

HCG-Series, Single-Acting, Gravity Return Cylinders

- Hardened surface resists side-loading and cyclic wear
- Designed to withstand 10% side-load of maximum capacity ¹⁾
- Stop ring to prevent plunger blow-out
- Weather protected, inside and out
- Upper and lower replaceable bearings enclose the cylinder plunger for support throughout the stroke
- Certified lifting eyes, base mounting holes and collar threads.
- Standard collar thread up to 250 ton models. Collar thread is optional on 300 ton models and higher.

SELECTION CHART 50 - 300 TON HCG-MODELS

For 400 - 1000 ton models, see pages 48-49.

For full product features see pages 42-43.

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	HCG-502	56 (550)	78,5	393	183
	100	HCG-504			785	233
	150	HCG-506 ¹⁾			1178	283
	200	HCG-508			1571	346
	250	HCG-5010			1963	396
	300	HCG-5012 ¹⁾			2356	446
100	50	HCG-1002	102 (1002)	143,1	716	202
	100	HCG-1004			1431	252
	150	HCG-1006			2147	302
	200	HCG-1008			2863	379
	250	HCG-10010			3578	429
	300	HCG-10012			4294	479
150	50	HCG-1502	153 (1497)	213,8	1069	220
	100	HCG-1504			2138	270
	150	HCG-1506			3207	320
	200	HCG-1508			4276	397
	250	HCG-15010			5346	447
	300	HCG-15012			6415	497
200	50	HCG-2002	202 (1985)	283,5	1418	231
	100	HCG-2004			2835	281
	150	HCG-2006			4253	331
	200	HCG-2008			5671	408
	250	HCG-20010			7088	458
	300	HCG-20012			8506	508
250	50	HCG-2502	259 (2541)	363,1	1815	241
	100	HCG-2504			3631	291
	150	HCG-2506			5446	341
	200	HCG-2508			7261	431
	250	HCG-25010			9076	481
	300	HCG-25012			10.892	531
300	50	HCG-3002	310 (3036)	433,7	2169	296
	100	HCG-3004			4337	346
	150	HCG-3006			6506	396
	200	HCG-3008			8675	446
	250	HCG-30010			10.843	496
	300	HCG-30012			13.012	546

Collar Thread * (mm)		
Model / Capacity ton	Thread Size	Thread Length
	W	X
HCG-50	M130 x 2	30
HCG-100	M175 x 3	46
HCG-150	M215 x 3	55
HCG-200	M250 x 3	63
HCG-250	M280 x 3	64
HCG-300*	M305 x 3	73

* Standard collar thread up to 250 ton models. Collar thread is optional on 300 ton models and higher. For collar thread on cylinder add suffix "E002" to model number. **Example: HCG3006E002** The collar thread length is designed for the full rated cylinder capacity.

Base Mounting Holes (mm)					
Model / Capacity ton	Bolt Circle	Thread Size	Minimum Thread Depth	Number of Holes	Angle from Coupler
	U	V	Z		
HCG-50	105	M12 x 1,75	22	2	90°
HCG-100	150	M12 x 1,75	22	2	90°
HCG-150	185	M12 x 1,75	22	2	90°
HCG-200	215	M12 x 1,75	22	3	60°
HCG-250	245	M12 x 1,75	22	3	60°
HCG-300	260	M16 x 2	25	3	60°

¹⁾ HCG-506 and HCG-5012: 7% side-load of maximum capacity.

