

LPL-Series, Low Height Lock Nut Cylinders

▼ LPL-Series, Low Height Lock Nut Cylinders



- Lock nut provide mechanical load holding for a safe work environment
- Integrated tilt saddle allows for up to 5 degrees of misalignment
- Extreme low height for use in confined areas
- Side-load resistance 5-10% of maximum capacity
- Overflow port as stroke limiter to prevent plunger blow-out
- Single-acting, gravity return.

▼ Only the extreme low height LPL-cylinder fits in this confined area to lift the construction. The lock nut provides positive and safe mechanical load holding over a long period of time.



Integrated Tilt Saddles

All LPL-Series cylinders include integral tilt saddles with maximum tilt angles up to 5°.



The Summit Edition

Innovation is at the heart of the new Summit Edition of cylinders, delivering the high quality construction that you expect from Enerpac. The durability ensures your job gets done safely and reliably.

- Replaceable plunger support bearing adds support for eccentric loads *
- Nitrocarburization surface treatment for improved load and wear resistance and corrosion protection
- Low wear, high pressure seals provide longer service life.

* Eccentric load (or "side-load") is inevitable in heavy lifting. Our unique Summit Edition features provide the ultimate protection against side load. Increased bearing surface maintains stability and nitrocarburization treatment prevents scoring on the inside of the cylinder. Side-load poses a real problem.... our new cylinder features are the solution!

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Cylinder Capacity	Stroke	Model Number	Maximum Cylinder Capacity at 700 bar ton (kN)	Side-load Resistance of Maximum Capacity	Cylinder Effective Area
ton	(mm)				(cm ²)
60	50	LPL-602	62 (606)	10%	86,6
100	50	LPL-1002	102 (1002)	10%	143,1
150	45	LPL-1602	162 (1589)	8%	227,0
200	45	LPL-2002	202 (1985)	8%	283,5
250	45	LPL-2502	259 (2541)	5%	363,1
400	45	LPL-4002	409 (4008)	5%	572,6
500	45	LPL-5002	522 (5114)	5%	730,6

Single-Acting, Low Height Lock Nut Cylinders

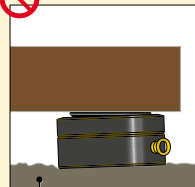


IMPORTANT!

All LPL-Series cylinders require a solid lifting surface for correct support. The use of these cylinders on surfaces such as sand, mud or dirt, may result in cylinder damage.



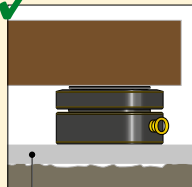
WRONG!



Rough soil

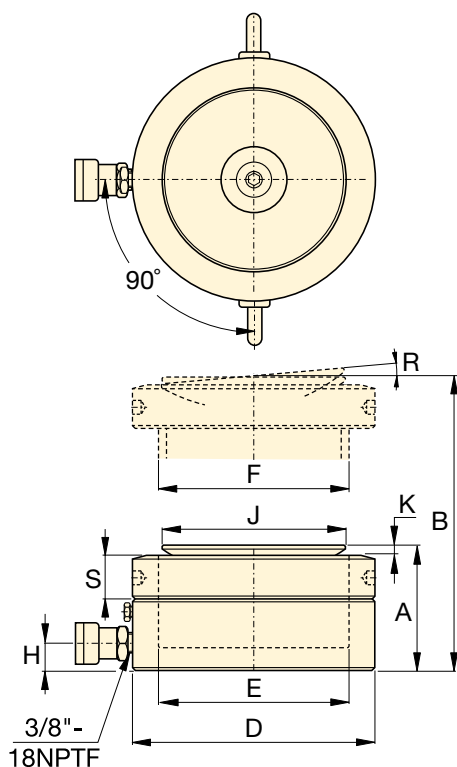


RIGHT!



Flat lifting surface

For more safety instructions see our 'Learning Center' on www.enerpac.com



LPL Series



Capacity:

60 - 500 ton

Stroke:

45 - 50 mm

Maximum Operating Pressure:

700 bar



Longer Stroke Lock Nut Cylinders

For longer stroke applications **HCL-Series** lock nut cylinders are the perfect choice.

