

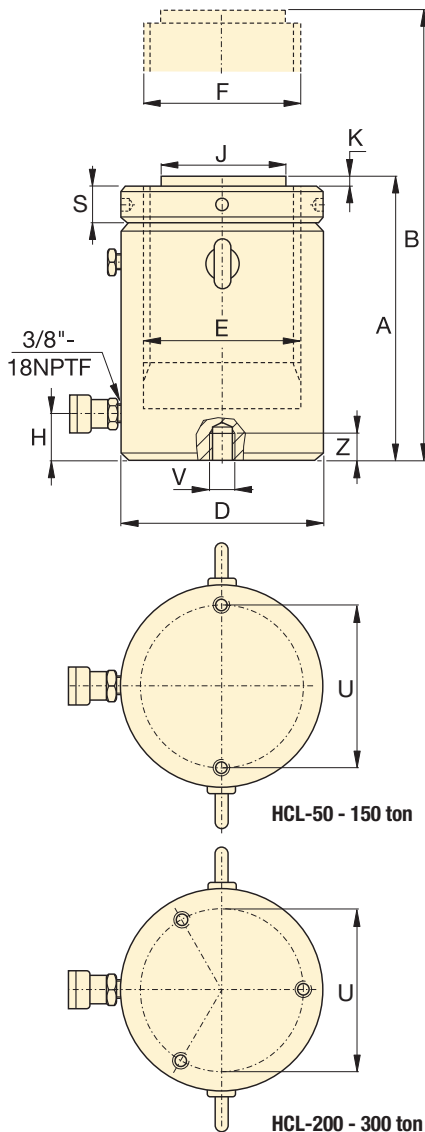
HCL-Series, Single-Acting, Gravity-Return Cylinders

- Lock nut provides positive and safe mechanical load holding
- Low-friction locking rings spin easy, save time and effort
- Designed to withstand 10% side-load up to 90% of maximum stroke
- Hardened surface resists side-loading and cyclic wear
- Overflow port as stroke limiter to prevent plunger blow-out
- Weather protected, inside and out
- Replaceable bearings enclose the plunger for support throughout the stroke
- Certified lifting eyes and base mounting holes

SELECTION CHART 50 – 300-TON HCL-MODELS

For 400 – 1000-ton models, see pages 50-51.

For full product features see pages 36-37.



Base Mounting Holes (in)					
Model / Capacity (ton)	Bolt Circle U	Thread Size V	Minimum Thread Depth Z	Number of Holes	Angle from Coupler
HCL-50	4.13	M8X1.25	0.39	2	90°
HCL-100	5.91	M12X1.75	0.67	2	90°
HCL-150	7.28	M12X1.75	0.87	2	90°
HCL-200	8.46	M12X1.75	0.87	3	60°
HCL-250	9.65	M12X1.75	0.87	3	60°
HCL-300	10.24	M16X2	0.98	3	60°

Cylinder Capacity (ton)	Stroke (in)	Model Number	Maximum Cylinder Capacity at 10,150 psi (ton)	Cylinder Effective Area (in ²)	Oil Capacity (in ³)	Collapsed Height A (in)
50	1.97	HCL-502	62	12.17	23.96	6.46
	3.94	HCL-504			47.93	8.43
	5.91	HCL-506			71.89	10.39
	7.87	HCL-508			95.86	12.36
	9.84	HCL-5010			119.82	14.33
	11.81	HCL-5012			143.78	16.30
100	1.97	HCL-1002	113	22.19	43.67	7.36
	3.94	HCL-1004			87.35	9.33
	5.91	HCL-1006			131.02	11.30
	7.87	HCL-1008			174.70	13.27
	9.84	HCL-10010			218.37	15.24
	11.81	HCL-10012			262.05	17.20
150	1.97	HCL-1502	168	33.14	65.24	8.23
	3.94	HCL-1504			130.48	10.20
	5.91	HCL-1506			195.73	12.17
	7.87	HCL-1508			260.97	14.13
	9.84	HCL-15010			326.21	16.10
	11.81	HCL-15012			391.45	18.07
200	1.97	HCL-2002	223	43.95	86.51	9.37
	3.94	HCL-2004			173.02	11.34
	5.91	HCL-2006			259.53	13.31
	7.87	HCL-2008			346.04	15.28
	9.84	HCL-20010			432.55	17.24
	11.81	HCL-20012			519.06	19.21
250	1.97	HCL-2502	286	56.27	110.77	9.80
	3.94	HCL-2504			221.55	11.77
	5.91	HCL-2506			332.32	13.74
	7.87	HCL-2508			443.09	15.71
	9.84	HCL-25010			553.87	17.68
	11.81	HCL-25012			664.64	19.65
300	1.97	HCL-3002	341	67.23	132.34	10.94
	3.94	HCL-3004			264.68	12.91
	5.91	HCL-3006			397.02	14.88
	7.87	HCL-3008			529.36	16.85
	9.84	HCL-30010			661.71	18.82
	11.81	HCL-30012			794.05	20.79

