



High-Performance Mini End Mills

New Accupro[®] mini tooling delivers big performance

Benefits: Accupro's newly expanded high-performance line of solid carbide mini end mills are extremely hard and wear-resistant. These mills are precision engineered for enhanced performance in the milling of small features and parts. The line expansion is in direct response to increasing production of these part types in the electronics, medical, aerospace and moldmaking industries.

Mini End Mills

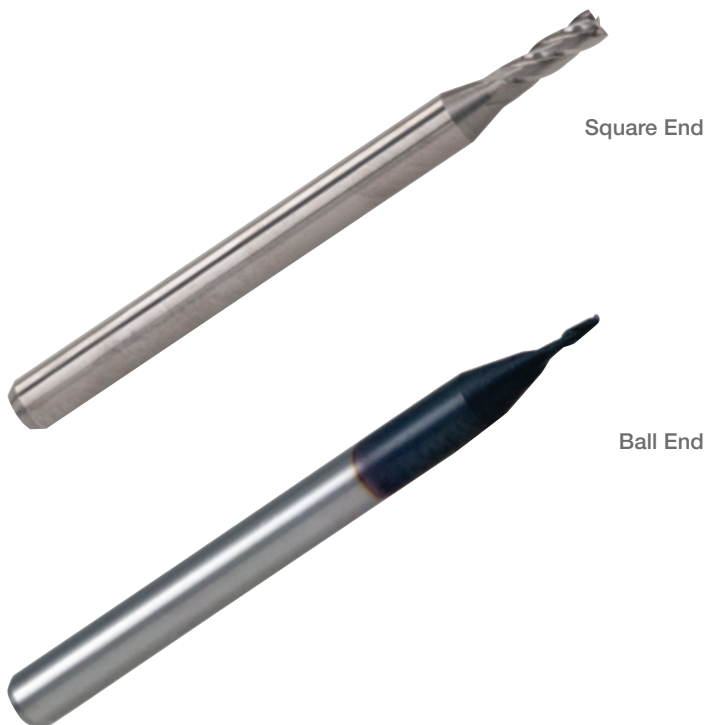
Accupro's unparalleled assortment of mini end mills is available in both square and ball end, uncoated and AlTiN (Aluminum Titanium Nitride)-coated version. Additionally, corner-radius mini end mills are also part of the line expansion.

Features

- For increased performance in the milling of small features and parts
- Available in 2-, 3- and 4-flute designs

Surface Treatment, AlTiN-Coated Version

- Recommended for difficult-to-machine materials
- Used in aggressive machining of aircraft/aerospace materials, stainless steels, high-alloy carbon steels, nickel-based high-temperature alloys and titanium alloys
- Used in dry machining of cast irons, nodular iron and selected carbon steels
- Extremely hard and wear-resistant
- Provides increases of 75 to 100% in machining speeds vs. uncoated tools



Accupro Micro Drill products are also available.

To see our newly expanded line of High-Performance Micro Drills, please visit mscdirect.com/accupro



Carbide High-Performance Micro Drill



Carbide Spotting Micro Drill



High-Performance Mini End Mills

Decimal Miniature Single End Mills

Mill Diameter (In.)	Shank Diameter (In.)	LOC (In.)	OAL (In.)	2-FLUTE		4-FLUTE	
				Solid Carbide Item #	AlTiN-Coated Item #	Solid-Carbide Item #	AlTiN-Coated Item #
0.0100	1/8	0.0300	1-1/2	37289451	37290087	37289857	78958279
0.0150	1/8	0.0450	1-1/2	37289501	37290137	37289865	78958287
0.0200	1/8	0.0300	1-1/2	37290525	37290871	62773064	62774427
0.0200	1/8	0.0600	1-1/2	37289550	37290186	37289873	78958295
0.0250	1/8	0.0380	1-1/2	37290574	37290921	62772959	62772934
0.0300	1/8	0.0900	1-1/2	37289659	37290285	37289899	78958311
0.0400	1/8	0.1200	1-1/2	37289717	37290343	37289915	78958337
0.0500	1/8	0.1500	1-1/2	37289733	37290368	37289931	78958352
0.0550	1/8	0.1650	1-1/2	37289741	78958048	37289949	78958360
0.0600	1/8	0.1800	1-1/2	37289758	78958055	37289956	78958378
0.0700	1/8	0.2100	1-1/2	37289774	78958071	37289972	78958394
0.1000	1/8	0.3000	1-1/2	37289832	78958147	37290038	78958451

Recommended Speed and Feed Information

Material	Property	Vc: SFM		Slotting (S) and Finishing (F) for all materials shown below: (Slotting: ap = 0.0394", ae = 0.0394") (Finishing: ap = 0.0394", ae = 0.0118")							
				Feed: (ipt)							
		Uncoated	AlTiN	S and F	Ø<0.0079"	Ø<0.0197"	Ø<0.0315"	Ø<0.0394"	Ø<0.0591"	Ø<0.0787"	Ø<0.1181"
P Steel -30HRC	<70 ksi	195	260	S	0.00004	0.00004	0.00008	0.00008	0.00012	0.00016	0.00024
				F	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004	0.00004
	<115 ksi	195	260	S	0.00004	0.00004	0.00008	0.00008	0.00012	0.00016	0.00024
				F	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004	0.00004
P Steel 30-40HRC	<145 ksi	195	260	S	0.00004	0.00004	0.00008	0.00008	0.00012	0.00016	0.00024
				F	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004	0.00004
	<190 ksi	130	195	S	0.00004	0.00004	0.00008	0.00008	0.00012	0.00016	0.00024
				F	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004	0.00004
M Stainless Steel	—	80	150	S	0.00004	0.00004	0.00008	0.00008	0.00012	0.00016	0.00024
				F	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004	0.00004
S Nickel/Cobalt	—	—	80	S	0.00004	0.00004	0.00008	0.00008	0.00012	0.00016	0.00024
				F	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004	0.00004
S Titanium Alloy	—	—	80	S	0.00004	0.00004	0.00008	0.00008	0.00012	0.00016	0.00024
				F	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004	0.00004
K Cast Iron	—	195	260	S	0.00004	0.00004	0.00008	0.00008	0.00012	0.00016	0.00024
				F	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004	0.00004
N Non-Ferrous Aluminum	—	490	—	S	0.00008	0.0002	0.00035	0.00047	0.00071	0.00094	0.00142
				F	0.00001	0.00004	0.00004	0.00004	0.00008	0.00008	0.00016
N Non-Ferrous Copper Alloy	—	260	—	S	0.00008	0.00024	0.00031	0.00047	0.00071	0.00094	0.00142
				F	0.00001	0.00004	0.00004	0.00004	0.00008	0.00008	0.00016
N Non-Ferrous Graphite	—	260	—	S	0.00008	0.0002	0.00031	0.00039	0.00059	0.00079	0.00118
				F	0.00001	0.00004	0.00004	0.00004	0.00008	0.00008	0.00012
Formulas: RPM = (SFM x 3.82) / Tool Diameter IPM = Number of Flutes x RPM x Chip Load Per Tooth											

The chart is a starting point based on a coated tool. Reduce rates up to 50% using an uncoated tool.

Important Disclaimer: The Accupro speed and feed rates are suggested by the manufacturer as a general guideline. Machine type, horsepower, spindle speed limitations, toolholding & workholding devices all may impact a cutting tool's ability to perform properly. MSC is not responsible for tool failure, part damage or injury that may be caused as a result of the previously mentioned factors.

Satisfaction guaranteed, call 800.521.9520
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