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Split-Flow Pumps

SFP-Series Pumps with multiple outlets with equal oil flow. For lifting and lowering applications on multiple points these pumps are a far better alternative than using separately operated pumps.

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Synchronous Lifting Systems

Pumps for multiple lift point capabilities. The economical **EVOB-Series** for basic applications and the multi-functional **EVO-Series** lifting system.

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Oil Capacity	Collapsed Height	Extended Height	Outside Diameter	Cylinder Bore Diameter	Plunger Diameter	Base to Advance Port	Saddle Diameter	Saddle Protrusion from Plgr.	Saddle Max. Tilt Angle	Lock Nut Height		Model Number
(cm ³)	A (mm)	B (mm)	D (mm)	E (mm)	F (mm)	H (mm)	J (mm)	K (mm)	R	S (mm)	(kg)	
433,0	126	176	140	105	Tr 105 x 4	19	96	7	5°	28	15	LPL-602
715,7	137	187	173	135	Tr 135 x 6	21	126	8	5°	31	25	LPL-1002
1021,4	148	193	220	170	Tr 170 x 6	27	160	9	5°	40	43	LPL-1602
1275,9	155	200	245	190	Tr 190 x 6	30	180	10	5°	43	55	LPL-2002
1633,7	159	204	275	215	Tr 215 x 6	32	200	12	5°	43	70	LPL-2502
2576,5	178	223	350	270	Tr 270 x 6	40	250	12	4°	55	129	LPL-4002
3287,8	192	237	400	305	Tr 305 x 6	49	290	10	3°	61,5	183	LPL-5002

▼ Shown from left to right: RSM-1000, RSM-300, RSM-50, RCS-1002, RCS-302



Maximum Power-to-Height Ratio



Saddles

All RCS-Series cylinders have plunger mounting holes for installation of tilt saddles. See table for selection and dimensional information.

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Low Clearance Lifting

The LW-16 Lifting Wedge and SOH-Series Machine Lifts are the perfect choice for lifting the first few millimeters.

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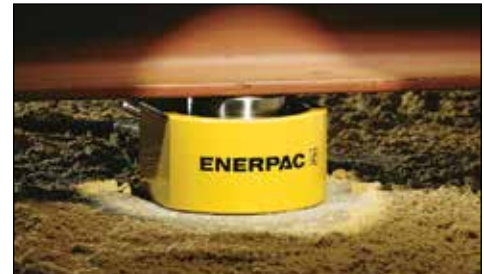
RSM-series, Flat-Jac® Cylinders

- Compact, flat design for use where most other cylinders will not fit
- Single-acting, spring return
- RSM-750, 1000 and 1500 have handles for easy carrying
- Mounting holes permit easy fixturing
- Baked enamel finish for increased corrosion resistance
- CR-400 coupler and dust cap included on all models¹⁾
- Hard chrome plated high quality steel plungers
- Grooved plunger ends require no saddle.

RCS-series, Low Height Cylinders

- Lightweight, low profile design for use in confined spaces
- Single-acting, spring return
- Baked enamel finish for increased corrosion resistance
- Plunger wiper reduces contamination, extending cylinder life
- CR-400 coupler and dust cap included on all models
- Grooved plunger end with threaded holes for mounting tilt saddles
- Integral handle on RCS-1002 for easy carrying
- Plated steel plungers.

▼ Only a couple of centimeters will do for an RSM-cylinder to lift a large construction.

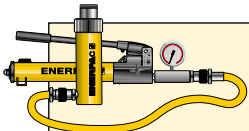


Cyl. Capacity	Stroke	Model Number	Cylinder Effective Area	Oil Capacity
ton (kN)	(mm)		(cm ²)	(cm ³)
5 (45)	6	RSM-50 ¹⁾	6,5	4
10 (101)	11	RSM-100 *	14,5	18
20 (201)	11	RSM-200 *	28,7	32
30 (295)	13	RSM-300 *	42,1	55
45 (435)	16	RSM-500 *	62,1	99
75 (718)	16	RSM-750	102,6	164
90 (887)	16	RSM-1000	126,7	203
150 (1386)	16	RSM-1500	198,1	317
10 (101)	38	RCS-101 *	14,5	55
20 (201)	45	RCS-201 *	28,7	129
30 (295)	62	RCS-302 *	42,1	261
45 (435)	60	RCS-502 *	62,1	373
90 (887)	57	RCS-1002 *	126,7	722

¹⁾ RSM-50 is fitted with an AR-400 coupler.