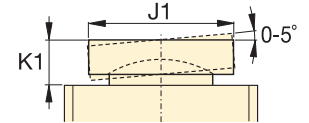
Single-Acting, High-Tonnage Lock Nut Cylinders

Capacity:
50 - 300 ton

Stroke:
1.97 - 11.81 inch

Maximum Operating Pressure:
10,150 psi

HCL Series

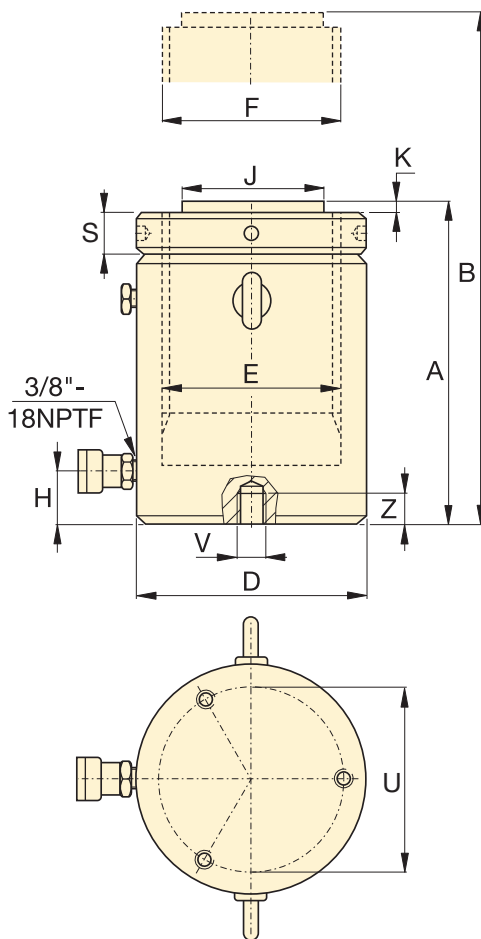


CAT-Series Tilt Saddle

Extended Height	Outside Diameter	Cylinder Bore Diameter	Plunger Diameter	Base to Advance Port	Standard Saddle Diameter	Saddle Protrusion from Plunger	Lock Nut Height	Wt.	Model Number	Optional Tilt Saddle		
										Diameter	Height	Saddle Model Number
B (in)	D (in)	E (in)	F (mm)	H (in)	J (in)	K (in)	S (in)	(lbs)		J1 (in)	K1 (in)	
8.43	5.12	3.94	Tr 100 x 4	0.94	2.80	0.08	0.98	37	HCL-502	2.80	0.93	CAT-100
12.36								48	HCL-504			
16.30								60	HCL-506			
20.24								71	HCL-508			
24.17								83	HCL-5010			
28.11								94	HCL-5012			
9.33	6.89	5.31	Tr 135 x 6	1.30	2.80	0.08	1.30	77	HCL-1002	2.80	0.93	CAT-100
13.27								98	HCL-1004			
17.20								118	HCL-1006			
21.14								139	HCL-1008			
25.08								160	HCL-10010			
29.02								181	HCL-10012			
10.20	8.46	6.50	Tr 165 x 6	1.61	5.12	0.08	1.57	130	HCL-1502	5.12	0.76	CAT-200
14.13								161	HCL-1504			
18.07								192	HCL-1506			
22.01								224	HCL-1508			
25.94								255	HCL-15010			
29.88								287	HCL-15012			
11.34	9.84	7.48	Tr 190 x 6	1.85	5.12	0.08	1.77	188	HCL-2002	5.12	0.76	CAT-200
15.28								231	HCL-2004			
19.21								273	HCL-2006			
23.15								316	HCL-2008			
27.09								358	HCL-20010			
31.02								401	HCL-20012			
11.77	11.02	8.46	Tr 215 x 6	2.09	5.91	0.08	2.05	262	HCL-2502	5.91	0.76	CAT-250
15.71								316	HCL-2504			
19.65								369	HCL-2506			
23.58								422	HCL-2508			
27.52								476	HCL-25010			
31.46								529	HCL-25012			
12.91	12.01	9.25	Tr 235 x 6	2.28	5.49	0.08	2.20	348	HCL-3002	7.68	2.86	CAT-300
16.85								411	HCL-3004			
20.79								474	HCL-3006			
24.72								537	HCL-3008			
28.66								601	HCL-30010			
32.60								664	HCL-30012			

HCL-Series, Single-Acting, Gravity-Return Cylinders

- Lock nut provides positive and safe mechanical load holding
- Low-friction locking rings spin easy, save time and effort
- Designed to withstand 10% side-load up to 90% of maximum stroke
- Hardened surface resists side-loading and cyclic wear
- Overflow port as stroke limiter to prevent plunger blow-out
- Weather protected, inside and out
- Replaceable bearings enclose the plunger for support throughout the stroke
- Certified lifting eyes and base mounting holes



SELECTION CHART 400 – 1000-TON HCL-MODELS

For 50 – 300-ton models, see pages 48-49

For full product features see pages 36-37.