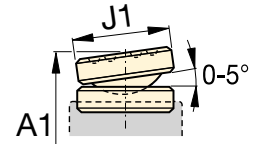
Single-Acting, High Tonnage Cylinders

Capacity:
50 - 300 ton


Stroke:
50 - 300 mm

Maximum Operating Pressure:
700 bar

HCG Series



CATS-Series Tilt Saddle

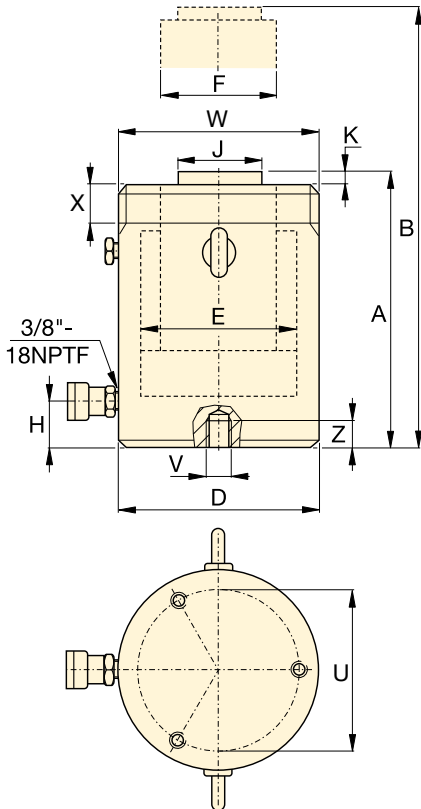
	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Diameter E (mm)	Plunger Diameter F (mm)	Base to Advance Port H (mm)	Standard Saddle Diameter J (mm)	Saddle Protrusion from Plunger K (mm)	 Model Number (kg)
	233	130	100	70	38	50	3	17 HCG-502
	333							20 HCG-504
	433							24 HCG-506¹⁾
	546							29 HCG-508
	646							32 HCG-5010
	746							36 HCG-5012¹⁾
	252	175	135	95	38	75	3	33 HCG-1002
	352							40 HCG-1004
	452							46 HCG-1006
	579							58 HCG-1008
	679							65 HCG-10010
	779							71 HCG-10012
	270	215	165	120	41	94	3	56 HCG-1502
	370							66 HCG-1504
	470							76 HCG-1506
	597							94 HCG-1508
	697							104 HCG-15010
	797							115 HCG-15012
	281	250	190	140	47	113	3	81 HCG-2002
	381							95 HCG-2004
	481							109 HCG-2006
	608							136 HCG-2008
	708							150 HCG-20010
	808							164 HCG-20012
	291	280	215	170	53	140	4	107 HCG-2502
	391							125 HCG-2504
	491							144 HCG-2506
	631							182 HCG-2508
	731							201 HCG-25010
	831							219 HCG-25012
	346	305	235	200	58	140	4	158 HCG-3002
	446							182 HCG-3004
	546							206 HCG-3006
	646							230 HCG-3008
	746							254 HCG-30010
	846							278 HCG-30012

Optional Tilt Saddle		
Saddle Diameter J1 (mm)	Collapsed Height ²⁾ A1 (mm)	Saddle Model Number
71	197	CATS-50
	247	
	297	
	360	
	410	
	460	
71	212	CATS-101
	262	
	312	
	389	
	439	
	489	
97	239	CATS-150
	289	
	339	
	416	
	466	
	516	
126	249	CATS-200
	299	
	349	
	426	
	476	
	526	
175	280	CATS-300
	330	
	380	
	470	
	520	
	570	
175	335	CATS-300
	385	
	435	
	485	
	535	
	585	

²⁾ A1 = Collapsed height including CATS-Series tilt saddle.

HCG-Series, Single-Acting, Gravity Return Cylinders

- Hardened surface resists side-loading and cyclic wear
- Designed to withstand 10% side-load of maximum capacity
- Stop ring to prevent plunger blow-out
- Weather protected, inside and out
- Upper and lower replaceable bearings enclose the cylinder plunger for support throughout the stroke
- Certified lifting eyes, base mounting holes
- Optional collar threads on 300 ton models and higher capacities.



Optional Collar Thread (mm)		
Model / Capacity ton	Thread Size	Thread Length
	W	X
HCG-400	M350 x 3	83
HCG-500	M400 x 4	90
HCG-600	M430 x 4	100
HCG-800	M505 x 5	122
HCG-1000	M570 x 5	137

Collar thread is optional on 300 ton models and higher. For collar thread on cylinder add suffix "E002" to model number. Example: **HCG4006E002**

The collar thread length is designed for the full rated cylinder capacity.