* Available as set, see note on next page.

Single-Acting, Low Height Cylinders



Cylinder-Pump Sets

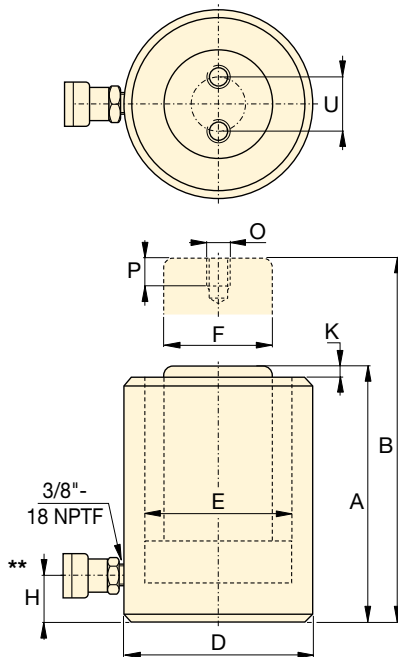
All cylinders marked with an * are available as (cylinder, gauge, couplers, hose and pump) for your ordering convenience.

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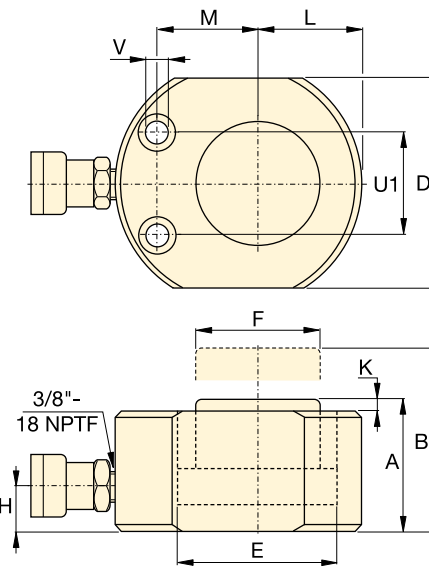
Optional Bolt On Tilt Saddle Dimensions (mm)

For Cylinder Model:	Model Number	A	B	C*
RCS-101	CAT-11	35	11	21
RCS-201, -302, -502	CAT-51	50	15	29
RCS-1002	CAT-101	71	17	35

* 'C' dimension equals saddle protrusion from plunger. Mounting screws are included.



RCS-Series



RSM-Series

RSM, RCS Series



Capacity:

5 - 150 ton

Stroke:

6 - 62 mm

Maximum Operating Pressure:

700 bar



Power Box

Tool box with hand pump, gauge adaptor assembly, hose and RSM or RCS-cylinders.

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RSM Cylinder Mounting Hole Dimensions (mm)

Model Number	Bolt Circle U1	Hole Dia. V	Counter Bore Dia.	Counter Bore Depth
RSM-50	28,5	5,5	9,1	4,3
RSM-100	36,6	7,1	10,7	7,9
RSM-200	49,3	10,0	15,1	9,9
RSM-300	52,3	10,0	15,9	11,2
RSM-500	66,5	11,0	19,0	12,7
RSM-750	76,2	13,5	20,6	14,2
RSM-1000	76,2	13,5	20,6	14,2
RSM-1500	117,3	13,5	20,6	14,2

