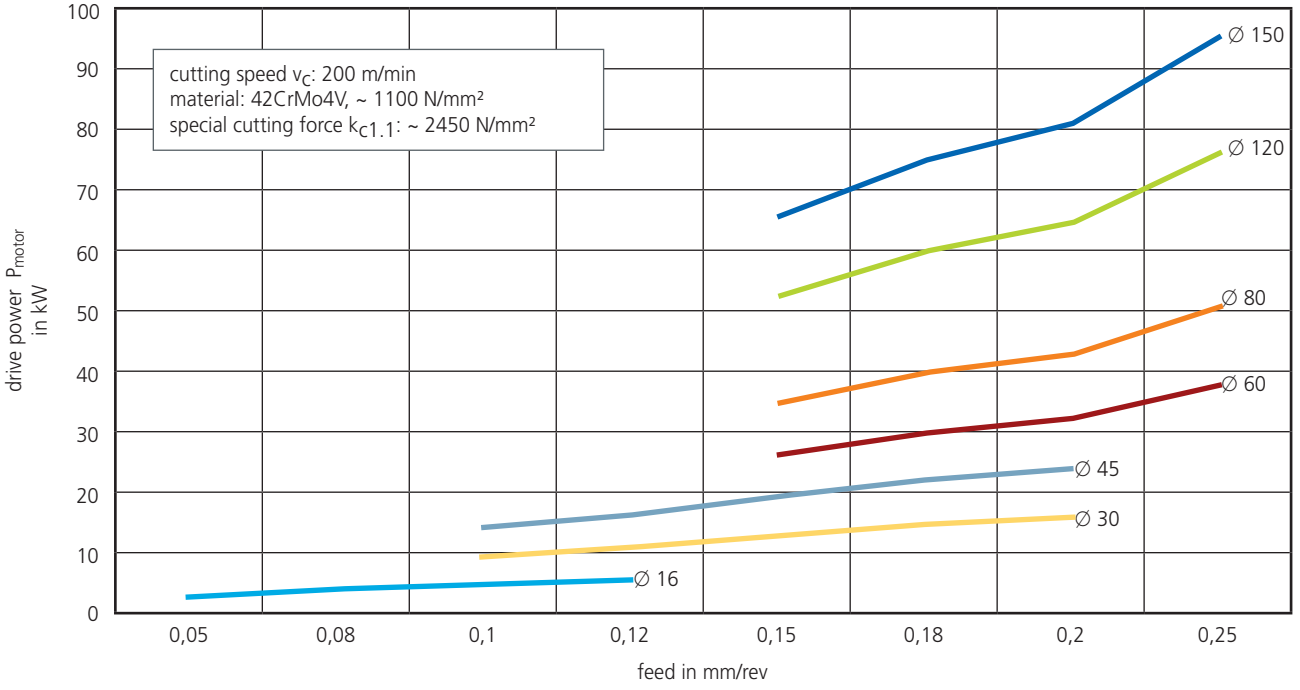

Example: Material 42CrMo4, bore 40 mm diameter

| | |
|---|---|
| $a_p$ = cutting width in mm | = 5 mm |
| f = feed in mm/rev | = 0,15 mm/rev |
| $k_c$ = special cutting force in N/mm² | = 2450 N/mm² |
| D = diameter in mm | = 40 mm |
| n = spindle speed in $min^{-1}$ | = 1433 $min^{-1}$ |
| $\eta$ = machine output 0,7-0,85 (0,8) | = 0,8 |

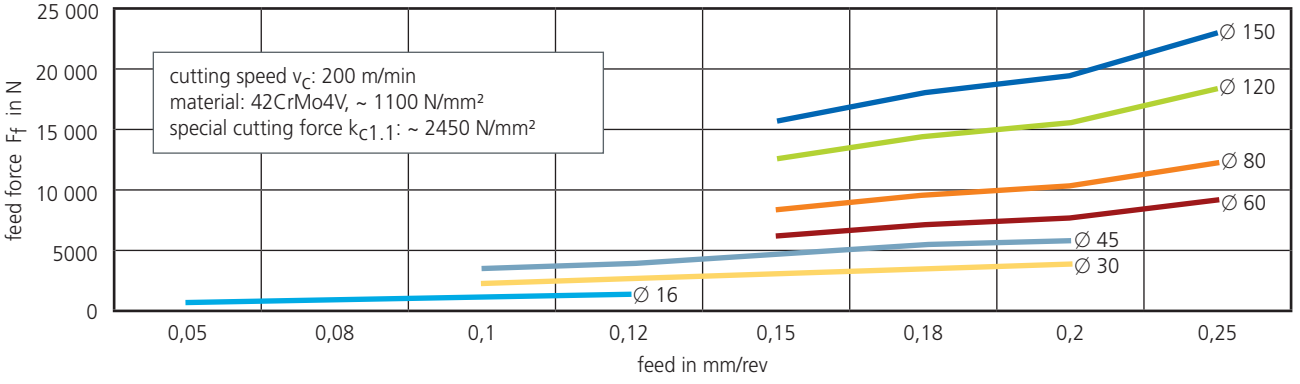
$$P_a = \frac{5 \times 0{,}15 \times 2450 \times 1433\,(40 - 5)}{2000 \times 9550 \times 0{,}8} = 6 \text{ kW}$$

$$F_f \approx 0{,}7 \times 5 \times 0{,}15 \times 2450 = 1286{,}25 \text{ N}$$

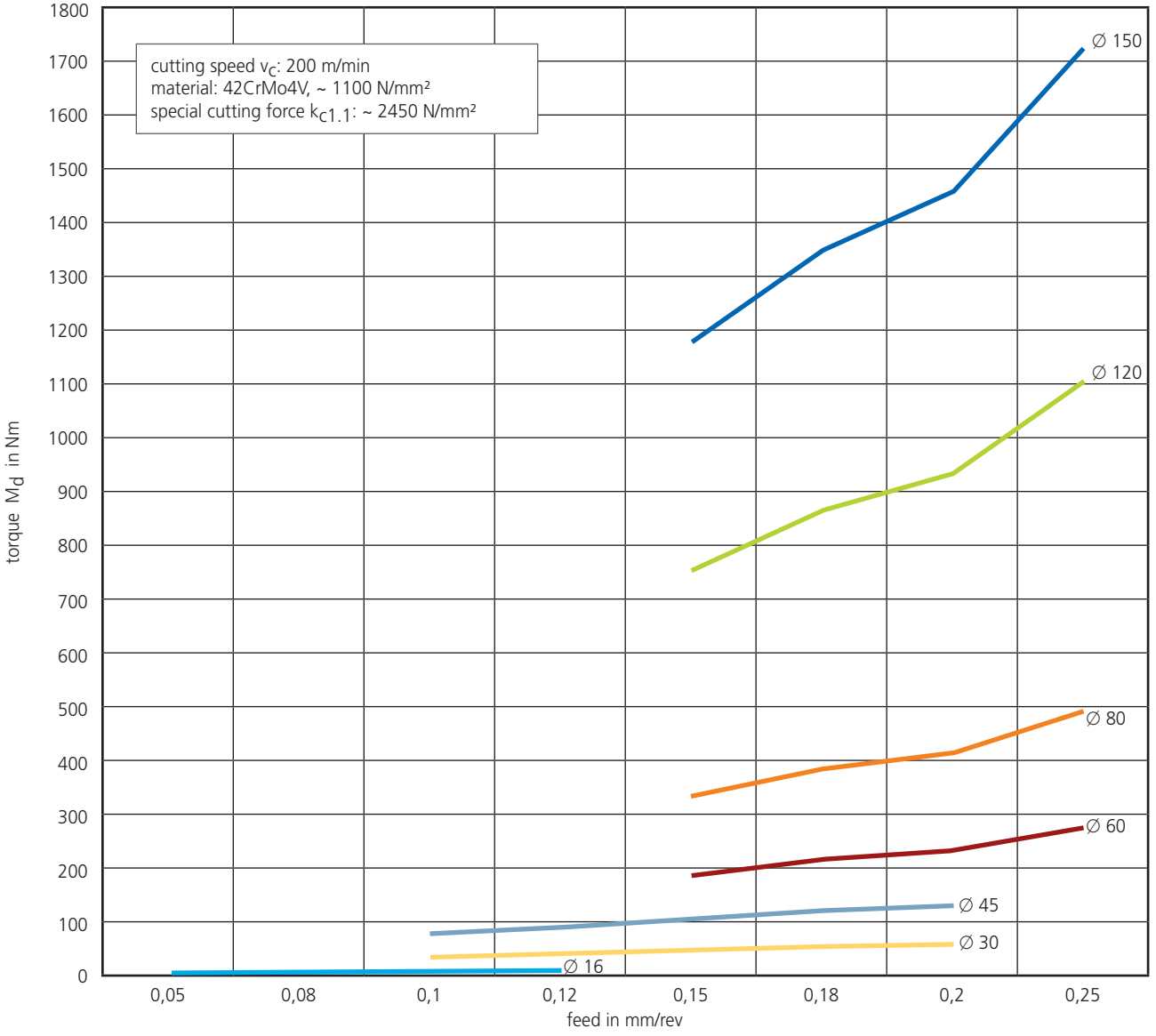
## Drive power kW




## Feed force $F_f$

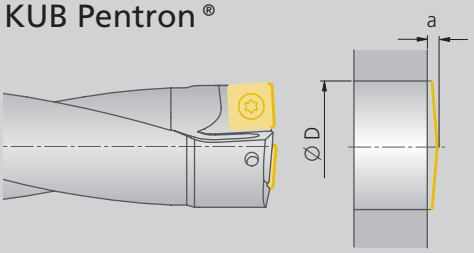


## Torque $M_d$


cutting speed $v_c$: 200 m/min
material: 42CrMo4V, ~ 1100 N/mm²
special cutting force $k_{c1.1}$: ~ 2450 N/mm²
torque $M_d$ in Nm
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
0,05
0,08
0,1
0,12
0,15
0,18
0,2
0,25
feed in mm/rev
Ø 150
Ø 120
Ø 80
Ø 60
Ø 45
Ø 30
Ø 16

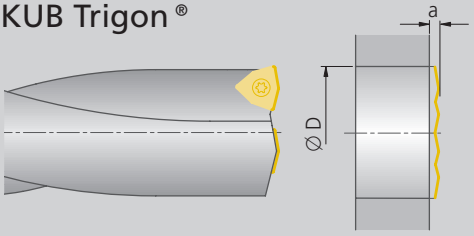
# Pre-drilling / Rough Boring Dimensions

## KUB Quatron®
## KUB Pentron®



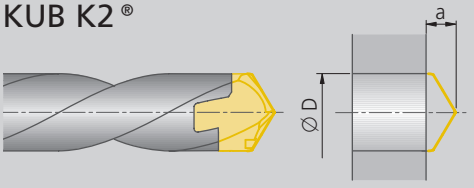

| Ø D | a |
|---|---|
| 14,0 – 17,5 | 1,5 |
| 18,0 – 21,0 | 1,9 |
| 22,0 – 26,5 | 2,4 |
| 27,0 – 33,0 | 2,8 |
| 34,0 – 44,0 | 3,0 |
| 45,0 – 52,0 | 3,3 |
| 53,0 – 65,0 | 3,7 |

## KUB Trigon®



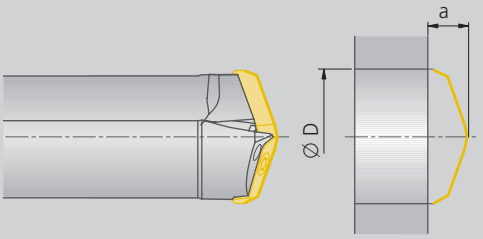

| Ø D | a |
|---|---|
| 14,0 – 19,5 | 1,3 |
| 20,0 – 24,0 | 1,5 |
| 24,5 – 36,0 | 1,7 |
| 37,0 – 44,0 | 2,0 |
| 45,0 – 54,0 | 2,4 |
| 55,0 – 68,0 | 2,7 |
| 69,0 – 82,0 | 3,5 |

## KUB K2®




| Ø D | a |
|---|---|
| 10,0 – 10,9 | 4,00 |
| 11,0 – 11,9 | 4,18 |
| 12,0 – 12,9 | 4,87 |
| 13,0 – 13,9 | 5,05 |
| 14,0 – 14,9 | 5,23 |
| 15,0 – 15,9 | 5,41 |
| 16,0 – 16,9 | 6,09 |
| 17,0 – 17,9 | 6,28 |
| 18,0 – 18,9 | 6,46 |
| 19,0 – 20,5 | 6,73 |

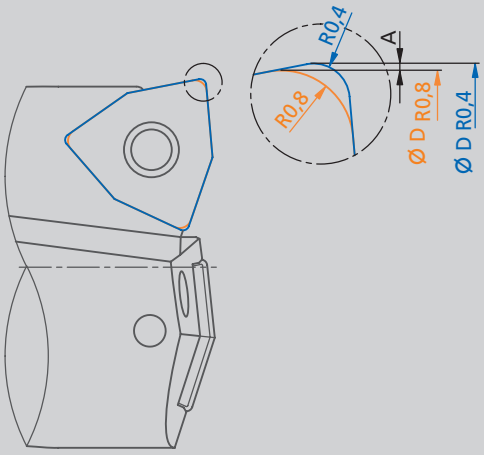
## KUB Duon®




| Ø D | a |
|---|---|
| 17,3 | 4,0 |
| 17,5 | 4,1 |
| 18,0 | 4,1 |
| 18,5 | 4,2 |
| 19,0 | 4,3 |
| 19,5 | 4,4 |
| 20,0 | 4,5 |
| 20,5 | 4,5 |
| 21,0 | 4,8 |
| 21,5 | 4,9 |
| 22,0 | 5,0 |
| 22,5 | 5,1 |
| 23,0 | 5,1 |
| 23,5 | 5,2 |
| 24,0 | 5,3 |
| 24,5 | 5,4 |
| 25,0 | 5,7 |
| 25,5 | 5,7 |
| 26,0 | 5,8 |
| 26,5 | 5,9 |
| 27,0 | 6,0 |
| 27,5 | 6,1 |
| 28,0 | 6,1 |
| 28,5 | 6,2 |
| 29,0 | 6,3 |
| 29,5 | 6,4 |
| 30,0 | 6,7 |
| 31,5 | 6,7 |

| Ø D | a |
|---|---|
| 31,0 | 6,8 |
| 31,5 | 6,9 |
| 32,0 | 7,0 |
| 32,5 | 7,1 |
| 33,0 | 7,1 |
| 33,5 | 7,2 |
| 34,0 | 7,3 |
| 34,5 | 7,4 |
| 35,0 | 7,5 |
| 35,5 | 7,5 |
| 36,0 | 7,6 |
| 36,5 | 7,7 |
| 37,0 | 8,0 |
| 37,5 | 8,1 |
| 38,0 | 8,1 |
| 38,5 | 8,2 |
| 39,0 | 8,3 |
| 39,5 | 8,4 |
| 40,0 | 8,5 |
| 40,5 | 8,5 |
| 41,0 | 8,6 |
| 41,5 | 8,7 |
| 42,0 | 8,8 |
| 42,5 | 8,9 |
| 43,0 | 8,9 |
| 43,5 | 9,0 |
| 44,0 | 9,1 |
| 44,2 | 9,2 |

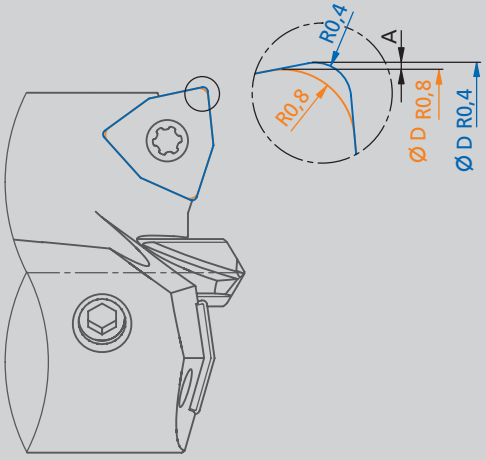
## KUB Trigon®, KUB® Drill




| Ø D | A |
|---|---|
| 25,0 – 27,9 | 0,08 |
| 28,0 – 28,9 | 0,09 |
| 29,0 – 29,9 | 0,10 |
| 30,0 – 31,9 | 0,08 |
| 32,0 – 33,9 | 0,09 |
| 34,0 – 36,9 | 0,10 |
| 37,0 – 38,9 | 0,08 |
| 39,0 – 41,9 | 0,09 |
| 42,0 – 44,9 | 0,10 |

$$D_{R0,8} = D_{R0,4} - 2 \times A$$

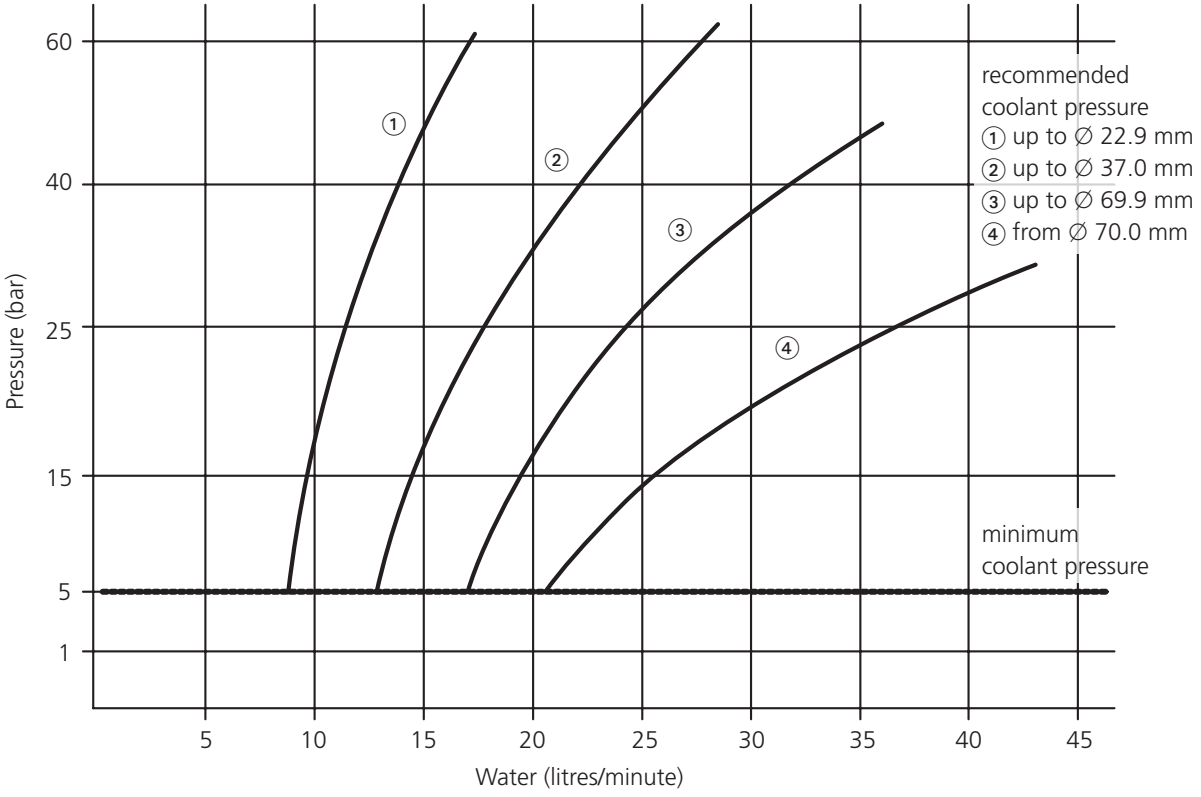
## KUB Centron®




| Ø D | A |
|---|---|
| 33,0 – 37,9 | 0,08 |
| 38,0 – 54,9 | 0,09 |
| 55,0 – 64,9 | 0,10 |

$$D_{R0,8} = D_{R0,4} - 2 \times A$$

Coolant flow / coolant pressure:




Balancing note:

Tool holders or adaptors are only balanced as supplied, i.e. no allowance has been made for items which can alter this, such as boring tools, milling cutters, inserts, etc. When used at high speeds, we recommend precision balancing be carried out when the tool is fitted ready for use.

Safety notes:



- **Important note!** On exit of the drill a disc as shown is ejected. With rotating components this can cause accidents. Please arrange suitable guarding.
- The technical notes provided in the application details depend on the environmental and application conditions (such as machine, environmental temperature, lubrication/coolant used and desired machining results): these are based on proper application conditions, use and compliance with the spindle speed limits given for the tools.
- To prevent damage to machine and tool, we recommend that the drive power be calculated in advance (see performance calculation). The drive power which is actually available will be found in the machine manufacturer's spindle speed/performance diagram.
- Safety equipment should be provided to protect personnel from flying chips.
  Please see our safety note (enclosed with packing).
- To ensure the best possible tool life, the insert should be changed promptly.
  Acceptable width of flank wear marks on inserts: W29 10... to W29 18... VB max = 0.20 mm
  W29 24... to W29 34... VB max = 0.25 mm
  W29 42... to W29 58... VB max = 0.30 mm

Hazard warning:

If using tungsten carbide-based hard metal products together with cobalt as a binder metal, please read our safety data sheets, which are available for you to download from our website.
(http://www.kometgroup.com/navigation-top/download/service/datenblaetter.html)

# KOMET KUB Centron® Powerline



## Maximum Drilling Performance and Dimensional Accuracy at Drilling Depths of up to 9×D

Together with the double-sided design of the cutter, this tool ensures extremely high performance in all standard materials.

The centring spade of the KOMET KUB Centron® Powerline guides the tool exactly into the drill axis and thereby ensures dimensional accuracy, straightness and maximum process reliability at drilling depths of up to 9×D. The extremely stabile SOEX indexable insert ensures maximum stability and optimum chip removal, even at maximum drilling depths.

The cutting division per side (from ∅ 39 mm) allows short chips to be produced even when using materials that are extremely poor for machining.

The KOMET KUB Centron® Powerline can be used in all existing KUB Centron® basic elements.

Enables drilling up to 9×D on flat even surfaces without a pilot hole.

BENEFITS for you:

- Maximum dimensional accuracy at deep drilling depths
- Transmission of high torques
- Guaranteed central positioning of the core bit
- Doubling of the feed values
- Reduction in production times
- Stable drilling process thanks to proven cutting geometries
- Maximum tool life through the use of the most modern cutting materials and coatings
- Compatibility with proven KUB Centron® programme



Patented design

Wear on clearance face
normal type of wear expected

remedy:
- use hardened/wear-resistant cutting materials
- reduce cutting parameters



Pitting

caused by:
- coating/substrate not sufficiently wear-resistant
- chip geometry too negative

rectified by:
- substrate or coatings with better wear resistance
- positive chip geometries



Microscopic fracturing

caused by:
- coating/substrate too brittle
- vibrations on part or tool
- interrupted cut
- build-up on cutting edges

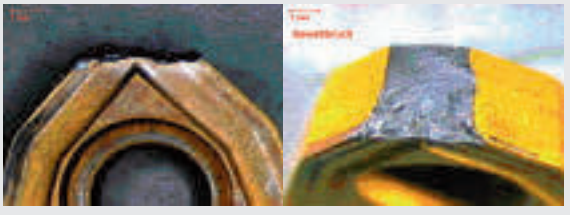
correcting by:
- tougher coating
- avoidance of vibrations
- avoidance of build-up on cutting edges



Stress fracture

caused by:
- wrong/excessively high cutting parameters
- no allowance for tool restrictions
- interrupted cut

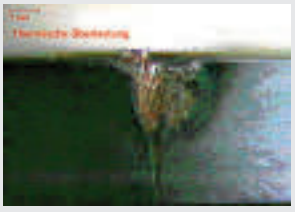
rectified by:
- checking of cutting data
- checking of tool restrictions



Thermal wear

caused by:
- cutting speed too high
- excessive heat

rectified by:
- reduction of cutting speed
- wear-resistant, more thermally stable coatings or substrate



Fracture of centre insert
caused by:
- basic substrate/coatings too brittle
- central position of internal insert too high (insert protrudes over centre)

rectified by:
- tougher coatings and substrate
- check lower central position of internal insert
- use centre plate with stronger chamfering
- use internal and external insert with same geometry



# KOMET ABS®

## Even more perfectly joined

One benefit of the new version of the KOMET ABS® connection is substantially higher clamping forces. It is fully compatible with the existing system, and also matches the original's high precision demands. In tooling systems, the tool adapter is an important element between the tool and machine.

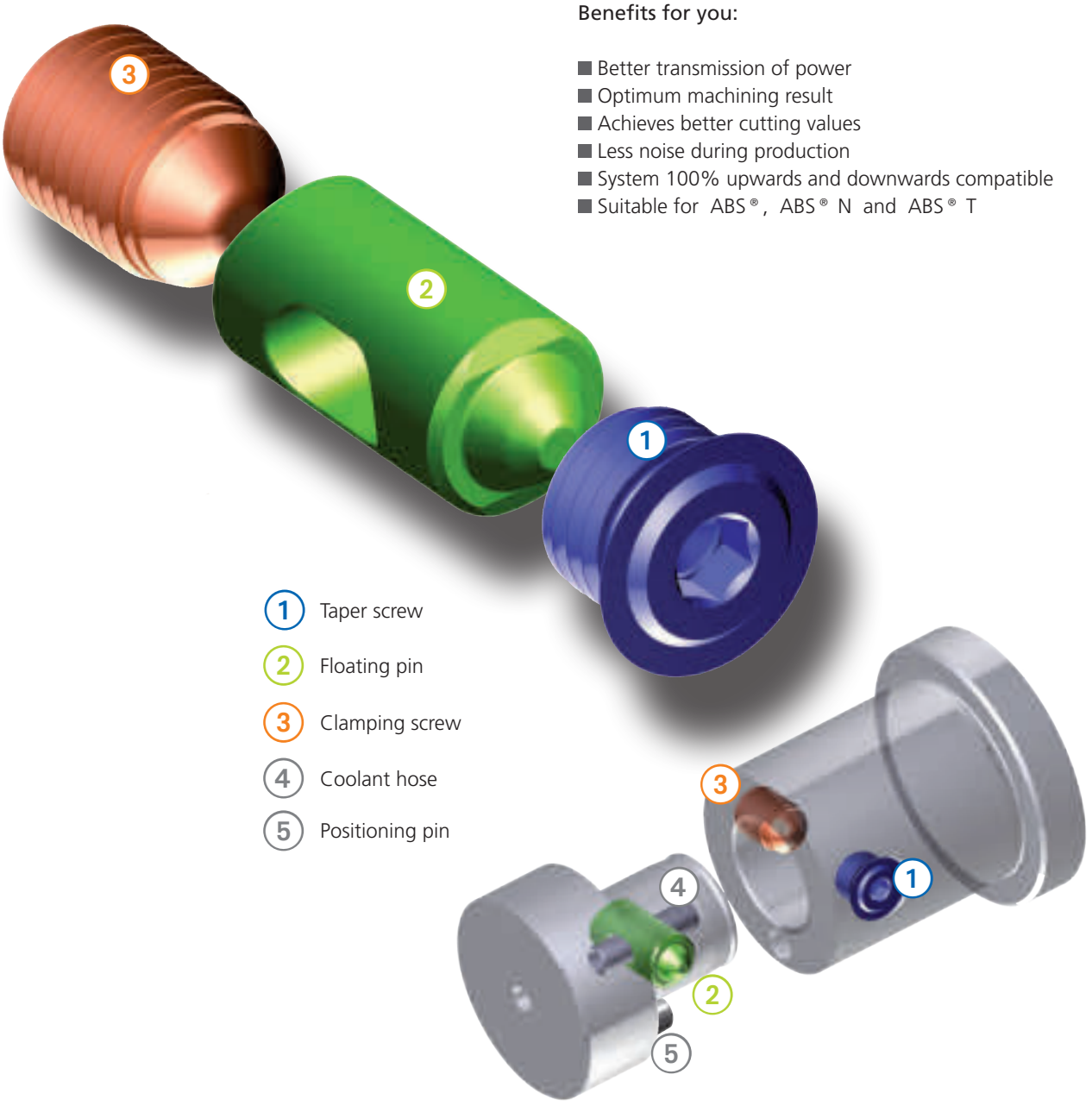
It must be able to transfer the machining forces safely. Moreover, tool adapters greatly influence the quality of the machining result. They also contribute to a cost efficient machining process. KOMET ABS® connections form a modular coupling system for rotating and stationary tools. The interface system is designed according to the modular principle. In this way, users can quickly and cheaply make use of modular metal cutting tools, extensions or adaptors.

Since its launch by KOMET® in 1981, the system has become established globally. It has fully developed components for each requirement.

The new KOMET ABS® is a technological leap forwards. The patented modifications have led to an increase of approx. 20 % in the clamping force. This means better transmission of power along with the corresponding effects on the machining result. During use, the new KOMET ABS® connections are quieter, and can achieve better cutting values. On the other hand, it also means reduced tightening torque at a constant required clamping force. The service life of the assembly parts are therefore longer. With 100% system compatibility, existing and new components can be combined with each other.

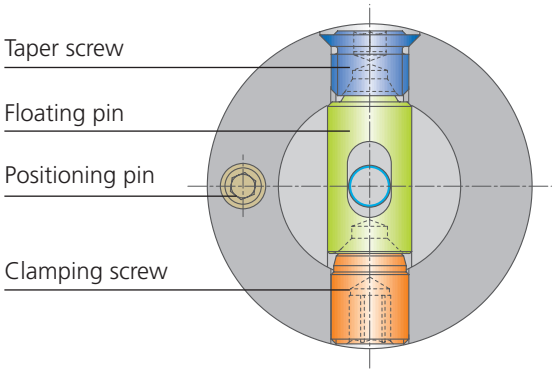
**Benefits for you:**

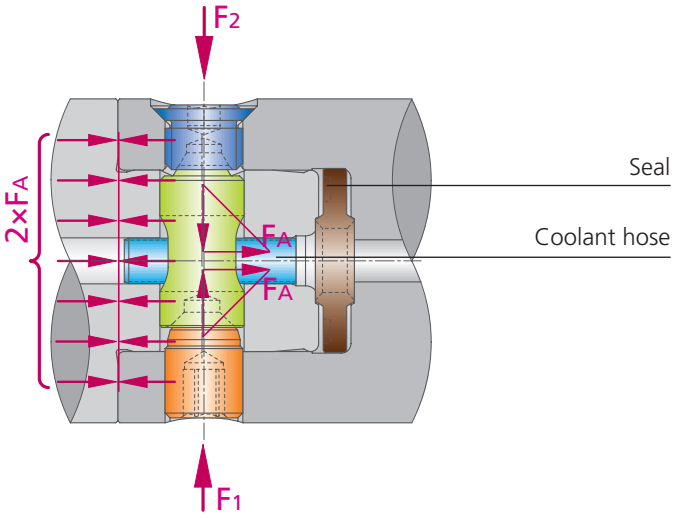
- Better transmission of power
- Optimum machining result
- Achieves better cutting values
- Less noise during production
- System 100% upwards and downwards compatible
- Suitable for ABS®, ABS® N and ABS® T






Patent applied for inside and outside Germany (ABS)




The ABS® connection consists of a location (spindle) and a shank with spigot (tool). In addition to the cylindrical bore on the location, there are two cross threads with the clamping screw and the taper screw. On the shank section, in addition to the cylindrical pin with cross bore, there is a sliding pin and positioning pin.

By axially offsetting the clamping screw/taper screw and sliding pin, the tapered surfaces are brought into contact when the screws are tightened and produce double the expansion force through axial components 2×FA. If cutting forces or moments arise, there is sufficient play between the positioning pin and the positioning bore to allow for a specific, minimum torsion. Exact positioning is achieved with a suitable positioning pin. On tools where an accurately defined cutting position is required, positioning and torque transmission is by means of 2 key slots on the holder or 2 key blocks on the tool.

The exactly adjusted dimensions of the ABS® System in conjunction with an extremely low amount of adjustment play produces minimum distortion from self-centering contact at four points. This in turn produces increased strength, a higher tool change repeatability and low vibration.

The ABS® System is frequently used directly on the spindle. In comparison with steep taper holders, the spindle or shank diameter for the ABS® System is decisive for vibration stability and enables a relatively large tool overhang.

The ABS® coupling system is protected by patent application domestically and abroad.

Tools with the Original ABS® connection system are manufactured and/or marketed exclusively by KOMET® and companies specifically authorised by KOMET®. All authorised (licenced) manufacturers are contractually bound to use manufacturing specifications supplied by KOMET®.
Original ABS® systems are identified with "ABS ... under licence to KOMET". All authorised ABS manufacturers guarantee a quality standard which complies with KOMET® manufacturing specifications. Quality and safety is guaranteed subject to original ABS® tools being correctly used. No guarantee can be given where tools are used with modular connections which are not identified as original ABS® tools. This particularly applies for connections which are designed to be combined and used with original ABS® tools.

Please ensure that tools are used with original ABS® connections only.

Features / changes:

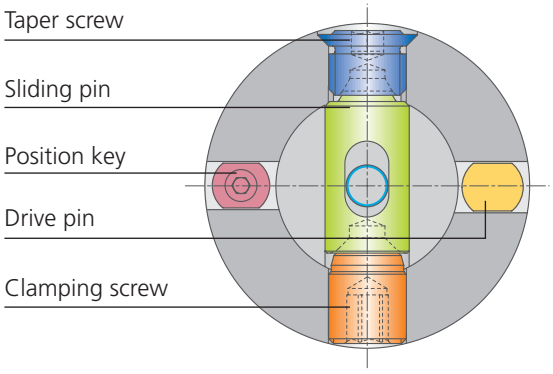
- The new ABS® is generally compatible with all conventional ABS® systems. You can see the variation possibilities illustrated above.

- Instead of a 90° tip, the floating pin now has a stepped shape at the flank towards the taper screw at which two contact parts are planned. Through the new shape, the basic body of the floating pin is longer and thus, a better guidance in the bore of the spigot is achieved.

- The taper screw was also improved by a new design with the features described above. This results in an increase of the clamping force and a higher accuracy of the ABS® system.
  Through the modifications mentioned, a better overall rigidity of the ABS® system is achieved in addition. More efficient cutting tools can be used with the new ABS® without any problems.

# KOMET ABS®

## ABS® N – The slotted ABS® version




**Features:**
For cutting operations which set high demands, the ABS® system has been modified so that moment and cutting forces can be absorbed by high-precision slots. This of course ensures that the results from ABS® and ABS® N are consistently high.

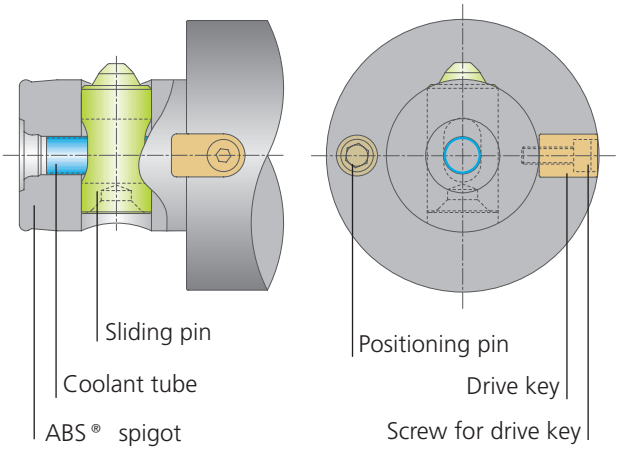
**Compatibility:**
- Standard ABS® tools can be used in ABS® N adaptors
- Because ABS® tools can be easily converted, the tool can be held in standard adaptors.

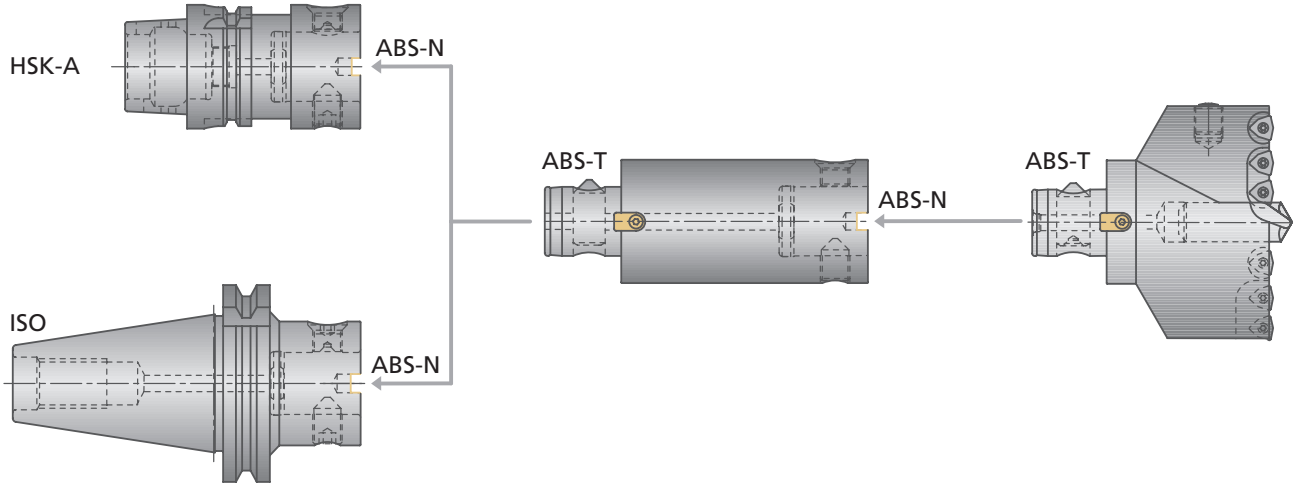

High stability from ABS® face connection with slots

## ABS® T – for increased torque requirements

**Features:**
For cutting operations which set high demands, the ABS® system has been modified so that moment and cutting forces can be absorbed by high-precision slots. This of course ensures that the results from ABS® N and ABS® T are consistently high.

**Compatibility:**
- standard ABS® T tools can be used in ABS® N adaptors
- removal the drive key, ABS® T tool can be held in standard adaptors ABS®.



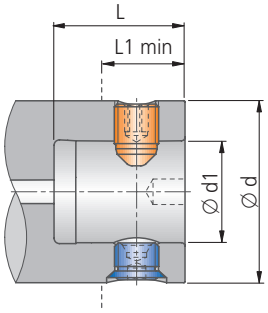



Patent applied for inside and outside Germany (ABS)

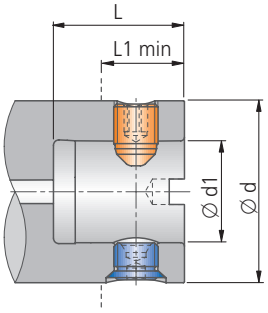
A colour code system is used for the ABS®, ABS® N and ABS® T Ø d size so that selection of tools with a specific location size can be made quickly and accurately.

## Location hole

ABS®



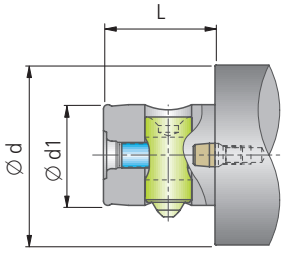

ABS® N



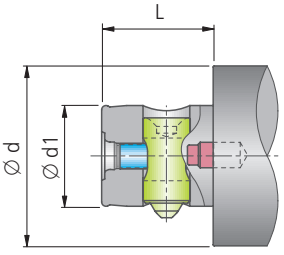

| ABS® / ABS® N | | | | | |
|---|---|---|---|---|---|
| size | size | Ø d | Ø d1 | L | L1 min. |
| ABS 25 | ABS 25 N | 25 | 13 | 24 | 13,0 |
| ABS 32 | ABS 32 N | 32 | 16 | 27 | 16,0 |
| ABS 40 | ABS 40 N | 40 | 20 | 31 | 18,5 |
| ABS 50 | ABS 50 N | 50 | 28 | 36 | 22,0 |
| ABS 63 | ABS 63 N | 63 | 34 | 43 | 28,0 |
| ABS 80 | ABS 80 N | 80 | 46 | 48 | 34,0 |
| ABS 100 | ABS 100 N | 100 | 56 | 60 | 40,5 |
| ABS 125 | ABS 125 N | 125 | 70 | 76 | 51,0 |
| ABS 160 | ABS 160 N | 160 | 90 | 96 | 65,0 |

## Location spigot

ABS®




ABS® N / ABS® T

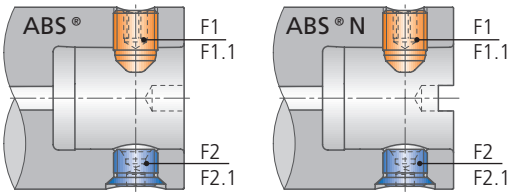



| ABS® / ABS® N / ABS® T | | | | | |
|---|---|---|---|---|---|
| size | size | size | Ø d | Ø d1 | L |
| ABS 25 | ABS 25 N | | 25 | 13 | 20 |
| ABS 32 | ABS 32 N | | 32 | 16 | 23 |
| ABS 40 | ABS 40 N | | 40 | 20 | 26 |
| ABS 50 | ABS 50 N | ABS 50 T | 50 | 28 | 31 |
| ABS 63 | ABS 63 N | ABS 63 T | 63 | 34 | 38 |
| ABS 80 | ABS 80 N | ABS 80 T | 80 | 46 | 43 |
| ABS 100 | ABS 100 N | | 100 | 56 | 55 |
| ABS 125 | ABS 125 N | | 125 | 70 | 70 |
| ABS 160 | ABS 160 N | | 160 | 90 | 90 |

# KOMET ABS®

Individual spares (spares assortment) are supplied for replacement purposes only.
Any other use is not permitted and represents an infringement of the patent.