Base Mounting Holes (mm)					
Model / Capacity ton	Bolt Circle	Thread Size	Minimum Thread Depth	Number of Holes	Angle from Coupler
	U	V	Z		
HCG-400	300	M16 x 2	25	3	60°
HCG-500	340	M24 x 3	36	3	60°
HCG-600	370	M24 x 3	36	3	60°
HCG-800	440	M24 x 3	36	3	60°
HCG-1000	500	M24 x 3	36	3	60°

SELECTION CHART 400 - 1000 TON HCG-MODELS

For 50 - 300 ton models, see pages 46-47.

For full product features see pages 42-43.

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)
400	50	HCG-4002	409 (4008)	572,6	2863	321
	100	HCG-4004			5726	371
	150	HCG-4006			8588	421
	200	HCG-4008			11.451	471
	250	HCG-40010			14.314	521
	300	HCG-40012			17.177	571
500	50	HCG-5002	522 (5114)	730,6	3653	344
	100	HCG-5004			7306	394
	150	HCG-5006			10.959	444
	200	HCG-5008			14.612	494
	250	HCG-50010			18.265	544
	300	HCG-50012			21.918	594
600	50	HCG-6002	611 (5987)	855,3	4276	352
	100	HCG-6004			8553	402
	150	HCG-6006			12.829	452
	200	HCG-6008			17.106	502
	250	HCG-60010			21.382	552
	300	HCG-60012			25.659	602
800	50	HCG-8002	831 (8149)	1164,2	5821	404
	100	HCG-8004			11.642	454
	150	HCG-8006			17.462	504
	200	HCG-8008			23.283	554
	250	HCG-80010			29.104	604
	300	HCG-80012			34.925	654
1000	50	HCG-10002	1085 (10.644)	1520,5	7603	442
	100	HCG-10004			15.205	492
	150	HCG-10006			22.808	542
	200	HCG-10008			30.411	592
	250	HCG-100010			38.013	642
	300	HCG-100012			45.616	692

Single-Acting, High Tonnage Cylinders



▲ Offshore wind turbines levelling: Enerpac's synchronous lifting system was the solution for levelling support cross pieces on 80 wind turbines.

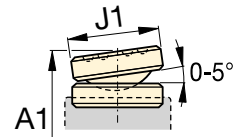
HCG Series









Capacity:
400 - 1000 ton

Stroke:
50 - 300 mm

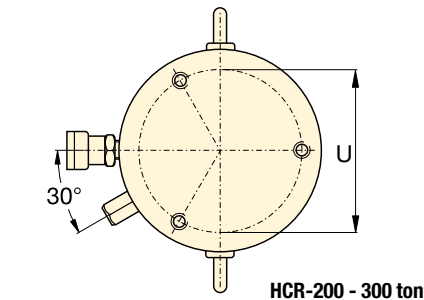
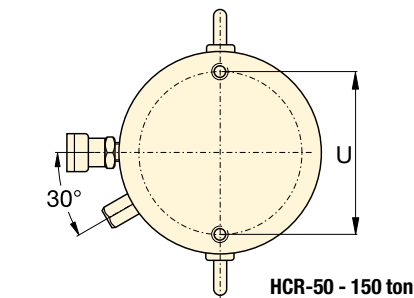
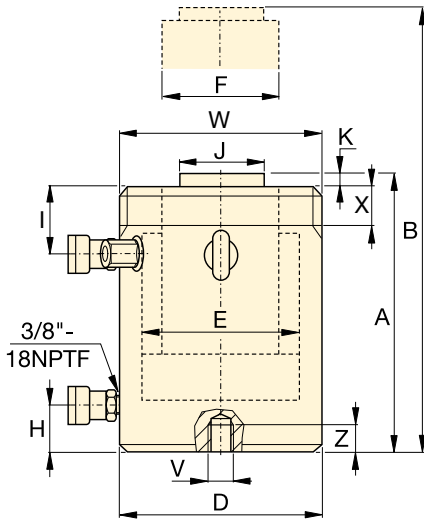
Maximum Operating Pressure:
700 bar



