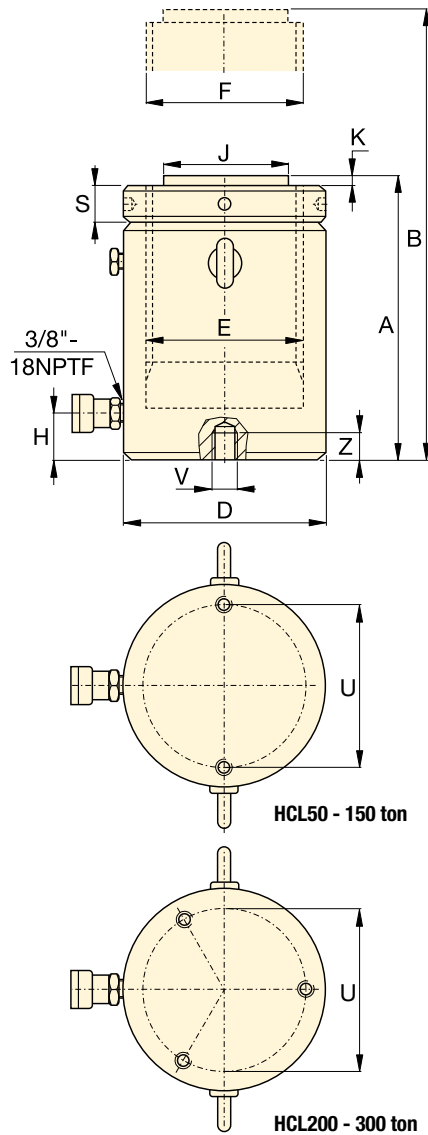




HCL-Series, Single-Acting, Gravity Return Cylinders

- 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 64-65.

For full product features see pages 50-51.

Cylinder Capacity	Stroke	Model Number	Maximum Cylinder Capacity at 700 bar ton (kN)	Cylinder Effective Area	Oil Capacity	Collapsed Height
ton	(mm)			(cm ²)	(cm ³)	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, High-Tonnage Lock Nut Cylinders

Capacity:

50 - 300 ton

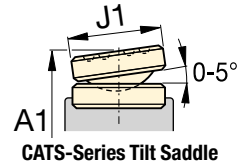
Stroke:

50 - 300 mm

Maximum Operating Pressure:

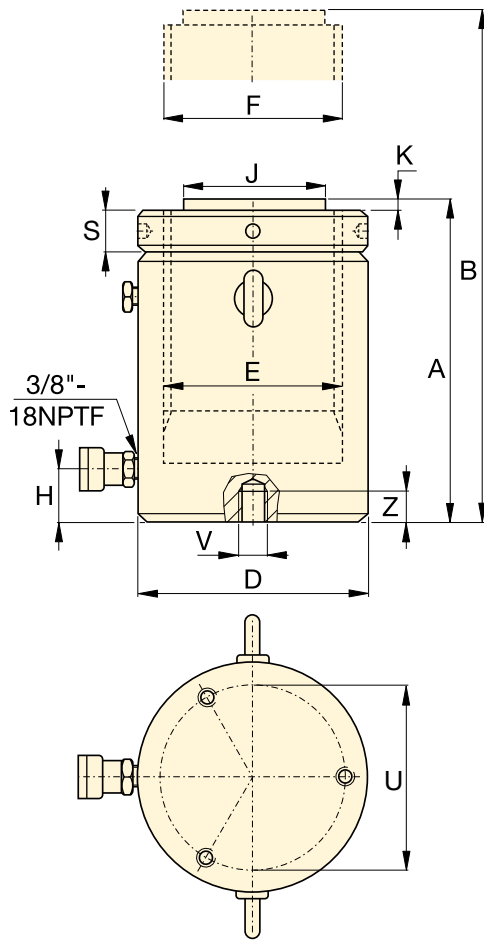
700 bar

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		
B (mm)	D (mm)	E (mm)	F (mm)	H (mm)	J (mm)	K (mm)	S (mm)	(kg)		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	HCL504		229	
414								27	HCL506		279	
514								32	HCL508		329	
614								38	HCL5010		379	
714								43	HCL5012		429	
237	175	135	Tr 135 x 6	33	71	2	33	35	HCL1002	71	202	CATS100
337								44	HCL1004		252	
437								54	HCL1006		302	
537								63	HCL1008		352	
637								73	HCL10010		402	
737								82	HCL10012		452	
259	215	165	Tr 165 x 6	41	130	2	40	59	HCL1502	126	225	CATS201
359								73	HCL1504		275	
459								87	HCL1506		325	
559								102	HCL1508		375	
659								116	HCL15010		425	
759								130	HCL15012		475	
288	250	190	Tr 190 x 6	47	130	2	45	85	HCL2002	126	254	CATS201
388								105	HCL2004		304	
488								124	HCL2006		354	
588								143	HCL2008		404	
688								163	HCL20010		454	
788								182	HCL20012		504	
299	280	215	Tr 215 x 6	53	140	2	52	119	HCL2502	175	288	CATS300
399								143	HCL2504		338	
499								167	HCL2506		388	
599								192	HCL2508		438	
699								216	HCL25010		488	
799								240	HCL25012		538	
328	305	235	Tr 235 x 6	58	140	2	56	158	HCL3002	175	317	CATS300
428								186	HCL3004		367	
528								215	HCL3006		417	
628								244	HCL3008		467	
728								272	HCL30010		517	
828								301	HCL30012		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 62-63.

For full product features see pages 50-51.

Cylinder Capacity	Stroke	Model Number	Maximum Cylinder Capacity at 700 bar ton (kN)	Cylinder Effective Area	Oil Capacity	Collapsed Height
ton	(mm)			(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, High-Tonnage Lock Nut Cylinders



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

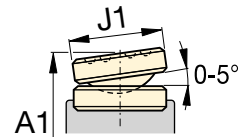
HCL Series



Capacity:
400 - 1000 ton

Stroke:
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.