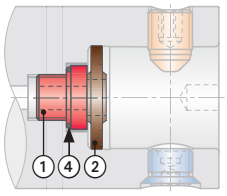
## Assembly parts ABS® / ABS® N

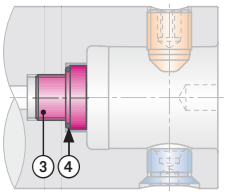


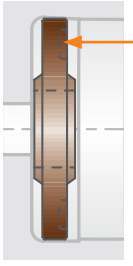

| ABS® / ABS® N | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 25 | 32 | 40 | 50 | 63 | 80 | 100 | 125 | 160 |
| Spares assortment ① | N00 15251<br>ABS25-FS-W | N00 15261<br>ABS32-FS-W | N00 15271<br>ABS40-FS-W | N00 15281<br>ABS50-FS-W | N00 15291<br>ABS63-FS-W | N00 15301<br>ABS80-FS-W | N00 15311<br>ABS100-FS-W | N00 15321<br>ABS125-FS-W | N00 15330<br>ABS160-FS-W |
| Clamping screw F1, F1.1 | N00 02052<br>ABS25-F1.1 | N00 02062<br>ABS32-F1.1 | N00 02072<br>ABS40-F1.1 | N00 02082<br>ABS50-F1.1 | N00 02092<br>ABS63-F1.1 | N00 02102<br>ABS80-F1.1 | N00 02112<br>ABS100-F1.1 | N00 02122<br>ABS125-F1.1 | N00 02131<br>ABS160-F1 |
| Taper screw F2, F2.1 | N00 03052<br>ABS25-F2.1 | N00 03062<br>ABS32-F2.1 | N00 03072<br>ABS40-F2.1 | N00 03082<br>ABS50-F2.1 | N00 03092<br>ABS63-F2.1 | N00 03102<br>ABS80-F2.1 | N00 03112<br>ABS100-F2.1 | N00 03122<br>ABS125-F2.1 | N00 03131<br>ABS160-F2 |

| Starting torque (Nm) for clamping screw F1 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 25 | 32 | 40 | 50 | 63 | 80 | 100 | 125 | 160 |
| light cutting<br>reaming, fine boring, finish milling | 2,5 – 3,0 | 9,0 – 11,0 | 12,0 – 20,0 | 15,0 – 28,0 | 30,0 – 45,0 | 38,0 – 54,0 | 46,0 – 70,0 | 55,0 – 78,0 | |
| heavy cutting<br>boring, roughing, milling | 3,5 – 4,5 | 12,0 – 14,0 | 21,0 – 28,0 | 30,0 – 40,0 | 46,0 – 60,0 | 55,0 – 70,0 | 75,0 – 100,0 | 90,0 – 120,0 | |

## Accessories ABS® / ABS® N



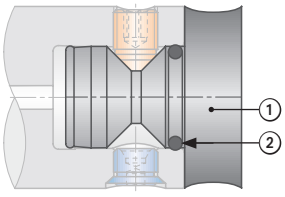



**Please note!**
Up to ABS® 50, the sealing disc is provided with a ring groove. After fitting in the ABS® drilled hole, the ring groove must be visible.

| ABS® / ABS® N | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 25 | 32 | 40 | 50 | 63 | 80 | 100 | 125 |
| Sealing screw ① | L02 30510<br>M8×1 | L02 30510<br>M8×1 | L02 30520<br>M10×1 | L02 30520<br>M10×1 | L02 30530<br>M12×1,5 | L02 30540<br>M12×1,5 | L02 30550<br>M16×1,5 | N00 07100<br>M36×1,5 |
| Sealing disc ② | L01 02011<br>ABS25-E9 | L01 02021<br>ABS32-E9 | L01 02031<br>ABS40-E9 | L01 02041<br>ABS50-E9 | L01 02051<br>ABS63-E9 | L01 02061<br>ABS80-E9 | L01 02071<br>ABS100-E9 | |
| Plug screw ③ | 55041 00810<br>M8×1 | 55041 00810<br>M8×1 | 55041 01010<br>M10×1 | 55041 01010<br>M10×1 | 55041 01215<br>M12×1,5 | 55041 01215<br>M12×1,5 | 55041 01615<br>M16×1,5 | 55041 03615<br>M36×1,5 |
| Sealing ring ④ | 56941 00811 | 56941 00811 | 56941 01013 | 56941 01013 | 56941 01215 | 56941 01215 | 56941 01620 | |

**Safety cover** (for covering ABS® / ABS® N spindle adaptor when not in use)




| ABS® / ABS® N | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 25 | 32 | 40 | 50 | 63 | 80 | 100 |
| Safety cover ① | L01 03020<br>0,016 | L01 03030<br>0,027 | L01 03040<br>0,049 | L01 03050<br>0,095 | L01 03060<br>0,173 | L01 03070<br>0,293 | L01 03080<br>0,488 |
| Sealing ring ② | 52911 01010 | 52911 01315 | 52911 01615 | 52911 02515 | 52911 03015 | 52911 04220 | 52911 05030 |

**Supply includes:** Safety cover with sealing ring

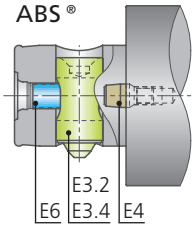


Patent applied for inside and outside Germany (ABS)

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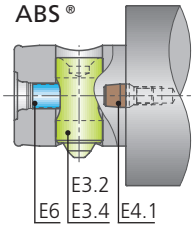
## Assembly parts ABS® / ABS® N / ABS® T and ABS® H

ABS®



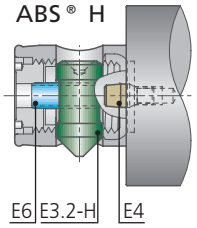

Spares assortment ②

ABS®



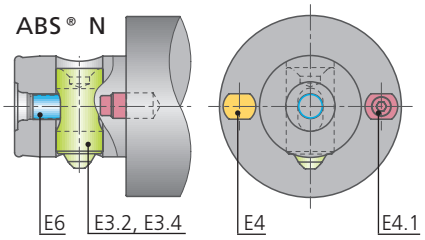

Spares assortment ③
for milling cutter adaptor

ABS® H



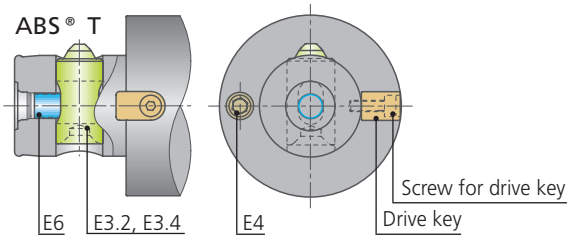

Spares assortment ④

ABS® N




Spares assortment ⑤

ABS® T




Spares assortment ⑥

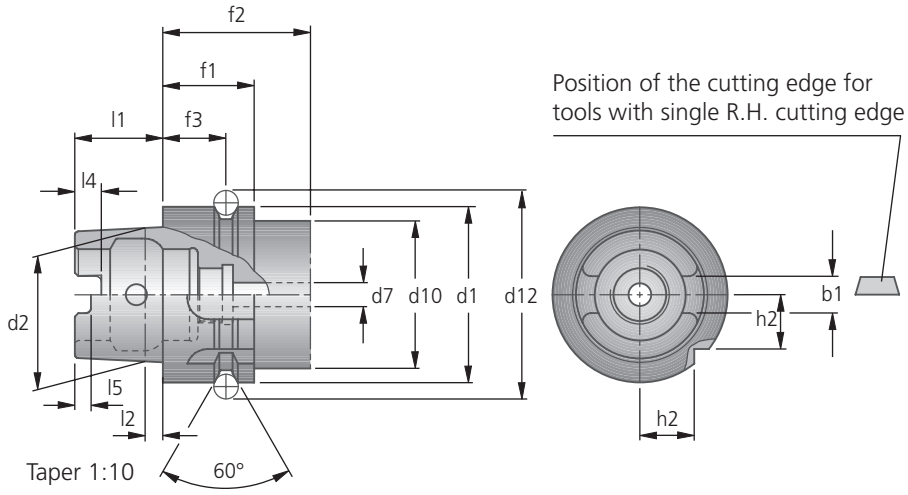
| ABS® / ABS® N / ABS® T / ABS® H | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 25 | 32 | 40 | 50 | 63 | 80 | 100 | 125 | 160 |
| Spares assortment ② | N00 17651<br>ABS25-ES-M3 | N00 17661<br>ABS32-ES-M3 | N00 17671<br>ABS40-ES-M3 | N00 17681<br>ABS50-ES-M3 | N00 17691<br>ABS63-ES-M3 | N00 17701<br>ABS80-ES-M3 | N00 17711<br>ABS100-ES-M3 | N00 17721<br>ABS125-ES-M3 | N00 17730<br>ABS160-ES-M3 |
| Spares assortment ③ | N00 17851<br>ABS25-ES-M4 | N00 17862<br>ABS32-ES-M4 | N00 17872<br>ABS40-ES-M4 | N00 17882<br>ABS50-ES-M4 | N00 17892<br>ABS63-ES-M4 | N00 17902<br>ABS80-ES-M4 | N00 17912<br>ABS100-ES-M4 | | |
| Spares assortment ④ | | N00 20060<br>ABS32-H-ES | N00 20070<br>ABS40-H-ES | N00 20080<br>ABS50-H-ES | N00 20090<br>ABS63-H-ES | N00 20100<br>ABS80-H-ES | | | |
| Spares assortment ⑤ | N00 19252<br>SBA25-ES-M1 | N00 19263<br>SBA32-ES-M1 | N00 19273<br>SBA40-ES-M1 | N00 19283<br>SBA50-ES-M1 | N00 19293<br>SBA63-ES-M1 | N00 19303<br>SBA80-ES-M1 | N00 19313<br>SBA100-ES-M1 | | |
| Spares assortment ⑥ | | | | N00 18181<br>ABS50-T-ES | N00 18191<br>ABS63-T-ES | N00 18201<br>ABS80-T-ES | | | |
| Sliding pin E3.2, E3.4 | N00 00451<br>ABS25-E3.4 | N00 00461<br>ABS32-E3.4 | N00 00471<br>ABS40-E3.4 | N00 00481<br>ABS50-E3.4 | N00 00491<br>ABS63-E3.4 | N00 00501<br>ABS80-E3.4 | N00 00511<br>ABS100-E3.4 | N00 00521<br>ABS125-E3.4 | N00 00530<br>ABS160-E3.2 |
| Sliding pin E3.2-H | | N00 01661<br>ABS32-E3.2-H | N00 01670<br>ABS40-E3.2-H | N00 01680<br>ABS50-E3.2-H | N00 01690<br>ABS63-E3.2-H | N00 01700<br>ABS80-E3.2-H | | | |
| Positioning pin E4 | N00 04050<br>ABS25-E4 | N00 04060<br>ABS32-E4 | N00 04070<br>ABS40-E4 | N00 04080<br>ABS50-E4 | N00 04090<br>ABS63-E4 | N00 04100<br>ABS80-E4 | N00 04110<br>ABS100-E4 | N00 04120<br>ABS125-E4 | N00 04130<br>ABS160-E4 |
| Positioning pin E4.1 | N00 04250<br>ABS25-E4.1 | N00 04261<br>ABS32-E4.1 | N00 04271<br>ABS40-E4.1 | N00 04281<br>ABS50-E4.1 | N00 04291<br>ABS63-E4.1 | N00 04301<br>ABS80-E4.1 | N00 04311<br>ABS100-E4.1 | | |
| Drive key | | | | N12 20280<br>T50 | N12 20290<br>T63 | N12 20300<br>T80 | | | |
| Screw for drive key | | | | 55011 03010 | 55011 04012 | 55011 05016 | | | |
| Drive pin E4 | N00 05051<br>SBA25-E4 | N00 05062<br>SBA32-E4 | N00 05072<br>SBA40-E4 | N00 05082<br>SBA50-E4 | N00 05092<br>SBA63-E4 | N00 05102<br>SBA80-E4 | N00 05112<br>SBA100-E4 | | |
| Position key E4.1 | N00 05251<br>SBA25-E4.1 | N00 05262<br>SBA32-E4.1 | N00 05272<br>SBA40-E4.1 | N00 05282<br>SBA50-E4.1 | N00 05292<br>SBA63-E4.1 | N00 05302<br>SBA80-E4.1 | N00 05312<br>SBA100-E4.1 | | |
| Coolant tube E6 | N00 06050<br>ABS25-E6 | N00 06060<br>ABS32-E6 | N00 06070<br>ABS40-E6 | N00 06080<br>ABS50-E6 | N00 06090<br>ABS63-E6 | N00 06100<br>ABS80-E6 | N00 06110<br>ABS100-E6 | N00 06120<br>ABS125-E6 | N00 06130<br>ABS160-E6 |
| Extraction tool* | | L05 01590 | L05 01590 | L05 01590 | L05 01590 | L05 01590 | L05 01590 | L05 01590 | L05 01590 |
| Press punch* | N75 80000 | N75 80010 | N75 80020 | N75 80030 | N75 80040 | N75 80050 | N75 80060 | N75 80070 | N75 80080 |
| Expansion punch* | N75 80100 | N75 80110 | N75 80120 | N75 80130 | N75 80140 | N75 80150 | N75 80160 | N75 80170 | N75 80180 |

*** Fitting and removing coolant hose:** Once coolant hoses have been removed, these must not be re-used.
To ensure seal, always fit a new coolant hose using the press and expansion punch.

# KOMET® HSK-A

## Hollow Shank HSK-A to ISO 12164-1

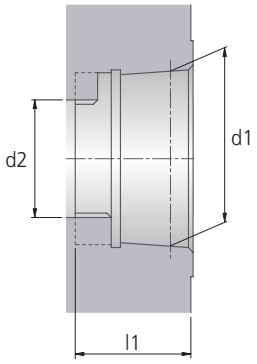
(as DIN 69893-1)
Version with hole for data carrier to DIN 69873.




| Dimensions | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HSK size | $d1_{h10}$ | d2 | d10 max | d12 | d7 max | b1±0,04 | $h2_{-0,3}$ | $f1_{-0,1}$ | f2 min | f3±0,1 | $l1_{-0,2}$ | l2 | $l4^{+0,2}$ | $l5^{+0,2}$ |
| HSK-A 32 | 32,0 | 24,0 | 26,0 | 37,00 | 4,2 | 7,05 | 9,50 | 20,0 | 35,0 | 16,0 | 16,0 | 3,2 | 3,5 | 3,0 |
| HSK-A 40 | 40,0 | 30,0 | 34,0 | 45,00 | 5,0 | 8,05 | 12,00 | 20,0 | 35,0 | 16,0 | 20,0 | 4,0 | 6,0 | 5,0 |
| HSK-A 50 | 50,0 | 38,0 | 42,0 | 59,30 | 6,8 | 10,54 | 15,50 | 26,0 | 42,0 | 18,0 | 25,0 | 5,0 | 7,5 | 4,5 |
| HSK-A 63 | 63,0 | 48,0 | 53,0 | 72,30 | 8,4 | 12,54 | 20,00 | 26,0 | 42,0 | 18,0 | 32,0 | 6,3 | 10,0 | 6,0 |
| HSK-A 80 | 80,0 | 60,0 | 67,0 | 88,80 | 10,2 | 16,04 | 25,00 | 26,0 | 42,0 | 18,0 | 40,0 | 8,0 | 12,0 | 8,0 |
| HSK-A100 | 100,0 | 75,0 | 88,0 | 109,75 | 12,0 | 20,02 | 31,50 | 29,0 | 45,0 | 20,0 | 50,0 | 10,0 | 15,0 | 10,0 |

## Adaptors for hollow taper shanks form A and C to ISO 12164-2

(as DIN 69063)

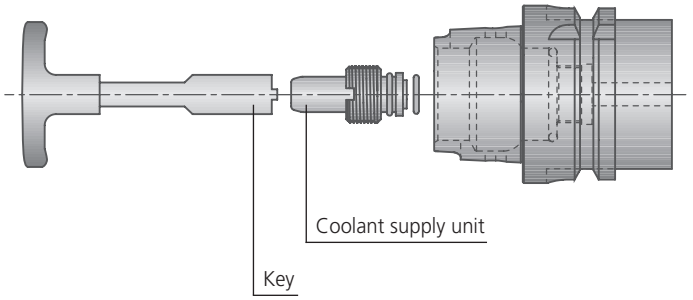



| Dimensions | | | |
|---|---|---|---|
| HSK size | d1 | d2 | $l1^{+0,2}$ |
| HSK-A/C 32 | 23,998 | 17 | 16,5 |
| HSK-A/C 40 | 29,998 | 21 | 20,5 |
| HSK-A/C 50 | 37,998 | 26 | 25,5 |
| HSK-A/C 63 | 47,998 | 34 | 33 |
| HSK-A/C 80 | 59,997 | 42 | 41 |
| HSK-A/C 100 | 74,997 | 53 | 51 |

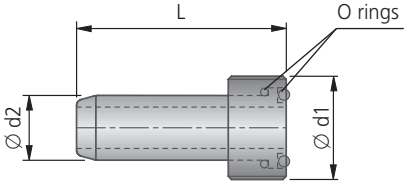


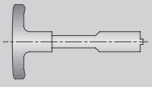
HSK-A
Adaptor Sleeve

Mounting of the coolant supply unit




Note:
The coolant supply unit should be fitted in the tool with the key, to ensure a seal is produced.
A coolant supply unit specifically for the machine can also be fitted, if required, using the thread in the tool.



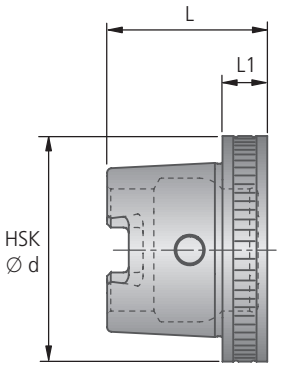

| HSK-A size | Key | Coolant supply unit | | | | | | |
|---|---|---|---|---|---|---|---|---|
| |  | | | | | O ring face side and over tube | | |
| | Order No. | Order No. | Ø d1 | Ø d2 | L | Article | | Order No. |
| 32 | **18021 01032** | **51391 00032** | M10×1,0 | 6 | 26 | 5×1,2 | 2× | **52914 00512** |
| 40 | **18021 01040** | **51391 00040** | M12×1,0 | 8 | 29,1 | 7,5×1,5 | 2× | **52914 00751** |
| 50 | **18021 01050** | **51391 00050** | M16×1,0 | 10 | 32,7 | 9×2 | 2× | **52914 00920** |
| 63 | **18021 01063** | **51391 00063** | M18×1,0 | 12 | 36,2 | 10×2,5<br>10×2 | 1×<br>1× | 52914 01025<br>52914 01020 |
| 80 | **18021 01080** | **51391 00080** | M20×1,5 | 14 | 39,7 | 13×2 | 2× | **52914 01320** |
| 100 | **18021 01100** | **51391 00100** | M24×1,5 | 16 | 43,6 | 14×3 | 2× | **52914 01430** |

Supply coolant supply unit includes:
Coolant tube, locking collar and two O rings.

Note re. supply:
**The coolant supply connection for the tool adaptors must be ordered separately.**
**Only use the keys listed for assembly.**
This will prevent coolant flowing back into the machine spindle/clamping system.
A specific coolant hose for the machine can also be fitted on all HSK adaptors.

## HSK-A/C Plugs

For sealing HSK units against dirt or other contamination.

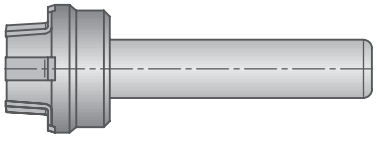



| Article | Order No. | HSK Ø d | L | L1 |
|---|---|---|---|---|
| HSK-C 40 | **A06 13470** | 40 | 30 | 10 |
| HSK-C 50 | **A06 23470** | 50 | 37,5 | 12,5 |
| HSK-C 63 | **A06 33470** | 63 | 44,5 | 12,5 |
| HSK-C 80 | **A06 43470** | 80 | 56 | 16 |
| HSK-C100 | **A06 53470** | 100 | 66 | 16 |

# Periphery

## Wiper for taper and face

Wiper for cleaning taper and face on machine spindle.



| for HSK size | Order No. |
|---|---|
| 32 | **5139101032** |
| 40 | **5139101040** |
| 50 | **5139101050** |
| 63 | **5139101063** |
| 80 | **5139101080** |
| 100 | **5139101100** |

# Features and advantages

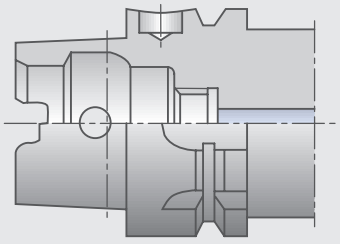
- The modern connection between machine spindle and tool is the hollow taper shank system (HSK)
- HSK is standardised under ISO 12164
- The main feature of HSK is the taper and face connection
- This gives important advantages: Maximum tool change accuracy, high static rigidity, high radial rigidity, small dimensions, low weights, use at high spindle speeds, shorter tool change times because of lower weights and higher machine acceleration.
- The HSK-A version is used for automatic tool change on machining centres, turning/milling centres, milling machines and other machine tools.
- HSK-A can also be used on machines with manual tool change.
- Other HSK versions can of course be supplied by KOMET on request
- Chip bore 10×4.5 included in the standard.

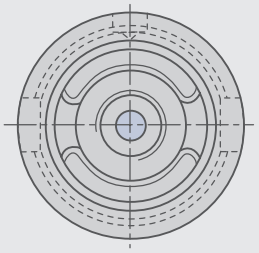
Note:
The application details shown depend on the environmental and application conditions (e.g. machine, ambient temperature, use of lubricant/coolant and the machining result required). These are subject to correct operating conditions, correct application and compliance with the spindle speed limits given for the tools.

## HSK Versions

Hollow taper shanks
for automatic tool change DIN 69893 Part 1 and 2 – with gripper groove

### Form A

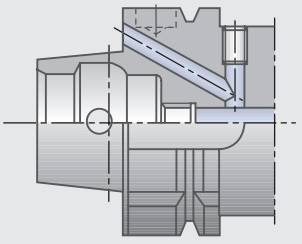


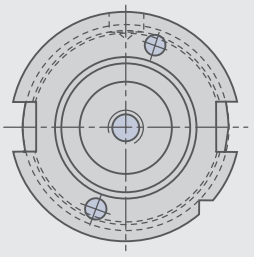


- used on machining centres, milling machines, turning machines, special machines with automatic tool change
- central, axial coolant supply through coolant tube
- torque transmission via two key slots at end of taper
- two slots on collar for tool magazine, location edge. Hole for data carrier DIN 69873 in collar

Hollow taper shanks
for automatic tool change DIN 69893 Part 1 and 2 – with gripper groove

### Form B

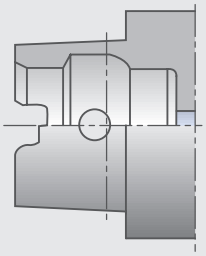


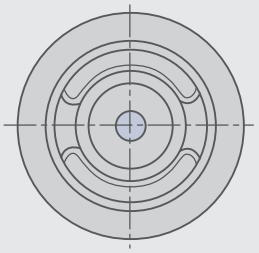


- use on machining centres, milling machines for heavy-duty cutting, turning machines
- enlarged collar
- off-centre coolant supply through collar or central supply through coolant tube
- torque transmission via two slots on collar
- location edge
- hole for data carrier DIN 69873 in collar

Hollow taper shanks
for manual tool change DIN 69893 Part 1 and 2 – without gripper groove

### Form C

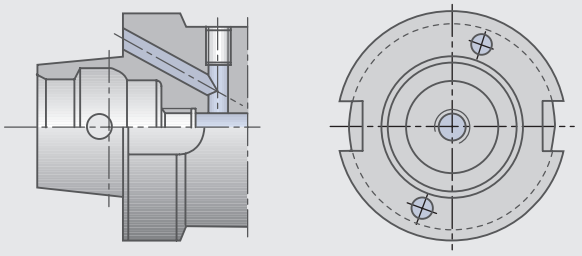




- preferably used for spindles on transfer lines and special machines with no automatic tool change or for short bore spindles and tool extensions and reducers
- central, axial coolant supply
- torque transmission via two key slots at end of taper

Hollow taper shanks
for manual tool change DIN 69893 Part 1 and 2 – without gripper groove

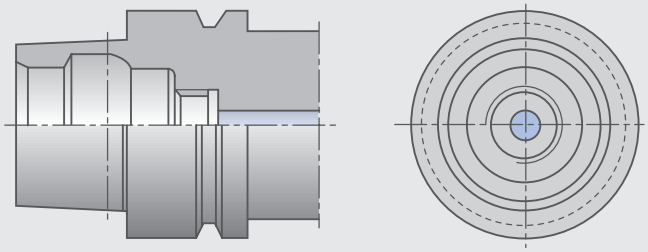
Form D



- for use in all areas which require better support from a large contact surface during manual tool change
- with larger collar
- off-centre coolant supply through collar or central supply through coolant tube
- torque transmission via two collar slots

Hollow taper shanks
for higher spindle speeds (HSC). Provisional standard DIN 69893 Part 5 and 6 – with gripper groove

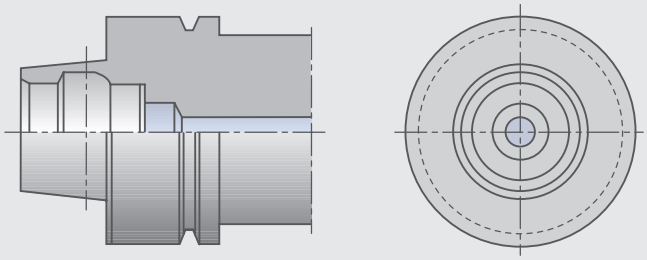
Form E



- used for high frequency spindles and wood machining
- rotationally symmetrical, without key slots
- torque transmission via friction resistance
- central coolant supply possible through coolant tube

Hollow taper shanks
for higher spindle speeds (HSC). Provisional standard DIN 69893 Part 5 and 6 – with gripper groove

Form F



- with larger collar
- central coolant supply possible through coolant hose

# KomLoc® clamping system

## Features of the system
- uncomplicated, low cost spindle contour
- small number of extremely sturdy components
- maximum clamping force
- specially suited to high speed machining (HSC)
- internal coolant supply
- practical ejector function

## Application area
There are numerous situations which require hollow taper shank tools to be clamped manual. The new KOMET HSK clamping device is used universally on transfer lines, machining centres, turning machines, multi-head machines and setting devices.
- direct mounting on multi-spindle boring heads and short boring spindles
- spindle mounting and adaptor flanges
- adaptors as extensions or reducers

## Using the KomLoc® clamping system
By using a hexagonal key, operating the KomLoc® clamping system is quite simple. A low draw-in moment automatically produces an excellent and stable clamping effect. In addition an axial movement or turning of the locking ring prevents dirt and chips from penetrating into the clamping mechanism.

## Ability for HSC (High Speed Cutting)
Because of the radially outward effect of the clamping action, the new KomLoc® clamping system is almost predestined for use at high clamping speeds. The clamping cartridge is designed to be completely symmetric in rotation.

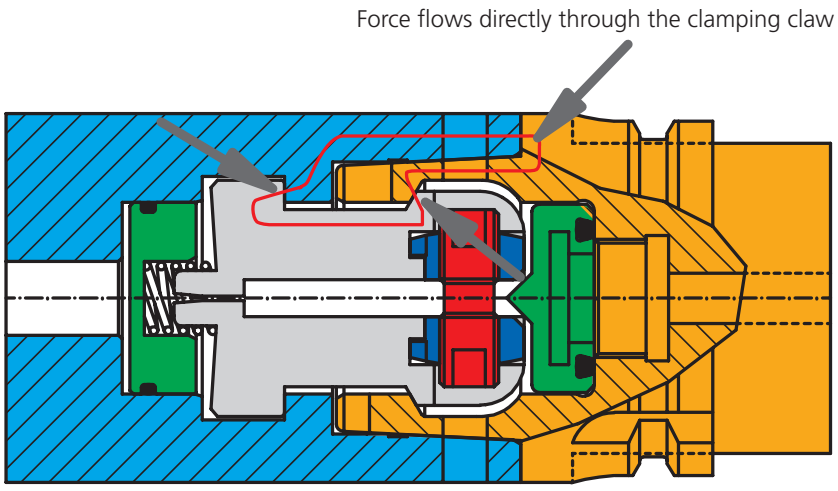
## Coolant supply
Internal coolant supply is introduced by two coolant hoses which form a cage with the ejector and the distributor. This cage is supported on floating bearings and produces a seal for a coolant pressure of p > 2 bar.

## Application details
By maintaining the correct draw-in moments and clamping forces the clamping device ensures a excellent transmission of the bending and torsion moments. The direction of these moments is not affected by the position of clamping cartridge.



EP 1 056 563 and other patents and patent applications (KomLoc)

## Function




## Clamping mechanism

- The two clamping nuts are moved radially outwards by using a hexagonal key on the threaded spindle.
- The two clamping elements are applied to the clamping shoulder of the hollow taper shank.
- The high axial clamping force produces a positive connection.

## Release mechanism

Clamping is released by moving the two clamping elements inwards back to the block. This activates the ejector which releases the connection.

## Clamping force / Rigidity

The high clamping forces (see table) produce excellent bending resistance. Depending on the operation temperature and the lubrication on the clamping element, clamping forces may vary by ± 15%.

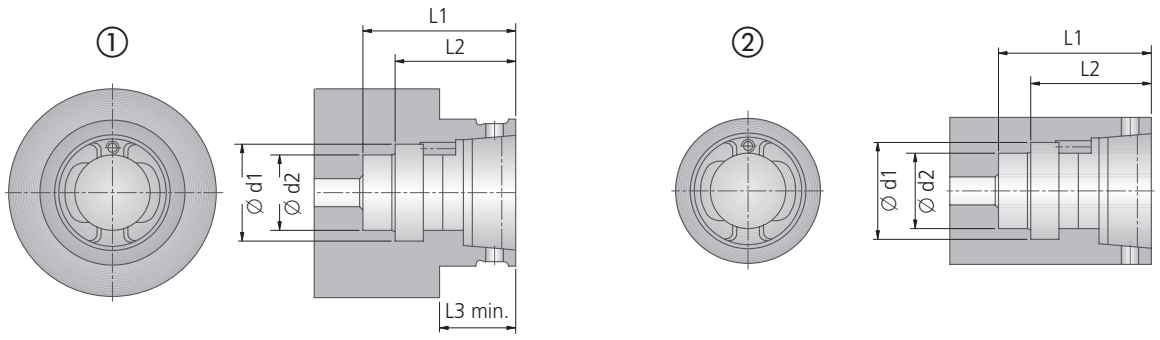


| HSK size | SW for operating | | | | | KOMET standard value | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Torque setting Nm | Tension force KN | Torque setting Nm | Tension force KN | Torque setting Nm | Tension force KN | Torque setting Nm | Tension force KN |
| 25 | 2 | – | – | 1 | 3,5 | 1,5 | 5,5 | 2 | 7 |
| 32 | 2,5 | 1,5 | 6,5 | 2 | 8 | 2,5 | 9 | 3,5 | 11 |
| 40 | 3 | 4 | 16 | 5 | 18 | 6 | 20 | 8 | 25 |
| 50 | 4 | 5 | 19 | 7,5 | 25 | 10 | 31 | 15 | 41 |
| 63 | 5 | 10 | 28 | 12,5 | 32 | 15 | 40 | 17,5 | 51 |
| 80 | 6 | 15 | 37 | 20 | 45 | 25 | 50 | 30 | 60 |
| 100 | 8 | 30 | 40 | 50 | 60 | 60 | 70 | 60 | 70 |

# KOMET KomLoc® HSK

## KomLoc® HSK clamping system – System K

### Spindle contour

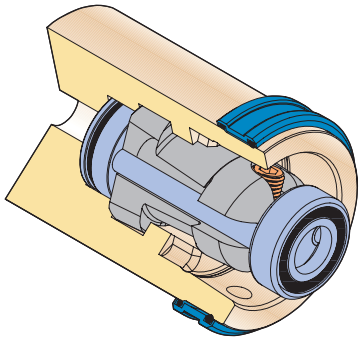



**Montage**
The KomLoc® clamping cartridge is extremely easy to fit. Insert the KomLoc® cartridge, rotate 90° and secure with threaded pin. This can be effected from any side and requires no alignment.

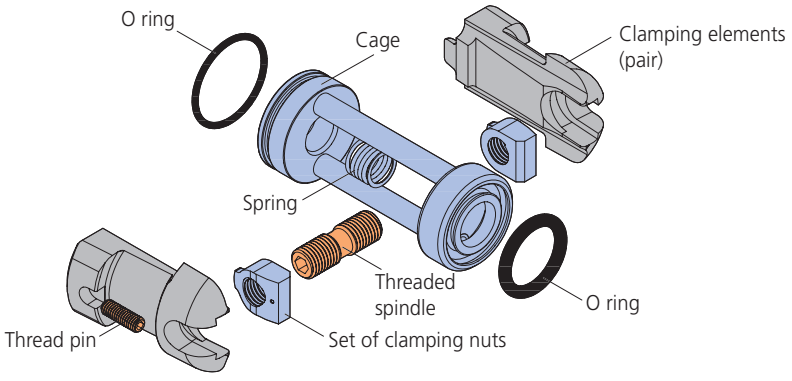
**Note**
Sealing ring for use on short bore spindles to DIN 69002 in conjunction with centrifuge ring available on request.
Detailed dimensional drawings can be supplied on request (free of charge).

| Fitting dimensions | | | | | ① | | ② | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Sealing ring, shifting | | Sealing ring, turning | Ball pressure screw |
| HSK size | L1 | L2 | Ø d1 | Ø d2 | Order No. | L3 min. | Order No. | Order No. |
| 25 | 27,7 | 21,1 | 16,8 | 13,5 | **L07 01420** | 14 | **L07 01720** | **N10 30736** |
| 32 | 34,3 | 27,3 | 21,1 | 17,0 | **L07 01430** | 16 | **L07 01730** | **N10 30737** |
| 40 | 42,4 | 33,8 | 26,4 | 21,0 | **L07 01440** | 19 | **L07 01740** | **N10 30738** |
| 50 | 53,0 | 42,2 | 33,0 | 26,0 | **L07 01450** | 24 | **L07 01750** | **N10 30739** |
| 63 | 65,0 | 52,8 | 42,5 | 34,0 | **L07 01460** | 29 | **L07 01761** | **N10 30740** |
| 80 | 84,8 | 67,6 | 52,8 | 42,0 | **L07 01470** | 37 | **L07 01771** | **N10 30741** |
| 100 | 106,0 | 84,4 | 66,0 | 52,0 | **L07 01480** | 47 | **L07 01780** | **N10 30742** |

### Components



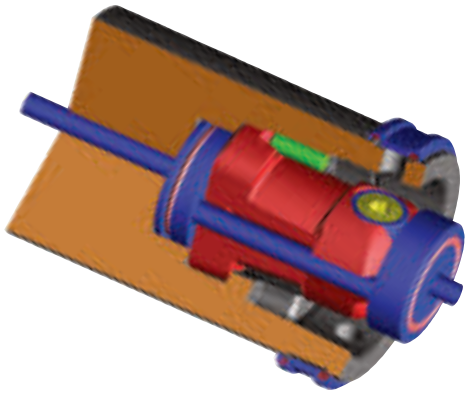
| KomLoc® Clamping cartridge | |
|---|---|
| Article | Order No. |
| System K IKZ-HSK25 | **L07 01020** |
| System K IKZ-HSK32 | **L07 01030** |
| System K IKZ-HSK40 | **L07 01040** |
| System K IKZ-HSK50 | **L07 01050** |
| System K IKZ-HSK63 | **L07 01060** |
| System K IKZ-HSK80 | **L07 01070** |
| System K IKZ-HSK100 | **L07 01080** |





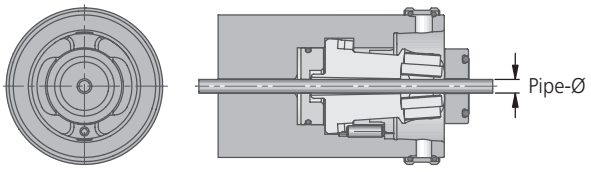
EP 1 056 563 and other patents and patent applications (KomLoc)

## KomLoc® HSK clamping system – System K for MQL



### Description / features

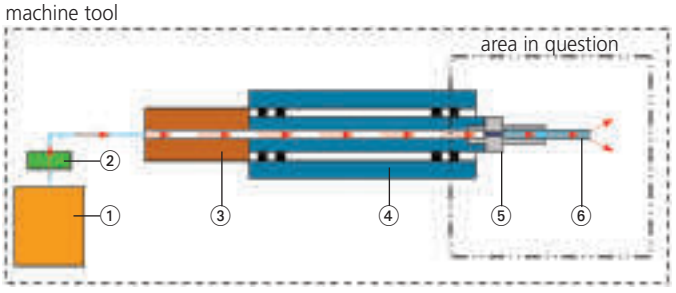
- KomLoc® minimal lubrication clamping element with open central area
- through hose for supply of minimal lubrication
- high clamping force similar to KomLoc®
- integral ejector
- compatible with existing KomLoc® contour
- available in sizes HSK 40, 50, 63, 80 and 100
- operating key can be held on both sides




| Article | **Order No.** with ejector | Pipe-Ø | Clamping force in kN |
|---|---|---|---|
| System K MQL-HSK40 | **L07 02040** | 3,9 | 20 |
| System K MQL-HSK50 | **L07 02050** | 4,9 | 30 |
| System K MQL-HSK63 | **L07 02060** | 6,9 | 40 |
| System K MQL-HSK80 | **L07 02070** | 7,9 | 50 |
| System K MQL-HSK100 | **L07 02080** | 9,9 | 70 |

## Overall system (MLC)

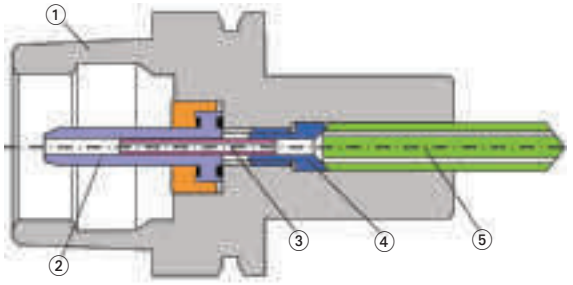
One important aspect for trouble-free functioning of the MLC system is the interplay of the individual elements in the overall minimal lubrication system. It is not generally sufficient for example for the tool just to be suitable for use with minimal lubrication. In fact all the elements need to be appropriately matched with one another.




① MLC unit
② stop valve
③ rotating supply
④ operating spindle
⑤ toolholder
⑥ tool

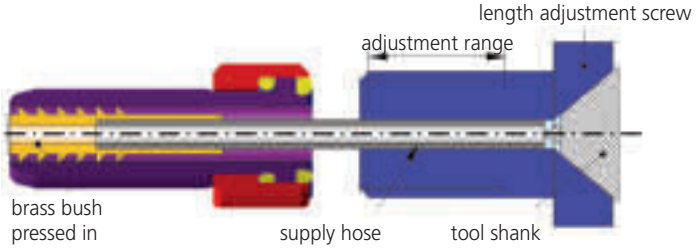
Components for an MLC machine tool

## Automatic tool change




① toolholder
② coolant supply hose
③ minimal lubrication supply hose
④ length adjustment screw
⑤ tool

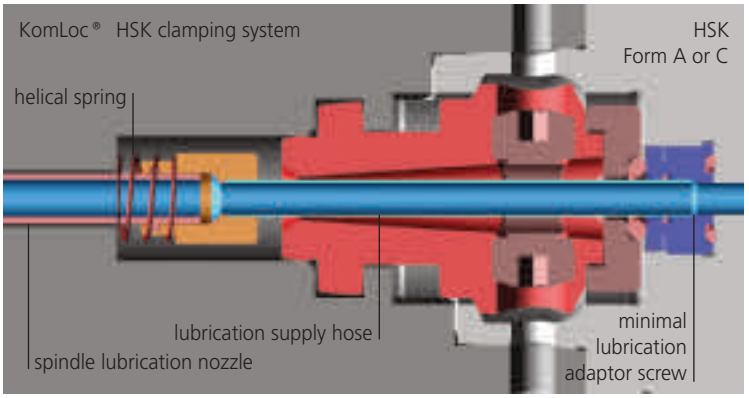
View of elements in question using an HSK connection as an example




Accessories such as adjusting screws can be supplied for any chucks and supply hoses.

## Manual tool change

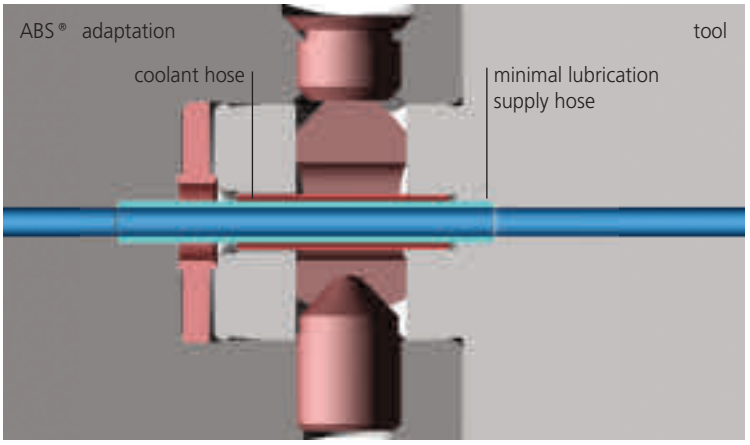
To successfully implement the manual clamping system, a solution for minimal lubrication supply on the machine was found for OEM projects. Here a system was applied which allowed the lubricant to be used in the best possible way. This solution involved connection by means of an HSK Form C adaptor with additional thread (as Form A) for the minimal lubricant adaptor screw to be fitted.




Layout for minimal lubrication with KomLoc ® HSK clamping system

## ABS ® modular connection

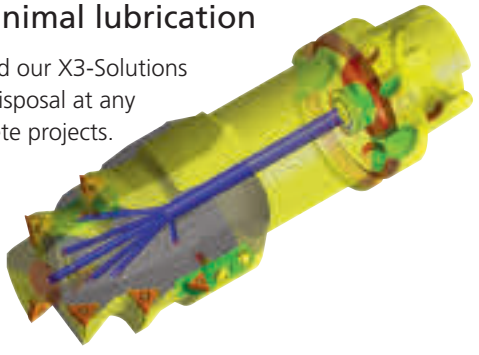
For ABS ® connections and ABS ® adaptors there are standard KOMET GROUP solutions. Please ask for information on the relevant projects. ABS ® connections usually involve connections with a tool or a form of adaptation with which an extension or a reduction is required.




ABS ® supply solution for minimal lubrication

## Tool design for minimal lubrication

Our external engineers and our X3-Solutions project team are at your disposal at any time for queries on concrete projects.

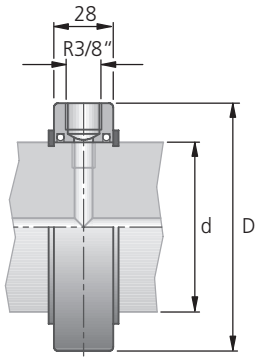


# Coolant Supply System

## Coolant Ring

KRD

- For machines with manual tool change.
- Peripheral speed: 15 - 20 m/sec.
- Coolant pressure up to approx.10 bar.

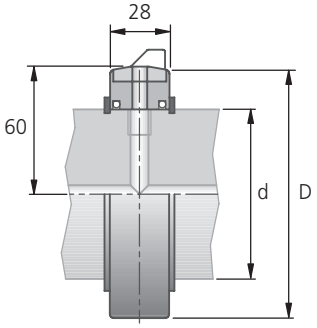



| Order No.<br>Article | d | D | kg | Assembly parts<br>Sealing ring<br>Order No. | Assembly parts<br>Retaining ring DIN 471<br>Order No.<br>Article |
|---|---|---|---|---|---|
| **L01 00001**<br>KRD 40 | 40 | 81 | 0,83 | **L01 00900** | **5523104017**<br>40×1,75 |
| **L01 00011**<br>KRD 50 | 50 | 91 | 1,08 | **L01 00910** | **5523105020**<br>50×2 |
| **L01 00031**<br>KRD 70 | 70 | 110 | 1,33 | **L01 00930** | **5523107025**<br>70×2,5 |
| **L01 00041**<br>KRD 80 | 80 | 120 | 1,49 | **L01 00940** | **5523108025**<br>80×2,5 |
| **L01 00051**<br>KRD 100 | 100 | 140 | 1,80 | **L01 00950** | **5523110030**<br>100×3 |
| **L01 00061**<br>KRD 125 | 125 | 165 | 2,22 | **L01 00960** | **5523112540**<br>125×4 |
| **L01 00071**<br>KRD 140 | 140 | 180 | 2,15 | **L01 00970** | – |

## Coolant Ring

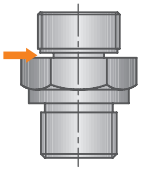
KRSD

- For machining centres and machines with automatic tool change, an automatic coolant supply system is available with coolant rings with **lip seals**.
- Peripheral speed: 15 - 20 m/sec.
- Coolant pressure up to approx.10 bar.




| Order No.<br>Article | d | D | kg | Assembly parts<br>Sealing ring<br>Order No. | Assembly parts<br>Retaining ring DIN 471<br>Order No.<br>Article |
|---|---|---|---|---|---|
| **L01 00411**<br>KRSD 50 | 50 | 117 | 2,05 | **L01 00910** | **5523105020**<br>50×2 |
| **L01 00431**<br>KRSD 70 | 70 | 117 | 1,60 | **L01 00930** | **5523107025**<br>70×2,5 |
| **L01 00441**<br>KRSD 80 | 80 | 117 | 1,15 | **L01 00940** | **5523108025**<br>80×2,5 |
| **L01 00451**<br>KRSD 100 | 100 | 117 | | **L01 00950** | **5523110030**<br>100×3 |

## Coolant Connection



| Article | Order No. |
|---|---|
| KUB-3/8 | **L01 00800** |

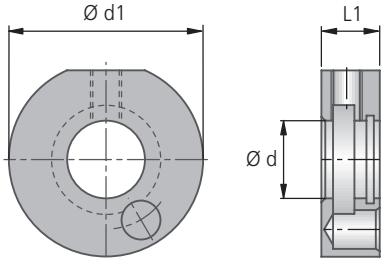
NOTE:
For safety reasons, only use a pipe connection with a definite shear point. Switch on coolant supply before starting operation.

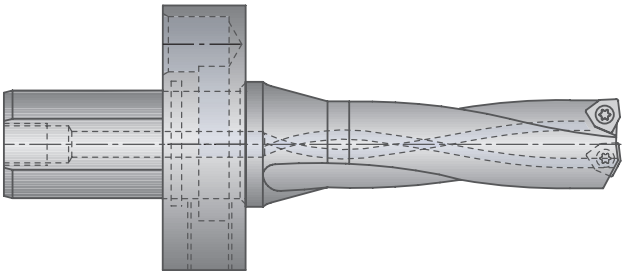
We recommend use of KOMET pipe connections to prevent any risk of accident from torn pipes should the coolant ring seize.

# Coolant supply ring for NC adaptors

## Coolant supply ring for axial coolant supply

Coolant supply to DIN 69880



| Order No. | Ø d | Ø d1 | L1 | kg | Assembly parts<br>Sealing ring<br>Order No. |
|---|---|---|---|---|---|
| **L01 01140** | 20 | 50 | 15 | 0,17 | **52914 02015** |
| **L01 01120** | 25 | 58 | 15 | 0,22 | **52914 02515** |
| **L01 01100** | 30 | 68 | 15 | 0,34 | **52914 03015** |
| **L01 01000** | 40 | 83 | 15 | 0,46 | **52914 04015** |

**Supply includes:**
Coolant supply ring with sealing ring.

# Coolant Supply System

## Mounting Instructions

1. A Taper holder with a KRSD coolant supply ring is inserted into the spindle.

2. Opposite the tool change side, i. e. where there is no obstruction, locate two taper holes on the headstock. Secure the two swivel holders (a, Fig. 2) to this and then the basic holder to the latter (b, Fig. 2). The swivel and basic holders can be assembled in several different ways. Two elongated holes on the basic holder offer additional movement so that this can always be adjusted into the correct position.

3. The holder for the hose (c, Fig. 2) is then inserted into the location bore and lightly clamped. This can be moved axially and rotated so that the location bolt inserted (d, Fig. 3) can be pushed gently and without force with its spigot piece into the coolant ring. The stop faces on the pin and coolant ring must be aligned with one another.

4. The hose holder (c, Fig. 2) is now set correctly and can be tightened accordingly. The location bolt is removed, the coolant hose inserted into the holder in its place and pressed against the coolant ring with a light force of approx. 100 g. The stop faces on the coolant hose and coolant ring must again be aligned parallel to one another (see also Fig. 1).

5. The clamping for the spindle, the coolant hose and all screws are now tightened and the supply hose connected. The fitting work is now complete (see Fig. 1).

6. Carry out a test run to check whether the fitting is functioning correctly and that there is no obstruction when changing tools.

**Note:**
The application details shown depend on the environmental and application conditions (e.g. machine, ambient temperature, use of lubricant/coolant and the machining result required). These are subject to correct operating conditions, correct application and compliance with the spindle speed limits given for the tools.