CATS-Series Tilt Saddle

	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Diameter E (mm)	Plunger Diameter F (mm)	Base to Advance Port H (mm)	Standard Saddle Diameter J (mm)	Saddle Protrusion from Plunger K (mm)		Model Number	Optional Tilt Saddle			
										Saddle Diameter J1 (mm)	Collapsed Height * A1 (mm)	Saddle Model Number	
	371	350	270	220	74	159	4		HCG-4002	210	369	CATS-400	
	471												419
	571												469
	671												519
	771												569
	871												619
	394	400	305	250	79	179	4		HCG-5002	230	392	CATS-500	
	494												442
	594												492
	694												542
	794												592
	894												642
	402	430	330	270	85	194	4		HCG-6002	250	405	CATS-600	
	502												455
	602												505
	702												555
	802												605
	902												655
	454	505	385	320	100	224	4		HCG-8002	275	461	CATS-800	
	554												511
	654												561
	754												611
	854												661
	954												711
	492	570	440	340	114	249	4		HCG-10002	300	519	CATS-1000	
	592												569
	692												619
	792												669
	892												719
	992												769

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



Collar Thread * (mm)		
Model / Capacity ton	Thread Size	Thread Length
	W	X
HCR-50	M130 x 2	30
HCR-100	M175 x 3	46
HCR-150	M215 x 3	55
HCR-200	M250 x 3	63
HCR-250	M280 x 3	64
HCR-300*	M305 x 3	73

* Standard collar thread up to 250 ton models. Collar thread is optional on 300 ton models and higher. For collar thread on cylinder add suffix "E002" to model number. **Example: HCR3006E002**
The collar thread length is designed for the full rated cylinder capacity.

Base Mounting Holes (mm)					
Model / Capacity ton	Bolt Circle	Thread Size	Minimum Thread Depth	Number of Holes	Angle from Coupler
	U	V	Z		
HCR-50	105	M12 x 1,75	22	2	90°
HCR-100	150	M12 x 1,75	22	2	90°
HCR-150	185	M12 x 1,75	22	2	90°
HCR-200	215	M12 x 1,75	22	3	60°
HCR-250	245	M12 x 1,75	22	3	60°
HCR-300	260	M16 x 2	25	3	60°

HCR-Series, Double-Acting Cylinders

- Fast advance and retract
- Designed to withstand 10% side-load of maximum capacity¹⁾
- Hardened surface resists side-loading and cyclic wear
- Weather protected, inside and out
- Upper and lower replaceable bearings enclose the cylinder plunger for support throughout the stroke
- Certified lifting eyes, base mounting holes and collar threads
- Standard collar thread up to 250 ton models. Collar thread is optional on 300 ton models and higher.

SELECTION CHART & DETAILS OF 50 - 300 TON HCR-MODELS

For 400 - 1000 ton models, see pages 52-53.

For full product features see pages 42-43.

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	HCR-502	56 (550)	78,5	393	183
	100	HCR-504			785	233
	150	HCR-506 ¹⁾			1178	283
	200	HCR-508			1571	346
	250	HCR-5010			1963	396
100	50	HCR-1002	102 (1002)	143,1	716	202
	100	HCR-1004			1431	252
	150	HCR-1006			2147	302
	200	HCR-1008			2863	379
	250	HCR-10010			3578	429
150	50	HCR-1502	153 (1497)	213,8	1069	220
	100	HCR-1504			2138	270
	150	HCR-1506			3207	320
	200	HCR-1508			4276	397
	250	HCR-15010			5346	447
200	50	HCR-2002	202 (1985)	283,5	1418	231
	100	HCR-2004			2835	281
	150	HCR-2006			4253	331
	200	HCR-2008			5671	408
	250	HCR-20010			7088	458
250	50	HCR-2502	259 (2541)	363,1	1815	241
	100	HCR-2504			3631	291
	150	HCR-2506			5446	341
	200	HCR-2508			7261	431
	250	HCR-25010			9076	481
300	50	HCR-3002	310 (3036)	433,7	2169	296
	100	HCR-3004			4337	346
	150	HCR-3006			6506	396
	200	HCR-3008			8675	446
	250	HCR-30010			10.843	496
	300	HCR-30012			13.012	546

