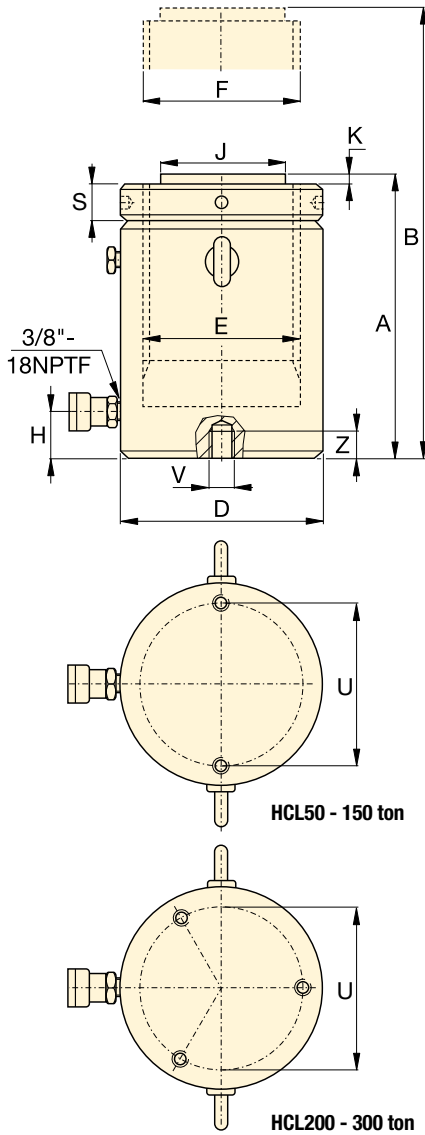


HCL-Series, Single-Acting, Gravity Return Cylinders

- 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 58-59.

For full product features see pages 44-45.

Cylinder Capacity ton	Stroke (mm)	Model Number	Maximum Cylinder Capacity at 700 bar ton (kN)	Cylinder Effective Area (cm ²)	Oil Capacity (cm ³)	Collapsed Height A (mm)
50	50	HCL502	56 (550)	78,5	393	164
	100	HCL504			785	214
	150	HCL506			1178	264
	200	HCL508			1571	314
	250	HCL5010			1963	364
	300	HCL5012			2356	414
100	50	HCL1002	102 (1002)	143,1	716	187
	100	HCL1004			1431	237
	150	HCL1006			2147	287
	200	HCL1008			2863	337
	250	HCL10010			3578	387
	300	HCL10012			4294	437
150	50	HCL1502	153 (1497)	213,8	1069	209
	100	HCL1504			2138	259
	150	HCL1506			3207	309
	200	HCL1508			4276	359
	250	HCL15010			5346	409
	300	HCL15012			6415	459
200	50	HCL2002	202 (1985)	283,5	1418	238
	100	HCL2004			2835	288
	150	HCL2006			4253	338
	200	HCL2008			5671	388
	250	HCL20010			7088	438
	300	HCL20012			8506	488
250	50	HCL2502	259 (2541)	363,1	1815	249
	100	HCL2504			3631	299
	150	HCL2506			5446	349
	200	HCL2508			7261	399
	250	HCL25010			9076	449
	300	HCL25012			10.892	499
300	50	HCL3002	310 (3036)	433,7	2169	278
	100	HCL3004			4337	328
	150	HCL3006			6506	378
	200	HCL3008			8675	428
	250	HCL30010			10.843	478
	300	HCL30012			13.012	528

Base Mounting Holes (mm)					
Model / Capacity ton	Bolt Circle U	Thread Size V	Minimum Thread Depth Z	Number of Holes	Angle from Coupler
HCL50	105	M8 x 1,25	10	2	90°
HCL100	150	M12 x 1,75	17	2	90°
HCL150	185	M12 x 1,75	22	2	90°
HCL200	215	M12 x 1,75	22	3	60°
HCL250	245	M12 x 1,75	22	3	60°
HCL300	260	M16 x 2	25	3	60°