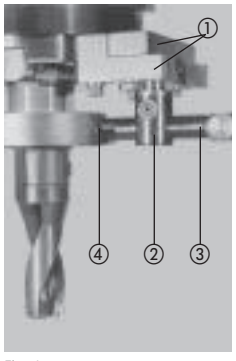


Fig. 1

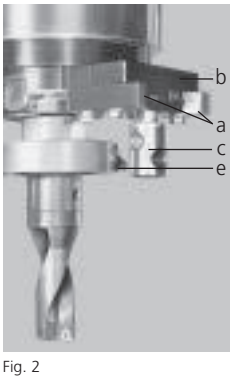


Fig. 2

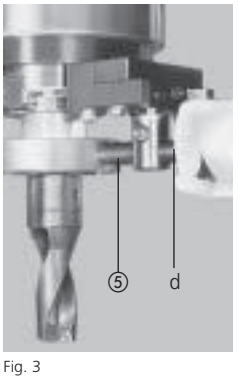
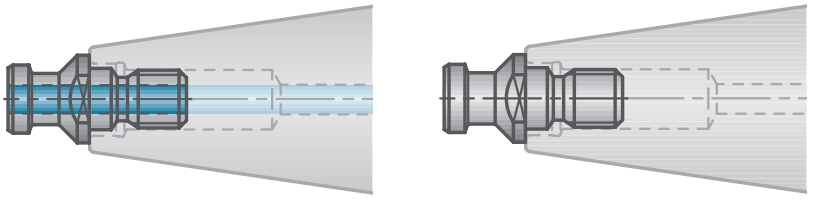


Fig. 3

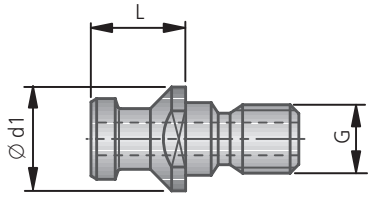
This fixture provides the coolant supply to tools used on machining centres without affecting supply for manual operation.

| Article | Order No. |
|---|---|
| Coolant supply system complete | **L01 05000 (AKV1)** |
| ① Basic body | **L01 05000.11** **L01 05000.12** **L01 05000.18** |
| ② Hose holder | **L01 05000.13** (AKV-V-004) **L01 05000.17** |
| ③ Coolant hose | **L01 05000.14** (AKV-Z-001) |
| ④ Seal | **L01 05000.15** (AKV-D-001) |
| ⑤ Pins | **L01 05000.16** |

Note:
With coolant supply through spindle, use pull stud with through hole.
To close off central coolant hole, use pull stud without through hole.

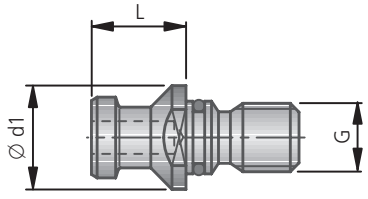


DIN 69872 A
with through hole



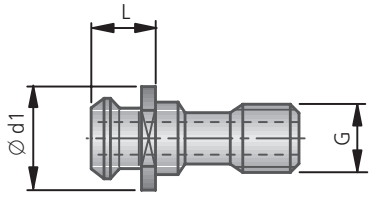

| DIN 69872 A | | | | |
|---|---|---|---|---|
| ISO size | Order No. | Ø d1 | L | G |
| 40 | **55391 01240** | 23 | 26 | M16 |
| 45 | **55391 01645** | 30 | 30 | M20 |
| 50 | **55391 02050** | 36 | 34 | M24 |

DIN 69872 B
sealed,
for coolant through collar



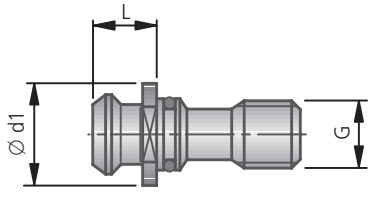

| DIN 69872 B | | | | |
|---|---|---|---|---|
| ISO size | Order No. | Ø d1 | L | G |
| 40 | **55392 01240** | 23 | 26 | M16 |
| 45 | **55392 01645** | 30 | 30 | M20 |
| 50 | **55392 02050** | 36 | 34 | M24 |

ISO 7388/2 B
with through hole




| ISO 7388/2 B | | | | |
|---|---|---|---|---|
| ISO size | Order No. | Ø d1 | L | G |
| 40 | **55391 51640** | 22,5 | 16,40 | M16 |
| 45 | **55391 52045** | 30,0 | 20,95 | M20 |
| 50 | **55391 52450** | 37,0 | 25,55 | M24 |

ISO 7388 B
sealed,
for coolant through collar




| ISO 7388 B | | | | |
|---|---|---|---|---|
| ISO size | Order No. | Ø d1 | L | G |
| 40 | **55392 51640** | 22,5 | 16,40 | M16 |
| 45 | **55392 52045** | 30,0 | 20,95 | M20 |
| 50 | **55392 52450** | 37,0 | 25,55 | M24 |

# KOMET® locking screws with TORX PLUS®

## Special features

**Improvements to detail to great effect**
The new geometry of the head engagement with the TORX PLUS® system has been designed so that little wear is caused when the tightening moment is applied.

Advantages:

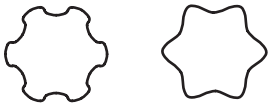
- 100% longer life for screwdriver
- 25% higher torque transmission
- improvement to torsion resistance and production reliability





Cross section

TORX PLUS® TORX



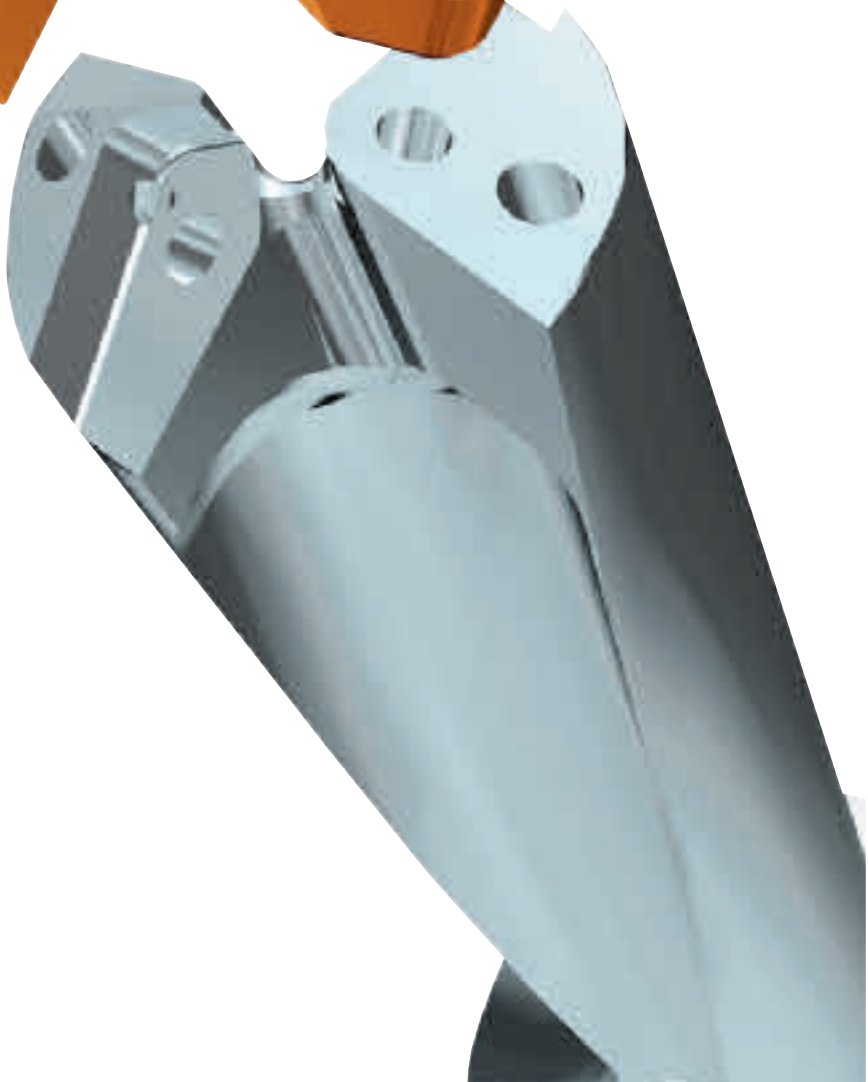


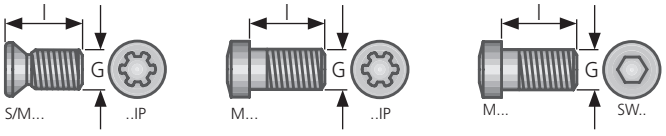


**Safer screw connections**

The facility for applying greater forces (clamping torque) has a direct effect on the safety of your screw connection.

This advantage also applies when loosening existing screw connections.



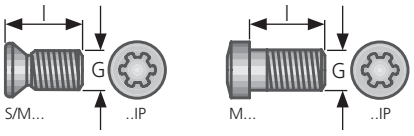



| | Insert size | Clamping screw | | | | | Key | | |
|---|---|---|---|---|---|---|---|---|---|
| | | ▼ G × l | Order No. | ▼ G × l | Order No. | Nm | Size | Order No. | Order No. |
| W00 WOHX | W00 04.. | S/M1,8×2,9-5IP | N00 56011 | | | 0,38 | 5IP | L05 00800 | L05 01110 |
| | W00 10.. | S/M2×4,9-6IP | N00 56031 | S/M2×3,8-6IP | N00 56021* | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W00 17.. | M2,5×4,5-8IP | N00 55581 | M2,5×2,8-8IP | N00 55551* | 1,28 | 8IP | L05 00830 | L05 01240 |
| | | | | M2,5×4-8IP | N00 55561* | | | | |
| | W00 24.. | M2,5×6-8IP | N00 55571 | M2,5×4-8IP | N00 55561* | 1,28 | 8IP | L05 00830 | L05 01240 |
| | | | | M2,5×4,5-8IP | N00 55581* | | | | |
| | W00 34.. | M3,5×5-8IP | N00 55701 | | | 2,25 | 8IP | L05 00830 | L05 01240 |
| | | M3,5×7,4-8IP | N00 55711 | | | | | | |
| | W00 42.. | M4,5×7-10IP | N00 55811 | M4,5×6-10IP | N00 55801* | 4,3 | 10IP | L05 00850 | L05 01260 |
| | | | | M4,5×9-10IP | N00 55821* | | | | |
| | W00 50.. | M4,5×7-10IP | N00 55811 | M4,5×9-10IP | N00 55821* | 4,3 | 10IP | L05 00850 | L05 01260 |
| | W00 58.. | M5,5×8,5-20IP | N00 55891 | M5,5×13,5-20IP | N00 55901* | 6,25 | 20IP | L05 00870 | – |
| W01 WOHX | W01 10.. | S/M2×4,3-6IP | N00 56041 | | | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W01 18.. | S/M2,2×5,5-6IP | N00 57553 | | | 1,01 | 6IP | L05 00810 | L05 01120 |
| | W01 24.. | S/M2,5×7,2-8IP | N00 57511 | | | 1,28 | 8IP | L05 00830 | L05 01240 |
| | W01 34.. | S/M3,5×7,3-10IP | N00 57521 | | | 2,8 | 10IP | L05 00850 | L05 01260 |
| | W01 42.. | S/M4,5×9-15IP | N00 57531 | | | 6,25 | 15IP | L05 00860 | – |
| | W01 50.. | S/M4,5×9-15IP | N00 57531 | | | 6,25 | 15IP | L05 00860 | – |
| | W01 58.. | S/M5,5×11-20IP | N00 57541 | | | 6,25 | 20IP | L05 00870 | – |
| W04 WNHX | | | | | | | | | |
| | W04 22.. | M3×7,8 /75° | N00 55050 | M3×7,8 /75° | N00 55050 | 1,8 | SW 1,5 | 18591 10015 | |
| | W04 34.. | M3,5×9,4/60° | N00 55060 | M3,5×11,4/60° | N00 55070 | 2,8 | | | |
| | W04 42.. | M4,5×12,4 | N00 55100 | M4,5×18,7 | N00 55130 | 4,5 | SW 2,5 | 18591 10025 | |
| | | M4,5×14,5 | N00 55110 | | | | | | |
| | W04 50.. | M4,5×16,4 | N00 55120 | M4,5×22,5 | N00 55140 | 4,5 | SW 2,5 | 18591 10025 | |
| | W04 58.. | M5,5×29,2 | N00 55180 | M5,5×29,2 | N00 55180 | 6,5 | SW 3 | 18591 10030 | |
| W24 | | | | | | | | | |
| | W24 12.. | S/M2×4,9-6IP | N00 56031 | S/M2×3,8-6IP | N00 56021* | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W24 20.. | S2560-8IP | N00 56651 | | | 1,28 | 8IP | L05 00830 | L05 01240 |
| W27 | W27 12.. | S/M2×4,9-6IP | N00 56031 | S/M2×3,8-6IP | N00 56021* | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W27 20.. | S2560-8IP | N00 56651 | | | 1,28 | 8IP | L05 00830 | L05 01240 |
| W28 WOEX | W28 10.. | S/M2×4,9-6IP | N00 56031 | S/M2×3,8-6IP | N00 56021* | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W28 17.. | M2,5×4,5-8IP | N00 55581 | M2,5×2,8-8IP | N00 55551* | 1,28 | 8IP | L05 00830 | L05 01240 |
| | | | | M2,5×4-8IP | N00 55561* | | | | |
| | W28 24.. | M2,5×6-8IP | N00 55571 | M2,5×4-8IP | N00 55561* | 1,28 | 8IP | L05 00830 | L05 01240 |
| | | | | M2,5×4,5-8IP | N00 55581* | | | | |
| | W28 34.. | M3,5×5-8IP | N00 55701 | M3,5×7,4-8IP | N00 55711 | 2,25 | 8IP | L05 00830 | L05 01240 |
| | W28 42.. | M4,5×7-10IP | N00 55811 | M4,5×6-10IP | N00 55801* | 4,3 | 10IP | L05 00850 | L05 01260 |
| | | | | M4,5×9-10IP | N00 55821* | | | | |
| | W28 50.. | M4,5×7-10IP | N00 55811 | M4,5×9-10IP | N00 55821* | 4,3 | 10IP | L05 00850 | L05 01260 |
| | W28 58.. | M5,5×8,5-20IP | N00 55891 | M5,5×13,5-20IP | N00 55901* | 6,25 | 20IP | L05 00870 | – |
| | W28 72.. | M5,5×13,5-20IP | N00 55901 | | | 6,25 | 20IP | L05 00870 | – |

* only be used for special tools

# KOMET® Clamping Screws

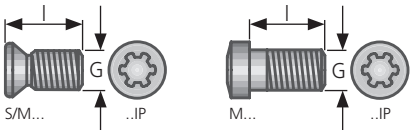
## for inserts W...




| | Insert size | Clamping screw | | | | | Key | | |
|---|---|---|---|---|---|---|---|---|---|
| | | ▼ G × l | Order No. | ▼ G × l | Order No. | Nm | Size | Order No. | Order No. |
| W29 WOEX | W29 04.. | S/M1,8×3,8-5IP | N00 56051 | | | 0,38 | 5IP | L05 00800 | L05 01110 |
| | W29 10.. | S/M2×4,3-6IP | N00 56041 | | | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W29 18.. | S/M2,2×5,5-6IP | N00 57553 | | | 1,01 | 6IP | L05 00810 | L05 01120 |
| | W29 24.. | S/M2,5×7,2-8IP | N00 57511 | | | 1,28 | 8IP | L05 00830 | L05 01240 |
| | W29 34.. | S/M3,5×7,3-10IP | N00 57521 | S/M3,5×7,3-10IP | N00 57790** | 2,8 | 10IP | L05 00850 | L05 01260 |
| | W29 42.. | S/M4,5×9-15IP | N00 57531 | | | 6,25 | 15IP | L05 00860 | – |
| | W29 50.. | | | | | | | | |
| | W29 58.. | S/M5,5×11-20IP | N00 57541 | | | 6,25 | 20IP | L05 00870 | – |
| W30 TOHX/TOGX | W30 04.. | S/M2×4,9-6IP | N00 56031 | S/M2×3,8-6IP | N00 56021* | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W30 14.. | S/M2,6×6,2-8IP | N00 56111 | S/M2,6×5,2-8IP | N00 56101* | 1,28 | 8IP | L05 00830 | L05 01240 |
| | | | | S/M2,6×4,7-8IP | N00 56121* | | | | |
| | W30 26.. | S/M3,5×6,2-10IP | N00 56201 | S/M3,5×7,3-10IP | N00 56211* | 2,8 | 10IP | L05 00850 | L05 01260 |
| | W30 44. | S/M5×9,4-20IP | N00 56401 | S/M5×13,4-20IP | N00 56411* | 6,25 | 20IP | L05 00870 | – |
| W32 TPHX | W32 03.. | S/M2×4,9-6IP | N00 56031 | S/M2×3,8-6IP | N00 56021* | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W32 13.. | S/M2,6×6,2-8IP | N00 56111 | S/M2,6×5,2-8IP | N00 56101* | 1,28 | 8IP | L05 00830 | L05 01240 |
| | W32 18.. | | | S/M2,6×4,7-8IP | N00 56121* | | | | |
| | W32 23.. | S/M3,5×6,2-10IP | N00 56201 | S/M3,5×7,3-10IP | N00 56211* | 2,8 | 10IP | L05 00850 | L05 01260 |
| | W32 32.. | S/M4×8-10IP | N00 56301 | | | 4,3 | 10IP | L05 00850 | L05 01260 |
| | W32 44.. | S/M5×9,4-20IP | N00 56401 | S/M5×13,4-20IP | N00 56411* | 6,25 | 20IP | L05 00870 | – |
| W34 TOHT | W34 18.. | S2560-8IP | N00 56651 | | | 1,28 | 8IP | L05 00830 | L05 01140 |
| | W34 32.. | S3574-10IP | N00 56751 | S35102-10IP | N00 56771 | 2,8 | 10IP | L05 00850 | L05 01260 |
| W37 TPHB | W37 18.. | S/M2,6×6,2-8IP | N00 56111 | S/M2,6×5,2-8IP | N00 56101* | 1,28 | 8IP | L05 00830 | L05 01240 |
| | | | | S/M2,6×4,7-8IP | N00 56121* | | | | |
| | W37 23.. | S/M3,5×6,2-10IP | N00 56201 | S/M3,5×7,3-10IP | N00 56211* | 2,8 | 10IP | L05 00850 | L05 01260 |
| | W37 32.. | S/M4×8-10IP | N00 56301 | | | 4,3 | 10IP | L05 00850 | L05 01260 |
| W57 TOHX/TOGX | W57 04.. | S/M2×4,9-6IP | N00 56031 | S/M2×3,8-6IP | N00 56021* | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W57 14.. | S/M2,6×6,2-8IP | N00 56111 | S/M2,6×5,2-8IP | N00 56101* | 1,28 | 8IP | L05 00830 | L05 01240 |
| | | | | S/M2,6×4,7-8IP | N00 56121* | | | | |
| | W57 26.. | S/M3,5×6,2-10IP | N00 56201 | S/M3,5×7,3-10IP | N00 56211* | 2,8 | 10IP | L05 00850 | L05 01260 |
| W58 TPHX | W58 03.. | S/M2×4,9-6IP | N00 56031 | S/M2×3,8-6IP | N00 56021* | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W58 13.. | S/M2,6×6,2-8IP | N00 56111 | S/M2,6×5,2-8IP | N00 56101* | 1,28 | 8IP | L05 00830 | L05 01240 |
| | W58 18.. | | | S/M2,6×4,7-8IP | N00 56121* | | | | |
| | W58 23.. | S/M3,5×6,2-10IP | N00 56201 | S/M3,5×7,3-10IP | N00 56211* | 2,8 | 10IP | L05 00850 | L05 01260 |
| | W58 32.. | S/M4×8-10IP | N00 56301 | | | 4,3 | 10IP | L05 00850 | L05 01260 |
| W59 TOHT | W59 18.. | S2560-8IP | N00 56651 | | | 1,28 | 8IP | L05 00830 | L05 01240 |
| | W59 32.. | S3574-10IP | N00 56751 | S35102-10IP | N00 56771 | 2,8 | 10IP | L05 00850 | L05 01260 |
| W60 DOHT | W60 18.. | S2560-8IP | N00 56651 | | | 1,28 | 8IP | L05 00830 | L05 01140 |
| | W60 32.. | S3574-10IP | N00 56751 | S35102-10IP | N00 56771 | 2,8 | 10IP | L05 00850 | L05 01260 |
| W78 VOHT/VOGW | W78 18.. | S2560-8IP | N00 56651 | | | 1,28 | 8IP | L05 00830 | L05 01140 |
| | W78 32.. | S3574-10IP | N00 56751 | S35102-10IP | N00 56771 | 2,8 | 10IP | L05 00850 | L05 01260 |
| W79 DOHT | W79 18.. | S2560-8IP | N00 56651 | | | 1,28 | 8IP | L05 00830 | L05 01140 |
| | W79 32.. | S3574-10IP | N00 56751 | S35102-10IP | N00 56771 | 2,8 | 10IP | L05 00850 | L05 01260 |



* only be used for special tools; ** tensile strength 1600 N/mm²



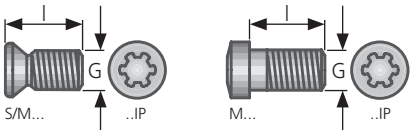

| | Insert size | Clamping screw | | | | | Key | | |
|---|---|---|---|---|---|---|---|---|---|
| | | ▼ G × l | Order No. | ▼ G × l | Order No. | Nm | Size | Order No. | Order No. |
| W80 SOGX | W80 12.. | S/M2×4,3-6IP | N00 56041 | | | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W80 18.. | S/M2,2×5,5-6IP | N00 57553 | | | 1,01 | 6IP | L05 00810 | L05 01120 |
| | W80 20.. | S/M2,2×5,5-6IP | N00 57553 | | | 1,01 | 6IP | L05 00810 | L05 01120 |
| | W80 24.. | S/M2,5×6,3-8IP | N00 57571 | | | 1,28 | 8IP | L05 00830 | L05 01240 |
| | W80 28.. | S3076-8IP | N00 57251 | | | 2,25 | 8IP | L05 00830 | L05 01240 |
| | W80 32.. | S3575-15IP | N00 57261 | | | 2,8 | 15IP | L05 00860 | – |
| | W80 38.. | S3575-15IP | N00 57261 | | | 2,8 | 15IP | L05 00860 | – |
| | W80 42.. | S45100-20IP | N00 57301 | | | 6,25 | 20IP | L05 00870 | – |
| | W80 46.. | S45100-20IP | N00 57301 | | | 6,25 | 20IP | L05 00870 | – |
| W82 SOHX | W82 32... | S3575-15IP | N00 57261 | | | 2,8 | 15IP | L05 00860 | – |
| W83 SOEX | W83 13.. | S/M2×4,3-6IP | N00 56041 | | | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W83 18.. | S/M2,2×5,5-6IP | N00 57553 | S/M2,2×5,5-6IP | N00 57740** | 1,01 | 6IP | L05 00810 | L05 01120 |
| | | | | S/M2,2×7,5-6IP | N00 57760** | | | | |
| | W83 23.. | S/M2,5×6,3-8IP | N00 57571 | S/M2,5×6,3-8IP | N00 57730** | 1,28 | 8IP | L05 00830 | L05 01240 |
| | | | | S/M2,5×8,8-8IP | N00 57780** | | | | |
| | W83 32.. | S3575-15IP | N00 57261 | S3575-15IP | N00 57750** | 2,8 | 15IP | L05 00860 | – |
| | W83 44.. | S45100-20IP | N00 57301 | | | 6,25 | 20IP | L05 00870 | – |
| W82 SPGT/SPWG | W83 18.. | S2553-7IP | N00 57221 | | | 0,9 | 7IP | L05 00820 | L05 01130 |
| | W83 32.. | S3575-15IP | N00 57261 | | | 2,8 | 15IP | L05 00860 | – |
| | W83 44.. | S45111-20IP | N00 56851 | | | 6,25 | 20IP | L05 00870 | – |
| W84 | W84 18000.01.. | S2560-8IP | N00 56651 | | | 1,28 | 8IP | L05 00830 | L05 01140 |
| | W84 32000.07.. | S35102-10IP | N00 56771 | | | 2,8 | 10IP | L05 00850 | L05 01260 |
| W85 CPGT/CPGW | W85 09000... | S2043-6IP | N00 57191 | | | 0,62 | 6IP | L05 00810 | L05 01120 |
| | W85 18000.01.. / .02.. | S2560-8IP | N00 56651 | | | 1,28 | 8IP | L05 00830 | L05 01240 |
| | W85 18000... | S2553-7IP | N00 57221 | | | 0,9 | 7IP | L05 00820 | L05 01130 |
| | W85 23000... | S3065-9IP | N00 57341 | | | 2,25 | 9IP | L05 00840 | L05 01250 |
| | W85 32000.02.. / .03.. / .04.. / .05.. | S3574-10IP | N00 56751 | | | 2,8 | 10IP | L05 00850 | L05 01260 |
| | W85 32000... | S3575-15IP | N00 57261 | | | 2,8 | 15IP | L05 00860 | – |
| | W85 44000... | S45111-20IP | N00 56851 | | | 6,25 | 20IP | L05 00870 | – |
| W86 | W86 18000... | S2560-8IP | N00 56651 | | | 1,28 | 8IP | L05 00830 | L05 01240 |
| | W86 32000... | | 16301 00537 | | | | Tx15 | L05 00070 | – |
| W89 VCMT/VBMT | W89 23000... | | 51560 74551 | | | | Tx9 | L05 00050 | – |
| | W89 32000.05.. / .06.. | | 16301 00537 | | | | Tx15 | L05 00070 | – |
| | W89 32000.07.. / .08.. | S3585-15IP | N00 57271 | | | 2,8 | 15IP | L05 00860 | – |

| | Insert size | Clamping screw | | | | Key | | |
|---|---|---|---|---|---|---|---|---|
| | | G × l | Article | Order No. | Nm | Size | Order No. | Order No. |
| C83 | C83 32.. SCMT / SCGT | 3,5×7,5 | S3575-15IP | N00 57261 | 2,8 | 15IP | L05 00860 | – |
| | C83 44.. SCMT / SCGT | 4,5×11,1 | S45111-20IP | N00 56851 | 6,25 | 20IP | L05 00870 | – |
| C84 | C84 13.. TCMT / TCGT | 2,2×4,8 | S/M2,2×4,8-6IP | N00 57660 | 1,01 | 6IP | L05 00810 | L05 01120 |
| | C84 18.. TCMT / TCGT | 2,5×6 | S2560-8IP | N00 56651 | 1,28 | 8IP | L05 00830 | L05 01140 |
| | C84 32.. TCMT / TCGT | 3,5×10,2 | S35102-10IP | N00 56771 | 2,8 | 10IP | L05 00850 | L05 01260 |
| C85 | C85 18.. CCMT / CCGT | 2,5×5,3 | S2553-7IP | N00 57221 | 0,9 | 7IP | L05 00820 | L05 01130 |
| | C85 32.. CCMT / CCGT | 3,5×7,5 | S3575-15IP | N00 57261 | 2,8 | 15IP | L05 00860 | – |
| | C85 44.. CCMT / CCGT | 4,5×11,1 | S45111-20IP | N00 56851 | 6,25 | 20IP | L05 00870 | – |
| C86 | C86 18.. DCMT / DCGT | 2,5×6 | S2560-8IP | N00 56651 | 1,28 | 8IP | L05 00830 | L05 01240 |
| | C86 32.. DCMT / DCGT | 3,5×7,5 | S3575-15IP | N00 57261 | 2,8 | 15IP | L05 00860 | – |

** tensile strength 1600 N/mm²

# KOMET® Clamping Screws

## for inserts H... / Q...




| | Insert size | Clamping screw | | | | Key | | |
|---|---|---|---|---|---|---|---|---|
| | | G × l | Article | Order No. | Nm | Size | Order No. | Order No. |
| H60 / H62 | XOHX 0802.. (Ø 17,3 – 20,7) | 2,2×4,8 | S/M2,2×4,8-6IP | N00 57660 | 1,01 | 6IP | L05 00810 | L05 01120 |
| | XOHX 1003.. (Ø 20,8 – 24,7) | 3×5,8 | S/M3×5,8-8IP | N00 57630 | 2,25 | 8IP | L05 00830 | L05 01240 |
| | XOHX 12T3.. (Ø 24,8 – 29,7) | 3,5×6,9 | S/M3,5×6,9-10IP | N00 57640 | 2,8 | 10IP | L05 00850 | L05 01260 |
| | XOHX 1504.. (Ø 29,8 – 36,2) | 4×8,7 | S/M4×8,7-15IP | N00 57650 | 4,3 | 15IP | L05 00860 | – |
| | XOHX 2205.. (Ø 36,3 – 44,2) | 5×10,4 | S/M5×10,4-20IP | N00 57670 | 6,25 | 20IP | L05 00870 | – |
| H80 | LNGU 0904 (Ø 32 – 41,99) | 3×7,6 | S3076-8IP | N00 57251 | 2,25 | 8IP | L05 00830 | L05 01240 |
| | LNHX 120510-01 (Ø 42 – 61,99) | 4×10,1 | S40101-15IP | N00 57411 | 4,3 | 15IP | L05 00860 | – |
| Q09 | Q09 13.. / Q09 18.. | 2,5×5,3 | S2553-7IP | N00 57221 | 0,9 | 7IP | L05 00820 | L05 01130 |
| | Q09 44.. / Q09 53.. | 4,5×10 | S45100-20IP | N00 57301 | 6,25 | 20IP | L05 00870 | – |
| Q12 | Q12 18.. | 2,5×3,6 | S2536-7IP | N00 57201 | 0,9 | 7IP | L05 00820 | L05 01130 |
| | | 2,5×4,2 | S2542-8IP | N00 57211 | 1,28 | 8IP | L05 00830 | L05 01240 |
| | | 2,5×5,3 | S2553-7IP | N00 57221 | 0,9 | 7IP | L05 00820 | L05 01130 |
| | Q12 32000.05.. / .06.. | 3×5,6 | S3056-8IP | N00 57231 | 2,25 | 8IP | L05 00830 | L05 01240 |
| | Q12 32000.07.. | 3×7 | S3070-8IP | N00 57241 | 2,25 | 8IP | L05 00830 | L05 01240 |
| | Q12 32000.08.. / .09.. | 3,5×8,5 | S3585-15IP | N00 57271 | 2,8 | 15IP | L05 00860 | – |
| | Q12 32000.15.. / .16.. / .17.. | 3,5×9,8 | S3598-15IP | N00 57281 | 2,8 | 15IP | L05 00860 | – |
| | Q12 32000.18.. / .19.. / .20.. | 3×7,6 | S3076-8IP | N00 57251 | 2,25 | 8IP | L05 00830 | L05 01240 |
| | Q12 32000.38.. / .41.. / .42.. / .43.. | 3,5×9,8 | S3598-15IP | N00 57281 | 2,8 | 15IP | L05 00860 | – |
| | Q12 32000.52.. / .53.. | 3×6,6 | S3066-8IP | N00 57431 | 2,25 | 8IP | L05 00830 | L05 01240 |
| | Q12 44.. | 4,5×10 | S45100-20IP | N00 57301 | 6,25 | 20IP | L05 00870 | – |
| Q15 | Q15 18.. | 2,5×5,3 | S2553-7IP | N00 57221 | 0,9 | 7IP | L05 00820 | L05 01130 |
| | Q15 32.. | 3,5×7,5 | S3575-15IP | N00 57261 | 2,8 | 15IP | L05 00860 | – |
| Q21 | Q21 24.. | 3×7,6 | S3076-8IP | N00 57251 | 2,25 | 8IP | L05 00830 | L05 01240 |
| | Q21 32.. | 3,5×7,5 | S3575-15IP | N00 57261 | 2,8 | 15IP | L05 00860 | – |
| | Q21 44.. | 4,5×10 | S45100-20IP | N00 57301 | 6,25 | 20IP | L05 00870 | – |
| Q33 | Q33 18.. | 2,5×6 | S2560-8IP | N00 56651 | 1,28 | 8IP | L05 00830 | L05 01240 |
| | Q33 23.. | 3×7 | S3070-8IP | N00 57241 | 2,25 | 8IP | L05 00830 | L05 01240 |
| | | 3×7,6 | S3076-8IP | N00 57251 | | | | |
| Q36 | Q36 18.. | 2,5×5,6 | S2556-8IP | N00 57321 | 1,28 | 8IP | L05 00830 | L05 01240 |
| | Q36 24. | 3×6,6 | S3066-9IP | N00 57341 | 2,25 | 9IP | L05 00840 | L05 01250 |
| | Q36 38.. | 4×10,1 | S40101-15IP | N00 57411 | 4,3 | 15IP | L05 00860 | – |
| Q80 | Q80 32.. | 4×10,1 | S40101-15IP | N00 57411 | 4,3 | 15IP | L05 00860 | – |

# KOMET® Torque Key

## for TORX PLUS®

**To ensure the correct starting torque on screws, the torque key from the TORX PLUS® system has.**

- Ergonomically designed cellulose acetate handle – chemical and oil resistant
- Fine grained surface on handle ensures maximum force transmission even if hands are oily
- Compact and particularly light construction
- Chrome plated blade in high quality chrome vanadium molybdenum steel for heavy duty use
- Anti-roll design – stops the tool from rolling off the bench
- Optimum handle size for torque range
- KOMET supplies torque keys with fixed torques and torque handles with variable settings
- Complies with the following requirements: EN ISO 6789, BS EN 26789, ASME B107.14M (with certificate)

### Torque wrench

**TorqueFix®**



| Article | Order No. | Nm |
|---|---|---|
| Fxd. torq. | L05 00901 | 0,38 |
| Fxd. torq. | L05 00911 | 0,62 |
| Fxd. torq. | L05 03301 | 1,01 |
| Fxd. torq. | L05 00921 | 0,90 |
| Fxd. torq. | L05 00931 | 1,28 |
| Fxd. torq. | L05 03311 | 2,25 |
| Fxd. torq. | L05 00941 | 2,50 |
| Fxd. torq. | L05 00951 | 2,80 |
| Fxd. torq. | L05 00961 | 4,30 |
| Fxd. torq. | L05 00971 | 6,25 |

**Supply includes TorqueFix®:**
Torque wrench without replaceable blade.

### Torque wrench – adjustable with scale

**TorqueVario®**



| Article | Order No. | Nm |
|---|---|---|
| Variab. torq. | L05 00781 | 0,38-1,01 |
| Variab. torq. | L05 00931 | 1,28 |
| Variab. torq. | L05 00791 | 2,25-6,25 |

**Adjusting key**



| Article | Order No. |
|---|---|
| Adjusting key for TorqueVario® | L05 00990 |

**Supply includes TorqueVario®:**
Torque wrench with adjusting key, without replaceable blade.



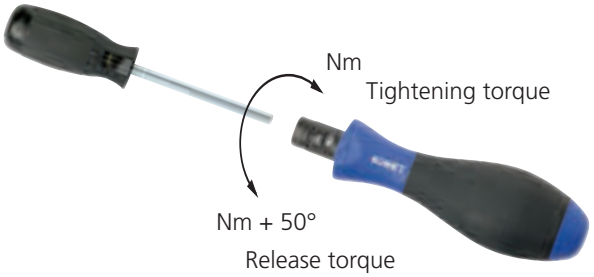
**Replaceable blade**



| Article | Order No. | Article | Order No. |
|---|---|---|---|
| Blade 5IP | L05 00700 | Blade 9IP | L05 00740 |
| Blade 6IP | L05 00710 | Blade 10IP | L05 00750 |
| Blade 7IP | L05 00720 | Blade 15IP | L05 00760 |
| Blade 8IP | L05 00730 | Blade 20IP | L05 00770 |

### Special note

Preset tightening torque and approx. 50% higher release torque to prevent screws from being damaged when releasing.




The keys for TORX PLUS® do not fit into Torx screws. The old Torx keys do fit the new TORX PLUS® shape but we recommend only.
TORX PLUS® keys be used for tightening screws.
TORX PLUS® is a registered trademark for the Camcar Division of Textron Inc.

### Changing the torque

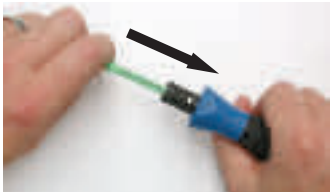
Insert adjusting key in variable torque key handle and turn to set the required torque. The appropriate IP size can be read from the graduated scale.



Remove blade



Insert adjusting key and set



Push blade in again

# International Material Classification (to VDI 3323 standard)

| Material | | DIN | AISI / SAAE | BS EN | AFNOR | SS | UNI | UNE | JIS |
|---|---|---|---|---|---|---|---|---|---|
| P | 1.0 | 1.0038 | RSt37-2 | A570-36 | 4360 40C | E24-2NE | 1311 | | | |
| | 1.0 | 1.0116 | St37-3 | A573-81 65 | 4360 40B | E24-U | 1312 | | | |
| | 1.0 | 1.0144 | St44-3 | A573-81 | 4360 43C | E28-4 | 1412 | | | |
| | 1.0 | 1.0201 | St36 | 1006 | | Fd5 | 1160 | | | |
| | 1.0 | 1.0345 | H1 | A515 65 | 1 501 161 | A37CP | 1330 | | | |
| | 2.0 | 1.0401 | C15 | 1015;1016;1017 | 080M15 | CC12 | 1350 | C15C16 | F.111 | |
| | 2.0 | 1.0402 | C22 | 1020;1023 | 055M15;070M20 ... 2C | AF42C20;XC25;1C22 | 1450 | C20; C21; C25 | 1C22F.112 | S20C; S22C |
| | 2.0 | 1.0436 | Ast45 | A662C | 1 501 224 | A48FP | 2103 | | | |
| | 2.0 | 1.0443 | GS-45 | A27 65-35 | A1 | E23-45M | | | | |
| | 2.0 | 1.0473 | 19Mn6 | A537 1 | 1 501 224 | A52CP | 2101 | | | |
| | 2.0 | 1.0501 | C35 | 1035 | 060A35 | CC35 | 1550 | C35 | F.113 | |
| | 2.0 | 1.0503 | C45 | 1043 | 080M46 | AF65C45 | 1650 | C45 | F.5110 | |
| | 2.0 | 1.0503 | C45 | 1045 | 080M46 | CC45 | 1650 | C45 | F.114 | |
| | 2.0 | 1.0511 | C40 | 1040 | 080M40 | AF60C40 | | C40 | F.114.A | |
| | 2.0 | 1.0535 | C55 | 1055 | 070M55 | | 1655 | C55 | F.115 | |
| | 2.0 | 1.0551 | GS-52 | A27 70-36 | A2 | 280-480M | 1505 | | | |
| | 2.0 | 1.0553 | GS-60 | A148 80-40 | A3 | 320-560M | 1606 | | | |
| | 2.0 | 1.0577 | Ast 52 | A738 | 1 501 224 | A52FP | 2107 | | | |
| | 2.0 | 1.0601 | C60 | 1060 | 080A62 ... 43D | CC55 | | C60 | | |
| | 2.0 | 1.0841 | St52-3 | 5120 | 150M19 | 20MC5 | 2172 | Fe52 | F.431 | |
| | 2.0 | 1.1121 | Ck10 | 1010 | 045M10 | XC10 | 1265 | C10 | F.1510-C10K | |
| | 2.0 | 1.1133 | 20Mn5 | 1022;1518 | 120M19 | 20M5 | 1132 | G22Mn3;20Mn7 | F.1515-20Mn6 | SMnC420 |
| | 2.0 | 1.1141 | CK 15 | 1015, 1017 | 080M15 | XC18 | 1370 | | F.1511 | |
| | 2.0 | 1.1158 | C25E;Ck25 | 1025 | 070M26 | 2C25;XC25 | 1450 | C25 | F.1120-C25k | S25C; S28C |
| | 2.0 | 1.1183 | Cf35 | 1035 | 060A35 | XC38TS | 1572 | C36 | | S35C |
| | 2.0 | 1.1191 | Ck45 | 1042 | 080A47 | XC45 | 1660 | C45 | F.1140 | |
| | 2.0 | 1.1545 | C105W1 | W110 | BW1A | Y105 | 1880 | C36KU | F.5118 | SK3 |
| | 2.0 | 1.5415 | 15Mo3 | ASTM A204Gr.A | 1501-240 | 15D3 | 2912 | 16Mo3KW | 16Mo3 | STBA 12 |
| | 2.0 | 1.5423 | 16Mo5 | 4520 | 1503-245-420 | | | 16Mo5 | 16Mo5 | |
| | 2.0 | 1.5622 | 14Ni6 | ASTM A350LF5 | | 16N6 | | 14Ni6 | 15Ni6 | |
| | 2.1 | 1.0715 | 9 SMn28 | 1213 | 230M07 | S250 | 1912 | CF9SMn28 | 11SMn28 | SUM22 |
| | 2.1 | 1.0718 | 9 SMnPb28 | 12 L 13 | | S250Pb | 1914 | CF9SMnPb28 | 11SMnPb28 | SUM22,3,4L |
| | 2.1 | 1.0722 | 10 SPb20 | 11 L 08 | | 10PbF2 | | CF10 SPb20 | 10SPb20 | |
| | 2.1 | 1.0726 | 35S20 | 1140 | 212M36 ... 8M | 35M F6 | 1957 | | F.210.G | |
| | 2.1 | 1.0727 | 45S20 | 1146 | | 45M F4 | 1973 | | | |
| | 2.1 | 1.0736 | 9SMn36 | 1215 | 240M07 ... 1b | S300 | | CF9SMn36 | 12SMn35 | SUM25 |
| | 2.1 | 1.0737 | 9SMnPb36 | 12 L 14 | | S300Pb | 1926 | CF9SMnPb36 | 12SMnP35 | |
| | 3.0 | 1.0904 | 55Si7 | 9255 | 250A53 ... 45 | 55S7 | 2085 | 55Si8 | 56Si7 | |
| | 3.0 | 1.0961 | 60SiCr8 | 9262 | | 60SC6 | | 60SiCr8 | 60SiCr8 | |
| | 3.0 | 1.1157 | 40Mn4 | 1039 | 150M36 ... 15 | 35M5 | | | | |
| | 3.0 | 1.1167 | 36Mn5 | 1335 | 150M36 | 40M5 | 2120 | | 36Mn5 | SMn438(H) |
| | 3.0 | 1.1170 | 28Mn6 | 1330 | 150M28 ... 14A | 20M5 | | C28Mn | | SCMn1 |
| | 3.0 | 1.1203 | Ck55 | 1055 | 070M55 | XC55 | | C50 | F.1203-36MnG | S55C |
| | 3.0 | 1.1213 | Cf53 | 1050 | 060A52 | XC48TS | 1674 | C53 | | S50C |
| | 3.0 | 1.1221 | Ck60 | 1064 | 060A62 | XC65 | 1678 | C60 | F.1150 | |
| | 3.0 | 1.1231 | Ck67 | 1070 | 070A72 | XC68 | 1770 | C70 | F.141 | |
| | 3.0 | 1.1248 | Ck75 | 1080 | 060A78 | XC75 | 1774 | | F.5107 | |
| | 3.0 | 1.1274 | Ck101 | 1095 | 060A96 | XC100 | 1870 | | F.5117 | |
| | 3.0 | 1.2713 | 55NiCrMoV6 | L6 | | 55NCDV7 | | | F.520.S | SKT4 |
| | 3.0 | 1.2721 | 50NiCr13 | L6 | | 55NCV6 | 2550 | | F.528.S | |
| | 3.0 | 1.3401 | G-X120Mn12 | ASTM A128 75 | BW10 | Z120M12 | 2183 | GX120Mn12 | AM-X120Mn12 | SCMnH/1 |
| | 3.0 | 1.3505 | 100Cr6 | 52100 | 534A99 ... 31 | 100C6 | 2258 | 100Cr6 | F.131 | SUJ2 |
| | 3.0 | 1.5662 | X8Ni9 | ASM A353 | 502-650 | 9 Ni | | X10Ni9 | F.2645 | SL9N60(53) |
| | 3.0 | 1.5680 | 12Ni19 | 2515 (2517) | 12Ni19 | Z18N5 | | 12Ni19 | 12Ni19 | SL5N60 |
| | 3.0 | 1.5710 | 36NiCr6 | 3135 | 640A35 ... 111A | 35NC6 | | | | SNC236 |
| | 3.0 | 1.5732 | 14NilCr10 | 3415 | | 14NC11 | | 16NiCr11 | 15NiCr11 | SNC415(H) |
| | 3.0 | 1.5752 | 14NilCr14 | 3310 | 655M13 ... 36A | 12NC15 | | | | SNC815(H) |
| | 3.0 | 1.6511 | 36CrNiMo4 | 9840 | 816M40 ... 110 | 40NCD3 | | 36NiCrMo4(KB) | F.128 | |
| | 3.0 | 1.6523 | 21NiCrMo2 | 8620, 8617 | 805M20 ... 362 | 20NCD2 | 2506 | 20NiCrMo2 | 20NiCrMo2 | SNCM220(H) |
| | 3.0 | 1.6546 | 40NiCrMo22 | 8740, 8640, 8742 | 311-Type 7 | 40NCD2 | | 40NiCrMo2(KB) | F.129 | SNCM240 |
| | 3.0 | 1.6582 | 35CrNiMo6 | 4340 | 817M40 ... 24 | 35NCD6 | 2541 | 35NiCrMo6(KB) | F.127 | |
| | 3.0 | 1.6587 | 17CrNiMo6 | 4317 | 820A16 | 18NCD6 | | | 14NiCrMo13 | |
| | 3.0 | 1.6657 | 14NiCrMo13-4 | 9310 | 832M13 ... 36C | | | 15NiCrMo13 | 14NiCrMo131 | |
| | 3.0 | 1.7015 | 15Cr3 | 5015 | 523M15 | 12C3 | | | | SCr415(H) |
| | 3.0 | 1.7033 | 34Cr4 | 5132 | 530A32 ... 18B | 32C4 | | 34Cr4(KB) | 35Cr4 | SCr430(H) |
| | 3.0 | 1.7035 | 41Cr4 | 5140 | 530M40 ... 18 | 42C4 | | 41Cr4 | 42Cr4 | SCr440(H) |
| | 3.0 | 1.7039 | 34MoCrS4 G | L1 | 524A14 | | 2092 | 105WCR 5 | | |
| | 3.0 | 1.7045 | 42Cr4 | 5140 | | | 2245 | | 42Cr4 | SCr440 |
| | 3.0 | 1.7131 | 16MnCr5 | 5115 | (527M20) | 16MC5 | 2511 | 16MnCr5 | 16MnCr5 | |
| | 3.0 | 1.7139 | 16MnCr5 | | | | 2127 | | | |
| | 3.0 | 1.7176 | 55Cr3 | 5155 | 527A60 ... 48 | 55C3 | | | | SUP9(A) |
| | 3.0 | 1.7218 | 25CrMo4 | 4130 | 1717CDS110 | 25CD4 | 2225 | 25CrMo4(KB) | 55Cr3 | SCM420/430 |
| | 3.0 | 1.7220 | 34CrMo4 | 4135, 4137 | 34CrMo4 | 34CD4 | 2234 | 35CrMo4 | 34CrMo4 | SCM435TK |
| | 3.0 | 1.7223 | 41CrMo4 | 4142 | | | | 41CrMo4 | 42CrMo4 | SNB 22-1 |
| | 3.0 | 1.7225 | 42CrMo4 | 4140 | 708M40 ... 19A | 42CD4 | 2244 | 42CrMo4 | 42CrMo4 | SCM440(H) |
| | 3.0 | 1.7262 | 15CrMo5 | | | 12CD4 | 2216 | | 12CrMo4 | SCM415(H) |
| | 3.0 | 1.7335 | 13CrMo4 4 | ASTM A182 F-12 | | | | 14CrMo4 5 | 14CrMo45 | |
| | 3.0 | 1.7337 | 16CrMo44 | ASTM A387 12-2 | 1501 620 | 15CD 4.5 | 2216 | 12CrMo910 | | |
| | 3.0 | 1.7361 | 32CrMo12 | | 722M24 ... 40B | 30CD12 | 2240 | 32CrMo12 | F.124.A | |
| | 3.0 | 1.7715 | 14MoV6 3 | | 1503-660-440 | | | | 13MoCrV6 | |
| | 3.0 | 1.8159 | 50CrV4 | 6150 | | | | 50CrV4 | F.143 | |
| | 3.0 | 1.8509 | 41CrAlMo7 | ASTM A290 | 905M39 ... 41B | 40CAD6, 12 | 2940 | 41CrAlMo7 | 41CrAlMo7 | |
| | 3.0 | 1.8515 | 31 CeMo 12 | | 722M24 | 30 CD 12 | 2240 | 30CrMo12 | F.01712 | |
| | 3.0 | 1.8523 | 39CrMoV13 9 | | 897M39 ... 40C | | | 36CrMoV12 | | |
| | 4.0 | 1.2067 | 100Cr6 | L3 | BL3 | Y100C6 | | | 100Cr6 | |
| | 4.0 | 1.2080 | X210Cr12 | D3 | BD3 | Z200C12 | | X210Cr13KU | X210Cr12 | SKD1 |
| | 4.0 | 1.2083 | X42Cr13 | | | X40Cr14 | 2314 | | F.5263 | |
| | 4.0 | 1.2344 | X40CrMoV5 1 | H13 | BH13 | Z40CDV5 | 2242 | X40CrMoV511KU | F.5318 | SKD61 |