¹⁾ HCR-506 and HCR-5012: 7% side-load of maximum capacity.

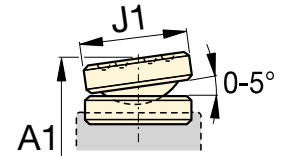
Double-Acting, High Tonnage Cylinders

Capacity:
50 - 300 ton


Stroke:
50 - 300 mm

Maximum Operating Pressure:
700 bar

HCR Series



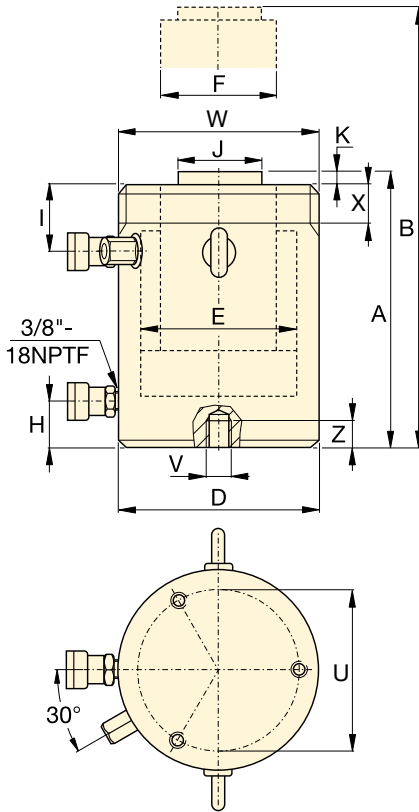
CATS-Series Tilt Saddle

	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Diameter E (mm)	Plunger Diameter F (mm)	Base to Advance Port H (mm)	Top to Retract Port I (mm)	Standard Saddle Diameter J (mm)	Saddle Protrusion from Plunger K (mm)	 (kg)	Model Number	Optional Tilt Saddle						
											Saddle Diameter J1 (mm)	Collapsed Height ²⁾ A1 (mm)	Saddle Model Number				
	233	130	100	70	38	45	50	3	17	HCR-502	71	197	CATS-50				
	333								21	HCR-504				247			
	433								25	HCR-506 ¹⁾					297		
	546								31	HCR-508						360	
	646								34	HCR-5010							410
	746								38	HCR-5012 ¹⁾							
	252	175	135	95	38	65	75	3	34	HCR-1002	71	212	CATS-101				
	352								41	HCR-1004				262			
	452								48	HCR-1006					312		
	579								59	HCR-1008						389	
	679								66	HCR-10010							439
	779								73	HCR-10012							
	270	215	165	120	41	70	94	3	56	HCR-1502	97	239	CATS-150				
	370								67	HCR-1504				289			
	470								78	HCR-1506					339		
	597								95	HCR-1508						416	
	697								106	HCR-15010							466
	797								116	HCR-15012							
	281	250	190	140	47	79	113	3	81	HCR-2002	126	249	CATS-200				
	381								96	HCR-2004				299			
	481								111	HCR-2006					349		
	608								139	HCR-2008						426	
	708								153	HCR-20010							476
	808								168	HCR-20012							
	291	280	215	170	53	79	140	4	107	HCR-2502	175	280	CATS-300				
	391								127	HCR-2504				330			
	491								146	HCR-2506					380		
	631								184	HCR-2508						470	
	731								207	HCR-25010							520
	831								227	HCR-25012							
	346	305	235	200	58	101	140	4	159	HCR-3002	175	335	CATS-300				
	446								183	HCR-3004				385			
	546								208	HCR-3006					435		
	646								232	HCR-3008						485	
	746								257	HCR-30010							535
	846								281	HCR-30012							

²⁾ A1 = Collapsed height including CATS-Series tilt saddle.