Collapsed Height A (mm)	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Dia. E (mm)	Plunger Dia. F (mm)	Base to Advance Port H (mm)	Plunger Protrusion from Base K (mm)	Plunger to Base L (mm)	Plunger to Mtg. Hole M (mm)	Thread O (mm)	Thread Depth P (mm)	Bolt Circle U (mm)	(kg)	Model Number
32	38	58 x 41	28,7	25,4	16	1	20	22	—	—	—	1,0	RSM-50 ¹⁾
43	54	82 x 55	42,9	38,1	19	1	27	34	—	—	—	1,4	RSM-100 *
51	62	101 x 76	60,5	50,8	19	1	39	39	—	—	—	3,1	RSM-200 *
58	71	117 x 95	73,2	63,4	19	2	47	44	—	—	—	4,5	RSM-300 *
66	82	140 x 114	88,9	69,8	19	2	57	53	—	—	—	6,8	RSM-500 *
79	95	165 x 139	114,3	82,6	19	2	69	66	—	—	—	11,3	RSM-750
85	101	178 x 153	127,0	92,2	19	2	76	74	—	—	—	14,5	RSM-1000
100	116	215 x 190	158,8	114,3	23	2	95	82	—	—	—	26,3	RSM-1500
88	126	69	42,9	38,1	17	5	—	—	M4	8	26	2,7	RCS-101 *
98	143	92	60,5	50,8	17	3	—	—	M5	8	40	5,0	RCS-201 *
117	179	101	73,2	66,5	19	3	—	—	M5	8	40	6,8	RCS-302 *
122	182	124	88,9	69,8	23	2	—	—	M5	8	40	10,0	RCS-502 *
141	198	165	127,0	92,2	31	1	—	—	M8	10	55	20,7	RCS-1002 *

** 5° angle position of coupler on RCS-101, 201, 302.

HIGH TONNAGE **ULTRA FLAT** CYLINDERS

Proven design for harsh conditions



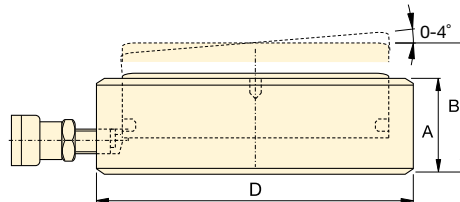
ENERPAC 

High Tonnage, Ultra Flat Cylinders

▼ CUSP-Series, Ultra Flat High Tonnage Cylinders, integrated tilting function.



- Up to 4% side load of maximum capacity
- Extremely low collapsed height
- Integrated tilting function up to 4 degrees
- Nitrocarburized surface treatment for harsh conditions
- “Red Line” for visual maximum stroke limitation.

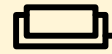


Cylinder Capacity @ 700 bar ton (kN)	Model Number	Tilted Stroke (mm)	Straight Stroke (mm)	Tilting +/- (degree)	Collapsed Height A (mm)	Extended Height B (mm)	Outside Diam. D (mm)	Oil Capacity (cm³)	 (kg)
10 (97)	CUSP10 ¹⁾	6	6,7	2	35,5	41,5	72	9,3	1,2
20 (198)	CUSP20 ¹⁾	6	7,0	2	40,5	46,5	90	19,8	1,9
30 (310)	CUSP30 ¹⁾	6	7,3	2	42,5	48,5	105	32,1	2,7
50 (550)	CUSP50 ¹⁾	10	13,3	4	57,0	67,0	130	104	5,6
75 (792)	CUSP75 ¹⁾	10	14,0	4	60,5	70,5	150	158	8,0
100 (1078)	CUSP100 ²⁾	10	14,7	4	63,5	73,5	170	226	10,8
150 (1589)	CUSP150 ²⁾	10	14,3	3	65,0	75,0	200	324	15,3
200 (2090)	CUSP200 ²⁾	10	14,9	3	69,0	79,0	229	446	21,5
250 (2542)	CUSP250 ²⁾	10	15,5	3	72,5	82,5	252	569	27,3
300 (3167)	CUSP300 ²⁾	10	14,1	2	72,5	82,5	282	637	34,4
400 (4008)	CUSP400 ²⁾	10	14,6	2	77,5	87,5	316	837	46,2
500 (5115)	CUSP500 ²⁾	10	15,2	2	82,5	92,5	356	1111	62,7
600 (5987)	CUSP600 ²⁾	10	15,6	2	87,5	97,5	386	1334	78,4
800 (7527)	CUSP750 ²⁾	10	16,3	2	93,5	103,5	432	1757	105,2
1000 (10.165)	CUSP1000 ²⁾	10	17,4	2	103,0	113,0	502	2531	157,0

¹⁾ Coupler AR630 including dustcap: Use HB7206 hose including AH630 coupler to connect to your pump.

