

HIGH TONNAGE ULTRA FLAT CYLINDERS

Proven design for harsh conditions



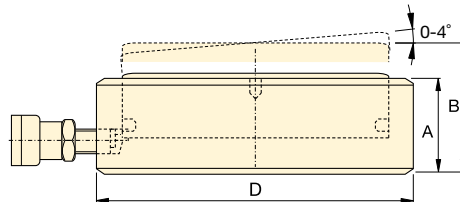
ENERPAC 


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 (cm ³)	 (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!

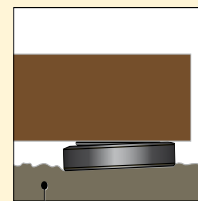
CUSP-Cylinders DO NOT have a Stop Ring for stroke limitation!



IMPORTANT!

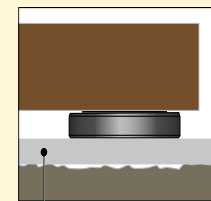
All Ultra Flat Cylinders require a solid lifting surface for correct support. The use of these flat cylinders on surfaces such as sand, mud or dirt, may result in cylinder damage.

 **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

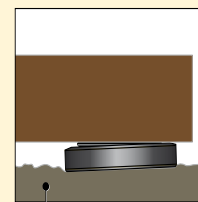
Maximum Operating Pressure:
700 bar



IMPORTANT!

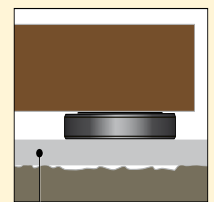
All Ultra Flat Cylinders require a solid lifting surface for correct support. The use of these flat cylinders on surfaces such as sand, mud or dirt, may result in cylinder damage.

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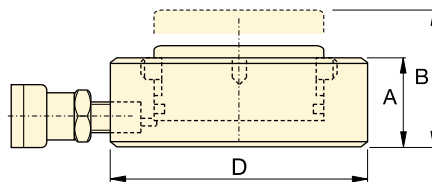
Rough soil


 **RIGHT!**



Flat lifting surface

For more safety instructions see our 'Yellow Pages'.



Cylinder Capacity @ 700 bar	Model Number	Stroke	Collapsed Height	Extended Height	Outside Diameter	Oil Capacity	
ton (kN)		(mm)	A (mm)	B (mm)	D (mm)	(cm ³)	(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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