HCR-Series, Double-Acting Cylinders

- Fast advance and retract
- Designed to withstand 10% side-load of maximum capacity
- Hardened surface resists side-loading and cyclic wear
- Weather protected, inside and out
- Upper and lower replaceable bearings enclose the cylinder plunger for support throughout the stroke
- Certified lifting eyes, base mounting holes and optional collar threads
- Optional collar threads on 300 ton models and higher capacities.



SELECTION CHART & DETAILS OF 400 - 1000 TON HCR-MODELS

For 50 - 300 ton models, see pages 50-51.

For full product features see pages 42-43.

Cylinder Capacity	Stroke	Model Number	Maximum Cylinder Capacity at 700 bar ton (kN)	Cylinder Effective Area (cm ²)	Oil Capacity (cm ³)	Collapsed Height A (mm)
ton	(mm)					
400	50	HCR-4002	409 (4008)	572,6	2863	321
	100	HCR-4004			5726	371
	150	HCR-4006			8588	421
	200	HCR-4008			11.451	471
	250	HCR-40010			14.314	521
	300	HCR-40012			17.177	571
500	50	HCR-5002	522 (5114)	730,6	3653	344
	100	HCR-5004			7306	394
	150	HCR-5006			10.959	444
	200	HCR-5008			14.612	494
	250	HCR-50010			18.265	544
	300	HCR-50012			21.918	594
600	50	HCR-6002	611 (5987)	855,3	4276	352
	100	HCR-6004			8553	402
	150	HCR-6006			12.829	452
	200	HCR-6008			17.106	502
	250	HCR-60010			21.382	552
	300	HCR-60012			25.659	602
800	50	HCR-8002	831 (8149)	1164,2	5821	404
	100	HCR-8004			11.642	454
	150	HCR-8006			17.462	504
	200	HCR-8008			23.283	554
	250	HCR-80010			29.104	604
	300	HCR-80012			34.925	654
1000	50	HCR-10002	1085 (10.644)	1520,5	7603	442
	100	HCR-10004			15.205	492
	150	HCR-10006			22.808	542
	200	HCR-10008			30.411	592
	250	HCR-100010			38.013	642
	300	HCR-100012			45.616	692

Optional Collar Thread (mm)

Model / Capacity ton	Thread Size	Thread Length
	W	X
HCR-400	M350 x 3	83
HCR-500	M400 x 4	90
HCR-600	M430 x 4	100
HCR-800	M505 x 5	122
HCR-1000	M570 x 5	137

Collar thread is optional on 300 ton models and higher. For collar thread on cylinder add suffix "E002" to model number. Example: **HCR4006E002**

The collar thread length is designed for the full rated cylinder capacity.

Base Mounting Holes (mm)

Model / Capacity ton	Bolt Circle	Thread Size	Minimum Thread Depth	Number of Holes	Angle from Coupler
	U	V	Z		
HCR-400	300	M16 x 2	25	3	60°
HCR-500	340	M24 x 3	36	3	60°
HCR-600	370	M24 x 3	36	3	60°
HCR-800	440	M24 x 3	36	3	60°
HCR-1000	500	M24 x 3	36	3	60°

Double-Acting, High Tonnage Cylinders



▲ The superlifting and launch of a 43,000-ton floating oil production system in Malaysia for the Gumusut-Kakap offshore field has set high benchmarks for safety through its use of sophisticated EVO-Series synchronous hydraulics to lift, balance, weigh and smoothly launch massive resource structures.