# International Material Classification (to VDI 3323 standard)

| | Material | | DIN | AISI / SAAE | BS EN | AFNOR | SS | UNI | UNE | JIS |
|---|---|---|---|---|---|---|---|---|---|---|
| P | 4.0 | 1.2363 | X100CrMoV5 1 | A2 | BA2 | Z100CDV5 | 2260 | X100CrMoV51KU | F.5227 | SKD12 |
| | 4.0 | 1.2379 | X155CrVMo121 | D2 | BD2 | Z160CDV12 | 2310 | X155CrVMo12 1KU | F.520.A | SKD11 |
| | 4.0 | 1.2419 | 105WCr6 | | | 105WC13 | 2140 | 107WCr5 | 105WCr5 | SKS31 |
| | 4.0 | 1.2436 | X210 CrW 12 | D4 (D6) | BD6 | Z200CD12-01 | 2312 | X215CrW12 1KU | F.5213 | |
| | 4.0 | 1.2542 | 45WCrV7 | S1 | BS1 | 45WCrV8 | 2710 | 45WCrV8KU | F.524 | |
| | 4.0 | 1.2581 | X30WCrV9 3 | H21 | BH21 | Z30WCV9 | | X30WCrV9 3KU | F.526 | SKD5 |
| | 4.0 | 1.2601 | X165CrMoV12 | | | | 2310 | X165CrMoW12KU | F.5211 | |
| | 4.1 | 1.3243 | S6/5/2/5 | M35 | BM35 | 6-5-2-5 | 2723 | HS6 5 2 5 | F.5613 | SKH55 |
| | 4.1 | 1.3343 | S6/5/2 | M2 | BM2 | Z85WDCV | 2722 | HS6 5 2 | F.5604 | SKH51 |
| | 4.1 | 1.3348 | S2/9/2 | M7 | | 2 9 2 | 2782 | HS2 9 2 | | |
| S | 5.0 | – | CoCr22W14 | AMS 5772 | | KC22 | | | | |
| | 5.0 | 1.4362 | X2CrNiN23 4 | S32304 | | Z2CN23-04AZ | 2327 | | | |
| | 5.0 | 1.4460 | X8CrNiMo27-5 | S32900 | | | 2324 | | | |
| | 5.0 | 1.4462 | X2CrNiMoN2253 | S31803 | | Z2CND22-05-03 | 2377 | | | |
| | 5.0 | 2.4375 | NiCu30Al | 4676 | 3072-76 | | | | | |
| | 5.0 | 2.4603 | NiCr 30 FeMo | 5390A | | NC22FeD | | | | |
| | 5.0 | 2.4630 | NiCr20Ti | | HR5,203-4 | NC20T | | | | |
| | 5.0 | 2.4631 | NiCr20TiAk | | Hr40,601 | NC20TA | | | | |
| | 5.0 | 2.4856 | NiCr22Mo9N | 5666 | | NC22FeDNB | | | | |
| | 5.0 | 2.4973 | NiCr19Co11 | AMS 5399 | | NC19KDT | | | | |
| | 5.0 | LW2.467 | S-NiCr13A16 | 5391 | 3146-3 | NC12AD | | | | |
| | 5.0 | LW2.466 | NiFe35Cr14 | 5660 | | ZSNCDT42 | | | | |
| | 5.0 | LW2.466 | NiCr19Fe19 | 5383 | HR8 | NC19FeNb | | | | |
| | 5.0 | LW2.466 | NiCr19Fe19 | AMS 5544 | | NC20K14 | | | | |
| | 5.0 | LW2.467 | NiCo15Cr10 | AMS 5397 | | | | | | |
| | 5.0 | LW2.496 | CoCr20W15 | 5537C | | KC20WN | | | | |
| | 5.1 | – | TiAl4Mo4Sn4Si0.5 | | | | | | | |
| | 5.1 | – | TiAl6V4ELI | AMS R56401 | TA11 | | | | | |
| | 5.1 | 3.7114 | TiAl5Sn2.5 | AMS R54520 | TA14/17 | T-A5E | | | | |
| | 5.1 | 3.7164 | TiAl6V4 | AMS R56400 | TA10-13/TA2 | T-A6V | | | | |
| M | 6.0 | 1.4000 | X7Cr13 | 403 | 403S17 | Z6C13 | 2301 | X6Cr13 | F.3110 | SUS403 |
| | 6.0 | 1.4006 | X10Cr13 | 410 | 410S21 ... 56A | Z10C14 | 2302 | X12Cr13 | F.3401 | SUS410 |
| | 6.0 | 1.4021 | X20Cr13 | 420 | 420S37 | Z20C13 | 2303 | X20Cr13 | | |
| | 6.0 | 1.4034 | X46Cr13 | | 420S45 ... 56D | Z40CM | 2304 | X40Cr14 | F.3405 | SUS420J2 |
| | 6.0 | 1.4057 | X22CrNi17 | 431 | 431S29 ... 57 | Z15CNi6.02 | 2321 | X16CrNi16 | F.3427 | SUS431 |
| | 6.0 | 1.4104 | X12CrMoS17 | 430F | | Z10CF17 | 2383 | X10CrS17 | F.3117 | SUS430F |
| | 6.0 | 1.4112 | X90 CrMoV 18 | 440B | | | | | | |
| | 6.0 | 1.4113 | X6CrMo17 | 434 | 434S17 | Z8CD17.01 | 2325 | X8CrMo17 | | SUS434 |
| | 6.0 | 1.4305 | X12CrNiS18 8 | 303 | 303S21 ... 58M | Z10CNF18.09 | 2346 | X10CrNiS18.09 | F.3508 | SUS303 |
| | 6.0 | 1.4306 | X2CrNiN18 9 | 304L | 304S12 | Z2CrNi18 10 | 2352 | X2CrNi18 11 | F.3503 | SCS19 |
| | 6.0 | 1.4310 | X12CrNi17 7 | 301 | | Z12CN17.07 | 2331 | X12CrNi17 07 | F.3517 | SUS301 |
| | 6.0 | 1.4311 | X4CrNiN18 10 | 304LN | 304S62 | Z2CN18.10 | 2371 | | | SUS304LN |
| | 6.0 | 1.4313 | X5CrNi13 4 | | 425C11 | Z4CND13.4M | | | | SCS5 |
| | 6.0 | 1.4350 | X5CrNi189 | 304 | 304S31 ... 58E | Z6CN18.09 | 2332/2333 | X5CrNi18 10 | F.3551 | SUS304 |
| | 6.0 | 1.4401 | X5CrNiMo18 10 | 316 | 316S16 ... 58J | Z2CND17.11 | 2347 | X5CrNiMo17 12 | F.3543 | SUS316 |
| | 6.1 | 1.4429 | X2CrNiMoN1813 | 316LN | | Z2CND17.13 | 2375 | | | SUS316LN |
| | 6.1 | 1.4435 | X2CrNiMo18 12 | 316L | 316S13 | Z2CND17.12 | 2353 | | | X2CrNiMo17 12 |
| | 6.1 | 1.4438 | X2CrNiMo18 16 | 317L | 317S12 | Z2CND19.15 | 2367 | | | X2CrNiMo18 16 |
| | 6.1 | 1.4541 | X10CrNiTi18 9 | 321 | 321S12 ... 58B | Z6CNT18.10 | 2337 | X6CrNiTi18 11 | F.3553 | SUS321 |
| | 6.1 | 1.4542/1.4548 | X5CrNiCuNb17-4-4 | 630 | | Z7CNU17-04 | | | | |
| | 6.1 | 1.4550 | X10CrNiNb | 347 | 347S17 ... 58F | Z6CNNb18.10 | 2338 | X6CrNiNb18 11 | F.3552 | SUS347 |
| | 6.1 | 1.4568/1.4504 | X12CrNiAl177 | 17-7PH | 316S111 | | | Z8CNA17-07 | X2CrNiMo1712 | |
| | 6.1 | 1.4571 | X10CrNiMoTi18 | 316Ti | 320S17 ... 58J | Z6NDT17.12 | 2350 | X6CrNiMoTi17 12 | F.3535 | |
| | 6.1 | 1.4583 | X10CrNiMoNb18 | 318 | | Z6CNDNb17 13B | | X6CrNiMoNb | 17 13 | |
| | 7.0 | 1.4718 | X45CrSi9 3 | HW 3 | 401S45 ... 52 | Z45CS9 | | X45CrSi8 | F.3220 | SUH1 |
| | 7.0 | 1.4724 | X10CrA113 | 405 | 403S17 | Z10C13 | | X10CrA112 | F.311 | SUS405 |
| | 7.0 | 1.4742 | X10CrA118 | 430 | 439S15 ... 60 | Z10CAS18 | | X8Cr17 | F.3113 | SUS430 |
| | 7.0 | 1.4747 | X80CrNiSi20 | HNV6 | 443S65 ... 59 | Z80CSN20.02 | | X80CrSiNi20 | F.320B | SUH4 |
| | 7.0 | 1.4762 | X10CrA124 | 446 | | Z10CAS24 | 2322 | X16Cr26 | | SUH446 |
| | 7.0 | 1.4828 | X15CrNiSi20 12 | 309 | 309S24 | Z15CNS20.12 | | | | SUH309 |
| | 7.0 | 1.4845 | X12CrNi25 21 | 310S | 310S24 | Z12CN25 20 | 2361 | X6CrNi25 20 | F.331 | SUH310 |
| | 7.0 | 1.4864 | X12NiCrSi | 330 | | Z12NCS35.16 | | | | SUH330 |
| | 7.0 | 1.4865 | G-X40NiCrSi | | 330C11 | | | XG50NiCr | | SCH15 |
| | 7.0 | 1.4871 | X53CrMnNiN219 | EV8 | 349S54 | Z52CMN21.09 | | X53CrMnNiN | | SUH35,SUH36 |
| K | 8.0 | 0.6010 | GG10 | A48 20 B | | Ft10D | 01 10-00 | G10 | FG10 | |
| | 8.0 | 0.6015 | GG15 | A48 25 B | Grade 150 | Ft15D | 01 15-00 | G14 | FG15 | |
| | 8.0 | 0.6020 | GG20 | A48 30 B | Grade 220 | Ft20D | 01 20-00 | G20 | FG20 | |
| | 8.0 | 0.6025 | GG25 | A48 35 B | Grade 260 | Ft25D | 01 25-00 | G25 | FG25 | |
| | 8.0 | 0.6030 | GG30 | A48 45 B | Grade 300 | Ft30D | 01 30-00 | G30 | FG30 | |
| | 8.0 | 0.6035 | GG35 | A48 50 B | Grade 350 | Ft35D | 01 35-00 | G35 | FG35 | |
| | 8.0 | 0.6040 | GG40 | A48 60 B | Grade 400 | Ft40D | 01 40-00 | | | |
| | 9.0 | 0.7033 | GGG35.3 | | | | 07 17-1 | | | |
| | 9.0 | 0.7040 | GGG40 | 60-40-18 | SNG420/12 | FGS400-12 | 07 17-0 2 | GS400-12 | | FCD40 |
| | 9.0 | 0.7043 | GGG40.3 | 0.7043 | SNG370/17 | FGS370-17 | 07 17-1 5 | GSO42/15 | | |
| | 9.0 | 0.7050 | GGG50 | 80-55-06 | SNG500/7 | FGS500-7 | 07 27-0 2 | GS500/7 | | FCD50 |
| | 9.0 | 0.7060 | GGG60 | | SNG600/3 | FGS600-3 | 07 32-0 3 | GS600/3 | | FCD60 |
| | 9.0 | 0.7070 | GGG70 | 100-70-03 | SNG700/2 | FGS700-2 | 07 37-0 1 | GS700/2 | | FCD70 |
| | 9.0 | 0.8135 | GTS-35 | 32510 | B340/12 | MN35-10 | 08 15 | | | |
| | 9.0 | 0.8145 | GTS-45 | 400 10 | P440/7 | | 08 52 | | | |
| | 9.0 | 0.8155 | GTS-55 | 50005 | P510/4 | MP50-5 | 08 54 | | | |
| | 9.0 | 0.8165 | GTS-65 | 70003 | P570/3 | MP60-3 | 08 58 | | | |
| N | 14.0 | 3.2162 | GD-AlSi8Cu3 | A380.1 | LM24 | | 4250 | | | |
| | 14.0 | 3.2381 | G-AlSi10Mg | A360.2 | LM9 | | 4253 | | | |
| | 14.0 | 3.2581 | G-AlSi12 | A413.2 | LM6 | | 4261 | | | |
| | 14.0 | 3.2583 | G-AlSi12(Cu) | A413.1 | LM20 | | 4260 | | | |
| | 14.0 | 3.2982 | GD-AlSi12 | A413.0 | | | 4247 | | | |

# Numerical Index


| 16.. / 51.. | |
|---|---|
| Order No. | Page |
| 16301 00537 | 763 |
| 18021 01032 | 745 |
| 18021 01040 | 745 |
| 18021 01050 | 745 |
| 18021 01063 | 745 |
| 18021 01080 | 745 |
| 18021 01100 | 745 |
| 18043 00028 | 402/441 |
| 18050 00025 | 266 |
| 18050 00030 | 266 |
| 18589 00014 | 270 |
| 18589 00018 | 270 |
| 18591 10015 | 761 |
| 18591 10025 | 761 |
| 18591 10030 | 761 |
| 18591 10040 | 279 |
| 18591 10050 | 279 |
| 18591 10060 | 279 |
| 18591 10080 | 279 |
| 18591 10100 | 279 |
| 38405002000600 | 25 |
| 38405002000800 | 25 |
| 38405002001000 | 25 |
| 38588003000850 | 24 |
| 38588003000930 | 24 |
| 38588003001000 | 24 |
| 38588018001020 | 24 |
| 38588018001120 | 24 |
| 38588018001200 | 24 |
| 38588082000500 | 24 |
| 38588082000550 | 24 |
| 38588082000600 | 24 |
| 38588091000680 | 24 |
| 38588091000740 | 24 |
| 38588091000800 | 24 |
| 51049 08016 | 404/446 |
| 51049 10020 | 404/446 |
| 51049 12025 | 404/446 |
| 51049 16025 | 404/446 |
| 51049 20035 | 446 |
| 51050 06010 | 404-474 |
| 51050 08010 | 404-474 |
| 51050 10012 | 404-474 |
| 51050 12016 | 404-474 |
| 51050 14016 | 404-475 |
| 51050 16016 | 404-475 |
| 51050 18220 | 404-475 |
| 51050 20220 | 404-475 |
| 51200 00316 | 480 |
| 51200 00320 | 480 |
| 51200 00325 | 480 |
| 51200 00332 | 480 |
| 51200 00340 | 480 |
| 51200 00416 | 480 |
| 51200 00420 | 480 |
| 51200 00425 | 480 |
| 51200 00432 | 480 |
| 51200 00440 | 480 |
| 51247 06012 | 158 |
| 51391 00032 | 745 |
| 51391 00040 | 745 |
| 51391 00050 | 745 |
| 51391 00063 | 745 |
| 51391 00080 | 745 |
| 51391 00100 | 745 |

| 51.. / 55.. | |
|---|---|
| Order No. | Page |
| 51391 01032 | 746 |
| 51391 01040 | 746 |
| 51391 01050 | 746 |
| 51391 01063 | 746 |
| 51391 01080 | 746 |
| 51391 01100 | 746 |
| 51560 74551 | 763 |
| 52710 00053 | 240/241 |
| 52806 16... | 408/480 |
| 52806 20... | 408/480 |
| 52806 25... | 408/480 |
| 52806 32... | 408/480 |
| 52806 33... | 408/480 |
| 52807 01016 | 480 |
| 52807 01020 | 480 |
| 52807 01025 | 480 |
| 52807 01032 | 480 |
| 52807 01040 | 480 |
| 52807 03016 | 480 |
| 52807 03020 | 480 |
| 52807 03025 | 480 |
| 52807 03032 | 480 |
| 52807 03040 | 480 |
| 52911 01010 | 742 |
| 52911 01315 | 742 |
| 52911 01615 | 742 |
| 52911 02515 | 742 |
| 52911 03015 | 742 |
| 52911 04220 | 742 |
| 52911 05030 | 742 |
| 52914 00512 | 745 |
| 52914 00751 | 745 |
| 52914 00920 | 745 |
| 52914 01020 | 745 |
| 52914 01025 | 745 |
| 52914 01320 | 745 |
| 52914 01430 | 745 |
| 52914 01615 | 240/241 |
| 52914 02015 | 757 |
| 52914 02515 | 757 |
| 52914 03015 | 757 |
| 52914 04015 | 757 |
| 55011 03010 | 743 |
| 55011 03016 | 170 |
| 55011 04012 | 160/743 |
| 55011 04020 | 170 |
| 55011 05012 | 147/170 |
| 55011 05016 | 170/743 |
| 55011 05020 | 426 |
| 55011 05025 | 170 |
| 55011 06020 | 170 |
| 55011 06030 | 170/426 |
| 55011 08035 | 170/426 |
| 55011 08045 | 170 |
| 55011 10042 | 426 |
| 55011 10050 | 170 |
| 55011 12060 | 170 |
| 55012 04008 | 158 |
| 55041 00810 | 742 |
| 55041 01010 | 742 |
| 55041 01215 | 742 |
| 55041 01615 | 742 |
| 55041 03615 | 742 |

| 55.. | |
|---|---|
| Order No. | Page |
| 55051 02505 | 170 |
| 55051 03008 | 146/158 |
| 55051 04008 | 158/243 |
| 55051 04010 | 146/170 |
| 55051 05005 | 273 |
| 55051 05008 | 146 |
| 55051 05010 | 146 |
| 55051 05020 | 182 |
| 55051 06006 | 279 |
| 55051 06008 | 147/496 |
| 55051 06010 | 254 |
| 55051 06012 | 170 |
| 55051 06020 | 170 |
| 55051 08008 | 279 |
| 55051 08010 | 147/279 |
| 55051 08020 | 170 |
| 55051 08025 | 147 |
| 55051 10010 | 279 |
| 55051 10012 | 273/274 |
| 55051 10020 | 170 |
| 55051 12012 | 279 |
| 55051 12016 | 273 |
| 55051 12112 | 444/451 |
| 55051 16016 | 279 |
| 55051 16020 | 273 |
| 55051 16112 | 444/451 |
| 55051 20020 | 273/279 |
| 55051 20025 | 273 |
| 55051 20030 | 279 |
| 55052 06010 | 254 |
| 55052 06012 | 254 |
| 55052 12016 | 153 |
| 55052 12020 | 153 |
| 55231 04017 | 756 |
| 55231 05020 | 756 |
| 55231 07025 | 756 |
| 55231 08025 | 756 |
| 55231 10030 | 756 |
| 55231 12540 | 756 |
| 55391 01240 | 759 |
| 55391 01645 | 759 |
| 55391 02050 | 759 |
| 55391 51640 | 759 |
| 55391 52045 | 759 |
| 55391 52450 | 759 |
| 55392 01240 | 759 |
| 55392 01645 | 759 |
| 55392 02050 | 759 |
| 55392 51640 | 759 |
| 55392 52045 | 759 |
| 55392 52450 | 759 |
| 56771 10053 | 220/235 |
| 56941 00811 | 742 |
| 56941 01013 | 742 |
| 56941 01215 | 742 |
| 56941 01620 | 742 |
| 75000 12150 | 240/241 |
| 78451003001000 | 26 |
| 78451018001200 | 26 |
| 78451082000600 | 26 |
| 78451091000800 | 26 |

| A.. | |
|---|---|
| Order No. | Page |
| A01 01130 | 458 |
| A01 01140 | 458 |
| A01 01150 | 458 |
| A01 01160 | 458 |
| A01 01240 | 458 |
| A01 01250 | 458 |
| A01 01260 | 458 |
| A01 01270 | 458 |
| A01 01450 | 458 |
| A01 01460 | 458 |
| A01 01470 | 458 |
| A01 01480 | 458 |
| A01 01490 | 458 |
| A01 11152 | 456 |
| A01 11242 | 456 |
| A01 11252 | 456 |
| A01 11262 | 456 |
| A01 11271 | 456 |
| A01 11352 | 456 |
| A01 11362 | 456 |
| A01 11372 | 456 |
| A01 11452 | 456 |
| A01 11462 | 456 |
| A01 11472 | 456 |
| A01 11482 | 456 |
| A01 14251 | 457 |
| A01 14261 | 457 |
| A01 14351 | 457 |
| A01 14361 | 457 |
| A01 14370 | 457 |
| A01 15450 | 459 |
| A01 15460 | 459 |
| A01 15550 | 459 |
| A01 15560 | 459 |
| A01 15570 | 459 |
| A01 15650 | 459 |
| A01 15660 | 459 |
| A01 15670 | 459 |
| A01 15750 | 459 |
| A01 15760 | 459 |
| A01 15770 | 459 |
| A01 15780 | 459 |
| A05 03140 | 445 |
| A05 03150 | 445 |
| A05 03160 | 445 |
| A05 03340 | 445 |
| A05 03350 | 445 |
| A05 03360 | 445 |
| A05 03370 | 445 |
| A05 06140 | 451 |
| A05 06150 | 451 |
| A05 06160 | 451 |
| A05 06340 | 451 |
| A05 06350 | 451 |
| A05 06360 | 451 |
| A05 06370 | 451 |
| A05 12071 | 446 |
| A05 12081 | 446 |
| A05 12091 | 446 |
| A05 12101 | 446 |
| A05 12111 | 446 |
| A05 12121 | 446 |
| A05 12131 | 446 |
| A05 12141 | 446 |
| A05 12151 | 446 |
| A05 12161 | 446 |

| A.. | |
|---|---|
| Order No. | Page |
| A05 12271 | 446 |
| A05 12281 | 446 |
| A05 12291 | 446 |
| A05 12301 | 446 |
| A05 12311 | 446 |
| A05 12321 | 446 |
| A05 12331 | 446 |
| A05 12341 | 446 |
| A05 12351 | 446 |
| A05 12361 | 446 |
| A05 13140 | 444 |
| A05 13151 | 444 |
| A05 13161 | 444 |
| A05 13340 | 444 |
| A05 13351 | 444 |
| A05 13361 | 444 |
| A05 13370 | 444 |
| A05 16140 | 450 |
| A05 16150 | 450 |
| A05 16160 | 450 |
| A05 16340 | 450 |
| A05 16350 | 450 |
| A05 16360 | 450 |
| A05 16370 | 450 |
| A05 24070 | 447 |
| A05 24080 | 447 |
| A05 24090 | 447 |
| A05 24100 | 447 |
| A05 24110 | 447 |
| A05 24120 | 447 |
| A05 24130 | 447 |
| A05 24140 | 447 |
| A05 24150 | 447 |
| A05 24160 | 447 |
| A05 24270 | 447 |
| A05 24280 | 447 |
| A05 24290 | 447 |
| A05 24300 | 447 |
| A05 24310 | 447 |
| A05 24320 | 447 |
| A05 24330 | 447 |
| A05 24340 | 447 |
| A05 24350 | 447 |
| A05 24360 | 447 |
| A05 24370 | 447 |
| A05 25300 | 196/297 |
| A05 92050 | 448 |
| A05 92090 | 449 |
| A05 92100 | 449 |
| A05 92110 | 449 |
| A05 92120 | 449 |
| A05 92170 | 448 |
| A05 92350 | 452 |
| A05 92470 | 452 |
| A06 00120 | 400 |
| A06 00130 | 400 |
| A06 06010 | 490 |
| A06 06020 | 490 |
| A06 06030 | 490 |
| A06 06040 | 490 |
| A06 06050 | 490 |
| A06 06061 | 490 |
| A06 06071 | 490 |
| A06 10120 | 400 |
| A06 10130 | 400 |
| A06 10140 | 400 |

| A.. Order No. | Page |
|---|---|
| A06 13470 | 746 |
| A06 16040 | 490 |
| A06 16050 | 490 |
| A06 16061 | 490 |
| A06 16071 | 490 |
| A06 16081 | 490 |
| A06 16091 | 490 |
| A06 20121 | 400 |
| A06 20131 | 400 |
| A06 20141 | 400 |
| A06 20151 | 400 |
| A06 20601 | 404 |
| A06 20801 | 404 |
| A06 21001 | 404 |
| A06 21201 | 404 |
| A06 21401 | 404 |
| A06 21601 | 404 |
| A06 21801 | 404 |
| A06 22001 | 404 |
| A06 23301 | 406 |
| A06 23311 | 406 |
| A06 23321 | 406 |
| A06 23331 | 406 |
| A06 23341 | 406 |
| A06 23351 | 406 |
| A06 23361 | 406 |
| A06 23371 | 406 |
| A06 23401 | 408 |
| A06 23431 | 408 |
| A06 23470 | 746 |
| A06 23480 | 418 |
| A06 23530 | 410 |
| A06 23570 | 410 |
| A06 23610 | 417 |
| A06 23620 | 417 |
| A06 23751 | 415 |
| A06 23761 | 415 |
| A06 23771 | 415 |
| A06 23781 | 415 |
| A06 26040 | 490 |
| A06 26050 | 490 |
| A06 26061 | 490 |
| A06 26071 | 490 |
| A06 26081 | 490 |
| A06 26091 | 490 |
| A06 26101 | 490 |
| A06 26111 | 490 |
| A06 30050 | 400 |
| A06 30060 | 400 |
| A06 30070 | 400 |
| A06 30120 | 400 |
| A06 30130 | 400 |
| A06 30140 | 400 |
| A06 30150 | 400 |
| A06 30160 | 400 |
| A06 30170 | 400 |
| A06 30220 | 400 |
| A06 30251 | 403 |
| A06 30261 | 403 |
| A06 30270 | 403 |
| A06 30360 | 401 |
| A06 30600 | 404 |
| A06 30800 | 404 |
| A06 31000 | 404 |
| A06 31200 | 404 |
| A06 31400 | 404 |

| A.. Order No. | Page |
|---|---|
| A06 31600 | 404 |
| A06 31800 | 404 |
| A06 32000 | 404 |
| A06 32500 | 404 |
| A06 33200 | 404 |
| A06 33300 | 406 |
| A06 33310 | 406 |
| A06 33320 | 406 |
| A06 33330 | 406 |
| A06 33340 | 406 |
| A06 33350 | 406 |
| A06 33360 | 406 |
| A06 33370 | 406 |
| A06 33380 | 406 |
| A06 33390 | 406 |
| A06 33400 | 408 |
| A06 33410 | 408 |
| A06 33420 | 408 |
| A06 33430 | 408 |
| A06 33440 | 408 |
| A06 33470 | 746 |
| A06 33480 | 418 |
| A06 33500 | 410 |
| A06 33510 | 410 |
| A06 33520 | 410 |
| A06 33530 | 410 |
| A06 33540 | 410 |
| A06 33550 | 410 |
| A06 33560 | 410 |
| A06 33570 | 410 |
| A06 33580 | 410 |
| A06 33590 | 410 |
| A06 33610 | 417 |
| A06 33620 | 417 |
| A06 33650 | 511 |
| A06 33750 | 415 |
| A06 33760 | 415 |
| A06 33770 | 415 |
| A06 33780 | 415 |
| A06 33790 | 415 |
| A06 33901 | 414 |
| A06 33911 | 414 |
| A06 33921 | 414 |
| A06 33931 | 414 |
| A06 33941 | 414 |
| A06 34010 | 416 |
| A06 34020 | 416 |
| A06 34030 | 416 |
| A06 34040 | 416 |
| A06 34060 | 405 |
| A06 34080 | 405 |
| A06 34100 | 405 |
| A06 34120 | 405 |
| A06 34140 | 405 |
| A06 34160 | 405 |
| A06 34180 | 405 |
| A06 34200 | 405 |
| A06 34250 | 405 |
| A06 34320 | 405 |
| A06 34350 | 413 |
| A06 34400 | 407 |
| A06 34410 | 407 |
| A06 34420 | 407 |
| A06 34430 | 407 |
| A06 34440 | 407 |
| A06 34450 | 407 |
| A06 34460 | 407 |
| A06 34470 | 407 |
| A06 34480 | 407 |

| A.. Order No. | Page |
|---|---|
| A06 34490 | 407 |
| A06 34500 | 408 |
| A06 34520 | 408 |
| A06 34700 | 420 |
| A06 34710 | 420 |
| A06 34770 | 421 |
| A06 34800 | 411 |
| A06 34810 | 411 |
| A06 34820 | 411 |
| A06 34830 | 411 |
| A06 34840 | 411 |
| A06 34850 | 411 |
| A06 34860 | 411 |
| A06 34870 | 411 |
| A06 34880 | 411 |
| A06 34890 | 411 |
| A06 34900 | 412 |
| A06 34910 | 412 |
| A06 34920 | 412 |
| A06 34930 | 412 |
| A06 34940 | 412 |
| A06 34950 | 412 |
| A06 34960 | 412 |
| A06 34970 | 412 |
| A06 36040 | 490 |
| A06 36050 | 490 |
| A06 36061 | 490 |
| A06 36071 | 490 |
| A06 36081 | 490 |
| A06 36091 | 490 |
| A06 36101 | 490 |
| A06 36111 | 490 |
| A06 36121 | 490 |
| A06 36131 | 490 |
| A06 36240 | 491 |
| A06 36250 | 491 |
| A06 36261 | 491 |
| A06 36271 | 491 |
| A06 36281 | 491 |
| A06 36291 | 491 |
| A06 36440 | 491 |
| A06 36450 | 491 |
| A06 36461 | 491 |
| A06 36471 | 491 |
| A06 36481 | 491 |
| A06 36491 | 491 |
| A06 36501 | 491 |
| A06 36511 | 491 |
| A06 36521 | 491 |
| A06 36531 | 491 |
| A06 36730 | 402 |
| A06 36740 | 402 |
| A06 40140 | 400 |
| A06 40150 | 400 |
| A06 40160 | 400 |
| A06 40170 | 400 |
| A06 43470 | 746 |
| A06 50050 | 400 |
| A06 50060 | 400 |
| A06 50070 | 400 |
| A06 50120 | 400 |
| A06 50130 | 400 |
| A06 50140 | 400 |
| A06 50150 | 400 |
| A06 50160 | 400 |
| A06 50170 | 400 |
| A06 50180 | 400 |
| A06 50251 | 403 |
| A06 50261 | 403 |

| A.. Order No. | Page |
|---|---|
| A06 50270 | 403 |
| A06 50360 | 401 |
| A06 50370 | 401 |
| A06 50380 | 401 |
| A06 50600 | 404 |
| A06 50800 | 404 |
| A06 51000 | 404 |
| A06 51200 | 404 |
| A06 51400 | 404 |
| A06 51600 | 404 |
| A06 51800 | 404 |
| A06 52000 | 404 |
| A06 52500 | 404 |
| A06 53200 | 404 |
| A06 53300 | 406 |
| A06 53310 | 406 |
| A06 53320 | 406 |
| A06 53330 | 406 |
| A06 53340 | 406 |
| A06 53350 | 406 |
| A06 53360 | 406 |
| A06 53370 | 406 |
| A06 53380 | 406 |
| A06 53390 | 406 |
| A06 53400 | 408 |
| A06 53410 | 408 |
| A06 53420 | 408 |
| A06 53430 | 408 |
| A06 53440 | 408 |
| A06 53470 | 746 |
| A06 53480 | 418 |
| A06 53500 | 410 |
| A06 53510 | 410 |
| A06 53520 | 410 |
| A06 53530 | 410 |
| A06 53540 | 410 |
| A06 53550 | 410 |
| A06 53560 | 410 |
| A06 53570 | 410 |
| A06 53580 | 410 |
| A06 53590 | 410 |
| A06 53650 | 511 |
| A06 53750 | 415 |
| A06 53760 | 415 |
| A06 53770 | 415 |
| A06 53780 | 415 |
| A06 53790 | 415 |
| A06 53800 | 415 |
| A06 53880 | 196/297 |
| A06 53901 | 414 |
| A06 53911 | 414 |
| A06 53921 | 414 |
| A06 53931 | 414 |
| A06 53941 | 414 |
| A06 53950 | 414 |
| A06 53960 | 414 |
| A06 54060 | 405 |
| A06 54080 | 405 |
| A06 54100 | 405 |
| A06 54120 | 405 |
| A06 54140 | 405 |
| A06 54160 | 405 |
| A06 54180 | 405 |
| A06 54200 | 405 |
| A06 54250 | 405 |
| A06 54320 | 405 |
| A06 54400 | 407 |
| A06 54410 | 407 |

| A.. Order No. | Page |
|---|---|
| A06 54420 | 407 |
| A06 54430 | 407 |
| A06 54440 | 407 |
| A06 54450 | 407 |
| A06 54460 | 407 |
| A06 54470 | 407 |
| A06 54480 | 407 |
| A06 54490 | 407 |
| A06 54500 | 408 |
| A06 54520 | 408 |
| A06 54700 | 420 |
| A06 54720 | 420 |
| A06 54770 | 421 |
| A06 54780 | 421 |
| A06 54790 | 421 |
| A06 56040 | 492 |
| A06 56050 | 492 |
| A06 56061 | 492 |
| A06 56071 | 492 |
| A06 56081 | 492 |
| A06 56091 | 492 |
| A06 56101 | 492 |
| A06 56111 | 492 |
| A06 56121 | 492 |
| A06 56131 | 492 |
| A06 56240 | 493 |
| A06 56250 | 493 |
| A06 56261 | 493 |
| A06 56271 | 493 |
| A06 56281 | 493 |
| A06 56291 | 493 |
| A06 56440 | 493 |
| A06 56450 | 493 |
| A06 56461 | 493 |
| A06 56471 | 493 |
| A06 56481 | 493 |
| A06 56491 | 493 |
| A06 56501 | 493 |
| A06 56511 | 493 |
| A06 56521 | 493 |
| A06 56531 | 493 |
| A06 56730 | 402 |
| A06 56740 | 402 |
| A08 51031 | 422 |
| A08 52030 | 424 |
| A08 61031 | 422 |
| A08 61060 | 426 |
| A08 71031 | 422 |
| A08 71060 | 426 |
| A08 72030 | 424 |
| A08 81030 | 422 |
| A08 81060 | 426 |
| A08 82030 | 424 |
| A08 91060 | 426 |
| A10 16010 | 494 |
| A10 16020 | 494 |
| A10 16040 | 494 |
| A10 16050 | 494 |
| A10 16061 | 494 |
| A10 16071 | 494 |
| A10 26010 | 494 |
| A10 26020 | 494 |
| A10 26040 | 494 |
| A10 26050 | 494 |
| A10 26061 | 494 |
| A10 26071 | 494 |
| A10 26081 | 494 |
| A10 26091 | 494 |

# Numerical Index


| A.. Order No. | Page |
|---|---|
| A10 36010 | 494 |
| A10 36020 | 494 |
| A10 36030 | 494 |
| A10 36040 | 494 |
| A10 36050 | 494 |
| A10 36061 | 494 |
| A10 36071 | 494 |
| A10 36081 | 494 |
| A10 36091 | 494 |
| A10 36101 | 494 |
| A10 36111 | 494 |
| A10 46040 | 494 |
| A10 46050 | 494 |
| A10 46060 | 494 |
| A10 46070 | 494 |
| A10 46080 | 494 |
| A10 46090 | 494 |
| A10 46110 | 494 |
| A20 00020 | 466 |
| A20 00030 | 466 |
| A20 00040 | 466 |
| A20 00050 | 466 |
| A20 00060 | 466 |
| A20 00070 | 466 |
| A20 00080 | 466 |
| A20 00090 | 466 |
| A20 00150 | 466 |
| A20 00160 | 466 |
| A20 00170 | 466 |
| A20 00220 | 466 |
| A20 00230 | 466 |
| A20 00240 | 466 |
| A20 00250 | 466 |
| A20 00260 | 466 |
| A20 00270 | 466 |
| A20 00280 | 466 |
| A20 00290 | 466 |
| A20 00530 | 466 |
| A20 00540 | 466 |
| A20 00550 | 466 |
| A20 00560 | 466 |
| A20 00570 | 466 |
| A20 00580 | 466 |
| A20 00620 | 462 |
| A20 00630 | 462 |
| A20 00651 | 463 |
| A20 00661 | 463 |
| A20 00670 | 463 |
| A20 01060 | 468 |
| A20 01070 | 468 |
| A20 01080 | 468 |
| A20 01160 | 468 |
| A20 01170 | 468 |
| A20 01180 | 468 |
| A20 01220 | 471 |
| A20 01230 | 471 |
| A20 01240 | 470 |
| A20 01250 | 470 |
| A20 01260 | 470 |
| A20 01270 | 470 |
| A20 01320 | 471 |
| A20 01330 | 471 |
| A20 01420 | 471 |
| A20 01430 | 471 |
| A20 05440 | 467 |
| A20 05450 | 467 |
| A20 05460 | 467 |
| A20 05470 | 467 |
| A20 05480 | 467 |
| A20 05640 | 467 |

| A.. Order No. | Page |
|---|---|
| A20 05652 | 467 |
| A20 05661 | 467 |
| A20 05671 | 467 |
| A20 05680 | 467 |
| A20 05751 | 467 |
| A20 05760 | 467 |
| A20 05770 | 467 |
| A20 05830 | 467 |
| A20 05840 | 467 |
| A20 05850 | 467 |
| A20 05860 | 467 |
| A20 05870 | 467 |
| A20 05880 | 467 |
| A20 10120 | 464 |
| A20 10220 | 464 |
| A20 10230 | 464 |
| A20 10320 | 464 |
| A20 10330 | 464 |
| A20 10340 | 464 |
| A20 10420 | 464 |
| A20 10430 | 464 |
| A20 10440 | 464 |
| A20 10450 | 464 |
| A20 10530 | 464 |
| A20 10540 | 464 |
| A20 10550 | 464 |
| A20 10560 | 464 |
| A20 10650 | 464 |
| A20 10660 | 464 |
| A20 10670 | 464 |
| A20 10750 | 464 |
| A20 10760 | 464 |
| A20 10770 | 464 |
| A20 10780 | 464 |
| A20 11560 | 469 |
| A20 11670 | 469 |
| A20 20320 | 465 |
| A20 20330 | 465 |
| A20 20340 | 465 |
| A20 20440 | 465 |
| A20 20450 | 465 |
| A20 20540 | 465 |
| A20 20550 | 465 |
| A20 20560 | 465 |
| A20 20650 | 465 |
| A20 20660 | 465 |
| A20 20670 | 465 |
| A20 21450 | 465 |
| A20 21560 | 465 |
| A20 50080 | 196/297 |
| A20 50180 | 196/297 |
| A21 02001 | 495 |
| A21 02011 | 495 |
| A21 02021 | 495 |
| A21 02031 | 495 |
| A21 02041 | 495 |
| A21 04001 | 495 |
| A21 04011 | 495 |
| A21 04021 | 495 |
| A21 04031 | 495 |
| A21 04041 | 495 |
| A21 06001 | 495 |
| A21 06011 | 495 |
| A21 06021 | 495 |
| A21 06031 | 495 |
| A21 06041 | 495 |
| A21 06052 | 495 |
| A21 06062 | 495 |

| A.. Order No. | Page |
|---|---|
| A21 07071 | 495 |
| A21 07081 | 495 |
| A25 06010 | 496 |
| A25 06020 | 496 |
| A25 06030 | 496 |
| A25 06041 | 498 |
| A25 06051 | 498 |
| A25 06061 | 498 |
| A25 06071 | 498 |
| A25 06081 | 498 |
| A25 06091 | 498 |
| A25 06101 | 498 |
| A25 06111 | 498 |
| A25 06121 | 498 |
| A25 06240 | 499 |
| A25 06250 | 499 |
| A25 06261 | 499 |
| A25 06271 | 499 |
| A25 06281 | 499 |
| A25 06291 | 499 |
| A25 06301 | 499 |
| A25 06311 | 499 |
| A25 26040 | 498 |
| A25 26050 | 498 |
| A25 26061 | 498 |
| A25 26071 | 498 |
| A25 26081 | 498 |
| A25 26091 | 498 |
| A25 26101 | 498 |
| A25 26111 | 498 |
| A25 26121 | 498 |
| A25 26131 | 498 |
| A25 26240 | 499 |
| A25 26250 | 499 |
| A25 26261 | 499 |
| A25 26271 | 499 |
| A25 26281 | 499 |
| A25 26291 | 499 |
| A25 26301 | 499 |
| A25 26311 | 499 |
| A25 36040 | 496 |
| A25 36050 | 496 |
| A25 36061 | 496 |
| A25 36071 | 496 |
| A25 36081 | 496 |
| A25 36091 | 496 |
| A25 36101 | 496 |
| A25 36111 | 496 |
| A25 36121 | 496 |
| A25 36440 | 497 |
| A25 36450 | 497 |
| A25 36461 | 497 |
| A25 36471 | 497 |
| A25 36481 | 497 |
| A25 36491 | 497 |
| A25 36501 | 497 |
| A25 36511 | 497 |
| A25 86040 | 500 |
| A25 86050 | 500 |
| A25 86061 | 500 |
| A25 86071 | 500 |
| A25 86081 | 500 |
| A25 86091 | 500 |
| A25 86101 | 500 |
| A25 86111 | 500 |
| A25 86121 | 500 |
| A25 86131 | 500 |
| A25 96040 | 501 |

| A.. Order No. | Page |
|---|---|
| A25 96050 | 501 |
| A25 96061 | 501 |
| A25 96071 | 501 |
| A25 96081 | 501 |
| A25 96091 | 501 |
| A25 96101 | 501 |
| A25 96111 | 501 |
| A30 10601 | 472 |
| A30 10801 | 472 |
| A30 11001 | 472 |
| A30 20601 | 472 |
| A30 20801 | 472 |
| A30 21001 | 472 |
| A30 21201 | 472 |
| A30 30601 | 472 |
| A30 30801 | 472 |
| A30 31001 | 473 |
| A30 31201 | 473 |
| A30 31601 | 473 |
| A30 40601 | 473 |
| A30 40801 | 473 |
| A30 41001 | 473 |
| A30 41201 | 473 |
| A30 41601 | 473 |
| A30 42002 | 473 |
| A30 42502 | 473 |
| A30 51001 | 473 |
| A30 51201 | 473 |
| A30 51601 | 473 |
| A30 52001 | 473 |
| A30 52501 | 473 |
| A30 61601 | 473 |
| A30 62001 | 473 |
| A30 62501 | 473 |
| A30 63201 | 473 |
| A32 26040 | 502 |
| A32 26050 | 502 |
| A32 26061 | 502 |
| A32 26071 | 502 |
| A32 32050 | 482 |
| A32 32060 | 482 |
| A32 32070 | 482 |
| A32 32080 | 482 |
| A32 36040 | 502 |
| A32 36050 | 502 |
| A32 36061 | 502 |
| A32 36071 | 502 |
| A32 36081 | 502 |
| A32 36091 | 502 |
| A32 40010 | 474 |
| A32 40020 | 474 |
| A32 40030 | 474 |
| A32 40040 | 474 |
| A32 40050 | 474 |
| A32 40060 | 474 |
| A32 40070 | 474 |
| A32 40080 | 474 |
| A32 40090 | 474 |
| A32 40250 | 475 |
| A32 40260 | 475 |
| A32 40270 | 475 |
| A32 42101 | 482 |
| A32 42110 | 482 |
| A32 42120 | 482 |
| A32 42130 | 482 |
| A32 42140 | 482 |
| A32 42150 | 482 |
| A32 42160 | 482 |
| A32 42170 | 482 |
| A32 46040 | 502 |