²⁾ Coupler CR400 including dustcap: Use HC-Series hose including CH604 coupler to connect to your pump.

CUSP Series



Capacity:

10 - 1000 ton

Stroke Straight / Tilted Stroke:

7-17 mm / 6-10 mm

Integrated:

Tilting Function

Maximum Operating Pressure:

700 bar



Tilt Plunger

All CUSP-Series cylinders include a tilting plunger to evenly distribute the load with maximum tilt angles up to 4 degrees.



IMPORTANT!

CUSP-Cylinders DO NOT have a Stop Ring for stroke limitation!

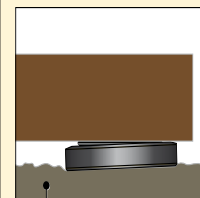


IMPORTANT!

All Ultra Flat Cylinders require a solid lifting surface for correct support. The use of these flat cylinders on surfaces such as sand, mud or dirt, may result in cylinder damage.



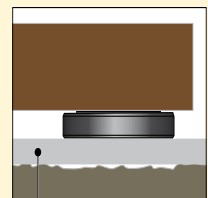
WRONG!



Rough soil



RIGHT!



Flat lifting surface

For more safety instructions see our 'Yellow Pages'.

Ultra Flat Cylinders with Stop Ring

▼ CULP-Cylinder, Ultra Flat Cylinder, with Stop Ring



- Up to 4% side load of maximum capacity
- Stop ring for maximum stroke limitation
- Extremely low collapsed height
- Nitrocarburized surface treatment for harsh conditions.

CULP Series



Capacity:

10 - 50 ton

Stroke:

6 mm

Integrated:

Stop Ring

Maximum Operating Pressure:

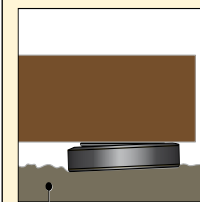
700 bar



IMPORTANT!

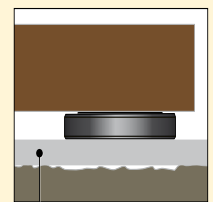
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WRONG!



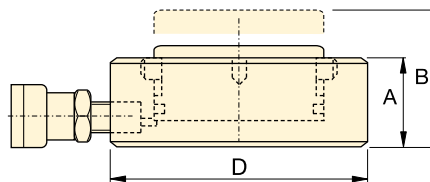
Rough soil

RIGHT!



Flat lifting surface

For more safety instructions see our 'Yellow Pages'.



Cylinder Capacity @ 700 bar ton (kN)	Model Number	Stroke (mm)	Collapsed Height A (mm)	Extended Height B (mm)	Outside Diameter D (mm)	Oil Capacity (cm³)	 (kg)
10 (97)	CULP10 ¹⁾	6	27,5	33,5	72	8,3	1,0
20 (198)	CULP20 ¹⁾	6	32,0	38,0	90	17,0	1,7
30 (310)	CULP30 ¹⁾	6	35,0	41,0	105	26,5	2,5
50 (550)	CULP50 ¹⁾	6	44,5	50,5	130	47,1	4,7

¹⁾ Coupler AR630 including dustcap: Use HB7206 hose including AH630 coupler to connect to your pump.



HYDRAULIC PUMPS

Enerpac hydraulic pumps are available in over 1000 different configurations. Whatever your application needs for speed, control, intermittent or heavy duty are, Enerpac has the right solution for you.

Featuring Hand, Battery, Electric, Air and Gasoline powered models, Enerpac offers the most comprehensive pump line available.



P-Series, Hand Pumps



XC-Series, Cordless Pumps



XA-Series, Air Driven Pumps



ZU4-Series, Portable Electric Pumps



ZE-Series, Electric Pumps



SFP-Series, Split-Flow Pumps

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