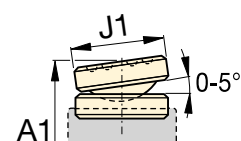
HCR Series









Capacity:
400 - 1000 ton

Stroke:
50 - 300 mm

Maximum Operating Pressure:
700 bar



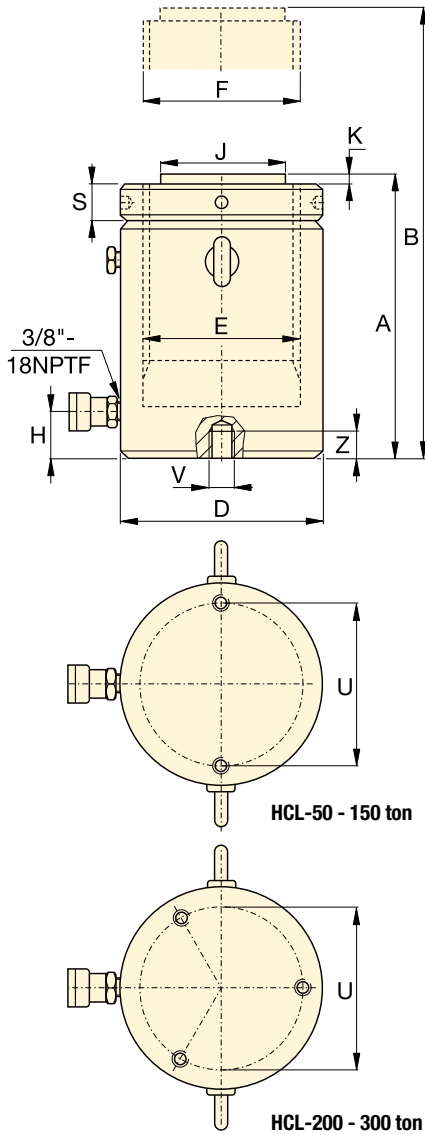
CATS-Series Tilt Saddle

Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Diameter E (mm)	Plunger Diameter F (mm)	Base to Advance Port H (mm)	Top to Retract Port I (mm)	Standard Saddle Diameter J (mm)	Saddle Protrusion from Plunger K (mm)		Model Number	Optional Tilt Saddle			
										Saddle Diameter J1 (mm)	Collapsed Height * A1 (mm)	Saddle Model Number	
371	350	270	220	74	111	159	4		HCR-4002	210	369	CATS-400	
471													419
571													469
671													519
771													569
871													619
394	400	305	250	79	121	179	4		HCR-5002	230	392	CATS-500	
494													442
594													492
694													542
794													592
894													642
402	430	330	270	85	121	194	4		HCR-6002	250	405	CATS-600	
502													455
602													505
702													555
802													605
902													655
454	505	385	320	100	143	224	4		HCR-8002	275	461	CATS-800	
554													511
654													561
754													611
854													661
954													711
492	570	440	340	114	153	249	4		HCR-10002	300	519	CATS-1000	
592													569
692													619
792													669
892													719
992													769

* 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 50 - 300 TON HCL-MODELS

For 400 - 1000 ton models, see pages 56-57.

For full product features see pages 42-43.