| A.. Order No. | Page |
|---|---|
| A32 46050 | 502 |
| A32 46061 | 502 |
| A32 46071 | 502 |
| A32 46081 | 502 |
| A32 46091 | 502 |
| A32 46101 | 502 |
| A32 46111 | 502 |
| A32 50030 | 474 |
| A32 50040 | 474 |
| A32 50050 | 474 |
| A32 50060 | 474 |
| A32 50070 | 474 |
| A32 50080 | 474 |
| A32 50100 | 474 |
| A32 50110 | 474 |
| A32 50250 | 475 |
| A32 50260 | 475 |
| A32 50270 | 475 |
| A32 50280 | 475 |
| A32 52180 | 482 |
| A32 52190 | 482 |
| A32 52200 | 482 |
| A32 56040 | 502 |
| A32 56050 | 502 |
| A32 56061 | 502 |
| A32 56071 | 502 |
| A32 56081 | 502 |
| A32 56091 | 502 |
| A32 56101 | 502 |
| A32 56111 | 502 |
| A32 56121 | 502 |
| A32 56131 | 502 |
| A32 60050 | 474 |
| A32 60060 | 474 |
| A32 60070 | 474 |
| A32 60080 | 474 |
| A32 60110 | 474 |
| A33 11120 | 480 |
| A33 12130 | 480 |
| A33 13141 | 480 |
| A33 14151 | 480 |
| A33 15161 | 480 |
| A33 16171 | 480 |
| A33 52000... | 409/481 |
| A33 52010... | 409/481 |
| A33 53000... | 409/481 |
| A33 53010... | 409/481 |
| A33 54000... | 409/481 |
| A33 54010... | 409/481 |
| A33 55000... | 409/481 |
| A33 55010... | 409/481 |
| A33 56000... | 409/481 |
| A33 56010... | 409/481 |
| A34 04030 | 476 |
| A34 05030 | 476 |
| A34 05040 | 476 |
| A34 14020 | 477 |
| A34 14030 | 477 |
| A34 14040 | 477 |
| A34 15050 | 477 |
| A34 24030 | 484 |
| A34 24040 | 484 |
| A34 32060 | 478 |
| A34 33060 | 478 |
| A34 34060 | 478 |
| A34 34070 | 478 |
| A34 35070 | 478 |
| A34 35080 | 478 |

| A.. | |
|---|---|
| Order No. | Page |
| A34 37100 | 478 |
| A34 91100.. | 479 |
| A34 91110.. | 479 |
| A34 91120.. | 479 |
| A34 91130.. | 479 |
| A34 91140.. | 479 |
| A34 91150.. | 479 |
| A34 91160.. | 479 |
| A34 91170.. | 479 |
| A34 91180.. | 479 |
| A34 92160.. | 479 |
| A34 92170.. | 479 |
| A34 92180.. | 479 |
| A34 92190.. | 479 |
| A34 92200.. | 479 |
| A34 92210.. | 479 |
| A34 92220.. | 479 |
| A34 93190.. | 479 |
| A34 93200.. | 479 |
| A34 93210.. | 479 |
| A34 93220.. | 479 |
| A34 93230.. | 479 |
| A34 93240.. | 479 |
| A34 93250.. | 479 |
| A34 93260.. | 479 |
| A34 93270.. | 479 |
| A34 94230.. | 479 |
| A34 94240.. | 479 |
| A34 94250.. | 479 |
| A34 94260.. | 479 |
| A34 94270.. | 479 |
| A34 94280.. | 479 |
| A34 94290.. | 479 |
| A34 94300.. | 479 |
| A34 94310.. | 479 |
| A34 94320.. | 479 |
| A34 96100.. | 479 |
| A34 96110.. | 479 |
| A34 96120.. | 479 |
| A34 96130.. | 479 |
| A34 96140.. | 479 |
| A34 96150.. | 479 |
| A34 96160.. | 479 |
| A34 96170.. | 479 |
| A34 96180.. | 479 |
| A34 97160.. | 479 |
| A34 97170.. | 479 |
| A34 97180.. | 479 |
| A34 97190.. | 479 |
| A34 97200.. | 479 |
| A34 97210.. | 479 |
| A34 97220.. | 479 |
| A34 98190.. | 479 |
| A34 98200.. | 479 |
| A34 98210.. | 479 |
| A34 98220.. | 479 |
| A34 98230.. | 479 |
| A34 98240.. | 479 |
| A34 98250.. | 479 |
| A34 98260.. | 479 |
| A34 98270.. | 479 |
| A34 99230.. | 479 |
| A34 99240.. | 479 |
| A34 99250.. | 479 |
| A34 99260.. | 479 |
| A34 99270.. | 479 |
| A34 99280.. | 479 |
| A34 99290.. | 479 |
| A34 99300.. | 479 |
| A34 99310.. | 479 |
| A34 99320.. | 479 |
| A40 04022 | 487 |

| A.. | |
|---|---|
| Order No. | Page |
| A40 04032 | 487 |
| A40 05021 | 487 |
| A40 05031 | 487 |
| A40 05041 | 487 |
| A40 06031 | 487 |
| A40 06041 | 487 |
| A40 06051 | 487 |
| A40 06061 | 487 |
| A40 16062 | 486 |
| A40 17062 | 486 |
| A40 17072 | 486 |
| A40 24020.12 | 485 |
| A40 24023 | 485 |
| A40 24034 | 485 |
| A40 24043 | 485 |
| A40 24053 | 485 |
| A40 25032 | 485 |
| A40 25042 | 485 |
| A40 25052 | 485 |
| A40 25062 | 485 |
| A40 26042 | 485 |
| A40 26052 | 485 |
| A40 26062 | 485 |
| A40 27052 | 485 |
| A40 27062 | 485 |
| | |
| A50 00120 | 431 |
| A50 00130 | 431 |
| A50 00140 | 431 |
| A50 00150 | 431 |
| A50 00160 | 431 |
| A50 00320 | 431 |
| A50 00330 | 431 |
| A50 00340 | 431 |
| A50 00350 | 431 |
| A50 00360 | 431 |
| A50 00370 | 431 |
| A50 00380 | 431 |
| A50 00380.4000 | 432 |
| A50 00390 | 431 |
| A50 00390.4000 | 432 |
| A50 00650 | 433 |
| A50 00850 | 433 |
| A50 00860 | 433 |
| A50 00870 | 433 |
| A50 00880 | 433 |
| A50 01351 | 435 |
| A50 01361 | 435 |
| A50 01451 | 435 |
| A50 01461 | 435 |
| A50 01470 | 435 |
| A50 55120 | 430 |
| A50 55130 | 430 |
| A50 55140 | 430 |
| A50 55150 | 430 |
| A50 55160 | 430 |
| A50 55240 | 430 |
| A50 55250 | 430 |
| A50 55260 | 430 |
| A50 55270 | 430 |
| A50 55320 | 430 |
| A50 55330 | 430 |
| A50 55340 | 430 |
| A50 55350 | 430 |
| A50 55360 | 430 |
| A50 55370 | 430 |
| A50 55380 | 430 |
| A50 56150 | 434 |
| A50 56160 | 434 |
| A50 56350 | 434 |
| A50 56360 | 434 |
| A50 76150 | 432 |

| A.. | |
|---|---|
| Order No. | Page |
| A50 76160 | 432 |
| A50 76350 | 432 |
| A50 76360 | 432 |
| A50 76370 | 432 |
| | |
| A54 00120 | 436 |
| A54 00130 | 436 |
| A54 00140 | 436 |
| A54 00150 | 436 |
| A54 00160 | 436 |
| A54 00330 | 436 |
| A54 00340 | 436 |
| A54 00350 | 436 |
| A54 00360 | 436 |
| A54 00370 | 436 |
| A54 00380 | 436 |
| A54 10650 | 437 |
| A54 10850 | 437 |
| A54 10860 | 437 |
| A54 10870 | 437 |
| A54 10880 | 437 |
| | |
| A55 00120 | 438 |
| A55 00130 | 438 |
| A55 00140 | 438 |
| A55 00150 | 438 |
| A55 00160 | 438 |
| A55 00330 | 438 |
| A55 00340 | 438 |
| A55 00350 | 438 |
| A55 00360 | 438 |
| A55 00370 | 438 |
| A55 00380 | 438 |
| A55 02150 | 442 |
| A55 02160 | 442 |
| A55 02350 | 442 |
| A55 02360 | 442 |
| | |
| A55 10640 | 440 |
| A55 10650 | 440 |
| A55 10850 | 440 |
| A55 10860 | 440 |
| A55 10870 | 440 |
| | |
| A55 55150 | 439 |
| A55 55160 | 439 |
| A55 55350 | 439 |
| A55 55360 | 439 |
| A55 55370 | 439 |
| A55 55380 | 439 |
| A55 56150 | 441 |
| A55 56160 | 441 |
| A55 56350 | 441 |
| A55 56360 | 441 |
| A55 57121 | 443 |
| A55 57131 | 443 |
| A55 57141 | 443 |
| A55 57151 | 443 |
| A55 57161 | 443 |
| A55 57331 | 443 |
| A55 57341 | 443 |
| A55 57351 | 443 |
| A55 57361 | 443 |
| A55 57371 | 443 |
| A55 57381 | 443 |
| | |
| A69 05050 | 460 |
| A69 06050 | 460 |
| A69 06060 | 460 |
| A69 08050 | 460 |
| A69 08060 | 460 |
| A69 08070 | 460 |

| B.. | |
|---|---|
| Order No. | Page |
| B00 00680 | 258 |
| B00 00690 | 258 |
| | |
| B00 15510 | 256 |
| B00 15530 | 256 |
| B00 15610 | 256 |
| B00 15620 | 256 |
| B00 15630 | 256 |
| B00 15640 | 256 |
| B00 15650 | 256 |
| B00 15661 | 256 |
| B00 15671 | 256 |
| B00 15681 | 256 |
| B00 15691 | 256 |
| B00 15710 | 256 |
| B00 15751 | 256 |
| | |
| B00 25510 | 264 |
| B00 25530 | 264 |
| B00 25540 | 264 |
| B00 25610 | 264 |
| B00 25620 | 264 |
| B00 25630 | 264 |
| B00 25640 | 264 |
| B00 25650 | 264 |
| B00 25661 | 264 |
| B00 25671 | 264 |
| B00 25681 | 264 |
| B00 25691 | 264 |
| B00 25700 | 264 |
| B00 25710 | 264 |
| B00 25810 | 264 |
| B00 25820 | 264 |
| B00 25830 | 264 |
| B00 25840 | 264 |
| B00 25850 | 264 |
| B00 25861 | 264 |
| B00 25871 | 264 |
| B00 25911 | 264 |
| | |
| B00 30280 | 258 |
| B00 30290 | 258 |
| B00 37010 | 256 |
| B00 37020 | 256 |
| | |
| B05 20100 | 218/232 |
| B05 20120 | 218 |
| B05 20140 | 232 |
| B05 20160 | 218 |
| B05 20180 | 232 |
| B05 20220 | 218/232 |
| B05 20260 | 232 |
| B05 20600 | 232 |
| B05 20640 | 232 |
| B05 20680 | 232 |
| B05 20720 | 232 |
| B05 20760 | 232 |
| | |
| B10 01011 | 510 |
| B10 02011 | 510 |
| B10 03011 | 510 |
| B10 04011 | 510 |
| B10 05011 | 510 |
| B10 06011 | 510 |
| B10 07011 | 510 |
| | |
| B30 01010 | 273 |
| B30 01010 | 274 |
| B30 01220 | 273 |
| B30 02010 | 273 |
| B30 02010 | 274 |
| B30 02020 | 268 |

| B.. / C.. | |
|---|---|
| Order No. | Page |
| B30 02200 | 273 |
| B30 03010 | 273 |
| B30 03010 | 274 |
| B30 04010 | 273 |
| B30 05010 | 273 |
| B30 06010 | 273 |
| B30 07010 | 273 |
| | |
| B30 11010 | 279 |
| B30 11020 | 279 |
| B30 12010 | 279 |
| B30 12020 | 279 |
| B30 13010 | 279 |
| B30 13020 | 279 |
| B30 14010 | 279 |
| B30 14020 | 279 |
| B30 15010 | 279 |
| B30 15020 | 279 |
| B30 16010 | 279 |
| B30 16020 | 279 |
| B30 17010 | 279 |
| B30 17020 | 279 |
| B30 17030 | 279 |
| | |
| C83 32010.04.. | 700 |
| C83 32010.08.. | 700 |
| C83 32050.04.. | 700 |
| C83 32050.08.. | 700 |
| C83 32140.04.. | 700 |
| C83 32140.08.. | 700 |
| C83 44010.04.. | 700 |
| C83 44010.08.. | 700 |
| C83 44010.12.. | 700 |
| C83 44050.04.. | 700 |
| C83 44050.08.. | 700 |
| C83 44050.12.. | 700 |
| C83 44120.08.. | 700 |
| C83 44140.08.. | 700 |
| | |
| C84 13050.04.. | 701 |
| C84 18010.08.. | 701 |
| C84 18050.04.. | 701 |
| C84 18050.08.. | 701 |
| C84 18140.02.. | 701 |
| C84 18140.04.. | 701 |
| C84 18140.08.. | 701 |
| C84 18150.02.. | 701 |
| C84 18150.04.. | 701 |
| C84 32010.04.. | 701 |
| C84 32010.08.. | 701 |
| C84 32050.04.. | 701 |
| C84 32050.08.. | 701 |
| C84 32140.04.. | 701 |
| C84 32140.08.. | 701 |
| | |
| C85 18010.04.. | 702 |
| C85 18120.02.. | 702 |
| C85 18120.04.. | 702 |
| C85 18140.02.. | 702 |
| C85 18140.04.. | 702 |
| C85 18150.02.. | 702 |
| C85 18150.04.. | 702 |
| C85 32010.04.. | 702 |
| C85 32010.08.. | 702 |
| C85 32050.04.. | 702 |
| C85 32050.08.. | 702 |
| C85 32120.04.. | 702 |
| C85 32120.08.. | 702 |
| C85 32140.04.. | 702 |
| C85 32140.08.. | 702 |
| C85 32150.04.. | 702 |
| C85 32150.08.. | 702 |

# Numerical Index


| C.. / D.. | | D.. | | D.. | | D.. | | D.. | |
|---|---|---|---|---|---|---|---|---|---|
| Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page |
| C85 44010.04.. | 702 | D20 05191 | 572 | D20 20020 | 582 | D20 80260 | 552 | D40 05460 | 528 |
| C85 44010.08.. | 702 | D20 05200 | 573 | D20 20040 | 582 | D20 80270 | 552 | D40 05470 | 528 |
| C85 44050.04.. | 702 | D20 05220 | 573 | D20 20060 | 582 | D20 80350 | 553 | D40 05660 | 529 |
| C85 44050.08.. | 702 | D20 05240 | 573 | D20 20081 | 582 | D20 80360 | 553 | D40 05670 | 529 |
| C85 44050.12.. | 702 | D20 05260 | 573 | D20 20101 | 582 | D20 80370 | 553 | D40 05860 | 530 |
| C85 44120.04.. | 702 | D20 05271 | 573 | D20 20121 | 582 | D20 80450 | 554 | D40 05870 | 530 |
| C85 44120.08.. | 702 | D20 05291 | 573 | D20 20220 | 583 | D20 80460 | 554 | D40 05960 | 531 |
| C85 44150.04.. | 702 | D20 05400 | 574 | D20 20240 | 583 | D20 80470 | 554 | D40 05970 | 531 |
| C85 44150.08.. | 702 | D20 05420 | 574 | D20 20260 | 583 | D20 80550 | 555 | D40 05980 | 531 |
| | | D20 05440 | 574 | D20 20281 | 583 | D20 80570 | 555 | | |
| C86 18010.04.. | 703 | D20 05460 | 574 | D20 20301 | 583 | D20 80650 | 556 | D40 06010 | 532 |
| C86 18140.02.. | 703 | D20 05471 | 574 | D20 20321 | 583 | D20 80660 | 556 | D40 06020 | 532 |
| C86 18140.04.. | 703 | D20 05491 | 574 | | | D20 80670 | 556 | D40 06040 | 532 |
| C86 18150.02.. | 703 | D20 05500 | 575 | D20 40000 | 557 | | | D40 06110 | 533 |
| C86 18150.04.. | 703 | D20 05520 | 575 | D20 40010 | 557 | D20 85050 | 550 | D40 06120 | 533 |
| C86 32050.04.. | 703 | D20 05540 | 575 | D20 40020 | 557 | D20 85060 | 550 | D40 06140 | 533 |
| C86 32050.08.. | 703 | D20 05560 | 575 | D20 40100 | 558 | D20 85070 | 550 | D40 06210 | 534 |
| C86 32120.04.. | 703 | D20 05571 | 575 | D20 40110 | 558 | D20 85150 | 551 | D40 06220 | 534 |
| C86 32120.08.. | 703 | D20 05591 | 575 | D20 40120 | 558 | D20 85160 | 551 | D40 06240 | 534 |
| C86 32140.04.. | 703 | D20 05600 | 576 | D20 40200 | 559 | D20 85170 | 551 | D40 06410 | 594 |
| C86 32140.08.. | 703 | D20 05620 | 576 | D20 40210 | 559 | D20 85250 | 552 | D40 06430 | 594 |
| C86 32150.04.. | 703 | D20 05640 | 576 | D20 40220 | 559 | D20 85260 | 552 | D40 06440 | 594 |
| C86 32150.08.. | 703 | D20 05660 | 576 | D20 40300 | 560 | D20 85270 | 552 | D40 06500 | 535 |
| | | D20 05671 | 576 | D20 40310 | 560 | D20 85350 | 553 | D40 06510 | 535 |
| D20 00000 | 571 | D20 05691 | 576 | D20 40320 | 560 | D20 85360 | 553 | D40 06520 | 535 |
| D20 00020 | 571 | D20 05700 | 577 | D20 40400 | 561 | D20 85370 | 553 | D40 06530 | 535 |
| D20 00040 | 571 | D20 05720 | 577 | D20 40410 | 561 | D20 85450 | 554 | D40 06551 | 535 |
| D20 00060 | 571 | D20 05740 | 577 | D20 40420 | 561 | D20 85460 | 554 | D40 06600 | 536 |
| D20 00071 | 571 | D20 05760 | 577 | D20 40500 | 562 | D20 85470 | 554 | D40 06610 | 536 |
| D20 00091 | 571 | D20 05771 | 577 | D20 40510 | 562 | D20 85550 | 555 | D40 06630 | 536 |
| D20 00100 | 572 | D20 05791 | 577 | D20 40520 | 562 | D20 85560 | 555 | D40 06640 | 536 |
| D20 00120 | 572 | D20 05800 | 577 | D20 40610 | 563 | D20 85570 | 555 | D40 06700 | 524 |
| D20 00140 | 572 | | | D20 40620 | 563 | D20 85650 | 556 | D40 06710 | 524 |
| D20 00160 | 572 | D20 10010 | 579 | D20 45310 | 560 | D20 85660 | 556 | D40 06720 | 524 |
| D20 00171 | 572 | D20 10030 | 579 | D20 45320 | 560 | D20 85670 | 556 | D40 06800 | 524 |
| D20 00191 | 572 | D20 10050 | 579 | | | | | D40 06810 | 524 |
| D20 00200 | 573 | D20 10071 | 579 | D20 50020 | 571 | D40 00160 | 525 | D40 06820 | 524 |
| D20 00220 | 573 | D20 10091 | 579 | D20 50090 | 571 | D40 00170 | 525 | D40 06901 | 524 |
| D20 00240 | 573 | D20 10111 | 579 | D20 50120 | 572 | D40 00180 | 525 | D40 06911 | 524 |
| D20 00271 | 573 | D20 10131 | 579 | D20 50190 | 572 | D40 00190 | 525 | D40 06921 | 524 |
| D20 00291 | 573 | D20 10610 | 580 | D20 50220 | 573 | D40 00260 | 526 | | |
| D20 00400 | 574 | D20 10620 | 268 | D20 50290 | 573 | D40 00470 | 528 | D40 07000 | 595 |
| D20 00420 | 574 | D20 10630 | 580 | D20 50420 | 574 | D40 00660 | 529 | D40 07010 | 595 |
| D20 00440 | 574 | D20 10650 | 580 | D20 50490 | 574 | D40 00670 | 529 | D40 07020 | 595 |
| D20 00460 | 574 | D20 10671 | 580 | D20 50520 | 575 | D40 00860 | 530 | D40 07030 | 595 |
| D20 00471 | 574 | D20 10691 | 580 | D20 50590 | 575 | D40 00870 | 530 | D40 07040 | 595 |
| D20 00491 | 574 | D20 10711 | 580 | D20 50620 | 576 | D40 00960 | 531 | D40 07050 | 595 |
| D20 00500 | 575 | D20 10731 | 580 | D20 50690 | 576 | D40 00970 | 531 | D40 07130 | 525 |
| D20 00520 | 575 | D20 10810 | 581 | D20 50720 | 577 | | | D40 07140 | 525 |
| D20 00540 | 575 | D20 10830 | 581 | D20 50790 | 577 | D40 01010 | 532 | D40 07200 | 596 |
| D20 00560 | 575 | D20 10850 | 581 | | | D40 01020 | 532 | D40 07210 | 596 |
| D20 00571 | 575 | D20 10871 | 581 | D20 55020 | 571 | D40 01040 | 532 | D40 07220 | 596 |
| D20 00591 | 575 | D20 10891 | 581 | D20 55090 | 571 | D40 01110 | 533 | D40 07230 | 596 |
| D20 00620 | 576 | | | D20 55120 | 572 | D40 01120 | 533 | D40 07240 | 596 |
| D20 00640 | 576 | D20 15010 | 579 | D20 55190 | 572 | D40 01140 | 533 | D40 07250 | 596 |
| D20 00660 | 576 | D20 15030 | 579 | D20 55220 | 573 | D40 01210 | 534 | | |
| D20 00671 | 576 | D20 15050 | 579 | D20 55290 | 573 | D40 01220 | 534 | D40 50011 | 514 |
| D20 00691 | 576 | D20 15071 | 579 | D20 55420 | 574 | D40 01240 | 534 | D40 50020 | 514 |
| D20 00771 | 577 | D20 15091 | 579 | D20 55490 | 574 | | | D40 50040 | 514 |
| D20 00791 | 577 | D20 15111 | 579 | D20 55520 | 575 | D40 02010 | 595 | D40 50120 | 515 |
| | | D20 15131 | 579 | D20 55590 | 575 | D40 02020 | 595 | D40 50140 | 515 |
| D20 05000 | 571 | D20 15610 | 580 | D20 55620 | 576 | D40 02030 | 595 | D40 50420 | 518 |
| D20 05020 | 571 | D20 15650 | 580 | D20 55690 | 576 | D40 02040 | 595 | D40 50820 | 522 |
| D20 05040 | 571 | D20 15671 | 580 | D20 55720 | 577 | | | D40 50840 | 522 |
| D20 05060 | 571 | D20 15691 | 580 | D20 55790 | 577 | D40 05160 | 525 | D40 50920 | 523 |
| D20 05071 | 571 | D20 15731 | 580 | | | D40 05170 | 525 | D40 50940 | 523 |
| D20 05091 | 571 | D20 15810 | 581 | D20 80050 | 550 | D40 05180 | 525 | | |
| D20 05100 | 572 | D20 15830 | 581 | D20 80060 | 550 | D40 05190 | 525 | D40 55020 | 514 |
| D20 05120 | 572 | D20 15850 | 581 | D20 80070 | 550 | D40 05260 | 526 | D40 55040 | 514 |
| D20 05140 | 572 | D20 15871 | 581 | D20 80160 | 551 | D40 05270 | 526 | D40 55111 | 515 |
| D20 05160 | 572 | D20 15891 | 581 | D20 80170 | 551 | D40 05360 | 527 | D40 55120 | 515 |
| D20 05171 | 572 | | | D20 80250 | 552 | D40 05370 | 527 | D40 55140 | 515 |

| D.. | |
|---|---|
| Order No. | Page |
| D40 55150 | 515 |
| D40 55160 | 515 |
| D40 55170 | 515 |
| D40 55180 | 540 |
| D40 55190 | 540 |
| D40 55211 | 516 |
| D40 55220 | 516 |
| D40 55240 | 516 |
| D40 55270 | 516 |
| D40 55280 | 541 |
| D40 55290 | 541 |
| D40 55311 | 517 |
| D40 55320 | 517 |
| D40 55340 | 517 |
| D40 55360 | 517 |
| D40 55411 | 518 |
| D40 55420 | 518 |
| D40 55440 | 518 |
| D40 55460 | 518 |
| D40 55511 | 519 |
| D40 55520 | 519 |
| D40 55540 | 519 |
| D40 55611 | 520 |
| D40 55620 | 520 |
| D40 55640 | 520 |
| D40 55711 | 521 |
| D40 55720 | 521 |
| D40 55740 | 521 |
| D40 55811 | 522 |
| D40 55820 | 522 |
| D40 55840 | 522 |
| D40 55911 | 523 |
| D40 55920 | 523 |
| D40 55940 | 523 |
| | |
| D40 58000 | 537 |
| D40 58010 | 537 |
| D40 58400 | 538 |
| | |
| D40 65011 | 543 |
| D40 65021 | 543 |
| D40 65081 | 544 |
| D40 65131 | 545 |
| D40 65180 | 540 |
| D40 65190 | 540 |
| D40 65280 | 541 |
| D40 65290 | 541 |
| | |
| D50 00800 | 593 |
| D50 00810 | 593 |
| D50 00820 | 593 |
| D50 00830 | 593 |
| D50 00840 | 593 |
| D50 50290 | 147 |
| D50 50300 | 153 |
| D50 50310 | 153 |
| | |
| D50 55090 | 147 |
| D50 55100 | 105/156 |
| D50 55110 | 105/156 |
| D50 55120 | 105/156 |
| D50 55130 | 105/109 |
| D50 55300 | 156 |
| D50 55310 | 109/156 |
| D50 55320 | 109/156 |
| D50 55330 | 109 |
| | |
| D52 01100 | 564 |
| D52 01110 | 564 |
| D52 01120 | 564 |
| D52 06100 | 564 |
| D52 06110 | 564 |

| D.. | |
|---|---|
| Order No. | Page |
| D52 06120 | 564 |
| D52 50090 | 565 |
| D52 50100 | 565 |
| D52 50110 | 565 |
| D52 50120 | 565 |
| D52 50130 | 565 |
| D52 55090 | 565 |
| D52 55100 | 565 |
| D52 55110 | 565 |
| D52 55120 | 565 |
| D52 55130 | 565 |
| | |
| D53 05110 | 158 |
| D53 05120 | 158 |
| D53 05310 | 158 |
| D53 05320 | 158 |
| D53 51430 | 547 |
| D53 51440 | 547 |
| D53 53200 | 147 |
| D53 53220 | 147 |
| D53 53230 | 147 |
| D53 53240 | 147 |
| D53 53350 | 153 |
| D53 53360 | 153 |
| D53 53370 | 153 |
| D53 53380 | 153 |
| D53 53390 | 153 |
| D53 53400 | 153 |
| D53 53410 | 153 |
| D53 53420 | 153 |
| D53 53430 | 153 |
| D53 55500 | 160 |
| D53 55600 | 160 |
| D53 55700 | 160 |
| D53 56201 | 105 |
| D53 56211 | 105 |
| D53 56221 | 105 |
| D53 56231 | 105 |
| D53 56400 | 597 |
| D53 56410 | 547 |
| D53 56420 | 597 |
| D53 56430 | 547 |
| D53 56440 | 547 |
| | |
| D54 60030 | 172 |
| D54 60040 | 172 |
| D54 60050 | 172 |
| D54 60060 | 172 |
| D54 60070 | 172 |
| D54 60070 | 182 |
| D54 60130 | 172 |
| D54 60140 | 172 |
| D54 60150 | 172 |
| D54 60160 | 172 |
| D54 60170 | 172 |
| D54 60170 | 182 |
| D54 60330 | 180 |
| D54 60340 | 180 |
| D54 60350 | 180 |
| D54 60360 | 180 |
| D54 60370 | 180 |
| D54 60370 | 182 |
| D54 60380 | 180 |
| D54 60430 | 178 |
| D54 60440 | 178 |
| D54 60450 | 178 |
| D54 60460 | 178 |
| D54 60470 | 178 |
| D54 60470 | 182 |
| D54 60510 | 172 |
| D54 60520 | 172 |
| D54 60540 | 172 |

| D.. / E.. / F.. / G.. | |
|---|---|
| Order No. | Page |
| D54 60550 | 172 |
| D54 60560 | 172 |
| D54 60570 | 172 |
| D54 60610 | 172 |
| D54 60620 | 172 |
| D54 60710 | 176 |
| D54 60720 | 176 |
| D54 60730 | 176 |
| D54 60740 | 176 |
| D54 60750 | 176 |
| D54 60760 | 176 |
| D54 60770 | 176 |
| | |
| E11 10050 | 298 |
| E16 10080 | 298 |
| E16 10090 | 298 |
| E16 10100 | 298 |
| E21 31010 | 298 |
| E21 31020 | 298 |
| E21 33010 | 298 |
| E21 33020 | 298 |
| E21 35010 | 298 |
| E21 35020 | 298 |
| E21 37010 | 298 |
| E21 37020 | 298 |
| E51 00000 | 230 |
| E51 00010 | 230 |
| E52 00000 | 230 |
| E52 00000.13 | 230 |
| | |
| F10 00051 | 202 |
| F10 00061 | 202 |
| F10 00071 | 202 |
| F10 00081 | 202 |
| F10 00091 | 202 |
| F10 00101 | 202 |
| F10 00350 | 202 |
| F10 00370 | 202 |
| F10 00380 | 202 |
| F10 00390 | 202 |
| F10 00400 | 202 |
| F10 10021 | 200 |
| F10 10031 | 200 |
| F10 10040 | 200 |
| F10 10050 | 200 |
| F10 10060 | 200 |
| F10 11070 | 200 |
| F10 11080 | 200 |
| F10 11090 | 200 |
| F10 11100 | 200 |
| F10 11110 | 200 |
| F10 11120 | 200 |
| F10 11130 | 200 |
| | |
| G01 23510 | 294 |
| G01 23520 | 294 |
| G01 23530 | 294 |
| G01 23600 | 294 |
| G01 63531 | 182 |
| G01 63541 | 182 |
| G01 63551 | 182 |
| G01 70521.12 | 170 |
| G01 70551 | 172-180 |
| G01 70561 | 172-180 |
| G01 71011.12 | 170 |
| G01 71021 | 172-180 |
| G01 71050.12 | 170 |
| G01 71071 | 172-180 |
| G01 71131 | 172-180 |
| G01 71511.12 | 170 |
| G01 71521 | 172-180 |
| G01 71621 | 172-180 |

| G.. | |
|---|---|
| Order No. | Page |
| G01 72011.12 | 170 |
| G01 72021 | 172-180 |
| G01 72121 | 172-180 |
| G01 72511.12 | 170 |
| G01 72521 | 172-180 |
| G01 72621 | 172-180 |
| G01 73011.12 | 170 |
| G01 73031 | 172-180 |
| G01 73041 | 172-180 |
| G01 73121 | 172-180 |
| G01 73511.12 | 170 |
| G01 73561 | 172-180 |
| G01 73571 | 172-180 |
| | |
| G03 10281 | 182 |
| G03 10281.13 | 182 |
| G03 10291 | 182 |
| G03 10301 | 182 |
| G03 50510 | 194 |
| G03 50520 | 194 |
| G03 50530 | 194 |
| G03 50540 | 194 |
| G03 50550 | 194 |
| G03 50560 | 194 |
| G03 50570 | 194 |
| G03 60510 | 194 |
| G03 60520 | 194 |
| G03 60530 | 194 |
| G03 60540 | 194 |
| G03 60550 | 194 |
| G03 60560 | 194 |
| G03 60570 | 194 |
| G03 70010.11 | 170 |
| G03 70011 | 172/176 |
| G03 70020.11 | 170 |
| G03 70021 | 172/176 |
| G03 70030.11 | 170 |
| G03 70031 | 172-180 |
| G03 70040.11 | 170 |
| G03 70041 | 172-180 |
| G03 70060.11 | 170 |
| G03 70061 | 172-180 |
| G03 70070.11 | 170 |
| G03 70071 | 172-180 |
| G03 70080.11 | 170 |
| G03 70081 | 172-180 |
| G03 70090.11 | 170 |
| G03 70091 | 172-180 |
| G03 70141 | 172 |
| G03 70150 | 178 |
| G03 70160 | 178 |
| G03 70170 | 178 |
| G03 70180 | 178 |
| G03 70190 | 178 |
| G03 70200 | 178 |
| G03 70210 | 180 |
| G03 70220 | 180 |
| G03 70230 | 172 |
| G03 70240 | 172 |
| G03 70250 | 172 |
| G03 70260 | 172 |
| G03 70330 | 172 |
| G03 70410 | 174 |
| G03 70420 | 174 |
| G03 70430 | 174 |
| G03 70440 | 174 |
| G03 70460 | 174 |
| G03 70470 | 174 |
| G03 70480 | 174 |
| G03 70490 | 174 |
| G03 80021 | 172 |
| G03 80030 | 176 |

| G.. / H.. | |
|---|---|
| Order No. | Page |
| G03 80040 | 176 |
| G03 80050 | 176 |
| G03 80060 | 176 |
| G03 80070 | 176 |
| G03 80080 | 176 |
| G03 80090 | 172 |
| G03 80100 | 172 |
| G03 80110 | 172 |
| G03 80120 | 172 |
| G03 80310 | 172 |
| | |
| G04 00500 | 194 |
| G04 01000 | 194 |
| G04 01000.12 | 194 |
| G04 01010 | 194 |
| G04 01500 | 194 |
| G04 01500.12 | 194 |
| G04 01510 | 194 |
| G04 01510.12 | 194 |
| G04 02000 | 194 |
| G04 02010 | 194 |
| G04 02010.12 | 194 |
| G04 02020 | 194 |
| G04 02500 | 194 |
| G04 02500.12 | 194 |
| G04 02510 | 194 |
| G04 03000 | 194 |
| G04 03000.12 | 194 |
| G04 03010 | 194 |
| G04 03500 | 194 |
| G04 03500.12 | 194 |
| | |
| G05 00010 | 196/297 |
| G05 10010 | 196/297 |
| G05 10040 | 196/297 |
| G05 20010 | 196/297 |
| G05 20020 | 196/297 |
| | |
| G10 10111 | 266 |
| G10 10111.15 | 266 |
| G10 10121 | 266 |
| G10 10121.15 | 266 |
| G10 10131 | 266 |
| G10 10131.15 | 266 |
| G10 10141 | 266 |
| G10 10141.15 | 266 |
| G10 10151 | 266 |
| G10 10151.15 | 266 |
| G10 10161 | 266 |
| G10 10161.15 | 266 |
| G10 10611 | 266 |
| G10 10621 | 266 |
| G10 10631 | 266 |
| G10 10641 | 266 |
| G10 10651 | 266 |
| G10 10661 | 266 |
| G10 12060 | 258 |
| G10 12070 | 258 |
| G10 12080 | 258 |
| G10 12621 | 258 |
| G10 12711 | 258 |
| G10 12731 | 258 |
| G10 12841 | 258 |
| G10 12861 | 258 |
| | |
| H15 11100.21 | 255 |
| H15 11110.21 | 255 |
| H15 11120.21 | 255 |
| H15 11130.21 | 255 |
| H15 11140.21 | 255 |
| H15 11150.21 | 255 |
| H15 11160.21 | 255 |

# Numerical Index

| H.. | |
|---|---|
| Order No. | Page |
| H15 21110.02 | 255 |
| H15 21110.21 | 255 |
| H15 21120.02 | 255 |
| H15 21120.21 | 255 |
| H15 21130.02 | 255 |
| H15 21130.21 | 255 |
| H15 21140.02 | 255 |
| H15 21140.21 | 255 |
| | |
| H50 21640 | 260 |
| H50 21680 | 260 |
| H50 23240 | 260 |
| H50 23280 | 260 |
| | |
| H51 31100.0182 | 261 |
| H51 31150.0182 | 261 |
| H51 31200.0182 | 261 |
| H51 32100.0182 | 261 |
| H51 32150.0182 | 261 |
| H51 32200.0182 | 261 |
| H51 41100.0182 | 261 |
| H51 41150.0182 | 261 |
| H51 41200.0182 | 261 |
| H51 41250.0182 | 261 |
| H51 42100.0182 | 261 |
| H51 42150.0182 | 261 |
| H51 42200.0182 | 261 |
| H51 42250.0182 | 261 |
| H51 51100.0282 | 261 |
| H51 51150.0282 | 261 |
| H51 51200.0282 | 261 |
| H51 51250.0282 | 261 |
| H51 51300.0282 | 261 |
| H51 52100.0282 | 261 |
| H51 52150.0282 | 261 |
| H51 52200.0282 | 261 |
| H51 52250.0282 | 261 |
| H51 52300.0282 | 261 |
| H51 61150.0282 | 261 |
| H51 61200.0282 | 261 |
| H51 61250.0282 | 261 |
| H51 61300.0282 | 261 |
| H51 61350.0282 | 261 |
| H51 62150.0282 | 261 |
| H51 62200.0282 | 261 |
| H51 62250.0282 | 261 |
| H51 62300.0282 | 261 |
| H51 62350.0282 | 261 |
| H51 81150.0282 | 261 |
| H51 81200.0282 | 261 |
| H51 81250.0282 | 261 |
| H51 81300.0282 | 261 |
| H51 81350.0282 | 261 |
| H51 81400.0282 | 261 |
| H51 82150.0282 | 261 |
| H51 82200.0282 | 261 |
| H51 82250.0282 | 261 |
| H51 82300.0282 | 261 |
| H51 82350.0282 | 261 |
| H51 82400.0282 | 261 |
| | |
| H55 31100.0182 | 262 |
| H55 31150.0182 | 262 |
| H55 32100.0182 | 262 |
| H55 32150.0182 | 262 |
| H55 41150.0182 | 262 |
| H55 41200.0182 | 262 |
| H55 42150.0182 | 262 |
| H55 42200.0182 | 262 |
| H55 51150.0282 | 262 |
| H55 51200.0282 | 262 |
| H55 51250.0282 | 262 |

| H.. | |
|---|---|
| Order No. | Page |
| H55 52150.0282 | 262 |
| H55 52200.0282 | 262 |
| H55 52250.0282 | 262 |
| H55 61200.0282 | 262 |
| H55 61300.0282 | 262 |
| H55 62200.0282 | 262 |
| H55 62300.0282 | 262 |
| H55 81200.0282 | 262 |
| H55 81400.0282 | 262 |
| H55 82200.0282 | 262 |
| H55 82400.0282 | 262 |
| | |
| H56 31100.0140 | 263 |
| H56 32100.0140 | 263 |
| H56 41121.0140 | 263 |
| H56 42121.0140 | 263 |
| H56 51151.0140 | 263 |
| H56 52151.0140 | 263 |
| H56 61201.0140 | 263 |
| H56 62201.0140 | 263 |
| H56 81251.0140 | 263 |
| H56 82251.0140 | 263 |
| | |
| H60 17300. .. | 704 |
| H60 17400. .. | 704 |
| H60 17500. .. | 704 |
| H60 17600. .. | 704 |
| H60 17700. .. | 704 |
| H60 17800. .. | 704 |
| H60 17900. .. | 704 |
| H60 18000. .. | 704 |
| H60 18100. .. | 704 |
| H60 18200. .. | 704 |
| H60 18300. .. | 704 |
| H60 18400. .. | 704 |
| H60 18500. .. | 704 |
| H60 18600. .. | 704 |
| H60 18700. .. | 704 |
| H60 18800. .. | 704 |
| H60 18900. .. | 704 |
| H60 19000. .. | 704 |
| H60 19100. .. | 704 |
| H60 19200. .. | 704 |
| H60 19300. .. | 704 |
| H60 19400. .. | 704 |
| H60 19500. .. | 704 |
| H60 19600. .. | 704 |
| H60 19700. .. | 704 |
| H60 19800. .. | 704 |
| H60 19900. .. | 704 |
| | |
| H60 20000. .. | 704 |
| H60 20100. .. | 704 |
| H60 20200. .. | 704 |
| H60 20300. .. | 704 |
| H60 20400. .. | 704 |
| H60 20500. .. | 704 |
| H60 20600. .. | 704 |
| H60 20700. .. | 704 |
| H60 20800. .. | 704 |
| H60 20900. .. | 704 |
| H60 21000. .. | 704 |
| H60 21100. .. | 704 |
| H60 21200. .. | 704 |
| H60 21300. .. | 705 |
| H60 21400. .. | 705 |
| H60 21500. .. | 705 |
| H60 21600. .. | 705 |
| H60 21700. .. | 705 |
| H60 21800. .. | 705 |
| H60 21900. .. | 705 |
| H60 22000. .. | 705 |

| H.. | |
|---|---|
| Order No. | Page |
| H60 22100. .. | 705 |
| H60 22200. .. | 705 |
| H60 22300. .. | 705 |
| H60 22400. .. | 705 |
| H60 22500. .. | 705 |
| H60 22600. .. | 705 |
| H60 22700. .. | 705 |
| H60 22800. .. | 705 |
| H60 22900. .. | 705 |
| H60 23000. .. | 705 |
| H60 23100. .. | 705 |
| H60 23200. .. | 705 |
| H60 23300. .. | 705 |
| H60 23400. .. | 705 |
| H60 23500. .. | 705 |
| H60 23600. .. | 705 |
| H60 23700. .. | 705 |
| H60 23800. .. | 705 |
| H60 23900. .. | 705 |
| H60 24000. .. | 705 |
| H60 24100. .. | 705 |
| H60 24200. .. | 705 |
| H60 24300. .. | 705 |
| H60 24400. .. | 705 |
| H60 24500. .. | 705 |
| H60 24600. .. | 705 |
| H60 24700. .. | 705 |
| H60 24800. .. | 705 |
| H60 24900. .. | 705 |
| H60 25000. .. | 705 |
| H60 25100. .. | 705 |
| H60 25200. .. | 705 |
| H60 25300. .. | 706 |
| H60 25400. .. | 706 |
| H60 25500. .. | 706 |
| H60 25600. .. | 706 |
| H60 25700. .. | 706 |
| H60 25800. .. | 706 |
| H60 25900. .. | 706 |
| H60 26000. .. | 706 |
| H60 26100. .. | 706 |
| H60 26200. .. | 706 |
| H60 26300. .. | 706 |
| H60 26400. .. | 706 |
| H60 26500. .. | 706 |
| H60 26600. .. | 706 |
| H60 26700. .. | 706 |
| H60 26800. .. | 706 |
| H60 26900. .. | 706 |
| H60 27000. .. | 706 |
| H60 27100. .. | 706 |
| H60 27200. .. | 706 |
| H60 27300. .. | 706 |
| H60 27400. .. | 706 |
| H60 27500. .. | 706 |
| H60 27600. .. | 706 |
| H60 27700. .. | 706 |
| H60 27900. .. | 706 |
| H60 28000. .. | 706 |
| H60 28100. .. | 706 |
| H60 28200. .. | 706 |
| H60 28300. .. | 706 |
| H60 28400. .. | 706 |
| H60 28500. .. | 706 |
| H60 28600. .. | 706 |
| H60 28700. .. | 706 |
| H60 28800. .. | 706 |
| H60 28900. .. | 706 |
| H60 29000. .. | 706 |
| H60 29100. .. | 706 |
| H60 29200. .. | 706 |
| H60 29300. .. | 707 |

| H.. | |
|---|---|
| Order No. | Page |
| H60 29400. .. | 707 |
| H60 29500. .. | 707 |
| H60 29600. .. | 707 |
| H60 29700. .. | 707 |
| H60 29800. .. | 707 |
| H60 29900. .. | 707 |
| | |
| H60 30000. .. | 707 |
| H60 30100. .. | 707 |
| H60 30200. .. | 707 |
| H60 30300. .. | 707 |
| H60 30400. .. | 707 |
| H60 30500. .. | 707 |
| H60 30600. .. | 707 |
| H60 30700. .. | 707 |
| H60 30800. .. | 707 |
| H60 30900. .. | 707 |
| H60 31000. .. | 707 |
| H60 31100. .. | 707 |
| H60 31200. .. | 707 |
| H60 31400. .. | 707 |
| H60 31500. .. | 707 |
| H60 31600. .. | 707 |
| H60 31700. .. | 707 |
| H60 31800. .. | 707 |
| H60 31900. .. | 707 |
| H60 32000. .. | 707 |
| H60 32100. .. | 707 |
| H60 32200. .. | 707 |
| H60 32300. .. | 707 |
| H60 32400. .. | 707 |
| H60 32500. .. | 707 |
| H60 32600. .. | 707 |
| H60 32700. .. | 707 |
| H60 32800. .. | 707 |
| H60 32900. .. | 707 |
| H60 33000. .. | 707 |
| H60 33100. .. | 707 |
| H60 33200. .. | 707 |
| H60 33300. .. | 708 |
| H60 33400. .. | 708 |
| H60 33500. .. | 708 |
| H60 33600. .. | 708 |
| H60 33700. .. | 708 |
| H60 33800. .. | 708 |
| H60 33900. .. | 708 |
| H60 34000. .. | 708 |
| H60 34100. .. | 708 |
| H60 34200. .. | 708 |
| H60 34300. .. | 708 |
| H60 34400. .. | 708 |
| H60 34500. .. | 708 |
| H60 34600. .. | 708 |
| H60 34700. .. | 708 |
| H60 34900. .. | 708 |
| H60 35000. .. | 708 |
| H60 35100. .. | 708 |
| H60 35200. .. | 708 |
| H60 35300. .. | 708 |
| H60 35400. .. | 708 |
| H60 35500. .. | 708 |
| H60 35600. .. | 708 |
| H60 35700. .. | 708 |
| H60 35800. .. | 708 |
| H60 35900. .. | 708 |
| H60 36000. .. | 708 |
| H60 36100. .. | 708 |
| H60 36200. .. | 708 |
| H60 36300. .. | 708 |
| H60 36400. .. | 708 |
| H60 36500. .. | 708 |
| H60 36600. .. | 708 |