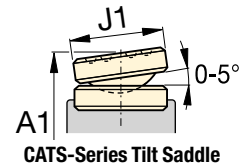
Single-Acting, Lock Nut Cylinders

Capacity:
50 - 300 ton

Stroke:
50 - 300 mm

Maximum Operating Pressure:
700 bar

HCL Series

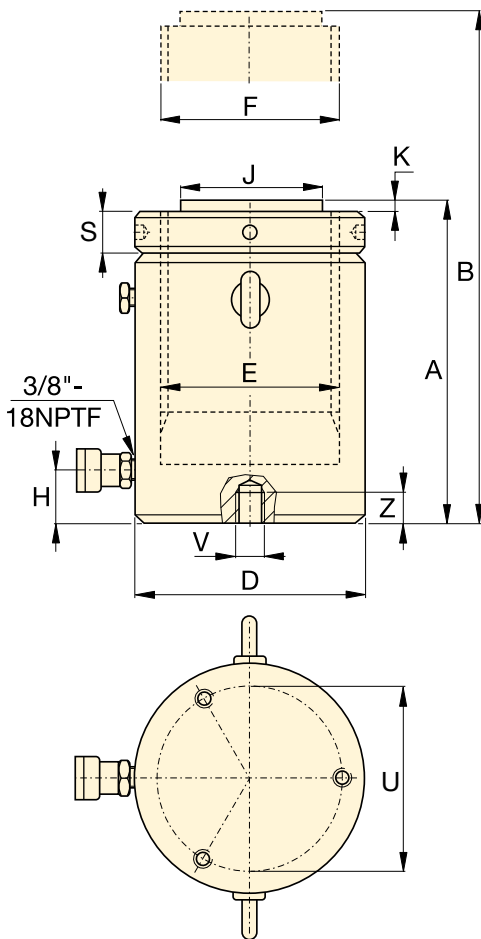


Extended Height	Outside Diameter	Cylinder Bore Diameter	Plunger Diameter (threaded)	Base to Advance Port	Standard Saddle Diameter	Saddle Protrusion from Plunger	Lock Nut Height	Model Number	Optional Tilt Saddle				
									Saddle Diameter J1 (mm)	Collapsed Height * A1 (mm)	Saddle Model Number		
214	130	100	Tr 100 x 4	24	71	2	25	17	HCL502	71	179	CATS100	
314								22					229
414								27					279
514								32					329
614								38					379
714								43					429
237	175	135	Tr 135 x 6	33	71	2	33	35	HCL1002	71	202	CATS100	
337								44					252
437								54					302
537								63					352
637								73					402
737								82					452
259	215	165	Tr 165 x 6	41	130	2	40	59	HCL1502	126	225	CATS201	
359								73					275
459								87					325
559								102					375
659								116					425
759								130					475
288	250	190	Tr 190 x 6	47	130	2	45	85	HCL2002	126	254	CATS201	
388								105					304
488								124					354
588								143					404
688								163					454
788								182					504
299	280	215	Tr 215 x 6	53	140	2	52	119	HCL2502	175	288	CATS300	
399								143					338
499								167					388
599								192					438
699								216					488
799								240					538
328	305	235	Tr 235 x 6	58	140	2	56	158	HCL3002	175	317	CATS300	
428								186					367
528								215					417
628								244					467
728								272					517
828								301					567

* A1 = Collapsed height including CATS-Series tilt saddle.

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 56-57.

For full product features see pages 44-45.

Cylinder Capacity	Stroke	Model Number	Maximum Cylinder Capacity at 700 bar	Cylinder Effective Area	Oil Capacity	Collapsed Height
ton	(mm)		ton (kN)	(cm ²)	(cm ³)	A (mm)
400	50	HCL4002	409 (4008)	572,6	2863	317
	100	HCL4004			5726	367
	150	HCL4006			8588	417
	200	HCL4008			11.451	467
	250	HCL40010			14.314	517
	300	HCL40012			17.177	567
500	50	HCL5002	522 (5114)	730,6	3653	357
	100	HCL5004			7306	407
	150	HCL5006			10.959	457
	200	HCL5008			14.612	507
	250	HCL50010			18.265	557
	300	HCL50012			21.918	607
600	50	HCL6002	611 (5987)	855,3	4276	380
	100	HCL6004			8553	430
	150	HCL6006			12.829	480
	200	HCL6008			17.106	530
	250	HCL60010			21.382	580
	300	HCL60012			25.659	630
800	50	HCL8002	831 (8149)	1164,2	5821	430
	100	HCL8004			11.642	480
	150	HCL8006			17.462	530
	200	HCL8008			23.283	580
	250	HCL80010			29.104	630
	300	HCL80012			34.925	680
1000	50	HCL10002	1085 (10.644)	1520,5	7603	484
	100	HCL10004			15.205	534
	150	HCL10006			22.808	584
	200	HCL10008			30.411	634
	250	HCL100010			38.013	684
	300	HCL100012			45.616	734

Base Mounting Holes (mm)					
Model / Capacity ton	Bolt Circle U	Thread Size V	Minimum Thread Depth Z	Number of Holes	Angle from Coupler
HCL400	300	M16 x 2	25	3	60°
HCL500	340	M24 x 3	36	3	60°
HCL600	370	M24 x 3	36	3	60°
HCL800	440	M24 x 3	36	3	60°
HCL1000	500	M24 x 3	36	3	60°

Single-Acting, Lock Nut Cylinders



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

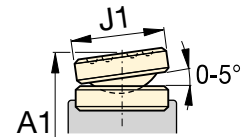
HCL Series




Capacity:
400 - 1000 ton

Stroke:
50 - 300 mm

Maximum Operating Pressure:
700 bar



CATS-Series Tilt Saddle

Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Diameter E (mm)	Plunger Diameter (threaded) F (mm)	Base to Advance Port H (mm)	Standard Saddle Diameter J (mm)	Saddle Protrusion from Plunger K (mm)	Lock Nut Height S (mm)	 (kg)	Model Number	Optional Tilt Saddle			
										Saddle Diameter J1 (mm)	Collapsed Height * A1 (mm)	Model Number	
367	350	270	Tr 270 x 6	67	159	5	65	236	HCL4002	210	365	CATS400	
467								274	HCL4004				415
567								311	HCL4006				465
667								349	HCL4008				515
767								387	HCL40010				565
867								425	HCL40012				615
407	400	305	Tr 305 x 6	75	179	5	72	341	HCL5002	230	405	CATS500	
507								390	HCL5004				455
607								439	HCL5006				505
707								489	HCL5008				555
807								538	HCL50010				605
907								587	HCL50012				655
430	430	330	Tr 330 x 6	81	194	5	80	427	HCL6002	250	433	CATS600	
530								484	HCL6004				483
630								541	HCL6006				533
730								598	HCL6008				583
830								655	HCL60010				633
930								712	HCL60012				683
480	505	385	Tr 385 x 6	95	224	5	90	668	HCL8002	275	487	CATS800	
580								746	HCL8004				537
680								825	HCL8006				587
780								904	HCL8008				637
880								982	HCL80010				687
980								1061	HCL80012				737
534	570	440	Tr 440 x 6	110	249	5	105	959	HCL10002	300	561	CATS1000	
634								1059	HCL10004				611
734								1160	HCL10006				661
834								1260	HCL10008				711
934								1360	HCL100010				761
1034								1460	HCL100012				811

* A1 = Collapsed height including CATS-Series tilt saddle.