Cylinder Capacity (ton)	Stroke (in)	Model Number	Maximum Cylinder Capacity at 10,150 psi (ton)	Cylinder Effective Area (in ²)	Oil Capacity (in ³)	Collapsed Height A (in)
400	1.97	HCL-4002	450	88.75	174.70	12.48
	3.94	HCL-4004			349.39	14.45
	5.91	HCL-4006			524.09	16.42
	7.87	HCL-4008			698.79	18.39
	9.84	HCL-40010			873.49	20.35
	11.81	HCL-40012			1,048.18	22.32
500	1.97	HCL-5002	575	113.25	222.92	14.06
	3.94	HCL-5004			445.85	16.02
	5.91	HCL-5006			668.77	17.99
	7.87	HCL-5008			891.70	19.96
	9.84	HCL-50010			1,114.62	21.93
	11.81	HCL-50012			1,337.55	23.90
600	1.97	HCL-6002	673	132.57	260.97	14.96
	3.94	HCL-6004			521.94	16.93
	5.91	HCL-6006			782.90	18.90
	7.87	HCL-6008			1,043.87	20.87
	9.84	HCL-60010			1,304.84	22.83
	11.81	HCL-60012			1,565.81	24.80
800	1.97	HCL-8002	916	180.44	355.21	16.93
	3.94	HCL-8004			710.41	18.90
	5.91	HCL-8006			1,065.62	20.87
	7.87	HCL-8008			1,420.82	22.83
	9.84	HCL-80010			1,776.03	24.80
	11.81	HCL-80012			2,131.24	26.77
1000	1.97	HCL-10002	1196	235.68	463.94	19.06
	3.94	HCL-10004			927.88	21.02
	5.91	HCL-10006			1,391.83	22.99
	7.87	HCL-10008			1,855.77	24.96
	9.84	HCL-100010			2,319.71	26.93
	11.81	HCL-100012			2,783.65	28.90

Base Mounting Holes (in)					
Model / Capacity (ton)	Bolt Circle U	Thread Size V	Minimum Thread Depth Z	Number of Holes	Angle from Coupler
HCL-400	11.81	M16 x 2	0.95	3	60°
HCL-500	13.39	M24 x 3	1.42	3	60°
HCL-600	14.57	M24 x 3	1.42	3	60°
HCL-800	17.32	M24 x 3	1.42	3	60°
HCL-1000	19.69	M24 x 3	1.42	3	60°

Single-Acting, High Tonnage, Lock Nut Cylinders



▲ Heavy lifting and foundation levelling. The lock nut provides mechanical load holding over a long period of time.

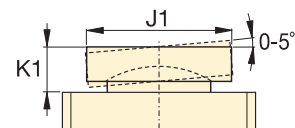
HCL Series



Capacity:
400 - 1000 ton

Stroke:
1.97 - 11.81 inch

Maximum Operating Pressure:
10,150 psi



CAT-Series Tilt Saddle

Extended Height	Outside Diameter	Cylinder Bore Diameter	Plunger Diameter	Base to Advance Port	Standard Saddle Diameter	Saddle Protrusion from Plunger	Lock Nut Height	Wt.	Model Number	Optional Tilt Saddle		
										Diameter	Height	Saddle Model Number
B (in)	D (in)	E (in)	F (mm)	H (in)	J (in)	K (in)	S (in)	(lbs)		J1 (in)	K1 (in)	
14.45	13.78	10.63	Tr 270 x 6	2.64	6.27	0.20	2.56	520	HCL-4002	8.86	3.34	CAT-400
18.39								603	HCL-4004			
22.32								686	HCL-4006			
26.26								770	HCL-4008			
30.20								853	HCL-40010			
34.13								936	HCL-40012			
16.02	15.75	12.01	Tr 305 x 6	2.95	7.06	0.20	2.83	751	HCL-5002	9.84	3.57	CAT-500
19.96								860	HCL-5004			
23.90								968	HCL-5006			
27.83								1,077	HCL-5008			
31.77								1,186	HCL-50010			
35.71								1,294	HCL-50012			
16.93	16.93	12.99	Tr 330 x 6	3.19	7.65	0.20	3.15	942	HCL-6002	10.83	3.89	CAT-600
20.87								1,067	HCL-6004			
24.80								1,193	HCL-6006			
28.74								1,319	HCL-6008			
32.68								1,444	HCL-60010			
36.61								1,570	HCL-60012			
18.90	19.88	15.16	Tr 385 x 6	3.74	8.83	0.20	3.54	1,472	HCL-8002	12.60	4.89	CAT-800
22.83								1,646	HCL-8004			
26.77								1,819	HCL-8006			
30.71								1,992	HCL-8008			
34.65								2,166	HCL-80010			
38.58								2,339	HCL-80012			
21.02	22.44	17.32	Tr 440 x 6	4.33	9.81	0.20	4.13	2,115	HCL-10002	14.17	5.36	CAT-1000
24.96								2,335	HCL-10004			
28.90								2,556	HCL-10006			
32.83								2,777	HCL-10008			
36.77								2,998	HCL-100010			
40.71								3,219	HCL-100012			