| H.. | |
|---|---|
| Order No. | Page |
| H60 36700. .. | 708 |
| H60 36800. .. | 708 |
| H60 36900. .. | 708 |
| H60 37000. .. | 708 |
| H60 37100. .. | 708 |
| H60 37200. .. | 708 |
| H60 37300. .. | 709 |
| H60 37400. .. | 709 |
| H60 37500. .. | 709 |
| H60 37600. .. | 709 |
| H60 37700. .. | 709 |
| H60 37800. .. | 709 |
| H60 37900. .. | 709 |
| H60 38000. .. | 709 |
| H60 38100. .. | 709 |
| H60 38200. .. | 709 |
| H60 38400. .. | 709 |
| H60 38500. .. | 709 |
| H60 38600. .. | 709 |
| H60 38700. .. | 709 |
| H60 38800. .. | 709 |
| H60 38900. .. | 709 |
| H60 39000. .. | 709 |
| H60 39100. .. | 709 |
| H60 39200. .. | 709 |
| H60 39300. .. | 709 |
| H60 39400. .. | 709 |
| H60 39500. .. | 709 |
| H60 39600. .. | 709 |
| H60 39700. .. | 709 |
| H60 39800. .. | 709 |
| H60 39900. .. | 709 |
| | |
| H60 40000. .. | 709 |
| H60 40100. .. | 709 |
| H60 40200. .. | 709 |
| H60 40300. .. | 709 |
| H60 40400. .. | 709 |
| H60 40500. .. | 709 |
| H60 40600. .. | 709 |
| H60 40700. .. | 709 |
| H60 40800. .. | 709 |
| H60 40900. .. | 709 |
| H60 41000. .. | 709 |
| H60 41100. .. | 709 |
| H60 41200. .. | 709 |
| H60 41300. .. | 710 |
| H60 41400. .. | 710 |
| H60 41500. .. | 710 |
| H60 41600. .. | 710 |
| H60 41700. .. | 710 |
| H60 41900. .. | 710 |
| H60 42000. .. | 710 |
| H60 42100. .. | 710 |
| H60 42200. .. | 710 |
| H60 42300. .. | 710 |
| H60 42400. .. | 710 |
| H60 42500. .. | 710 |
| H60 42600. .. | 710 |
| H60 42700. .. | 710 |
| H60 42800. .. | 710 |
| H60 42900. .. | 710 |
| H60 43000. .. | 710 |
| H60 43100. .. | 710 |
| H60 43200. .. | 710 |
| H60 43300. .. | 710 |
| H60 43400. .. | 710 |
| H60 43500. .. | 710 |
| H60 43600. .. | 710 |
| H60 43700. .. | 710 |
| H60 43800. .. | 710 |
| H60 43900. .. | 710 |

| H.. Order No. | Page |
|---|---|
| H60 44000. .. | 710 |
| H60 44100. .. | 710 |
| H60 44200. .. | 710 |
| H62 17300. .. | 704 |
| H62 17400. .. | 704 |
| H62 17500. .. | 704 |
| H62 17600. .. | 704 |
| H62 17700. .. | 704 |
| H62 17800. .. | 704 |
| H62 17900. .. | 704 |
| H62 18000. .. | 704 |
| H62 18100. .. | 704 |
| H62 18200. .. | 704 |
| H62 18300. .. | 704 |
| H62 18400. .. | 704 |
| H62 18500. .. | 704 |
| H62 18600. .. | 704 |
| H62 18700. .. | 704 |
| H62 18800. .. | 704 |
| H62 18900. .. | 704 |
| H62 19000. .. | 704 |
| H62 19100. .. | 704 |
| H62 19200. .. | 704 |
| H62 19300. .. | 704 |
| H62 19400. .. | 704 |
| H62 19500. .. | 704 |
| H62 19600. .. | 704 |
| H62 19700. .. | 704 |
| H62 19800. .. | 704 |
| H62 19900. .. | 704 |
| | |
| H62 20000. .. | 704 |
| H62 20100. .. | 704 |
| H62 20200. .. | 704 |
| H62 20300. .. | 704 |
| H62 20400. .. | 704 |
| H62 20500. .. | 704 |
| H62 20600. .. | 704 |
| H62 20700. .. | 704 |
| H62 20800. .. | 704 |
| H62 20900. .. | 704 |
| H62 21000. .. | 704 |
| H62 21100. .. | 704 |
| H62 21200. .. | 704 |
| H62 21300. .. | 705 |
| H62 21400. .. | 705 |
| H62 21500. .. | 705 |
| H62 21600. .. | 705 |
| H62 21700. .. | 705 |
| H62 21800. .. | 705 |
| H62 21900. .. | 705 |
| H62 22000. .. | 705 |
| H62 22100. .. | 705 |
| H62 22200. .. | 705 |
| H62 22300. .. | 705 |
| H62 22400. .. | 705 |
| H62 22500. .. | 705 |
| H62 22600. .. | 705 |
| H62 22700. .. | 705 |
| H62 22800. .. | 705 |
| H62 22900. .. | 705 |
| H62 23000. .. | 705 |
| H62 23100. .. | 705 |
| H62 23200. .. | 705 |
| H62 23300. .. | 705 |
| H62 23400. .. | 705 |
| H62 23500. .. | 705 |
| H62 23600. .. | 705 |
| H62 23700. .. | 705 |
| H62 23800. .. | 705 |
| H62 23900. .. | 705 |
| H62 24000. .. | 705 |

| H.. Order No. | Page |
|---|---|
| H62 24100. .. | 705 |
| H62 24200. .. | 705 |
| H62 24300. .. | 705 |
| H62 24400. .. | 705 |
| H62 24500. .. | 705 |
| H62 24600. .. | 705 |
| H62 24700. .. | 705 |
| H62 24800. .. | 705 |
| H62 24900. .. | 705 |
| H62 25000. .. | 705 |
| H62 25100. .. | 705 |
| H62 25200. .. | 705 |
| H62 25300. .. | 706 |
| H62 25400. .. | 706 |
| H62 25500. .. | 706 |
| H62 25600. .. | 706 |
| H62 25700. .. | 706 |
| H62 25800. .. | 706 |
| H62 25900. .. | 706 |
| H62 26000. .. | 706 |
| H62 26100. .. | 706 |
| H62 26200. .. | 706 |
| H62 26300. .. | 706 |
| H62 26400. .. | 706 |
| H62 26500. .. | 706 |
| H62 26600. .. | 706 |
| H62 26700. .. | 706 |
| H62 26800. .. | 706 |
| H62 26900. .. | 706 |
| H62 27000. .. | 706 |
| H62 27100. .. | 706 |
| H62 27200. .. | 706 |
| H62 27300. .. | 706 |
| H62 27400. .. | 706 |
| H62 27500. .. | 706 |
| H62 27600. .. | 706 |
| H62 27700. .. | 706 |
| H62 27800. .. | 706 |
| H62 27900. .. | 706 |
| H62 28000. .. | 706 |
| H62 28100. .. | 706 |
| H62 28200. .. | 706 |
| H62 28300. .. | 706 |
| H62 28400. .. | 706 |
| H62 28500. .. | 706 |
| H62 28600. .. | 706 |
| H62 28700. .. | 706 |
| H62 28800. .. | 706 |
| H62 28900. .. | 706 |
| H62 29000. .. | 706 |
| H62 29100. .. | 706 |
| H62 29200. .. | 706 |
| H62 29300. .. | 707 |
| H62 29400. .. | 707 |
| H62 29500. .. | 707 |
| H62 29600. .. | 707 |
| H62 29700. .. | 707 |
| H62 29800. .. | 707 |
| H62 29900. .. | 707 |
| | |
| H62 30000. .. | 707 |
| H62 30100. .. | 707 |
| H62 30200. .. | 707 |
| H62 30300. .. | 707 |
| H62 30400. .. | 707 |
| H62 30500. .. | 707 |
| H62 30600. .. | 707 |
| H62 30700. .. | 707 |
| H62 30800. .. | 707 |
| H62 30900. .. | 707 |
| H62 31000. .. | 707 |
| H62 31100. .. | 707 |

| H.. Order No. | Page |
|---|---|
| H62 31200. .. | 707 |
| H62 31300. .. | 707 |
| H62 31400. .. | 707 |
| H62 31500. .. | 707 |
| H62 31600. .. | 707 |
| H62 31700. .. | 707 |
| H62 31800. .. | 707 |
| H62 31900. .. | 707 |
| H62 32000. .. | 707 |
| H62 32100. .. | 707 |
| H62 32200. .. | 707 |
| H62 32300. .. | 707 |
| H62 32400. .. | 707 |
| H62 32500. .. | 707 |
| H62 32600. .. | 707 |
| H62 32700. .. | 707 |
| H62 32800. .. | 707 |
| H62 32900. .. | 707 |
| H62 33000. .. | 707 |
| H62 33100. .. | 707 |
| H62 33200. .. | 707 |
| H62 33300. .. | 708 |
| H62 33400. .. | 708 |
| H62 33500. .. | 708 |
| H62 33600. .. | 708 |
| H62 33700. .. | 708 |
| H62 33800. .. | 708 |
| H62 33900. .. | 708 |
| H62 34000. .. | 708 |
| H62 34100. .. | 708 |
| H62 34200. .. | 708 |
| H62 34300. .. | 708 |
| H62 34400. .. | 708 |
| H62 34500. .. | 708 |
| H62 34600. .. | 708 |
| H62 34700. .. | 708 |
| H62 34800. .. | 708 |
| H62 34900. .. | 708 |
| H62 35000. .. | 708 |
| H62 35100. .. | 708 |
| H62 35200. .. | 708 |
| H62 35300. .. | 708 |
| H62 35400. .. | 708 |
| H62 35500. .. | 708 |
| H62 35600. .. | 708 |
| H62 35700. .. | 708 |
| H62 35800. .. | 708 |
| H62 35900. .. | 708 |
| H62 36000. .. | 708 |
| H62 36100. .. | 708 |
| H62 36200. .. | 708 |
| H62 36300. .. | 708 |
| H62 36400. .. | 708 |
| H62 36500. .. | 708 |
| H62 36600. .. | 708 |
| H62 36700. .. | 708 |
| H62 36800. .. | 708 |
| H62 36900. .. | 708 |
| H62 37000. .. | 708 |
| H62 37100. .. | 708 |
| H62 37200. .. | 708 |
| H62 37300. .. | 709 |
| H62 37400. .. | 709 |
| H62 37500. .. | 709 |
| H62 37600. .. | 709 |
| H62 37700. .. | 709 |
| H62 37800. .. | 709 |
| H62 37900. .. | 709 |
| H62 38000. .. | 709 |
| H62 38100. .. | 709 |
| H62 38200. .. | 709 |
| H62 38300. .. | 709 |

| H.. Order No. | Page |
|---|---|
| H62 38400. .. | 709 |
| H62 38500. .. | 709 |
| H62 38600. .. | 709 |
| H62 38700. .. | 709 |
| H62 38800. .. | 709 |
| H62 38900. .. | 709 |
| H62 39000. .. | 709 |
| H62 39100. .. | 709 |
| H62 39200. .. | 709 |
| H62 39300. .. | 709 |
| H62 39400. .. | 709 |
| H62 39500. .. | 709 |
| H62 39600. .. | 709 |
| H62 39700. .. | 709 |
| H62 39800. .. | 709 |
| H62 39900. .. | 709 |
| | |
| H62 40000. .. | 709 |
| H62 40100. .. | 709 |
| H62 40200. .. | 709 |
| H62 40300. .. | 709 |
| H62 40400. .. | 709 |
| H62 40500. .. | 709 |
| H62 40600. .. | 709 |
| H62 40700. .. | 709 |
| H62 40800. .. | 709 |
| H62 40900. .. | 709 |
| H62 41000. .. | 709 |
| H62 41100. .. | 709 |
| H62 41200. .. | 709 |
| H62 41300. .. | 710 |
| H62 41400. .. | 710 |
| H62 41500. .. | 710 |
| H62 41600. .. | 710 |
| H62 41700. .. | 710 |
| H62 41800. .. | 710 |
| H62 41900. .. | 710 |
| H62 42000. .. | 710 |
| H62 42100. .. | 710 |
| H62 42200. .. | 710 |
| H62 42300. .. | 710 |
| H62 42400. .. | 710 |
| H62 42500. .. | 710 |
| H62 42600. .. | 710 |
| H62 42700. .. | 710 |
| H62 42800. .. | 710 |
| H62 42900. .. | 710 |
| H62 43000. .. | 710 |
| H62 43100. .. | 710 |
| H62 43200. .. | 710 |
| H62 43300. .. | 710 |
| H62 43400. .. | 710 |
| H62 43500. .. | 710 |
| H62 43600. .. | 710 |
| H62 43700. .. | 710 |
| H62 43800. .. | 710 |
| H62 43900. .. | 710 |
| H62 44000. .. | 710 |
| H62 44100. .. | 710 |
| H62 44200. .. | 710 |
| | |
| H70 10000.012725 | 31 |
| H70 10000.018425 | 31 |
| H70 10100.012725 | 31 |
| H70 10100.018425 | 31 |
| H70 10200.012725 | 31 |
| H70 10200.018425 | 31 |
| H70 10300.012725 | 31 |
| H70 10300.018425 | 31 |
| H70 10400.012725 | 31 |
| H70 10400.018425 | 31 |
| H70 10500.012725 | 31 |

| H.. Order No. | Page |
|---|---|
| H70 10500.018425 | 31 |
| H70 10600.012725 | 31 |
| H70 10600.018425 | 31 |
| H70 10700.012725 | 31 |
| H70 10700.018425 | 31 |
| H70 10800.012725 | 31 |
| H70 10800.018425 | 31 |
| H70 10900.012725 | 31 |
| H70 10900.018425 | 31 |
| | |
| H70 11000.012725 | 31 |
| H70 11000.018425 | 31 |
| H70 11100.012725 | 31 |
| H70 11100.018425 | 31 |
| H70 11200.012725 | 31 |
| H70 11200.018425 | 31 |
| H70 11300.012725 | 31 |
| H70 11300.018425 | 31 |
| H70 11400.012725 | 31 |
| H70 11400.018425 | 31 |
| H70 11500.012725 | 31 |
| H70 11500.018425 | 31 |
| H70 11600.012725 | 31 |
| H70 11600.018425 | 31 |
| H70 11700.012725 | 31 |
| H70 11700.018425 | 31 |
| H70 11800.012725 | 31 |
| H70 11800.018425 | 31 |
| H70 11900.012725 | 31 |
| H70 11900.018425 | 31 |
| | |
| H70 12000.012725 | 31 |
| H70 12000.018425 | 31 |
| H70 12100.012725 | 31 |
| H70 12100.018425 | 31 |
| H70 12200.012725 | 31 |
| H70 12200.018425 | 31 |
| H70 12300.012725 | 31 |
| H70 12300.018425 | 31 |
| H70 12400.012725 | 31 |
| H70 12400.018425 | 31 |
| H70 12500.012725 | 31 |
| H70 12500.018425 | 31 |
| H70 12600.012725 | 31 |
| H70 12600.018425 | 31 |
| H70 12700.012725 | 31 |
| H70 12700.018425 | 31 |
| H70 12800.012725 | 31 |
| H70 12800.018425 | 31 |
| H70 12900.012725 | 31 |
| H70 12900.018425 | 31 |
| | |
| H70 13000.012725 | 33 |
| H70 13000.018425 | 33 |
| H70 13100.012725 | 33 |
| H70 13100.018425 | 33 |
| H70 13200.012725 | 33 |
| H70 13200.018425 | 33 |
| H70 13300.012725 | 33 |
| H70 13300.018425 | 33 |
| H70 13400.012725 | 33 |
| H70 13400.018425 | 33 |
| H70 13500.012725 | 33 |
| H70 13500.018425 | 33 |
| H70 13600.012725 | 33 |
| H70 13600.018425 | 33 |
| H70 13700.012725 | 33 |
| H70 13700.018425 | 33 |
| H70 13800.012725 | 33 |
| H70 13800.018425 | 33 |
| H70 13900.012725 | 33 |
| H70 13900.018425 | 33 |

# Numerical Index

| H.. | |
|---|---|
| Order No. | Page |
| H70 14000.012725 | 33 |
| H70 14000.018425 | 33 |
| H70 14100.012725 | 33 |
| H70 14100.018425 | 33 |
| H70 14200.012725 | 33 |
| H70 14200.018425 | 33 |
| H70 14300.012725 | 33 |
| H70 14300.018425 | 33 |
| H70 14400.012725 | 33 |
| H70 14400.018425 | 33 |
| H70 14500.012725 | 33 |
| H70 14500.018425 | 33 |
| H70 14600.012725 | 33 |
| H70 14600.018425 | 33 |
| H70 14700.012725 | 33 |
| H70 14700.018425 | 33 |
| H70 14800.012725 | 33 |
| H70 14800.018425 | 33 |
| H70 14900.012725 | 33 |
| H70 14900.018425 | 33 |
| H70 15000.012725 | 33 |
| H70 15000.018425 | 33 |
| H70 15100.012725 | 33 |
| H70 15100.018425 | 33 |
| H70 15200.012725 | 33 |
| H70 15200.018425 | 33 |
| H70 15300.012725 | 33 |
| H70 15300.018425 | 33 |
| H70 15400.012725 | 33 |
| H70 15400.018425 | 33 |
| H70 15500.012725 | 33 |
| H70 15500.018425 | 33 |
| H70 15600.012725 | 33 |
| H70 15600.018425 | 33 |
| H70 15700.012725 | 33 |
| H70 15700.018425 | 33 |
| H70 15800.012725 | 33 |
| H70 15800.018425 | 33 |
| H70 15900.012725 | 33 |
| H70 15900.018425 | 33 |
| H70 16000.012725 | 33 |
| H70 16000.018425 | 33 |
| H70 16100.012725 | 33 |
| H70 16100.018425 | 33 |
| H70 16200.012725 | 33 |
| H70 16200.018425 | 33 |
| H70 16300.012725 | 33 |
| H70 16300.018425 | 33 |
| H70 16400.012725 | 33 |
| H70 16400.018425 | 33 |
| H70 16500.012725 | 33 |
| H70 16500.018425 | 33 |
| H70 16600.012725 | 33 |
| H70 16600.018425 | 33 |
| H70 16700.012725 | 33 |
| H70 16700.018425 | 33 |
| H70 16800.012725 | 33 |
| H70 16800.018425 | 33 |
| H70 16900.012725 | 33 |
| H70 16900.018425 | 33 |
| H70 17000.012725 | 35 |
| H70 17000.018425 | 35 |
| H70 17100.012725 | 35 |
| H70 17100.018425 | 35 |
| H70 17200.012725 | 35 |
| H70 17200.018425 | 35 |
| H70 17300.012725 | 35 |
| H70 17300.018425 | 35 |
| H70 17400.012725 | 35 |

| H.. | |
|---|---|
| Order No. | Page |
| H70 17400.018425 | 35 |
| H70 17500.012725 | 35 |
| H70 17500.018425 | 35 |
| H70 17600.012725 | 35 |
| H70 17600.018425 | 35 |
| H70 17700.012725 | 35 |
| H70 17700.018425 | 35 |
| H70 17800.012725 | 35 |
| H70 17800.018425 | 35 |
| H70 17900.012725 | 35 |
| H70 17900.018425 | 35 |
| H70 18000.012725 | 35 |
| H70 18000.018425 | 35 |
| H70 18100.012725 | 35 |
| H70 18100.018425 | 35 |
| H70 18200.012725 | 35 |
| H70 18200.018425 | 35 |
| H70 18300.012725 | 35 |
| H70 18300.018425 | 35 |
| H70 18400.012725 | 35 |
| H70 18400.018425 | 35 |
| H70 18500.012725 | 35 |
| H70 18500.018425 | 35 |
| H70 18600.012725 | 35 |
| H70 18600.018425 | 35 |
| H70 18700.012725 | 35 |
| H70 18700.018425 | 35 |
| H70 18800.012725 | 35 |
| H70 18800.018425 | 35 |
| H70 18900.012725 | 35 |
| H70 18900.018425 | 35 |
| H70 19000.012725 | 35 |
| H70 19000.018425 | 35 |
| H70 19100.012725 | 35 |
| H70 19100.018425 | 35 |
| H70 19200.012725 | 35 |
| H70 19200.018425 | 35 |
| H70 19300.012725 | 35 |
| H70 19300.018425 | 35 |
| H70 19400.012725 | 35 |
| H70 19400.018425 | 35 |
| H70 19500.012725 | 35 |
| H70 19500.018425 | 35 |
| H70 19600.012725 | 35 |
| H70 19600.018425 | 35 |
| H70 19700.012725 | 35 |
| H70 19700.018425 | 35 |
| H70 19800.012725 | 35 |
| H70 19800.018425 | 35 |
| H70 19900.012725 | 35 |
| H70 19900.018425 | 35 |
| H70 20000.012725 | 35 |
| H70 20000.018425 | 35 |
| H70 20100.012725 | 35 |
| H70 20100.018425 | 35 |
| H70 20200.012725 | 35 |
| H70 20200.018425 | 35 |
| H70 20300.012725 | 35 |
| H70 20300.018425 | 35 |
| H70 20400.012725 | 35 |
| H70 20400.018425 | 35 |
| H70 20500.012725 | 35 |
| H70 20500.018425 | 35 |
| H80 32000.01.... | 711 |
| H80 35000.01.... | 711 |
| H80 37500.01.... | 711 |
| H80 40000.01.... | 711 |
| H80 42000.01.... | 711 |

| H.. / L.. | |
|---|---|
| Order No. | Page |
| H80 44000.01.... | 711 |
| H80 46000.01.... | 711 |
| H80 48000.01.... | 711 |
| H80 50000.01.... | 711 |
| H80 52000.01.... | 711 |
| H80 54000.01.... | 711 |
| H80 56000.01.... | 711 |
| H80 58000.01.... | 711 |
| H80 60000.01.... | 711 |
| L01 00001 | 756 |
| L01 00011 | 756 |
| L01 00031 | 756 |
| L01 00041 | 756 |
| L01 00051 | 756 |
| L01 00061 | 756 |
| L01 00071 | 756 |
| L01 00411 | 756 |
| L01 00431 | 756 |
| L01 00441 | 756 |
| L01 00451 | 756 |
| L01 00800 | 756 |
| L01 00900 | 756 |
| L01 00910 | 756 |
| L01 00930 | 756 |
| L01 00940 | 756 |
| L01 00950 | 756 |
| L01 00960 | 756 |
| L01 00970 | 756 |
| L01 01000 | 757 |
| L01 01100 | 757 |
| L01 01120 | 757 |
| L01 01140 | 757 |
| L01 02011 | 742 |
| L01 02021 | 742 |
| L01 02031 | 742 |
| L01 02041 | 742 |
| L01 02051 | 742 |
| L01 02061 | 742 |
| L01 02071 | 742 |
| L01 03020 | 742 |
| L01 03030 | 742 |
| L01 03040 | 742 |
| L01 03050 | 742 |
| L01 03060 | 742 |
| L01 03070 | 742 |
| L01 03080 | 742 |
| L01 03990 | 146 |
| L01 04000 | 146 |
| L01 04010 | 146 |
| L01 04020 | 146 |
| L01 04150 | 146 |
| L01 04160 | 146 |
| L01 04190 | 146 |
| L01 04240 | 146 |
| L01 04300 | 153 |
| L01 04310 | 147 |
| L01 04350 | 153 |
| L01 04370 | 147 |
| L01 04450 | 147 |
| L01 04450 | 153 |
| L01 05000 | 758 |
| L01 05000.11 | 758 |
| L01 05000.12 | 758 |
| L01 05000.13 | 758 |
| L01 05000.14 | 758 |
| L01 05000.15 | 758 |
| L01 05000.16 | 758 |
| L01 05000.17 | 758 |
| L01 05000.18 | 758 |
| L01 10100 | 254 |

| L.. | |
|---|---|
| Order No. | Page |
| L01 10110 | 254 |
| L01 10120 | 254 |
| L01 10130 | 254 |
| L01 10140 | 254 |
| L01 10300 | 254 |
| L01 10421 | 254 |
| L01 10431 | 254 |
| L01 10441 | 254 |
| L01 13201 | 453/483 |
| L01 13211 | 453/483 |
| L01 13221 | 453/483 |
| L01 13231 | 453/483 |
| L01 13241 | 453/483 |
| L01 13251 | 453/483 |
| L01 13261 | 453/483 |
| L01 13271 | 453/483 |
| L01 13281 | 453/483 |
| L01 13291 | 453/483 |
| L01 13301 | 453/483 |
| L01 13311 | 453/483 |
| L01 13321 | 453/483 |
| L01 13331 | 453/483 |
| L01 13501 | 453/483 |
| L01 13511 | 453/483 |
| L01 13521 | 453/483 |
| L01 13531 | 453/483 |
| L01 13541 | 453/483 |
| L01 13551 | 453/483 |
| L01 13561 | 453/483 |
| L01 13571 | 453/483 |
| L01 13581 | 453/483 |
| L01 14201 | 453/483 |
| L01 14211 | 453/483 |
| L01 14221 | 453/483 |
| L01 14231 | 453/483 |
| L01 14241 | 453/483 |
| L01 14251 | 453/483 |
| L01 14261 | 453/483 |
| L01 14271 | 453/483 |
| L01 14281 | 453/483 |
| L01 14291 | 453/483 |
| L01 14301 | 453/483 |
| L01 14311 | 453/483 |
| L01 14321 | 453/483 |
| L01 14331 | 453/483 |
| L01 14501 | 453/483 |
| L01 14511 | 453/483 |
| L01 14521 | 453/483 |
| L01 14531 | 453/483 |
| L01 14541 | 453/483 |
| L01 14551 | 453/483 |
| L01 14561 | 453/483 |
| L01 14571 | 453/483 |
| L01 14581 | 453/483 |
| L01 15010 | 252 |
| L01 15030 | 252 |
| L01 15050 | 252 |
| L01 15060 | 252 |
| L02 20200 | 595 |
| L02 20220 | 594-595 |
| L02 20240 | 594-595 |
| L02 20250 | 595 |
| L02 20300 | 596 |
| L02 20310 | 594-596 |
| L02 20320 | 596 |
| L02 20340 | 596 |
| L02 20350 | 596 |
| L02 21220 | 595 |
| L02 21240 | 595 |
| L02 21310 | 595 |
| L02 30300 | 158 |

| L.. | |
|---|---|
| Order No. | Page |
| L02 30350 | 444/451 |
| L02 30510 | 742 |
| L02 30520 | 742 |
| L02 30530 | 742 |
| L02 30540 | 742 |
| L02 30550 | 742 |
| L02 30920 | 430/442 |
| L02 30930 | 430/435 |
| L02 30940 | 430/442 |
| L02 30960 | 424 |
| L05 00050 | 763 |
| L05 00070 | 763 |
| L05 00700 | 765 |
| L05 00710 | 765 |
| L05 00720 | 765 |
| L05 00730 | 765 |
| L05 00740 | 765 |
| L05 00750 | 765 |
| L05 00760 | 765 |
| L05 00770 | 765 |
| L05 00781 | 765 |
| L05 00791 | 765 |
| L05 00800 | 761-762 |
| L05 00810 | 761-764 |
| L05 00820 | 763-764 |
| L05 00830 | 761-764 |
| L05 00840 | 763-764 |
| L05 00850 | 761-764 |
| L05 00860 | 761-764 |
| L05 00870 | 761-764 |
| L05 00901 | 765 |
| L05 00911 | 765 |
| L05 00921 | 765 |
| L05 00931 | 765 |
| L05 00941 | 765 |
| L05 00951 | 765 |
| L05 00961 | 765 |
| L05 00971 | 765 |
| L05 00990 | 765 |
| L05 01020 | 273-274 |
| L05 01030 | 273-274 |
| L05 01040 | 273-274 |
| L05 01050 | 273 |
| L05 01060 | 273 |
| L05 01070 | 273 |
| L05 01110 | 761-762 |
| L05 01120 | 761-764 |
| L05 01130 | 763-764 |
| L05 01140 | 762-763 |
| L05 01240 | 761-764 |
| L05 01250 | 763-764 |
| L05 01260 | 761-764 |
| L05 01590 | 743 |
| L05 02020 | 480 |
| L05 02030 | 408/480 |
| L05 02040 | 408/480 |
| L05 02050 | 408/480 |
| L05 02060 | 408/480 |
| L05 02070 | 480 |
| L05 03301 | 765 |
| L05 03311 | 765 |
| L05 09430 | 503 |
| L05 09440 | 503 |
| L05 09450 | 503 |
| L05 09460 | 503 |
| L05 09461 | 503 |
| L05 09470 | 503 |
| L05 09471 | 503 |
| L05 09480 | 503 |
| L05 09490 | 503 |
| L05 09500 | 503 |

| L.. / M.. | |
|---|---|
| Order No. | Page |
| L05 09510 | 503 |
| L05 09520 | 503 |
| | |
| L07 01020 | 752 |
| L07 01030 | 752 |
| L07 01040 | 752 |
| L07 01050 | 752 |
| L07 01060 | 752 |
| L07 01070 | 752 |
| L07 01080 | 752 |
| L07 01420 | 752 |
| L07 01430 | 752 |
| L07 01440 | 752 |
| L07 01450 | 752 |
| L07 01460 | 752 |
| L07 01470 | 752 |
| L07 01480 | 752 |
| L07 01720 | 752 |
| L07 01730 | 752 |
| L07 01740 | 752 |
| L07 01750 | 752 |
| L07 01761 | 752 |
| L07 01771 | 752 |
| L07 01780 | 752 |
| L07 01790 | 426 |
| L07 02040 | 753 |
| L07 02050 | 753 |
| L07 02060 | 753 |
| L07 02070 | 753 |
| L07 02080 | 753 |
| | |
| M01 00000 | 461 |
| M01 00010 | 461 |
| M01 00020 | 461 |
| | |
| M02 00000 | 249 |
| M02 00201 | 249 |
| M02 00211 | 249 |
| M02 00401 | 249 |
| M02 01100 | 248 |
| M02 01201 | 248 |
| M02 02260 | 251 |
| M02 02360 | 250 |
| | |
| M03 00115 | 284 |
| M03 00515 | 284 |
| M03 01025 | 286 |
| M03 01535 | 286 |
| M03 02045 | 286 |
| M03 02555 | 286 |
| M03 10011 | 285 |
| M03 10021 | 285 |
| M03 10033 | 244/289 |
| M03 10043 | 244/289 |
| M03 10063 | 287 |
| M03 10070 | 291 |
| M03 11100 | 285 |
| M03 11110 | 285 |
| M03 11120 | 244/289 |
| M03 11130 | 244/289 |
| M03 11150 | 287 |
| M03 11160 | 291 |
| M03 11200 | 285 |
| M03 11210 | 285 |
| M03 11220 | 244/289 |
| M03 11230 | 244/289 |
| M03 11250 | 287 |
| M03 11260 | 291 |
| M03 11300 | 285 |
| M03 11310 | 285 |
| M03 11320 | 244/289 |
| M03 11330 | 244/289 |

| M.. | |
|---|---|
| Order No. | Page |
| M03 11350 | 287 |
| M03 11360 | 291 |
| M03 12000 | 285 |
| M03 12010 | 285 |
| M03 12020 | 287/289 |
| M03 12030 | 287/289 |
| M03 12050 | 287 |
| M03 12060 | 291 |
| M03 12100 | 285 |
| M03 12110 | 285 |
| M03 12120 | 287/289 |
| M03 12130 | 287/289 |
| M03 12150 | 287 |
| M03 12160 | 291 |
| M03 12200 | 285 |
| M03 12210 | 285 |
| M03 12220 | 287/289 |
| M03 12230 | 287/289 |
| M03 12250 | 287 |
| M03 12260 | 291 |
| M03 12300 | 285 |
| M03 12310 | 285 |
| M03 12320 | 287/289 |
| M03 12330 | 287/289 |
| M03 12350 | 287 |
| M03 12360 | 291 |
| M03 20090 | 290 |
| M03 20090.15 | 242 |
| M03 20100 | 290 |
| M03 20110 | 290 |
| M03 20120 | 290 |
| M03 20130 | 293 |
| M03 20140 | 288 |
| M03 20150 | 243/288 |
| M03 20150.16 | 243 |
| M03 20160 | 243/288 |
| M03 20170 | 288 |
| M03 20180 | 243/288 |
| M03 20180.16 | 243 |
| M03 20190 | 243/288 |
| M03 20240 | 293 |
| | |
| M04 00150.11 | 240 |
| M04 00150.11 | 241 |
| M04 00151 | 241 |
| M04 00201 | 240 |
| M04 01310 | 242 |
| M04 01320 | 242 |
| M04 10000 | 230 |
| | |
| M05 01000 | 217 |
| M05 20101 | 219/233 |
| M05 20151 | 219-235 |
| M05 20601 | 233 |
| M05 20651 | 233-235 |
| M05 80101 | 221/235 |
| M05 80200 | 221/235 |
| M05 80300 | 221/235 |
| M05 80400 | 221/235 |
| M05 90100 | 219/233 |
| M05 90200 | 224 |
| M05 90210 | 224 |
| M05 90220 | 224 |
| M05 90230 | 224 |
| M05 90240 | 224 |
| M05 90300 | 225 |
| | |
| M10 50010.15 | 270 |
| M10 50010.16 | 270 |
| M10 50010.18 | 270 |
| M10 50011 | 270 |
| M10 50020.15 | 270 |

| M.. | |
|---|---|
| Order No. | Page |
| M10 50020.18 | 270 |
| M10 50021 | 270 |
| M10 50030.15 | 270 |
| M10 50030.18 | 270 |
| M10 50031 | 270 |
| | |
| M30 00011 | 586 |
| M30 00021 | 586 |
| M30 00031 | 587 |
| M30 00041 | 587 |
| M30 00051 | 587/590 |
| M30 00061 | 587/587 |
| M30 00071 | 590 |
| M30 00081 | 587 |
| M30 00091 | 587 |
| M30 00101 | 587 |
| M30 00111 | 587 |
| M30 00121 | 587 |
| M30 00131 | 587 |
| M30 00141 | 587 |
| M30 00151 | 587 |
| M30 00161 | 587 |
| M30 02011 | 588 |
| M30 02021 | 588 |
| M30 02031 | 589/598 |
| M30 02041 | 589/598 |
| M30 02051 | 589/598 |
| M30 02061 | 589/598 |
| M30 02071 | 589/598 |
| M30 02081 | 589/598 |
| M30 02091 | 589 |
| M30 02101 | 589 |
| M30 02111 | 589 |
| M30 02121 | 589 |
| M30 02131 | 589 |
| M30 02141 | 589 |
| M30 02151 | 589 |
| M30 02161 | 589 |
| M30 02231 | 273 |
| M30 02241 | 273 |
| M30 02251 | 273 |
| M30 02261 | 273 |
| M30 02271 | 273 |
| M30 02281 | 273 |
| M30 02291 | 273 |
| M30 02301 | 273 |
| M30 02311 | 273 |
| M30 02321 | 273 |
| M30 02331 | 273 |
| M30 02341 | 273 |
| M30 02351 | 273 |
| M30 02361 | 273 |
| M30 04011 | 273 |
| M30 04111 | 273 |
| M30 04121 | 273 |
| M30 20011 | 279/591 |
| M30 20021 | 279/591 |
| M30 20031 | 279/591 |
| M30 20041 | 279/591 |
| M30 20051 | 279/591 |
| M30 20061 | 279/591 |
| M30 20071 | 279/591 |
| M30 20201 | 599 |
| M30 20211 | 599 |
| M30 20221 | 599 |
| M30 50021 | 587 |
| M30 50031 | 587 |
| M30 50041 | 587 |
| M30 50051 | 587 |
| M30 50061 | 587 |
| M30 50071 | 587 |
| M30 51021 | 587 |

| M.. / N.. | |
|---|---|
| Order No. | Page |
| M30 51031 | 587 |
| M30 51041 | 587 |
| M30 51051 | 587 |
| M30 51061 | 587 |
| M30 51071 | 587 |
| M30 52021 | 273/589 |
| M30 52031 | 273/589 |
| M30 52041 | 273/589 |
| M30 52051 | 273/589 |
| M30 52061 | 273/589 |
| M30 52071 | 273/589 |
| M30 52111.21 | 588 |
| M30 52421 | 274/598 |
| M30 52431 | 274/598 |
| M30 52441 | 274/598 |
| M30 53021 | 589 |
| M30 53031 | 589 |
| M30 53041 | 589 |
| M30 53051 | 589 |
| M30 53061 | 589 |
| M30 54011 | 273/590 |
| M30 54021 | 273/590 |
| M30 54030 | 590 |
| M30 54040 | 590 |
| | |
| M31 00022 | 584 |
| M31 00032 | 584 |
| M31 00042 | 584 |
| M31 00122 | 600 |
| M31 00153 | 600 |
| M31 00162 | 600 |
| M31 01022 | 585 |
| M31 01032 | 585 |
| M31 01042 | 585 |
| M31 01122 | 601 |
| M31 01153 | 601 |
| M31 01162 | 601 |
| | |
| N00 00451 | 743 |
| N00 00461 | 743 |
| N00 00471 | 743 |
| N00 00481 | 743 |
| N00 00491 | 743 |
| N00 00501 | 743 |
| N00 00511 | 743 |
| N00 00521 | 743 |
| N00 00530 | 743 |
| N00 01661 | 743 |
| N00 01670 | 743 |
| N00 01680 | 743 |
| N00 01690 | 743 |
| N00 01700 | 743 |
| N00 02052 | 742 |
| N00 02062 | 742 |
| N00 02072 | 742 |
| N00 02082 | 742 |
| N00 02092 | 742 |
| N00 02102 | 742 |
| N00 02112 | 742 |
| N00 02122 | 742 |
| N00 02131 | 742 |
| N00 03052 | 742 |
| N00 03062 | 742 |
| N00 03072 | 742 |
| N00 03082 | 742 |
| N00 03092 | 742 |
| N00 03102 | 742 |
| N00 03112 | 742 |
| N00 03122 | 742 |
| N00 03131 | 742 |
| N00 04050 | 743 |
| N00 04060 | 743 |

| N.. | |
|---|---|
| Order No. | Page |
| N00 04070 | 743 |
| N00 04080 | 743 |
| N00 04090 | 743 |
| N00 04100 | 743 |
| N00 04110 | 743 |
| N00 04120 | 743 |
| N00 04130 | 743 |
| N00 04250 | 743 |
| N00 04261 | 743 |
| N00 04271 | 743 |
| N00 04281 | 743 |
| N00 04291 | 743 |
| N00 04301 | 743 |
| N00 04311 | 743 |
| N00 05051 | 743 |
| N00 05062 | 743 |
| N00 05072 | 743 |
| N00 05082 | 743 |
| N00 05092 | 743 |
| N00 05102 | 743 |
| N00 05112 | 743 |
| N00 05251 | 743 |
| N00 05262 | 743 |
| N00 05272 | 743 |
| N00 05282 | 743 |
| N00 05292 | 743 |
| N00 05302 | 743 |
| N00 05312 | 743 |
| N00 05480 | 240-241 |
| N00 06050 | 743 |
| N00 06060 | 743 |
| N00 06070 | 743 |
| N00 06080 | 743 |
| N00 06090 | 743 |
| N00 06100 | 743 |
| N00 06110 | 743 |
| N00 06120 | 743 |
| N00 06130 | 743 |
| N00 07100 | 742 |
| | |
| N00 15251 | 742 |
| N00 15261 | 742 |
| N00 15271 | 742 |
| N00 15281 | 742 |
| N00 15291 | 742 |
| N00 15301 | 742 |
| N00 15311 | 742 |
| N00 15321 | 742 |
| N00 15330 | 742 |
| N00 17651 | 743 |
| N00 17661 | 743 |
| N00 17671 | 743 |
| N00 17681 | 743 |
| N00 17691 | 743 |
| N00 17701 | 743 |
| N00 17711 | 743 |
| N00 17721 | 743 |
| N00 17730 | 743 |
| N00 17851 | 743 |
| N00 17862 | 743 |
| N00 17872 | 743 |
| N00 17882 | 743 |
| N00 17892 | 743 |
| N00 17902 | 743 |
| N00 17912 | 743 |
| N00 18181 | 743 |
| N00 18191 | 743 |
| N00 18201 | 743 |
| N00 19252 | 743 |
| N00 19263 | 743 |
| N00 19273 | 743 |
| N00 19283 | 743 |

# Numerical Index


| N.. | | N.. | | N.. / Q.. | | Q.. / U.. | | U.. | |
|---|---|---|---|---|---|---|---|---|---|
| Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page |
| N00 19293 | 743 | N00 57490 | 146 | N00 71510 | 404-405 | Q12 18000.02.. | 715 | U10 12200 | 45 |
| N00 19303 | 743 | N00 57500 | 146 | N00 71520 | 473/480 | Q12 18000.03.. | 715 | U10 12250 | 45 |
| N00 19313 | 743 | N00 57511 | 761-762 | N00 71540 | 482 | Q12 18000.04.. | 715 | U10 12300 | 45 |
| | | N00 57521 | 761-762 | N00 71550 | 410/452 | Q12 18000.10.. | 717 | U10 22400 | 45 |
| N00 20060 | 743 | N00 57531 | 761-762 | N00 71600 | 473 | Q12 18000.11.. | 716 | U10 22450 | 45 |
| N00 20070 | 743 | N00 57541 | 761-762 | N00 71650 | 473 | Q12 18000.12.. | 716 | U10 22500 | 45 |
| N00 20080 | 743 | N00 57553 | 761-763 | N00 71730 | 410/482 | Q12 18000.13.. | 716 | U10 22600 | 45 |
| N00 20090 | 743 | N00 57571 | 763 | N00 71800 | 410/482 | Q12 18000.14.. | 716 | U10 22650 | 45 |
| N00 20100 | 743 | N00 57630 | 764 | N00 71860 | 410/449 | Q12 18000.31.. | 717 | U10 22700 | 45 |
| | | N00 57640 | 764 | N00 71900 | 408/480 | Q12 18000.32.. | 717 | U10 22800 | 45 |
| N00 52000 | 147/156 | N00 57650 | 764 | N00 71910 | 408/480 | Q12 18000.33.. | 717 | U10 22850 | 45 |
| N00 52010 | 156 | N00 57660 | 763-764 | N00 71940 | 408/480 | Q12 18000.34.. | 717 | U10 22900 | 45 |
| | | N00 57670 | 764 | N00 71970 | 408/480 | Q12 18000.36.. | 718 | U10 22950 | 45 |
| N00 55050 | 761 | N00 57730 | 763 | N00 71980 | 408/480 | | | U10 23000 | 45 |
| N00 55060 | 761 | N00 57740 | 763 | N00 72000 | 490-502 | Q12 32000.05.. | 715 | U10 23100 | 45 |
| N00 55070 | 761 | N00 57750 | 763 | N00 72010 | 490-502 | Q12 32000.06.. | 715 | U10 23150 | 45 |
| N00 55100 | 761 | N00 57760 | 763 | N00 72050 | 490-502 | Q12 32000.07.. | 715 | U10 23200 | 45 |
| N00 55110 | 761 | N00 57780 | 763 | N00 72060 | 490-502 | Q12 32000.08.. | 715 | U10 23300 | 45 |
| N00 55120 | 761 | N00 57790 | 762 | N00 72070 | 490-502 | Q12 32000.09.. | 715 | U10 23400 | 47 |
| N00 55130 | 761 | | | N00 72080 | 490-502 | Q12 32000.15.. | 717 | U10 23500 | 47 |
| N00 55140 | 761 | N00 60400 | 444/451 | | | Q12 32000.16.. | 717 | U10 23600 | 47 |
| N00 55180 | 761 | N00 60430 | 444/451 | N10 11010 | 105 | Q12 32000.17.. | 717 | U10 23700 | 47 |
| N00 55551 | 761 | | | N10 11200 | 170 | Q12 32000.18.. | 716 | U10 23750 | 47 |
| N00 55561 | 761 | N00 70080 | 266 | N10 11300 | 170 | Q12 32000.19.. | 716 | U10 23800 | 47 |
| N00 55571 | 761 | N00 70090 | 266 | N10 11310 | 170 | Q12 32000.20.. | 716 | U10 23900 | 47 |
| N00 55581 | 761 | N00 70140 | 266 | N10 11400 | 105/170 | Q12 32000.38.. | 718 | U10 23950 | 47 |
| N00 55701 | 156 | N00 70190 | 266 | N10 11500 | 105/170 | Q12 32000.41.. | 717 | U10 24000 | 47 |
| N00 55701 | 761 | N00 70200 | 405 | N10 11510 | 105/170 | Q12 32000.42.. | 717 | U10 24100 | 47 |
| N00 55711 | 761 | N00 70250 | 424 | N10 20170 | 485 | Q12 32000.43.. | 717 | U10 24200 | 47 |
| N00 55801 | 761 | N00 70320 | 424 | N10 30736 | 752 | Q12 32000.52.. | 715 | U10 24300 | 47 |
| N00 55811 | 761 | N00 70330 | 424 | N10 30737 | 752 | Q12 32000.53.. | 715 | U10 24400 | 47 |
| N00 55821 | 761 | N00 70370 | 153 | N10 30738 | 752 | | | | |
| N00 55891 | 761 | N00 70380 | 153 | N10 30739 | 752 | Q12 44000.21.. | 716 | U10 33300 | 45 |
| N00 55901 | 761 | N00 70460 | 153 | N10 30740 | 752 | Q12 44000.22.. | 716 | U10 33400 | 47 |
| | | N00 70800 | 153 | N10 30741 | 752 | Q12 44000.23.. | 716 | U10 33500 | 47 |
| N00 56011 | 761 | N00 70900 | 240 | N10 30742 | 752 | Q12 44000.25.. | 716 | U10 33600 | 47 |
| N00 56021 | 761-762 | N00 70910 | 146 | | | Q12 44000.84.. | 717 | U10 33700 | 47 |
| N00 56031 | 761-762 | N00 70920 | 146 | N12 20120 | 485 | Q12 44000.85.. | 717 | U10 33750 | 47 |
| N00 56041 | 761-763 | N00 70930 | 146 | N12 20140 | 485 | Q12 44000.86.. | 717 | U10 33800 | 47 |
| N00 56051 | 762 | N00 70940 | 146 | N12 20200 | 485 | Q12 44000.87.. | 717 | U10 33900 | 47 |
| N00 56101 | 762 | N00 70950 | 146 | N12 20280 | 743 | | | U10 33950 | 47 |
| N00 56111 | 762 | N00 70960 | 146 | N12 20290 | 743 | Q15 18000.01.. | 719 | U10 34000 | 47 |
| N00 56121 | 762 | N00 70970 | 147 | N12 20300 | 743 | Q15 18000.02.. | 719 | U10 34100 | 47 |
| N00 56201 | 762 | | | | | Q15 32000.03.. | 719 | U10 34200 | 47 |
| N00 56211 | 762 | N00 71000 | 404/473 | N75 80000 | 743 | Q15 32000.04.. | 719 | U10 34300 | 47 |
| N00 56301 | 762 | N00 71020 | 410/482 | N75 80010 | 743 | | | U10 34400 | 47 |
| N00 56401 | 762 | N00 71050 | 404/480 | N75 80020 | 743 | Q36 18000.01.. | 720 | | |
| N00 56411 | 762 | N00 71070 | 408/482 | N75 80030 | 743 | Q36 24000.02.. | 720 | U10 71402 | 41 |
| N00 56651 | 761-764 | N00 71100 | 472 | N75 80040 | 743 | Q36 24000.04.. | 721 | U10 71502 | 41 |
| N00 56751 | 762-763 | N00 71110 | 472 | N75 80050 | 743 | Q36 24000.05.. | 721 | U10 71550 | 41 |
| N00 56771 | 762-763 | N00 71120 | 404/473 | N75 80060 | 743 | Q36 24000.06.. | 721 | U10 71600 | 41 |
| N00 56851 | 763 | N00 71130 | 473 | N75 80070 | 743 | Q36 38000.07.. | 720 | U10 71700 | 41 |
| | | N00 71150 | 480 | N75 80080 | 743 | | | U10 71750 | 41 |
| N00 57191 | 763 | N00 71200 | 472 | N75 80100 | 743 | Q80 32000.01.. | 722 | U10 71800 | 41 |
| N00 57201 | 764 | N00 71210 | 472 | N75 80110 | 743 | Q80 32000.02.. | 722 | U10 71850 | 41 |
| N00 57211 | 764 | N00 71220 | 473 | N75 80120 | 743 | Q80 32230.08.. | 722 | U10 71900 | 41 |
| N00 57221 | 763-764 | N00 71230 | 473 | N75 80130 | 743 | Q80 32530.08.. | 722 | U10 71950 | 41 |
| N00 57231 | 764 | N00 71240 | 408/480 | N75 80140 | 743 | Q80 32630.08.. | 722 | U10 72000 | 41 |
| N00 57241 | 764 | N00 71250 | 480 | N75 80150 | 743 | | | U10 72050 | 41 |
| N00 57251 | 763-764 | N00 71270 | 404/405 | N75 80160 | 743 | U10 01402 | 45 | U10 72100 | 41 |
| N00 57261 | 763-764 | N00 71280 | 408/480 | N75 80170 | 743 | U10 01502 | 45 | U10 72200 | 41 |
| N00 57271 | 763-764 | N00 71300 | 472 | | | U10 01550 | 45 | U10 72250 | 41 |
| N00 57281 | 764 | N00 71310 | 473 | Q09 13000.01.. | 712 | U10 01600 | 45 | U10 72300 | 41 |
| N00 57301 | 763-764 | N00 71320 | 473/480 | Q09 18000.17.. | 713 | U10 01700 | 45 | U10 72400 | 41 |
| N00 57321 | 764 | N00 71330 | 408 | Q09 44000.02.. | 714 | U10 11750 | 45 | U10 72450 | 41 |
| N00 57341 | 763-764 | N00 71340 | 408/480 | Q09 44000.03.. | 714 | U10 11800 | 45 | U10 72500 | 41 |
| N00 57411 | 764 | N00 71350 | 480 | Q09 44000.13.. | 714 | U10 11850 | 45 | U10 72600 | 41 |
| N00 57431 | 764 | N00 71400 | 473 | Q09 44000.14.. | 714 | U10 11900 | 45 | U10 72650 | 41 |
| N00 57440 | 146 | N00 71410 | 473 | Q09 44000.15.. | 714 | U10 11950 | 45 | U10 72700 | 41 |
| N00 57450 | 146 | N00 71420 | 404-405 | Q09 44000.23.. | 714 | U10 12000 | 45 | U10 72800 | 41 |
| N00 57460 | 146 | N00 71430 | 473 | | | U10 12050 | 45 | U10 72850 | 41 |
| N00 57480 | 146 | N00 71500 | 473 | Q12 18000.01.. | 715 | U10 12100 | 45 | U10 72900 | 41 |

| U.. Order No. | Page |
|---|---|
| U10 72950 | 41 |
| U10 73000 | 41 |
| U10 73100 | 41 |
| U10 73150 | 41 |
| U10 73200 | 41 |
| U10 73300 | 41 |
| U10 73400 | 43 |
| U10 73500 | 43 |
| U10 73600 | 43 |
| U10 73700 | 43 |
| U10 73750 | 43 |
| U10 73800 | 43 |
| U10 73900 | 43 |
| U10 73950 | 43 |
| U10 74000 | 43 |
| U10 74100 | 43 |
| U10 74200 | 43 |
| U10 74300 | 43 |
| U10 74400 | 43 |
| U10 84500 | 43 |
| U10 84600 | 43 |
| U10 84700 | 43 |
| U10 84800 | 43 |
| U10 84900 | 43 |
| U10 85000 | 43 |
| U10 85100 | 43 |
| U10 85200 | 43 |
| U10 85300 | 43 |
| U10 85400 | 43 |
| U10 95500 | 43 |
| U10 95600 | 43 |
| U10 95700 | 43 |
| U10 95800 | 43 |
| U10 95900 | 43 |
| U10 96000 | 43 |
| U10 96100 | 43 |
| U10 96200 | 43 |
| U10 96300 | 43 |
| U10 96400 | 43 |
| U10 96500 | 43 |
| U11 51402 | 41 |
| U11 51502 | 41 |
| U11 51550 | 41 |
| U11 51600 | 41 |
| U11 51650 | 41 |
| U11 51700 | 41 |
| U11 51750 | 41 |
| U11 51800 | 41 |
| U11 51850 | 41 |
| U11 51900 | 41 |
| U11 51950 | 41 |
| U11 52000 | 41 |
| U11 52050 | 41 |
| U11 52100 | 41 |
| U11 52200 | 41 |
| U11 52250 | 41 |
| U11 52300 | 41 |
| U11 52400 | 41 |
| U11 52450 | 41 |
| U11 52500 | 41 |
| U11 52600 | 41 |
| U11 52650 | 41 |
| U11 52700 | 41 |
| U11 52800 | 41 |
| U11 52850 | 41 |
| U11 52900 | 41 |
| U11 52950 | 41 |
| U11 53000 | 41 |
| U11 53100 | 41 |

| U.. Order No. | Page |
|---|---|
| U11 53150 | 41 |
| U11 53200 | 41 |
| U11 53300 | 41 |
| U11 53400 | 43 |
| U11 53500 | 43 |
| U11 53600 | 43 |
| U11 53700 | 43 |
| U11 53750 | 43 |
| U11 53800 | 43 |
| U11 53900 | 43 |
| U11 53950 | 43 |
| U11 54000 | 43 |
| U11 54100 | 43 |
| U11 54200 | 43 |
| U11 54300 | 43 |
| U11 54400 | 43 |
| U11 61402 | 45 |
| U11 61502 | 45 |
| U11 61550 | 45 |
| U11 61600 | 45 |
| U11 61650 | 45 |
| U11 61700 | 45 |
| U11 71750 | 45 |
| U11 71800 | 45 |
| U11 71850 | 45 |
| U11 71900 | 45 |
| U11 71950 | 45 |
| U11 72000 | 45 |
| U11 72050 | 45 |
| U11 72100 | 45 |
| U11 72200 | 45 |
| U11 72250 | 45 |
| U11 72300 | 45 |
| U11 82400 | 45 |
| U11 82450 | 45 |
| U11 82500 | 45 |
| U11 82600 | 45 |
| U11 82650 | 45 |
| U11 82700 | 45 |
| U11 82800 | 45 |
| U11 82850 | 45 |
| U11 82900 | 45 |
| U11 82950 | 45 |
| U11 83000 | 45 |
| U11 83100 | 45 |
| U11 83150 | 45 |
| U11 83200 | 45 |
| U11 83300 | 45 |
| U11 83400 | 47 |
| U11 83500 | 47 |
| U11 83600 | 47 |
| U11 83700 | 47 |
| U11 83750 | 47 |
| U11 83800 | 47 |
| U11 83900 | 47 |
| U11 83950 | 47 |
| U11 84000 | 47 |
| U11 84100 | 47 |
| U11 84200 | 47 |
| U11 84300 | 47 |
| U11 84400 | 47 |
| U11 93300 | 45 |
| U11 93400 | 47 |
| U11 93500 | 47 |
| U11 93600 | 47 |
| U11 93700 | 47 |
| U11 93750 | 47 |
| U11 93800 | 47 |
| U11 93900 | 47 |
| U11 93950 | 47 |

| U.. Order No. | Page |
|---|---|
| U11 94000 | 47 |
| U11 94100 | 47 |
| U11 94200 | 47 |
| U11 94300 | 47 |
| U11 94400 | 47 |
| U12 34500 | 43 |
| U12 34600 | 43 |
| U12 34700 | 43 |
| U12 34800 | 43 |
| U12 34900 | 43 |
| U12 35000 | 43 |
| U12 35100 | 43 |
| U12 35200 | 43 |
| U12 35300 | 43 |
| U12 35400 | 43 |
| U12 45500 | 43 |
| U12 45600 | 43 |
| U12 45700 | 43 |
| U12 45800 | 43 |
| U12 45900 | 43 |
| U12 46000 | 43 |
| U12 46100 | 43 |
| U12 46200 | 43 |
| U12 46300 | 43 |
| U12 46400 | 43 |
| U12 46500 | 43 |
| U20 01750 | 119 |
| U20 01800 | 119 |
| U20 01850 | 119 |
| U20 01900 | 119 |
| U20 01950 | 119 |
| U20 02000 | 119 |
| U20 02050 | 119 |
| U20 02100 | 121 |
| U20 02150 | 121 |
| U20 02200 | 121 |
| U20 02250 | 121 |
| U20 02300 | 121 |
| U20 02350 | 121 |
| U20 02400 | 121 |
| U20 02450 | 123 |
| U20 02500 | 123 |
| U20 02550 | 123 |
| U20 02600 | 123 |
| U20 02650 | 123 |
| U20 02700 | 123 |
| U20 02750 | 123 |
| U20 02800 | 125 |
| U20 02850 | 125 |
| U20 02900 | 125 |
| U20 02950 | 125 |
| U20 03000 | 125 |
| U20 03050 | 125 |
| U20 03100 | 125 |
| U20 03150 | 127 |
| U20 03200 | 127 |
| U20 03250 | 127 |
| U20 03300 | 127 |
| U20 03350 | 127 |
| U20 03400 | 127 |
| U20 03450 | 127 |
| U20 03500 | 129 |
| U20 03550 | 129 |
| U20 03600 | 129 |
| U20 13650 | 129 |
| U20 13700 | 129 |
| U20 13750 | 129 |
| U20 13800 | 129 |
| U20 13850 | 131 |

| U.. Order No. | Page |
|---|---|
| U20 13900 | 131 |
| U20 13950 | 131 |
| U20 14000 | 131 |
| U20 14050 | 131 |
| U20 14100 | 131 |
| U20 14150 | 131 |
| U20 14200 | 133 |
| U20 14250 | 133 |
| U20 14300 | 133 |
| U20 14350 | 133 |
| U20 14400 | 133 |
| U20 71750 | 119 |
| U20 71800 | 119 |
| U20 71850 | 119 |
| U20 71900 | 119 |
| U20 81950 | 119 |
| U20 82000 | 119 |
| U20 82050 | 119 |
| U20 82100 | 121 |
| U20 82150 | 121 |
| U20 82200 | 121 |
| U20 82250 | 121 |
| U20 82300 | 121 |
| U20 82350 | 121 |
| U20 82400 | 121 |
| U20 82450 | 123 |
| U20 82500 | 123 |
| U20 82550 | 123 |
| U20 82600 | 123 |
| U20 82650 | 123 |
| U20 82700 | 123 |
| U20 92750 | 123 |
| U20 92800 | 125 |
| U20 92850 | 125 |
| U20 92900 | 125 |
| U20 92950 | 125 |
| U20 93000 | 125 |
| U20 93050 | 125 |
| U20 93100 | 125 |
| U20 93150 | 127 |
| U20 93200 | 127 |
| U20 93250 | 127 |
| U20 93300 | 127 |
| U20 93350 | 127 |
| U20 93400 | 127 |
| U20 93450 | 127 |
| U20 93500 | 129 |
| U20 93550 | 129 |
| U20 93600 | 129 |
| U22 21750 | 135 |
| U22 22100 | 135 |
| U22 22500 | 135 |
| U22 23000 | 135 |
| U22 43650 | 135 |
| U22 71750 | 135 |
| U22 82100 | 135 |
| U22 82500 | 135 |
| U22 93000 | 135 |
| U44 01400 | 62 |
| U44 01430 | 62 |
| U44 01450 | 62 |
| U44 01500 | 62 |
| U44 01510 | 62 |
| U44 01550 | 62 |
| U44 01590 | 62 |
| U44 01600 | 62 |
| U44 01650 | 62 |

| U.. Order No. | Page |
|---|---|
| U44 01670 | 62 |
| U44 01700 | 62 |
| U44 11750 | 62 |
| U44 11790 | 62 |
| U44 11800 | 62 |
| U44 11850 | 62 |
| U44 11900 | 62 |
| U44 11910 | 62 |
| U44 11940 | 62 |
| U44 11950 | 62 |
| U44 11980 | 62 |
| U44 12000 | 62 |
| U44 12050 | 62 |
| U44 12060 | 62 |
| U44 12100 | 62 |
| U44 12150 | 62 |
| U44 12200 | 62 |
| U44 12220 | 62 |
| U44 12250 | 62 |
| U44 12300 | 62 |
| U44 22350 | 62 |
| U44 22380 | 62 |
| U44 22400 | 62 |
| U44 22450 | 62 |
| U44 22500 | 62 |
| U44 22540 | 62 |
| U44 22550 | 62 |
| U44 22600 | 62 |
| U44 22620 | 65 |
| U44 22650 | 65 |
| U44 22700 | 65 |
| U44 22750 | 65 |
| U44 22800 | 65 |
| U44 22820 | 65 |
| U44 22850 | 65 |
| U44 22860 | 65 |
| U44 22900 | 65 |
| U44 22940 | 65 |
| U44 22950 | 65 |
| U44 23000 | 65 |
| U44 33020 | 65 |
| U44 33050 | 65 |
| U44 33090 | 65 |
| U44 33100 | 65 |
| U44 33150 | 65 |
| U44 33180 | 65 |
| U44 33200 | 65 |
| U44 33250 | 65 |
| U44 33300 | 65 |
| U44 33320 | 65 |
| U44 33330 | 65 |
| U44 33350 | 65 |
| U44 33370 | 65 |
| U44 33400 | 65 |
| U44 33450 | 65 |
| U44 33490 | 65 |
| U44 33500 | 65 |
| U44 33550 | 65 |
| U44 33600 | 65 |
| U44 33650 | 65 |
| U44 33700 | 65 |
| U44 33730 | 66 |
| U44 33750 | 66 |
| U44 33800 | 66 |
| U44 33810 | 66 |
| U44 33850 | 66 |
| U44 33900 | 66 |
| U44 33920 | 66 |
| U44 33950 | 66 |
| U44 33970 | 66 |

# Numerical Index

| U.. | |
|---|---|
| Order No. | Page |
| U44 34000 | 66 |
| U44 34050 | 66 |
| U44 34100 | 66 |
| U44 34130 | 66 |
| U44 34150 | 66 |
| U44 34200 | 66 |
| U44 34210 | 66 |
| U44 34250 | 66 |
| U44 34290 | 66 |
| U44 34300 | 66 |
| U44 34350 | 66 |
| U44 34400 | 66 |
| U44 34450 | 66 |
| U44 34500 | 66 |
| U44 34550 | 66 |
| U44 34600 | 66 |
| | |
| U44 51400 | 57 |
| U44 51430 | 57 |
| U44 51450 | 57 |
| U44 51500 | 57 |
| U44 51510 | 57 |
| U44 51550 | 57 |
| U44 51590 | 57 |
| U44 51600 | 57 |
| U44 51650 | 57 |
| U44 51700 | 57 |
| U44 51750 | 57 |
| U44 51800 | 57 |
| U44 51850 | 57 |
| U44 51900 | 57 |
| U44 51950 | 57 |
| U44 52000 | 57 |
| U44 52050 | 57 |
| U44 52100 | 57 |
| U44 52150 | 57 |
| U44 52200 | 57 |
| U44 52250 | 57 |
| U44 52300 | 57 |
| U44 52350 | 57 |
| U44 52400 | 57 |
| U44 52450 | 57 |
| U44 52500 | 57 |
| U44 52550 | 57 |
| U44 52600 | 57 |
| U44 52650 | 58 |
| U44 52700 | 58 |
| U44 52750 | 58 |
| U44 52800 | 58 |
| U44 52850 | 58 |
| U44 52900 | 58 |
| U44 52950 | 58 |
| U44 53000 | 58 |
| | |
| U44 64500 | 60 |
| U44 64550 | 60 |
| U44 64600 | 60 |
| | |
| U45 01400 | 62 |
| U45 01430 | 62 |
| U45 01450 | 62 |
| U45 01500 | 62 |
| U45 01510 | 62 |
| U45 01550 | 62 |
| U45 01590 | 62 |
| U45 01600 | 62 |
| U45 01650 | 62 |
| U45 01670 | 62 |
| U45 01700 | 62 |
| | |
| U45 11750 | 62 |
| U45 11790 | 62 |

| U.. | |
|---|---|
| Order No. | Page |
| U45 11800 | 62 |
| U45 11850 | 62 |
| U45 11900 | 62 |
| U45 11910 | 62 |
| U45 11940 | 62 |
| U45 11950 | 62 |
| U45 11980 | 62 |
| U45 12000 | 62 |
| U45 12050 | 62 |
| U45 12060 | 62 |
| U45 12100 | 62 |
| U45 12150 | 62 |
| U45 12200 | 62 |
| U45 12220 | 62 |
| U45 12250 | 62 |
| U45 12300 | 62 |
| | |
| U45 22350 | 62 |
| U45 22380 | 62 |
| U45 22400 | 62 |
| U45 22450 | 62 |
| U45 22500 | 62 |
| U45 22540 | 62 |
| U45 22550 | 62 |
| U45 22600 | 62 |
| U45 22620 | 65 |
| U45 22650 | 65 |
| U45 22700 | 65 |
| U45 22750 | 65 |
| U45 22800 | 65 |
| U45 22820 | 65 |
| U45 22850 | 65 |
| U45 22860 | 65 |
| U45 22900 | 65 |
| U45 22940 | 65 |
| U45 22950 | 65 |
| U45 23000 | 65 |
| | |
| U45 33020 | 65 |
| U45 33050 | 65 |
| U45 33090 | 65 |
| U45 33100 | 65 |
| U45 33150 | 65 |
| U45 33180 | 65 |
| U45 33200 | 65 |
| U45 33250 | 65 |
| U45 33300 | 65 |
| U45 33320 | 65 |
| U45 33330 | 65 |
| U45 33350 | 65 |
| U45 33370 | 65 |
| U45 33400 | 65 |
| U45 33450 | 65 |
| U45 33490 | 65 |
| U45 33500 | 65 |
| U45 33550 | 65 |
| U45 33600 | 65 |
| U45 33650 | 65 |
| U45 33700 | 65 |
| U45 33730 | 66 |
| U45 33750 | 66 |
| U45 33800 | 66 |
| U45 33810 | 66 |
| U45 33850 | 66 |
| U45 33900 | 66 |
| U45 33920 | 66 |
| U45 33950 | 66 |
| U45 33970 | 66 |
| U45 34000 | 66 |
| U45 34050 | 66 |
| U45 34100 | 66 |
| U45 34130 | 66 |

| U.. | |
|---|---|
| Order No. | Page |
| U45 34150 | 66 |
| U45 34200 | 66 |
| U45 34210 | 66 |
| U45 34250 | 66 |
| U45 34290 | 66 |
| U45 34300 | 66 |
| U45 34350 | 66 |
| U45 34400 | 66 |
| U45 34450 | 66 |
| U45 34500 | 66 |
| U45 34550 | 66 |
| | |
| U45 51400 | 57 |
| U45 51430 | 57 |
| U45 51450 | 57 |
| U45 51500 | 57 |
| U45 51510 | 57 |
| U45 51550 | 57 |
| U45 51590 | 57 |
| U45 51600 | 57 |
| U45 51650 | 57 |
| U45 51700 | 57 |
| U45 51750 | 57 |
| U45 51800 | 57 |
| U45 51850 | 57 |
| U45 51900 | 57 |
| U45 51950 | 57 |
| U45 52000 | 57 |
| U45 52050 | 57 |
| U45 52100 | 57 |
| U45 52150 | 57 |
| U45 52200 | 57 |
| U45 52250 | 57 |
| U45 52300 | 57 |
| U45 52350 | 57 |
| U45 52400 | 57 |
| U45 52450 | 57 |
| U45 52500 | 57 |
| U45 52550 | 57 |
| U45 52600 | 57 |
| U45 52650 | 58 |
| U45 52700 | 58 |
| U45 52750 | 58 |
| U45 52800 | 58 |
| U45 52850 | 58 |
| U45 52900 | 58 |
| U45 52950 | 58 |
| U45 53000 | 58 |
| | |
| U45 64500 | 60 |
| U45 64550 | 60 |
| U45 64600 | 60 |
| | |
| U53 21000 | 31 |
| U53 21050 | 31 |
| U53 21100 | 31 |
| U53 21150 | 31 |
| U53 31200 | 31 |
| U53 31250 | 31 |
| U53 31300 | 33 |
| U53 41600 | 33 |
| U53 41700 | 35 |
| U53 41800 | 35 |
| U53 41900 | 35 |
| | |
| U55 21000 | 31 |
| U55 21050 | 31 |
| U55 21100 | 31 |
| U55 21150 | 31 |
| U55 31200 | 31 |
| U55 31250 | 31 |
| U55 31300 | 33 |

| U.. / V.. | |
|---|---|
| Order No. | Page |
| U55 41600 | 33 |
| U55 41700 | 35 |
| | |
| U57 21000 | 31 |
| U57 21050 | 31 |
| U57 21100 | 31 |
| U57 21150 | 31 |
| U57 31200 | 31 |
| U57 31250 | 31 |
| U57 31300 | 33 |
| U57 31400 | 33 |
| U57 31500 | 33 |
| | |
| V03 03000.112730 | 12 |
| V03 03000.212730 | 12 |
| V03 03100.112730 | 12 |
| V03 03100.212730 | 12 |
| V03 03200.112730 | 12 |
| V03 03200.212730 | 12 |
| V03 03300.112730 | 12 |
| V03 03300.212730 | 12 |
| V03 03400.112730 | 12 |
| V03 03400.212730 | 12 |
| V03 03500.112730 | 12 |
| V03 03500.212730 | 12 |
| V03 03600.112730 | 12 |
| V03 03600.212730 | 12 |
| V03 03700.112730 | 12 |
| V03 03700.212730 | 12 |
| V03 03800.112730 | 12 |
| V03 03800.212730 | 12 |
| V03 03900.112730 | 12 |
| V03 03900.212730 | 12 |
| V03 04000.112730 | 12 |
| V03 04000.212730 | 12 |
| V03 04100.112730 | 12 |
| V03 04100.212730 | 12 |
| V03 04200.112730 | 12 |
| V03 04200.212730 | 12 |
| V03 04300.112730 | 12 |
| V03 04300.212730 | 12 |
| V03 04400.112730 | 12 |
| V03 04400.212730 | 12 |
| V03 04500.112730 | 12 |
| V03 04500.212730 | 12 |
| V03 04600.112730 | 12 |
| V03 04600.212730 | 12 |
| V03 04700.112730 | 12 |
| V03 04700.212730 | 12 |
| V03 04800.112730 | 12 |
| V03 04800.212730 | 12 |
| V03 04900.112730 | 12 |
| V03 04900.212730 | 12 |
| V03 05000.112730 | 12 |
| V03 05000.212730 | 12 |
| V03 05100.112730 | 12 |
| V03 05100.212730 | 12 |
| V03 05200.112730 | 12 |
| V03 05200.212730 | 12 |
| V03 05300.112730 | 12 |
| V03 05300.212730 | 12 |
| V03 05400.112730 | 12 |
| V03 05400.212730 | 12 |
| V03 05500.112730 | 12 |
| V03 05500.212730 | 12 |
| V03 05540.112730 | 12 |
| V03 05540.212730 | 12 |
| V03 05600.112730 | 12 |
| V03 05600.212730 | 12 |
| V03 05700.112730 | 12 |
| V03 05700.212730 | 12 |
| V03 05800.112730 | 12 |

| V.. | |
|---|---|
| Order No. | Page |
| V03 05800.212730 | 12 |
| V03 05900.112730 | 12 |
| V03 05900.212730 | 12 |
| V03 06000.112730 | 12 |
| V03 06000.212730 | 12 |
| V03 06100.112730 | 12 |
| V03 06100.212730 | 12 |
| V03 06200.112730 | 12 |
| V03 06200.212730 | 12 |
| V03 06300.112730 | 12 |
| V03 06300.212730 | 12 |
| V03 06400.112730 | 12 |
| V03 06400.212730 | 12 |
| V03 06500.112730 | 12 |
| V03 06500.212730 | 12 |
| V03 06600.112730 | 12 |
| V03 06600.212730 | 12 |
| V03 06700.112730 | 12 |
| V03 06700.212730 | 12 |
| V03 06800.112730 | 12 |
| V03 06800.212730 | 12 |
| V03 06900.112730 | 12 |
| V03 06900.212730 | 12 |
| V03 07000.112730 | 13 |
| V03 07000.212730 | 13 |
| V03 07100.112730 | 13 |
| V03 07100.212730 | 13 |
| V03 07200.112730 | 13 |
| V03 07200.212730 | 13 |
| V03 07300.112730 | 13 |
| V03 07300.212730 | 13 |
| V03 07400.112730 | 13 |
| V03 07400.212730 | 13 |
| V03 07430.112730 | 13 |
| V03 07430.212730 | 13 |
| V03 07500.112730 | 13 |
| V03 07500.212730 | 13 |
| V03 07600.112730 | 13 |
| V03 07600.212730 | 13 |
| V03 07700.112730 | 13 |
| V03 07700.212730 | 13 |
| V03 07800.112730 | 13 |
| V03 07800.212730 | 13 |
| V03 07900.112730 | 13 |
| V03 07900.212730 | 13 |
| V03 08000.112730 | 13 |
| V03 08000.212730 | 13 |
| V03 08100.112730 | 13 |
| V03 08100.212730 | 13 |
| V03 08200.112730 | 13 |
| V03 08200.212730 | 13 |
| V03 08300.112730 | 13 |
| V03 08300.212730 | 13 |
| V03 08400.112730 | 13 |
| V03 08400.212730 | 13 |
| V03 08500.112730 | 13 |
| V03 08500.212730 | 13 |
| V03 08600.112730 | 13 |
| V03 08600.212730 | 13 |
| V03 08700.112730 | 13 |
| V03 08700.212730 | 13 |
| V03 08800.112730 | 13 |
| V03 08800.212730 | 13 |
| V03 08900.112730 | 13 |
| V03 08900.212730 | 13 |
| V03 09000.112730 | 13 |
| V03 09000.212730 | 13 |
| V03 09100.112730 | 13 |
| V03 09100.212730 | 13 |
| V03 09200.112730 | 13 |
| V03 09200.212730 | 13 |
| V03 09300.112730 | 13 |

| V.. Order No. | Page |
|---|---|
| V03 09300.212730 | 13 |
| V03 09400.112730 | 13 |
| V03 09400.212730 | 13 |
| V03 09500.112730 | 13 |
| V03 09500.212730 | 13 |
| V03 09540.112730 | 13 |
| V03 09540.212730 | 13 |
| V03 09600.112730 | 13 |
| V03 09600.212730 | 13 |
| V03 09700.112730 | 13 |
| V03 09700.212730 | 13 |
| V03 09800.112730 | 13 |
| V03 09800.212730 | 13 |
| V03 09900.112730 | 13 |
| V03 09900.212730 | 13 |
| V03 10000.112730 | 13 |
| V03 10000.212730 | 13 |
| V03 10100.112730 | 13 |
| V03 10100.212730 | 13 |
| V03 10200.112730 | 13 |
| V03 10200.212730 | 13 |
| V03 10300.112730 | 13 |
| V03 10300.212730 | 13 |
| V03 10400.112730 | 13 |
| V03 10400.212730 | 13 |
| V03 10500.112730 | 13 |
| V03 10500.212730 | 13 |
| V03 10600.112730 | 13 |
| V03 10600.212730 | 13 |
| V03 10700.112730 | 13 |
| V03 10700.212730 | 13 |
| V03 10800.112730 | 13 |
| V03 10800.212730 | 13 |
| V03 10900.112730 | 13 |
| V03 10900.212730 | 13 |
| V03 11000.112730 | 13 |
| V03 11000.212730 | 13 |
| V03 11100.112730 | 13 |
| V03 11100.212730 | 13 |
| V03 11200.112730 | 13 |
| V03 11200.212730 | 13 |
| V03 11300.112730 | 13 |
| V03 11300.212730 | 13 |
| V03 11400.112730 | 13 |
| V03 11400.212730 | 13 |
| V03 11500.112730 | 13 |
| V03 11500.212730 | 13 |
| V03 11540.112730 | 13 |
| V03 11540.212730 | 13 |
| V03 11600.112730 | 13 |
| V03 11600.212730 | 13 |
| V03 11700.112730 | 13 |
| V03 11700.212730 | 13 |
| V03 11800.112730 | 13 |
| V03 11800.212730 | 13 |
| V03 11900.112730 | 13 |
| V03 11900.212730 | 13 |
| V03 12000.112730 | 13 |
| V03 12000.212730 | 13 |
| V03 12500.112730 | 13 |
| V03 12500.212730 | 13 |
| V03 12800.112730 | 13 |
| V03 12800.212730 | 13 |
| V03 13000.112730 | 13 |
| V03 13000.212730 | 13 |
| V03 13300.112730 | 13 |
| V03 13300.212730 | 13 |
| V03 13500.112730 | 13 |
| V03 13500.212730 | 13 |
| V03 13800.112730 | 13 |
| V03 13800.212730 | 13 |

| V.. Order No. | Page |
|---|---|
| V03 14000.112730 | 13 |
| V03 14000.212730 | 13 |
| V03 14500.112730 | 13 |
| V03 14500.212730 | 13 |
| V03 14800.112730 | 13 |
| V03 14800.212730 | 13 |
| V03 15000.112730 | 13 |
| V03 15000.212730 | 13 |
| V03 15500.112730 | 13 |
| V03 15500.212730 | 13 |
| V03 15800.112730 | 13 |
| V03 15800.212730 | 13 |
| V03 16000.112730 | 13 |
| V03 16000.212730 | 13 |
| V04 03000.112730 | 14 |
| V04 03000.212730 | 14 |
| V04 03100.112730 | 14 |
| V04 03100.212730 | 14 |
| V04 03200.112730 | 14 |
| V04 03200.212730 | 14 |
| V04 03300.112730 | 14 |
| V04 03300.212730 | 14 |
| V04 03400.112730 | 14 |
| V04 03400.212730 | 14 |
| V04 03500.112730 | 14 |
| V04 03500.212730 | 14 |
| V04 03600.112730 | 14 |
| V04 03600.212730 | 14 |
| V04 03700.112730 | 14 |
| V04 03700.212730 | 14 |
| V04 03800.112730 | 14 |
| V04 03800.212730 | 14 |
| V04 03900.112730 | 14 |
| V04 03900.212730 | 14 |
| V04 04000.112730 | 14 |
| V04 04000.212730 | 14 |
| V04 04100.112730 | 14 |
| V04 04100.212730 | 14 |
| V04 04200.112730 | 14 |
| V04 04200.212730 | 14 |
| V04 04300.112730 | 14 |
| V04 04300.212730 | 14 |
| V04 04400.112730 | 14 |
| V04 04400.212730 | 14 |
| V04 04500.112730 | 14 |
| V04 04500.212730 | 14 |
| V04 04600.112730 | 14 |
| V04 04600.212730 | 14 |
| V04 04700.112730 | 14 |
| V04 04700.212730 | 14 |
| V04 04800.112730 | 14 |
| V04 04800.212730 | 14 |
| V04 04900.112730 | 14 |
| V04 04900.212730 | 14 |
| V04 05000.112730 | 14 |
| V04 05000.212730 | 14 |
| V04 05100.112730 | 14 |
| V04 05100.212730 | 14 |
| V04 05200.112730 | 14 |
| V04 05200.212730 | 14 |
| V04 05300.112730 | 14 |
| V04 05300.212730 | 14 |
| V04 05400.112730 | 14 |
| V04 05400.212730 | 14 |
| V04 05500.112730 | 14 |
| V04 05500.212730 | 14 |
| V04 05540.112730 | 14 |
| V04 05540.212730 | 14 |
| V04 05600.112730 | 14 |
| V04 05600.212730 | 14 |
| V04 05700.112730 | 14 |

| V.. Order No. | Page |
|---|---|
| V04 05700.212730 | 14 |
| V04 05800.112730 | 14 |
| V04 05800.212730 | 14 |
| V04 05900.112730 | 14 |
| V04 05900.212730 | 14 |
| V04 06000.112730 | 14 |
| V04 06000.212730 | 14 |
| V04 06100.112730 | 14 |
| V04 06100.212730 | 14 |
| V04 06200.112730 | 14 |
| V04 06200.212730 | 14 |
| V04 06300.112730 | 14 |
| V04 06300.212730 | 14 |
| V04 06400.112730 | 14 |
| V04 06400.212730 | 14 |
| V04 06500.112730 | 14 |
| V04 06500.212730 | 14 |
| V04 06600.112730 | 14 |
| V04 06600.212730 | 14 |
| V04 06700.112730 | 14 |
| V04 06700.212730 | 14 |
| V04 06800.112730 | 14 |
| V04 06800.212730 | 14 |
| V04 06900.112730 | 15 |
| V04 06900.212730 | 15 |
| V04 07000.112730 | 15 |
| V04 07000.212730 | 15 |
| V04 07100.112730 | 15 |
| V04 07100.212730 | 15 |
| V04 07200.112730 | 15 |
| V04 07200.212730 | 15 |
| V04 07300.112730 | 15 |
| V04 07300.212730 | 15 |
| V04 07400.112730 | 15 |
| V04 07400.212730 | 15 |
| V04 07430.112730 | 15 |
| V04 07430.212730 | 15 |
| V04 07500.112730 | 15 |
| V04 07500.212730 | 15 |
| V04 07600.112730 | 15 |
| V04 07600.212730 | 15 |
| V04 07700.112730 | 15 |
| V04 07700.212730 | 15 |
| V04 07800.112730 | 15 |
| V04 07800.212730 | 15 |
| V04 07900.112730 | 15 |
| V04 07900.212730 | 15 |
| V04 08000.112730 | 15 |
| V04 08000.212730 | 15 |
| V04 08100.112730 | 15 |
| V04 08100.212730 | 15 |
| V04 08200.112730 | 15 |
| V04 08200.212730 | 15 |
| V04 08300.112730 | 15 |
| V04 08300.212730 | 15 |
| V04 08400.112730 | 15 |
| V04 08400.212730 | 15 |
| V04 08500.112730 | 15 |
| V04 08500.212730 | 15 |
| V04 08600.112730 | 15 |
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| V04 08700.112730 | 15 |
| V04 08700.212730 | 15 |
| V04 08800.112730 | 15 |
| V04 08800.212730 | 15 |
| V04 08900.112730 | 15 |
| V04 08900.212730 | 15 |
| V04 09000.112730 | 15 |
| V04 09000.212730 | 15 |
| V04 09100.112730 | 15 |
| V04 09100.212730 | 15 |
| V04 09200.112730 | 15 |

| V.. Order No. | Page |
|---|---|
| V04 09200.212730 | 15 |
| V04 09300.112730 | 15 |
| V04 09300.212730 | 15 |
| V04 09400.112730 | 15 |
| V04 09400.212730 | 15 |
| V04 09500.112730 | 15 |
| V04 09500.212730 | 15 |
| V04 09540.112730 | 15 |
| V04 09540.212730 | 15 |
| V04 09600.112730 | 15 |
| V04 09600.212730 | 15 |
| V04 09700.112730 | 15 |
| V04 09700.212730 | 15 |
| V04 09800.112730 | 15 |
| V04 09800.212730 | 15 |
| V04 09900.112730 | 15 |
| V04 09900.212730 | 15 |
| V04 10000.112730 | 15 |
| V04 10000.212730 | 15 |
| V04 10100.112730 | 15 |
| V04 10100.212730 | 15 |
| V04 10200.112730 | 15 |
| V04 10200.212730 | 15 |
| V04 10300.112730 | 15 |
| V04 10300.212730 | 15 |
| V04 10400.112730 | 15 |
| V04 10400.212730 | 15 |
| V04 10500.112730 | 15 |
| V04 10500.212730 | 15 |
| V04 10600.112730 | 15 |
| V04 10600.212730 | 15 |
| V04 10700.112730 | 15 |
| V04 10700.212730 | 15 |
| V04 10800.112730 | 15 |
| V04 10800.212730 | 15 |
| V04 10900.112730 | 15 |
| V04 10900.212730 | 15 |
| V04 11000.112730 | 15 |
| V04 11000.212730 | 15 |
| V04 11100.112730 | 15 |
| V04 11100.212730 | 15 |
| V04 11200.112730 | 15 |
| V04 11200.212730 | 15 |
| V04 11300.112730 | 15 |
| V04 11300.212730 | 15 |
| V04 11400.112730 | 15 |
| V04 11400.212730 | 15 |
| V04 11500.112730 | 15 |
| V04 11500.212730 | 15 |
| V04 11540.112730 | 15 |
| V04 11540.212730 | 15 |
| V04 11600.112730 | 15 |
| V04 11600.212730 | 15 |
| V04 11700.112730 | 15 |
| V04 11700.212730 | 15 |
| V04 11800.112730 | 15 |
| V04 11800.212730 | 15 |
| V04 11900.112730 | 15 |
| V04 11900.212730 | 15 |
| V04 12000.112730 | 15 |
| V04 12000.212730 | 15 |
| V04 12500.112730 | 15 |
| V04 12500.212730 | 15 |
| V04 12800.112730 | 15 |
| V04 12800.212730 | 15 |
| V04 13000.112730 | 15 |
| V04 13000.212730 | 15 |
| V04 13300.112730 | 15 |
| V04 13300.212730 | 15 |
| V04 13500.112730 | 15 |
| V04 13500.212730 | 15 |

| V.. Order No. | Page |
|---|---|
| V04 13800.112730 | 15 |
| V04 13800.212730 | 15 |
| V04 14000.112730 | 15 |
| V04 14000.212730 | 15 |
| V04 14500.112730 | 15 |
| V04 14500.212730 | 15 |
| V04 14800.112730 | 15 |
| V04 14800.212730 | 15 |
| V04 15000.112730 | 15 |
| V04 15000.212730 | 15 |
| V04 15500.112730 | 15 |
| V04 15500.212730 | 15 |
| V04 15800.112730 | 15 |
| V04 15800.212730 | 15 |
| V04 16000.112730 | 15 |
| V04 16000.212730 | 15 |
| V05 03000.117830 | 16 |
| V05 04000.117830 | 16 |
| V05 04500.117830 | 16 |
| V05 05000.117830 | 16 |
| V05 05500.117830 | 16 |
| V05 06000.117830 | 16 |
| V05 06500.117830 | 16 |
| V05 08000.117830 | 16 |
| V05 08500.117830 | 16 |
| V05 09000.117830 | 16 |
| V05 10000.117830 | 16 |
| V06 03000.117830 | 17 |
| V06 04000.117830 | 17 |
| V06 04500.117830 | 17 |
| V06 05000.117830 | 17 |
| V06 05500.117830 | 17 |
| V06 06000.117830 | 17 |
| V06 06500.117830 | 17 |
| V06 08000.117830 | 17 |
| V13 34500 | 109 |
| V13 34600 | 109 |
| V13 34700 | 109 |
| V13 34800 | 109 |
| V13 34900 | 109 |
| V13 35000 | 109 |
| V13 35100 | 109 |
| V13 35200 | 109 |
| V13 35300 | 109 |
| V13 35400 | 109 |
| V13 74500 | 109 |
| V13 74600 | 109 |
| V13 74700 | 109 |
| V13 74800 | 109 |
| V13 74900 | 109 |
| V13 75000 | 109 |
| V13 75100 | 109 |
| V13 75200 | 109 |
| V13 75300 | 109 |
| V13 75400 | 109 |
| V14 35500 | 109 |
| V14 35600 | 109 |
| V14 35700 | 109 |
| V14 35800 | 109 |
| V14 35900 | 109 |
| V14 36000 | 109 |
| V14 36100 | 109 |
| V14 36200 | 109 |
| V14 36300 | 109 |
| V14 36400 | 109 |
| V14 36500 | 109 |
| V14 36600 | 109 |

# Numerical Index


| V.. Order No. | Page |
|---|---|
| V14 36700 | 109 |
| V14 36800 | 109 |
| V14 36900 | 109 |
| V14 37000 | 109 |
| V14 37100 | 109 |
| V14 37200 | 109 |
| V14 37300 | 109 |
| V14 37400 | 109 |
| V14 37500 | 109 |
| V14 37600 | 109 |
| V14 37700 | 109 |
| V14 37800 | 109 |
| V14 37900 | 109 |
| V14 38000 | 109 |
| V14 38100 | 109 |
| V14 38200 | 109 |
| V14 75500 | 109 |
| V14 75600 | 109 |
| V14 75700 | 109 |
| V14 75800 | 109 |
| V14 75900 | 109 |
| V14 76000 | 109 |
| V14 76100 | 109 |
| V14 76200 | 109 |
| V14 76300 | 109 |
| V14 76400 | 109 |
| V14 76500 | 109 |
| V14 76600 | 109 |
| V14 76700 | 109 |
| V14 76800 | 109 |
| V14 76900 | 109 |
| V14 77000 | 109 |
| V14 77100 | 109 |
| V14 77200 | 109 |
| V14 77300 | 109 |
| V14 77400 | 109 |
| V14 77500 | 109 |
| V14 77600 | 109 |
| V14 77700 | 109 |
| V14 77800 | 109 |
| V14 77900 | 109 |
| V14 78000 | 109 |
| V14 78100 | 109 |
| V14 78200 | 109 |
| V30 21402 | 97 |
| V30 21502 | 97 |
| V30 21600 | 97 |
| V30 21700 | 97 |
| V30 21800 | 97 |
| V30 21900 | 97 |
| V30 22000 | 97 |
| V30 22100 | 97 |
| V30 22200 | 97 |
| V30 22300 | 97 |
| V30 22400 | 97 |
| V30 22500 | 97 |
| V30 22600 | 97 |
| V30 22700 | 97 |
| V30 22800 | 97 |
| V30 22900 | 97 |
| V30 23000 | 97 |
| V30 23100 | 97 |
| V30 23200 | 97 |
| V30 23300 | 97 |
| V30 23400 | 97 |
| V30 23500 | 97 |
| V30 23600 | 97 |
| V30 23700 | 97 |
| V30 23800 | 97 |
| V30 23900 | 97 |

| V.. Order No. | Page |
|---|---|
| V30 24000 | 97 |
| V30 24100 | 97 |
| V30 24200 | 97 |
| V30 24300 | 97 |
| V30 24400 | 97 |
| V30 31403 | 77 |
| V30 31503 | 77 |
| V30 31551 | 77 |
| V30 31601 | 77 |
| V30 31701 | 77 |
| V30 31751 | 77 |
| V30 31801 | 77 |
| V30 31851 | 77 |
| V30 31901 | 77 |
| V30 31951 | 77 |
| V30 32001 | 77 |
| V30 32101 | 77 |
| V30 32201 | 77 |
| V30 32251 | 77 |
| V30 32301 | 77 |
| V30 32401 | 77 |
| V30 32451 | 77 |
| V30 32501 | 77 |
| V30 32601 | 77 |
| V30 32651 | 77 |
| V30 32701 | 77 |
| V30 32801 | 77 |
| V30 32851 | 77 |
| V30 32901 | 77 |
| V30 32951 | 77 |
| V30 33001 | 77 |
| V30 33101 | 77 |
| V30 33151 | 77 |
| V30 33201 | 77 |
| V30 33301 | 77 |
| V30 33401 | 77 |
| V30 33501 | 77 |
| V30 33601 | 77 |
| V30 33701 | 77 |
| V30 33751 | 77 |
| V30 33801 | 77 |
| V30 33901 | 77 |
| V30 33951 | 77 |
| V30 34001 | 77 |
| V30 34101 | 77 |
| V30 34201 | 77 |
| V30 34301 | 77 |
| V30 34401 | 77 |
| V30 61402 | 97 |
| V30 61502 | 97 |
| V30 61600 | 97 |
| V30 61700 | 97 |
| V30 61800 | 97 |
| V30 61900 | 97 |
| V30 62000 | 97 |
| V30 62100 | 97 |
| V30 62200 | 97 |
| V30 62300 | 97 |
| V30 62400 | 97 |
| V30 62500 | 97 |
| V30 62600 | 97 |
| V30 62700 | 97 |
| V30 62800 | 97 |
| V30 62900 | 97 |
| V30 63000 | 97 |
| V30 63100 | 97 |
| V30 63200 | 97 |
| V30 63300 | 97 |
| V30 63400 | 97 |
| V30 63500 | 97 |

| V.. Order No. | Page |
|---|---|
| V30 63600 | 97 |
| V30 63700 | 97 |
| V30 63800 | 97 |
| V30 63900 | 97 |
| V30 64000 | 97 |
| V30 64100 | 97 |
| V30 64200 | 97 |
| V30 64300 | 97 |
| V30 64400 | 97 |
| V30 71403 | 77 |
| V30 71503 | 77 |
| V30 71551 | 77 |
| V30 71601 | 77 |
| V30 71701 | 77 |
| V30 71751 | 77 |
| V30 71801 | 77 |
| V30 71851 | 77 |
| V30 71901 | 77 |
| V30 71951 | 77 |
| V30 72001 | 77 |
| V30 72101 | 77 |
| V30 72201 | 77 |
| V30 72251 | 77 |
| V30 72301 | 77 |
| V30 72401 | 77 |
| V30 72451 | 77 |
| V30 72501 | 77 |
| V30 72601 | 77 |
| V30 72651 | 77 |
| V30 72701 | 77 |
| V30 72801 | 77 |
| V30 72851 | 77 |
| V30 72901 | 77 |
| V30 72951 | 77 |
| V30 73001 | 77 |
| V30 73101 | 77 |
| V30 73151 | 77 |
| V30 73201 | 77 |
| V30 73301 | 77 |
| V30 73401 | 77 |
| V30 73501 | 77 |
| V30 73601 | 77 |
| V30 73701 | 77 |
| V30 73751 | 77 |
| V30 73801 | 77 |
| V30 73901 | 77 |
| V30 73951 | 77 |
| V30 74001 | 77 |
| V30 74101 | 77 |
| V30 74201 | 77 |
| V30 74301 | 77 |
| V30 74401 | 77 |
| V30 91403 | 77 |
| V30 91503 | 77 |
| V30 91551 | 77 |
| V30 91601 | 77 |
| V30 91701 | 77 |
| V30 91751 | 77 |
| V30 91801 | 77 |
| V30 91851 | 77 |
| V30 91901 | 77 |
| V30 91951 | 77 |
| V30 92001 | 77 |
| V30 92101 | 77 |
| V30 92201 | 77 |
| V30 92251 | 77 |
| V30 92301 | 77 |
| V30 92401 | 77 |
| V30 92451 | 77 |
| V30 92501 | 77 |

| V.. Order No. | Page |
|---|---|
| V30 92601 | 77 |
| V30 92651 | 77 |
| V30 92701 | 77 |
| V30 92801 | 77 |
| V30 92851 | 77 |
| V30 92901 | 77 |
| V30 92951 | 77 |
| V30 93001 | 77 |
| V30 93101 | 77 |
| V30 93151 | 77 |
| V30 93201 | 77 |
| V30 93301 | 77 |
| V30 93401 | 77 |
| V30 93501 | 77 |
| V30 93601 | 77 |
| V30 93701 | 77 |
| V30 93751 | 77 |
| V30 93801 | 77 |
| V30 93901 | 77 |
| V30 93951 | 77 |
| V30 94001 | 77 |
| V30 94101 | 77 |
| V30 94201 | 77 |
| V30 94301 | 77 |
| V30 94401 | 77 |
| V36 71402 | 88 |
| V36 71502 | 88 |
| V36 71600 | 88 |
| V36 71700 | 88 |
| V36 71800 | 88 |
| V36 71900 | 88 |
| V36 72000 | 90 |
| V36 72100 | 90 |
| V36 72200 | 90 |
| V36 72300 | 90 |
| V36 72400 | 90 |
| V37 61402 | 100 |
| V37 61502 | 100 |
| V37 61600 | 100 |
| V37 61700 | 100 |
| V37 61800 | 100 |
| V37 61900 | 100 |
| V37 62000 | 100 |
| V37 62100 | 100 |
| V37 62200 | 100 |
| V37 62300 | 100 |
| V37 62400 | 100 |
| V37 71402 | 88 |
| V37 71502 | 88 |
| V37 71600 | 88 |
| V37 71700 | 88 |
| V37 71800 | 88 |
| V37 71900 | 88 |
| V37 72000 | 90 |
| V37 72100 | 90 |
| V37 72200 | 90 |
| V37 72300 | 90 |
| V37 72400 | 90 |
| V37 72600 | 90 |
| V37 72800 | 90 |
| V37 72900 | 90 |
| V38 61402 | 100 |
| V38 61502 | 100 |
| V38 61600 | 100 |
| V38 61700 | 100 |
| V38 61800 | 100 |
| V38 61900 | 100 |
| V38 62000 | 100 |
| V38 62100 | 100 |

| V.. Order No. | Page |
|---|---|
| V38 62200 | 100 |
| V38 62300 | 100 |
| V38 62400 | 100 |
| V38 62500 | 100 |
| V38 62600 | 100 |
| V38 62700 | 100 |
| V38 62800 | 100 |
| V38 62900 | 100 |
| V38 63000 | 100 |
| V38 63100 | 100 |
| V38 63200 | 100 |
| V38 63300 | 100 |
| V38 63400 | 100 |
| V38 63500 | 100 |
| V38 63600 | 100 |
| V38 63700 | 100 |
| V38 63800 | 100 |
| V38 63900 | 100 |
| V38 64000 | 100 |
| V38 64100 | 100 |
| V38 64200 | 100 |
| V38 64300 | 100 |
| V38 64400 | 100 |
| V38 71402 | 88 |
| V38 71502 | 88 |
| V38 71600 | 88 |
| V38 71700 | 88 |
| V38 71800 | 88 |
| V38 71900 | 88 |
| V38 72000 | 90 |
| V38 72100 | 90 |
| V38 72200 | 90 |
| V38 72300 | 90 |
| V38 72400 | 90 |
| V38 72500 | 90 |
| V38 72600 | 90 |
| V38 72700 | 90 |
| V38 72800 | 90 |
| V38 72900 | 90 |
| V38 73000 | 92 |
| V38 73100 | 92 |
| V38 73200 | 92 |
| V38 73300 | 92 |
| V38 73400 | 92 |
| V38 73500 | 92 |
| V38 73600 | 92 |
| V38 73700 | 92 |
| V38 73800 | 92 |
| V38 73900 | 92 |
| V38 74000 | 92 |
| V38 74100 | 92 |
| V38 74200 | 92 |
| V38 74300 | 92 |
| V38 74400 | 92 |
| V38 91402 | 88 |
| V38 91502 | 88 |
| V38 91550 | 88 |
| V38 91600 | 88 |
| V38 91700 | 88 |
| V38 91750 | 88 |
| V38 91800 | 88 |
| V38 91850 | 88 |
| V38 91900 | 88 |
| V38 91950 | 88 |
| V38 92000 | 90 |
| V38 92100 | 90 |
| V38 92200 | 90 |
| V38 92250 | 90 |
| V38 92300 | 90 |
| V38 92400 | 90 |

| V.. Order No. | Page |
|---|---|
| V38 92450 | 90 |
| V38 92500 | 90 |
| V38 92600 | 90 |
| V38 92650 | 90 |
| V38 92700 | 90 |
| V38 92800 | 90 |
| V38 92850 | 90 |
| V38 92900 | 90 |
| V38 92950 | 90 |
| V38 93000 | 92 |
| V38 93100 | 92 |
| V38 93150 | 92 |
| V38 93200 | 92 |
| V38 93300 | 92 |
| V38 93400 | 92 |
| V38 93500 | 92 |
| V38 93600 | 92 |
| | |
| V39 61402 | 100 |
| V39 61502 | 100 |
| V39 61600 | 100 |
| V39 61700 | 100 |
| V39 61800 | 100 |
| V39 61900 | 100 |
| V39 62000 | 100 |
| V39 62100 | 100 |
| V39 62200 | 100 |
| V39 62300 | 100 |
| V39 62400 | 100 |
| V39 62500 | 100 |
| V39 62600 | 100 |
| V39 62700 | 100 |
| V39 62800 | 100 |
| V39 62900 | 100 |
| V39 63000 | 100 |
| V39 63100 | 100 |
| V39 63200 | 100 |
| V39 63300 | 100 |
| V39 63400 | 100 |
| V39 63500 | 100 |
| V39 63600 | 100 |
| V39 63700 | 100 |
| V39 63800 | 100 |
| V39 63900 | 100 |
| V39 64000 | 100 |
| V39 64100 | 100 |
| V39 64200 | 100 |
| V39 64300 | 100 |
| V39 64400 | 100 |
| | |
| V39 71402 | 88 |
| V39 71502 | 88 |
| V39 71600 | 88 |
| V39 71700 | 88 |
| V39 71800 | 88 |
| V39 71900 | 88 |
| V39 72000 | 90 |
| V39 72100 | 90 |
| V39 72200 | 90 |
| V39 72300 | 90 |
| V39 72400 | 90 |
| V39 72500 | 90 |
| V39 72600 | 90 |
| V39 72700 | 90 |
| V39 72800 | 90 |
| V39 72900 | 90 |
| V39 73000 | 92 |
| V39 73100 | 92 |
| V39 73200 | 92 |
| V39 73300 | 92 |
| V39 73400 | 92 |
| V39 73500 | 92 |

| V.. Order No. | Page |
|---|---|
| V39 73600 | 92 |
| V39 73700 | 92 |
| V39 73800 | 92 |
| V39 73900 | 92 |
| V39 74000 | 92 |
| V39 74100 | 92 |
| V39 74200 | 92 |
| V39 74300 | 92 |
| V39 74400 | 92 |
| | |
| V39 91402 | 88 |
| V39 91502 | 88 |
| V39 91550 | 88 |
| V39 91600 | 88 |
| V39 91700 | 88 |
| V39 91750 | 88 |
| V39 91800 | 88 |
| V39 91850 | 88 |
| V39 91900 | 88 |
| V39 91950 | 88 |
| V39 92000 | 90 |
| V39 92100 | 90 |
| V39 92200 | 90 |
| V39 92250 | 90 |
| V39 92300 | 90 |
| V39 92400 | 90 |
| V39 92450 | 90 |
| V39 92500 | 90 |
| V39 92600 | 90 |
| V39 92650 | 90 |
| V39 92700 | 90 |
| V39 92800 | 90 |
| V39 92850 | 90 |
| V39 92900 | 90 |
| V39 92950 | 90 |
| V39 93000 | 92 |
| V39 93100 | 92 |
| V39 93150 | 92 |
| V39 93200 | 92 |
| V39 93300 | 92 |
| V39 93400 | 92 |
| V39 93500 | 92 |
| V39 93600 | 92 |
| V39 93700 | 92 |
| V39 93750 | 92 |
| V39 93800 | 92 |
| V39 93900 | 92 |
| V39 93950 | 92 |
| V39 94000 | 92 |
| V39 94100 | 92 |
| V39 94200 | 92 |
| V39 94300 | 92 |
| V39 94400 | 92 |
| | |
| V43 31202 | 80 |
| V43 31272 | 80 |
| V43 31302 | 80 |
| V43 31372 | 80 |
| V43 31404 | 80 |
| V43 31504 | 80 |
| V43 31552 | 80 |
| V43 31602 | 80 |
| V43 31702 | 80 |
| V43 31752 | 80 |
| V43 31802 | 80 |
| V43 31852 | 80 |
| V43 31902 | 80 |
| V43 31952 | 80 |
| V43 32002 | 83 |
| V43 32102 | 83 |
| V43 32202 | 83 |
| V43 32252 | 83 |

| V.. Order No. | Page |
|---|---|
| V43 32302 | 83 |
| V43 32402 | 83 |
| V43 32452 | 83 |
| | |
| V43 71202 | 80 |
| V43 71272 | 80 |
| V43 71302 | 80 |
| V43 71372 | 80 |
| V43 71404 | 80 |
| V43 71504 | 80 |
| V43 71552 | 80 |
| V43 71602 | 80 |
| V43 71702 | 80 |
| V43 71752 | 80 |
| V43 71802 | 80 |
| V43 71852 | 80 |
| V43 71902 | 80 |
| V43 71952 | 80 |
| V43 72002 | 83 |
| V43 72102 | 83 |
| V43 72202 | 83 |
| V43 72252 | 83 |
| V43 72302 | 83 |
| V43 72402 | 83 |
| V43 72452 | 83 |
| | |
| V43 91404 | 80 |
| V43 91504 | 80 |
| V43 91602 | 80 |
| V43 91702 | 80 |
| V43 91802 | 80 |
| V43 91902 | 80 |
| | |
| V44 32002 | 83 |
| V44 32102 | 83 |
| V44 32202 | 83 |
| V44 32252 | 83 |
| V44 32302 | 83 |
| V44 32402 | 83 |
| V44 32452 | 83 |
| V44 32502 | 83 |
| V44 32602 | 83 |
| V44 32652 | 83 |
| V44 32702 | 83 |
| V44 32802 | 83 |
| V44 32852 | 83 |
| V44 32902 | 83 |
| V44 32952 | 83 |
| V44 71404 | 80 |
| V44 71504 | 80 |
| V44 71552 | 80 |
| V44 71602 | 80 |
| V44 71702 | 80 |
| V44 71752 | 80 |
| V44 71802 | 80 |
| V44 71852 | 80 |
| V44 71902 | 80 |
| V44 71952 | 80 |
| V44 72002 | 83 |
| V44 72102 | 83 |
| V44 72202 | 83 |
| V44 72252 | 83 |
| V44 72302 | 83 |
| V44 72402 | 83 |
| V44 72452 | 83 |
| V44 72502 | 83 |
| V44 72602 | 83 |
| V44 72652 | 83 |
| V44 72702 | 83 |
| V44 72802 | 83 |
| V44 72852 | 83 |
| V44 72902 | 83 |

| V.. Order No. | Page |
|---|---|
| V44 72952 | 83 |
| V44 92002 | 83 |
| V44 92102 | 83 |
| V44 92202 | 83 |
| V44 92302 | 83 |
| V44 92402 | 83 |
| V44 92452 | 83 |
| | |
| V45 32402 | 83 |
| V45 32452 | 83 |
| V45 32502 | 83 |
| V45 32602 | 83 |
| V45 32652 | 83 |
| V45 32702 | 83 |
| V45 32802 | 83 |
| V45 32852 | 83 |
| V45 32902 | 83 |
| V45 32952 | 83 |
| V45 33002 | 84 |
| V45 33102 | 84 |
| V45 33152 | 84 |
| V45 33202 | 84 |
| V45 33302 | 84 |
| V45 33402 | 84 |
| V45 33502 | 84 |
| V45 33602 | 84 |
| V45 33702 | 84 |
| V45 33752 | 84 |
| V45 33802 | 84 |
| V45 33902 | 84 |
| V45 33952 | 84 |
| V45 34002 | 84 |
| V45 34102 | 84 |
| V45 34202 | 84 |
| V45 34302 | 84 |
| V45 34402 | 84 |
| | |
| V45 72002 | 83 |
| V45 72102 | 83 |
| V45 72202 | 83 |
| V45 72252 | 83 |
| V45 72302 | 83 |
| V45 72402 | 83 |
| V45 72452 | 83 |
| V45 72502 | 83 |
| V45 72602 | 83 |
| V45 72652 | 83 |
| V45 72702 | 83 |
| V45 72802 | 83 |
| V45 72852 | 83 |
| V45 72902 | 83 |
| V45 72952 | 83 |
| V45 73002 | 84 |
| V45 73102 | 84 |
| V45 73152 | 84 |
| V45 73202 | 84 |
| V45 73302 | 84 |
| V45 73402 | 84 |
| V45 73502 | 84 |
| V45 73602 | 84 |
| V45 73702 | 84 |
| V45 73752 | 84 |
| V45 73802 | 84 |
| V45 73902 | 84 |
| V45 73952 | 84 |
| V45 74002 | 84 |
| V45 74102 | 84 |
| V45 74202 | 84 |
| V45 74302 | 84 |
| V45 74402 | 84 |
| V45 92502 | 83 |
| V45 92602 | 83 |

| V.. Order No. | Page |
|---|---|
| V45 92702 | 83 |
| V45 92802 | 83 |
| V45 92902 | 83 |
| V45 93002 | 84 |
| V45 93102 | 84 |
| V45 93202 | 84 |
| V45 93302 | 84 |
| V45 93402 | 84 |
| V45 93502 | 84 |
| V45 93602 | 84 |
| | |
| V46 40801 | 152 |
| V46 40851 | 152 |
| V46 40901 | 152 |
| V46 40951 | 152 |
| V46 41001 | 152 |
| V46 41051 | 152 |
| V46 41101 | 152 |
| V46 41151 | 152 |
| V46 41201 | 152 |
| V46 41251 | 152 |
| V46 41301 | 152 |
| V46 41351 | 152 |
| V46 41401 | 152 |
| V46 41451 | 152 |
| V46 41501 | 152 |
| V46 41551 | 152 |
| | |
| V46 50200 | 140 |
| V46 50210 | 140 |
| V46 50220 | 140 |
| V46 50230 | 140 |
| V46 50240 | 140 |
| V46 50250 | 140 |
| V46 50260 | 140 |
| V46 50270 | 140 |
| V46 50280 | 140 |
| V46 50290 | 140 |
| V46 50300 | 140 |
| V46 50310 | 140 |
| V46 50320 | 140 |
| V46 50330 | 140 |
| V46 50340 | 140 |
| V46 50350 | 140 |
| V46 50360 | 140 |
| V46 50370 | 140 |
| V46 50380 | 140 |
| V46 50390 | 140 |
| V46 50400 | 140 |
| V46 50410 | 140 |
| V46 50420 | 140 |
| V46 50430 | 140 |
| V46 50440 | 140 |
| V46 50450 | 140 |
| V46 50460 | 140 |
| V46 50470 | 140 |
| V46 50480 | 140 |
| V46 50490 | 140 |
| V46 50500 | 140 |
| V46 50510 | 140 |
| V46 50520 | 140 |
| V46 50530 | 140 |
| V46 50540 | 140 |
| V46 50550 | 142 |
| V46 50560 | 142 |
| V46 50570 | 142 |
| V46 50580 | 142 |
| V46 50590 | 142 |
| V46 50600 | 142 |
| V46 50610 | 142 |
| V46 50620 | 142 |
| V46 50630 | 142 |

# Numerical Index


| V.. Order No. | Page |
|---|---|
| V46 50640 | 142 |
| V46 50650 | 142 |
| V46 50660 | 142 |
| V46 50670 | 142 |
| V46 50680 | 142 |
| V46 50690 | 142 |
| V46 50700 | 142 |
| V46 50710 | 142 |
| V46 50720 | 142 |
| V46 50730 | 142 |
| V46 50740 | 142 |
| V46 50750 | 142 |
| V46 50760 | 142 |
| V46 50770 | 142 |
| V46 50780 | 142 |
| V46 50790 | 142 |
| V46 50800 | 142 |
| V46 50810 | 142 |
| V47 20201 | 141 |
| V47 20261 | 141 |
| V47 20331 | 141 |
| V47 20401 | 141 |
| V47 20461 | 141 |
| V47 20551 | 143 |
| V47 20651 | 143 |
| V47 20721 | 143 |
| V47 40201 | 141 |
| V47 40261 | 141 |
| V47 40331 | 141 |
| V47 40401 | 141 |
| V47 40461 | 141 |
| V47 40551 | 143 |
| V47 40651 | 143 |
| V47 40721 | 143 |
| V47 60201 | 141 |
| V47 60261 | 141 |
| V47 60331 | 141 |
| V47 60401 | 141 |
| V47 60461 | 141 |
| V47 60551 | 143 |
| V47 60651 | 143 |
| V47 60721 | 143 |
| V50 30830 | 156 |
| V50 30880 | 156 |
| V50 30930 | 156 |
| V50 30980 | 156 |
| V50 31030 | 156 |
| V50 31080 | 156 |
| V50 31130 | 156 |
| V50 31180 | 156 |
| V50 31230 | 156 |
| V50 31280 | 156 |
| V59 64500 | 100 |
| V59 64600 | 100 |
| V59 64700 | 100 |
| V59 64800 | 100 |
| V59 64900 | 100 |
| V59 65000 | 100 |
| V59 65100 | 100 |
| V59 65400 | 100 |
| V59 74500 | 92 |
| V59 74600 | 92 |
| V59 74700 | 92 |
| V59 74800 | 92 |
| V59 74900 | 92 |
| V59 75000 | 92 |
| V59 75100 | 92 |
| V59 75200 | 92 |
| V59 75300 | 92 |

| V.. Order No. | Page |
|---|---|
| V59 75400 | 92 |
| V71 00200 | 158 |
| V71 00210 | 158 |
| V71 00250 | 158 |
| V71 00260 | 158 |
| V71 00330 | 158 |
| V82 73900 | 105 |
| V82 74000 | 105 |
| V82 74100 | 105 |
| V82 74200 | 105 |
| V82 74300 | 105 |
| V82 74400 | 105 |
| V83 74500 | 105 |
| V83 74600 | 105 |
| V83 74700 | 105 |
| V83 74800 | 105 |
| V83 74900 | 105 |
| V83 75000 | 105 |
| V83 75100 | 105 |
| V83 75200 | 105 |
| V83 75300 | 105 |
| V83 75400 | 105 |
| V84 75500 | 105 |
| V84 75600 | 105 |
| V84 75700 | 105 |
| V84 75800 | 105 |
| V84 75900 | 105 |
| V84 76000 | 105 |
| V84 76100 | 105 |
| V84 76200 | 105 |
| V84 76300 | 105 |
| V84 76400 | 105 |
| V84 76500 | 105 |
| V84 76600 | 105 |
| V84 76700 | 105 |
| V84 76800 | 105 |
| V84 76900 | 105 |
| V84 77000 | 105 |
| V84 77100 | 105 |
| V84 77200 | 105 |
| V84 77300 | 105 |
| V84 77400 | 105 |
| V84 77500 | 105 |
| V84 77600 | 105 |
| V84 77700 | 105 |
| V84 77800 | 105 |
| V84 77900 | 105 |
| V84 78000 | 105 |
| V84 78100 | 105 |
| V95 10012.0089 | 146 |
| V95 10012.0090 | 146 |
| V95 10022.0089 | 146 |
| V95 10022.0090 | 146 |
| V95 10032.0089 | 146 |
| V95 10032.0090 | 146 |
| V95 10042.0089 | 146 |
| V95 10042.0090 | 146 |
| V95 10050.0089 | 147 |
| V95 10050.0090 | 147 |
| V95 10063.0089 | 153 |
| V95 10063.0090 | 153 |
| V95 10213.0089 | 153 |
| V95 10213.0090 | 153 |
| V95 10310.8450 | 146 |
| V95 10320.8450 | 146 |
| V95 10330.8450 | 146 |
| V95 10340.8450 | 146 |

| W.. Order No. | Page |
|---|---|
| W00 04120.01.. | 617 |
| W00 04120.02.. | 617 |
| W00 04420.01.. | 617 |
| W00 04420.02.. | 617 |
| W00 04600.01.. | 617 |
| W01 10060.04.. | 618 |
| W01 10120.04.. | 618 |
| W01 10360.04.. | 619 |
| W01 10420.04.. | 619 |
| W01 10600.04.. | 620 |
| W01 18060.04.. | 618 |
| W01 18120.04.. | 618 |
| W01 18360.04.. | 619 |
| W01 18420.04.. | 619 |
| W01 18600.04.. | 620 |
| W01 24060.02.. | 618 |
| W01 24060.04.. | 618 |
| W01 24120.02.. | 618 |
| W01 24120.04.. | 618 |
| W01 24360.04.. | 619 |
| W01 24420.02.. | 619 |
| W01 24600.04.. | 620 |
| W01 24600.08.. | 620 |
| W01 24600.75.. | 623 |
| W01 24600.90.. | 622 |
| W01 24940.04.. | 621 |
| W01 34060.02.. | 618 |
| W01 34060.04.. | 618 |
| W01 34120.02.. | 618 |
| W01 34120.04.. | 618 |
| W01 34360.02.. | 619 |
| W01 34360.04.. | 619 |
| W01 34360.34.. | 624 |
| W01 34360.35.. | 624 |
| W01 34420.02.. | 619 |
| W01 34600.04.. | 620 |
| W01 34600.08.. | 620 |
| W01 34600.75.. | 623 |
| W01 34600.90.. | 622 |
| W01 34940.04.. | 621 |
| W01 42060.02.. | 618 |
| W01 42060.04.. | 618 |
| W01 42120.02.. | 618 |
| W01 42120.04.. | 618 |
| W01 42360.02.. | 619 |
| W01 42360.04.. | 619 |
| W01 42360.34.. | 624 |
| W01 42420.02.. | 619 |
| W01 42420.04.. | 619 |
| W01 42600.04.. | 620 |
| W01 42600.08.. | 620 |
| W01 42600.75.. | 623 |
| W01 42600.90.. | 622 |
| W01 42940.04.. | 621 |
| W01 50060.04.. | 618 |
| W01 50120.04.. | 618 |
| W01 50360.04.. | 619 |
| W01 50420.04.. | 619 |
| W01 50600.75.. | 623 |
| W01 50600.90.. | 622 |
| W01 58060.06.. | 618 |
| W01 58120.06.. | 618 |
| W04 34180.02.. | 625 |
| W04 34480.02.. | 626 |
| W04 42180.02.. | 625 |
| W04 42480.02.. | 626 |

| W.. Order No. | Page |
|---|---|
| W04 42480.04.. | 626 |
| W04 50180.04.. | 625 |
| W04 50480.04.. | 626 |
| W04 58480.06.. | 626 |
| W24 12010.04.. | 627 |
| W24 12110.04.. | 628 |
| W24 12130.04.. | 629 |
| W24 20010.04.. | 627 |
| W24 20110.04.. | 628 |
| W24 20130.04.. | 629 |
| W27 12010.04.. | 631 |
| W27 12100.04.. | 632 |
| W27 20010.04.. | 631 |
| W27 20100.04.. | 632 |
| W29 04010.02.. | 634 |
| W29 10010.04.. | 634 |
| W29 10030.04.. | 636 |
| W29 10110.04.. | 637 |
| W29 10130.04.. | 638 |
| W29 10150.04.. | 639 |
| W29 10160.04.. | 640 |
| W29 10200.04.. | 641 |
| W29 18010.04.. | 634 |
| W29 18030.04.. | 636 |
| W29 18110.04.. | 637 |
| W29 18130.04.. | 638 |
| W29 18150.04.. | 639 |
| W29 18160.04.. | 640 |
| W29 18200.04.. | 641 |
| W29 24000.04.. | 633 |
| W29 24010.04.. | 634 |
| W29 24010.08.. | 634 |
| W29 24020.04.. | 635 |
| W29 24020.08.. | 635 |
| W29 24030.04.. | 636 |
| W29 24030.08.. | 636 |
| W29 24110.04.. | 637 |
| W29 24130.04.. | 638 |
| W29 24150.04.. | 639 |
| W29 24160.04.. | 640 |
| W29 24200.04.. | 641 |
| W29 34000.04.. | 633 |
| W29 34010.04.. | 634 |
| W29 34010.08.. | 634 |
| W29 34020.04.. | 635 |
| W29 34020.08.. | 635 |
| W29 34030.04.. | 636 |
| W29 34030.08.. | 636 |
| W29 34110.04.. | 637 |
| W29 34130.04.. | 638 |
| W29 34150.04.. | 639 |
| W29 34160.04.. | 640 |
| W29 34200.04.. | 641 |
| W29 42000.04.. | 633 |
| W29 42010.04.. | 634 |
| W29 42010.08.. | 634 |
| W29 42020.04.. | 635 |
| W29 42020.08.. | 635 |
| W29 42030.04.. | 636 |
| W29 42030.08.. | 636 |
| W29 42110.04.. | 637 |
| W29 42130.04.. | 638 |
| W29 42150.04.. | 639 |
| W29 42160.04.. | 640 |
| W29 42200.04.. | 641 |

| W.. Order No. | Page |
|---|---|
| W29 50000.04.. | 633 |
| W29 50000.08.. | 633 |
| W29 50010.04.. | 634 |
| W29 50010.08.. | 634 |
| W29 50020.04.. | 635 |
| W29 50020.08.. | 635 |
| W29 50030.04.. | 636 |
| W29 50030.08.. | 636 |
| W29 50110.04.. | 637 |
| W29 50130.04.. | 638 |
| W29 50200.04.. | 641 |
| W29 58000.08.. | 633 |
| W29 58010.08.. | 634 |
| W29 58020.08.. | 635 |
| W29 58030.08.. | 636 |
| W29 58130.08.. | 638 |
| W30 04060.02.. | 643 |
| W30 04060.03.. | 643 |
| W30 04060.04.. | 643 |
| W30 04060.30.. | 643 |
| W30 04060.31.. | 649 |
| W30 04120.02.. | 643 |
| W30 04120.03.. | 643 |
| W30 04120.04.. | 643 |
| W30 04120.30.. | 643 |
| W30 04120.31.. | 649 |
| W30 04120.32.. | 651 |
| W30 04120.39.. | 650 |
| W30 04200.02.. | 643 |
| W30 04200.03.. | 643 |
| W30 04360.02.. | 644 |
| W30 04360.03.. | 644 |
| W30 04360.04.. | 644 |
| W30 04420.02.. | 644 |
| W30 04420.03.. | 644 |
| W30 04420.04.. | 644 |
| W30 04500.02.. | 644 |
| W30 04500.03.. | 644 |
| W30 04600.02.. | 645 |
| W30 04600.03.. | 645 |
| W30 04660.03.. | 646 |
| W30 04720.03.. | 646 |
| W30 04820.02.. | 647 |
| W30 04820.03.. | 647 |
| W30 04820.04.. | 647 |
| W30 04820.32.. | 652 |
| W30 04830.02.. | 648 |
| W30 04980.03.. | 654 |
| W30 04990.02.. | 655 |
| W30 04990.03.. | 655 |
| W30 04990.04.. | 655 |
| W30 14060.02.. | 643 |
| W30 14060.04.. | 643 |
| W30 14060.08.. | 643 |
| W30 14060.30.. | 643 |
| W30 14060.31.. | 649 |
| W30 14120.02.. | 643 |
| W30 14120.04.. | 643 |
| W30 14120.08.. | 643 |
| W30 14120.30.. | 643 |
| W30 14120.31.. | 649 |
| W30 14120.32.. | 651 |
| W30 14120.39.. | 650 |
| W30 14200.02.. | 643 |
| W30 14200.04.. | 643 |
| W30 14360.02.. | 644 |
| W30 14360.04.. | 644 |
| W30 14360.30.. | 644 |
| W30 14420.02.. | 644 |
| W30 14420.04.. | 644 |

| W.. Order No. | Page |
|---|---|
| W30 14420.30.. | 644 |
| W30 14500.02.. | 644 |
| W30 14500.04.. | 644 |
| W30 14600.02.. | 645 |
| W30 14600.04.. | 645 |
| W30 14600.08.. | 645 |
| W30 14660.02.. | 646 |
| W30 14660.04.. | 646 |
| W30 14660.33.. | 646 |
| W30 14720.02.. | 646 |
| W30 14720.04.. | 646 |
| W30 14800.04.. | 646 |
| W30 14820.02.. | 647 |
| W30 14820.04.. | 647 |
| W30 14820.32.. | 652 |
| W30 14830.02.. | 648 |
| W30 14830.04.. | 648 |
| W30 14940.04.. | 653 |
| W30 14980.04.. | 654 |
| W30 14990.02.. | 655 |
| W30 14990.04.. | 655 |
| W30 14990.08.. | 655 |
| W30 26060.02.. | 643 |
| W30 26060.04.. | 643 |
| W30 26060.05.. | 643 |
| W30 26060.08.. | 643 |
| W30 26060.31.. | 649 |
| W30 26120.02.. | 643 |
| W30 26120.04.. | 643 |
| W30 26120.05.. | 643 |
| W30 26120.08.. | 643 |
| W30 26120.31.. | 649 |
| W30 26120.32.. | 651 |
| W30 26120.39.. | 650 |
| W30 26200.02.. | 643 |
| W30 26200.04.. | 643 |
| W30 26200.05.. | 643 |
| W30 26360.02.. | 644 |
| W30 26360.04.. | 644 |
| W30 26360.05.. | 644 |
| W30 26420.02.. | 644 |
| W30 26420.04.. | 644 |
| W30 26420.05.. | 644 |
| W30 26500.05.. | 644 |
| W30 26600.02.. | 645 |
| W30 26600.04.. | 645 |
| W30 26600.05.. | 645 |
| W30 26600.08.. | 645 |
| W30 26660.05.. | 646 |
| W30 26720.05.. | 646 |
| W30 26820.02.. | 647 |
| W30 26820.04.. | 647 |
| W30 26820.05.. | 647 |
| W30 26820.32.. | 652 |
| W30 26940.05.. | 653 |
| W30 26980.05.. | 654 |
| W30 26990.02.. | 655 |
| W30 26990.04.. | 655 |
| W30 26990.05.. | 655 |
| W30 44060.08.. | 643 |
| W30 44120.08.. | 643 |
| W30 44360.08.. | 644 |
| W30 44420.08.. | 644 |
| W30 44600.08.. | 645 |
| W30 44660.08.. | 646 |
| W30 44720.08.. | 646 |
| W32 03150.04.. | 656 |
| W32 03450.04.. | 657 |
| W32 03600.04.. | 658 |

| W.. Order No. | Page |
|---|---|
| W32 03980.04.. | 660 |
| W32 03990.04.. | 661 |
| W32 13150.04.. | 656 |
| W32 13150.08.. | 656 |
| W32 13450.04.. | 657 |
| W32 13600.04.. | 658 |
| W32 13600.08.. | 658 |
| W32 13940.04.. | 659 |
| W32 13980.04.. | 660 |
| W32 13990.04.. | 661 |
| W32 18150.04.. | 656 |
| W32 18150.08.. | 656 |
| W32 18450.04.. | 657 |
| W32 18600.04.. | 658 |
| W32 18600.08.. | 658 |
| W32 18940.04.. | 659 |
| W32 18980.04.. | 660 |
| W32 18990.04.. | 661 |
| W32 23150.04.. | 656 |
| W32 23150.08.. | 656 |
| W32 23450.04.. | 657 |
| W32 23600.04.. | 658 |
| W32 23600.08.. | 658 |
| W32 23940.04.. | 659 |
| W32 23980.04.. | 660 |
| W32 23990.04.. | 661 |
| W32 32150.04.. | 656 |
| W32 32150.08.. | 656 |
| W32 32450.04.. | 657 |
| W32 32600.04.. | 658 |
| W32 32600.08.. | 658 |
| W32 32940.04.. | 659 |
| W32 32980.04.. | 660 |
| W32 32990.04.. | 661 |
| W32 44150.08.. | 656 |
| W32 44450.08.. | 657 |
| W32 44600.04.. | 658 |
| W32 44600.08.. | 658 |
| W34 18660.04.. | 662 |
| W37 18600.04.. | 663 |
| W37 18600.08.. | 663 |
| W37 23600.08.. | 663 |
| W57 04120.02.. | 664 |
| W57 04140.02.. | 665 |
| W57 04140.04.. | 665 |
| W57 04180.04.. | 666 |
| W57 14120.04.. | 664 |
| W57 14140.02.. | 665 |
| W57 14140.04.. | 665 |
| W57 14180.04.. | 666 |
| W57 26120.04.. | 664 |
| W57 26140.02.. | 665 |
| W57 26140.04.. | 665 |
| W57 26180.04.. | 666 |
| W58 03120.04.. | 667 |
| W58 13120.04.. | 667 |
| W58 18120.04.. | 667 |
| W58 23120.04.. | 667 |
| W58 32120.04.. | 667 |
| W59 18050.04.. | 668 |
| W59 32050.05.. | 668 |
| W59 32050.08.. | 668 |

| W.. Order No. | Page |
|---|---|
| W60 18060.02.. | 669 |
| W60 18060.04.. | 669 |
| W60 18120.02.. | 669 |
| W60 18120.04.. | 669 |
| W60 18200.02.. | 669 |
| W60 18360.02.. | 670 |
| W60 18360.04.. | 670 |
| W60 18420.02.. | 670 |
| W60 18420.04.. | 670 |
| W60 18500.02.. | 670 |
| W60 18500.04.. | 670 |
| W60 18600.02.. | 671 |
| W60 18600.04.. | 671 |
| W60 18980.04.. | 672 |
| W60 18990.02.. | 673 |
| W60 18990.04.. | 673 |
| W60 32120.02.. | 669 |
| W60 32120.04.. | 669 |
| W60 32120.08.. | 669 |
| W60 32360.08.. | 670 |
| W60 32420.02.. | 670 |
| W60 32420.04.. | 670 |
| W60 32420.08.. | 670 |
| W60 32600.02.. | 671 |
| W60 32600.04.. | 671 |
| W60 32980.04.. | 672 |
| W60 32990.02.. | 673 |
| W60 32990.04.. | 673 |
| W78 18070.02.. | 674 |
| W78 18070.04.. | 674 |
| W78 18980.04.. | 675 |
| W78 18990.04.. | 676 |
| W78 32070.04.. | 674 |
| W78 32070.08.. | 674 |
| W78 32980.08.. | 675 |
| W78 32990.08.. | 676 |
| W79 18040.04.. | 677 |
| W79 18060.02.. | 678 |
| W79 18060.04.. | 678 |
| W79 18060.08.. | 678 |
| W79 32040.04.. | 677 |
| W79 32060.02.. | 678 |
| W79 32060.04.. | 678 |
| W79 32060.08.. | 678 |
| W80 10010.04.. | 679 |
| W80 12010.04.. | 679 |
| W80 18010.06.. | 679 |
| W80 20010.08.. | 679 |
| W80 24010.08.. | 679 |
| W80 28010.08.. | 679 |
| W80 32010.08.. | 679 |
| W80 38010.08.. | 679 |
| W80 42010.08.. | 679 |
| W80 46010.08.. | 679 |
| W82 32210.04.. | 680 |
| W82 32210.08.. | 680 |
| W83 13000.01.. | 681 |
| W83 13000.02.. | 683 |
| W83 13000.04.. | 685 |
| W83 13010.04.. | 681 |
| W83 13030.04.. | 682 |
| W83 13130.04.. | 683 |
| W83 13210.04.. | 684 |
| W83 13320.04.. | 685 |
| W83 18000.01.. | 686 |
| W83 18000.09.. | 681 |

| W.. Order No. | Page |
|---|---|
| W83 18000.10.. | 683 |
| W83 18000.13.. | 688 |
| W83 18000.15.. | 687 |
| W83 18000.16.. | 687 |
| W83 18000.18.. | 685 |
| W83 18000.20.. | 689 |
| W83 18010.06.. | 681 |
| W83 18030.06.. | 682 |
| W83 18130.06.. | 683 |
| W83 18130.08.. | 683 |
| W83 18210.06.. | 684 |
| W83 18210.08.. | 684 |
| W83 18320.06.. | 685 |
| W83 23000.01.. | 681 |
| W83 23000.02.. | 683 |
| W83 23010.08.. | 681 |
| W83 23030.08.. | 682 |
| W83 23130.08.. | 683 |
| W83 23210.08.. | 684 |
| W83 23330.08.. | 685 |
| W83 32000.13.. | 688 |
| W83 32000.14.. | 688 |
| W83 32000.15.. | 681 |
| W83 32000.17.. | 683 |
| W83 32000.18.. | 687 |
| W83 32000.19.. | 687 |
| W83 32000.21.. | 685 |
| W83 32000.25.. | 689 |
| W83 32010.08.. | 681 |
| W83 32030.08.. | 682 |
| W83 32130.08.. | 683 |
| W83 32210.08.. | 684 |
| W83 32320.08.. | 685 |
| W83 39130.08.. | 683 |
| W83 39210.08.. | 684 |
| W83 44000.14.. | 686 |
| W83 44000.15.. | 686 |
| W83 44000.16.. | 688 |
| W83 44000.17.. | 688 |
| W83 44000.18.. | 681 |
| W83 44000.19.. | 683 |
| W83 44000.21.. | 687 |
| W83 44000.23.. | 685 |
| W83 44000.26.. | 689 |
| W83 44010.08.. | 681 |
| W83 44030.08.. | 682 |
| W83 44130.08.. | 683 |
| W83 44210.08.. | 684 |
| W83 44320.08.. | 685 |
| W85 09000.01.. | 690 |
| W85 09000.03.. | 690 |
| W85 09000.07.. | 695 |
| W85 09000.08.. | 697 |
| W85 09000.09.. | 691 |
| W85 09000.10.. | 691 |
| W85 09000.11.. | 690 |
| W85 09000.12.. | 690 |
| W85 09000.13.. | 691 |
| W85 09000.14.. | 691 |
| W85 09000.15.. | 693 |
| W85 09000.16.. | 694 |
| W85 18000.06.. | 690 |
| W85 18000.08.. | 690 |
| W85 18000.16.. | 695 |
| W85 18000.17.. | 692 |
| W85 18000.18.. | 692 |
| W85 18000.21.. | 693 |

| W.. Order No. | Page |
|---|---|
| W85 18000.23.. | 695 |
| W85 18000.24.. | 695 |
| W85 18000.26.. | 697 |
| W85 18000.27.. | 691 |
| W85 18000.28.. | 691 |
| W85 18000.29.. | 694 |
| W85 18000.30.. | 693 |
| W85 18000.31.. | 694 |
| W85 18980.04.. | 696 |
| W85 23000.01.. | 690 |
| W85 23000.02.. | 690 |
| W85 23000.03.. | 691 |
| W85 23000.04.. | 691 |
| W85 23000.05.. | 693 |
| W85 23000.06.. | 693 |
| W85 23000.07.. | 694 |
| W85 23000.08.. | 694 |
| W85 32000.19.. | 693 |
| W85 32000.20.. | 693 |
| W85 32000.21.. | 695 |
| W85 32000.22.. | 695 |
| W85 32000.23.. | 690 |
| W85 32000.24.. | 690 |
| W85 32000.26.. | 692 |
| W85 32000.27.. | 692 |
| W85 32000.30.. | 695 |
| W85 32000.31.. | 697 |
| W85 32000.32.. | 697 |
| W85 32000.33.. | 697 |
| W85 32000.34.. | 691 |
| W85 32000.35.. | 691 |
| W85 32000.36.. | 694 |
| W85 32000.37.. | 694 |
| W85 32980.04.. | 696 |
| W85 44000.25.. | 693 |
| W85 44000.26.. | 693 |
| W85 44000.27.. | 695 |
| W85 44000.28.. | 695 |
| W85 44000.29.. | 690 |
| W85 44000.30.. | 690 |
| W85 44000.32.. | 692 |
| W85 44000.33.. | 692 |
| W85 44000.35.. | 697 |
| W85 44000.36.. | 697 |
| W85 44000.38.. | 691 |
| W85 44000.39.. | 691 |
| W85 44000.40.. | 694 |
| W85 44000.41.. | 694 |
| W85 44980.04.. | 696 |
| W89 32000.05.. | 698 |
| W89 32000.06.. | 698 |
| W89 32000.07.. | 698 |
| W89 32000.08.. | 698 |

# Fax Order +49 7143 373233

KOMET GROUP

## KomPass – Bore machining

| Customer No. – please specify | Order No. | Order date | Supplier No. |
|---|---|---|---|
| | | | |

Company

Contact person (surname) Name

Branch Department/site

Street

Town/city, postcode

Tel. Fax

Date Signature

**Delivery address (if different)**

Company

Contact person (surname) Name

Branch Department/site

Street

Town/city, postcode

Tel. Fax

| Order quantity | Order No. | Tool name / Item Article | Customer material number | Additional information |
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This order is subject to the KOMET GROUP GmbH conditions of supply and payment.




# TOOLS PLUS IDEAS –
# a PLUS for our customers and the environment

### The company targets

The KOMET GROUP pursues a consistent policy of investments and achieves long-term and profitable growth via continuous improvement of products and processes as well as via consistent qualification of employees. This increases the value of the company. The KOMET GROUP consistently increases its innovation quota via research and development, offering the market new products every year. The KOMET GROUP is a premium quality manufacturer and motivates employee qualification and customers in their IDEAS FACTORY. The training quota of vocational beginners is exemplary for the entire field of business.

### The products and services

KOMET GROUP products and services offer the customer incomparable added value. The KOMET GROUP develops, manufactures and sells the most comprehensive, modular portfolio on bore machining as full-range suppliers. The KOMET GROUP offers the most innovative technologies, thereby taking the highest economic viability, best quality and most attractive designs into account. The KOMET GROUP sees itself not purely as a tool manufacturer, but rather as suppliers of innovative solutions and ideas for the benefit of the customer: TOOLS AND IDEAS.

### The customer

The KOMET GROUP places value on long-term, binding customer relations, seeing itself as a partner of the customer in a balance of benefit supplies and benefit harvests. The KOMET GROUP records customers' demands and then produces the most effective ideas and tool solutions for their machining tasks. The KOMET GROUP offers the customer information and collaboration via their worldwide presence in local Service Centres. The IDEAS FACTORY supports vocation-related training and further qualifications for customers.

### The environment / surroundings

The KOMET GROUP feels itself obliged to avoid any wastage, and therefore commits itself to responsible usage of raw materials and careful utilisation of remaining materials. The KOMET GROUP management is well aware of its responsibilities towards society, and creates the foundations for modern working environments and working conditions. The specifications on ergonomics and work safety are taken into account. Beholden to the founder, Robert Breuning, the KOMET GROUP supports the site at Besigheim, maintaining direct contact to schools and social facilities in the region.

With these claims in mind, the KOMET GROUP has introduced a modern, integrated management system, known as KMS (KOMET Management System), which is certified in accordance with ISO 9001:2008, ISO 14001:2004 and the German Recognition and Authorisation Ordinance for Continuing Education (AZWV).

ISO 9001:2008
BUREAU VERITAS
Certification

ISO 14001
BUREAU VERITAS
Certification

zertifiziert nach AZWV durch HZA

### Company policy

http://www.kometgroup.com/navigation-top/komet-group/unternehmensleitlinien.html
http://www.kometgroup.com/navigation-top/komet-group/unternehmenswerte.html

### Certification

http://www.kometgroup.com/navigation-top/download/service/zertifikate.html

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