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	HCL-502	56 (550)	78,5	393	164
	100	HCL-504			785	214
	150	HCL-506			1178	264
	200	HCL-508			1571	314
	250	HCL-5010			1963	364
	300	HCL-5012			2356	414
100	50	HCL-1002	102 (1002)	143,1	716	187
	100	HCL-1004			1431	237
	150	HCL-1006			2147	287
	200	HCL-1008			2863	337
	250	HCL-10010			3578	387
	300	HCL-10012			4294	437
150	50	HCL-1502	153 (1497)	213,8	1069	209
	100	HCL-1504			2138	259
	150	HCL-1506			3207	309
	200	HCL-1508			4276	359
	250	HCL-15010			5346	409
	300	HCL-15012			6415	459
200	50	HCL-2002	202 (1985)	283,5	1418	238
	100	HCL-2004			2835	288
	150	HCL-2006			4253	338
	200	HCL-2008			5671	388
	250	HCL-20010			7088	438
	300	HCL-20012			8506	488
250	50	HCL-2502	259 (2541)	363,1	1815	249
	100	HCL-2504			3631	299
	150	HCL-2506			5446	349
	200	HCL-2508			7261	399
	250	HCL-25010			9076	449
	300	HCL-25012			10.892	499
300	50	HCL-3002	310 (3036)	433,7	2169	278
	100	HCL-3004			4337	328
	150	HCL-3006			6506	378
	200	HCL-3008			8675	428
	250	HCL-30010			10.843	478
	300	HCL-30012			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
HCL-50	105	M8 x 1,25	10	2	90°
HCL-100	150	M12 x 1,75	17	2	90°
HCL-150	185	M12 x 1,75	22	2	90°
HCL-200	215	M12 x 1,75	22	3	60°
HCL-250	245	M12 x 1,75	22	3	60°
HCL-300	260	M16 x 2	25	3	60°

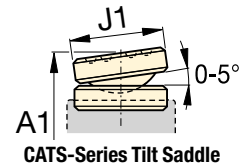
Single-Acting, Lock Nut Cylinders

Capacity:
50 - 300 ton

Stroke:
50 - 300 mm

Maximum Operating Pressure:
700 bar

HCL Series

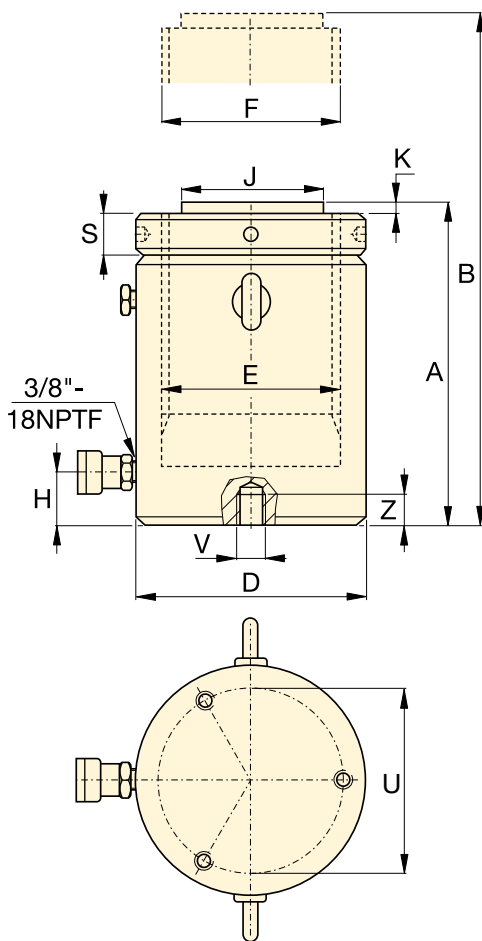


Extended Height	Outside Diameter	Cylinder Bore Diameter	Plunger Diameter (threaded)	Base to Advance Port	Standard Saddle Diameter	Saddle Protrusion from Plunger	Lock Nut Height	Model Number	Optional Tilt Saddle				
									Saddle Diameter J1 (mm)	Collapsed Height * A1 (mm)	Saddle Model Number		
214	130	100	Tr 100 x 4	24	71	2	25	17	HCL-502	71	174	CATS-100	
314								22					224
414								27					274
514								32					324
614								38					374
714								43					424
237	175	135	Tr 135 x 6	33	71	2	33	35	HCL-1002	71	197	CATS-100	
337								44					247
437								54					297
537								63					347
637								73					397
737								82					447
259	215	165	Tr 165 x 6	41	130	2	40	59	HCL-1502	126	225	CATS-201	
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	HCL-2002	126	254	CATS-201	
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	HCL-2502	175	288	CATS-300	
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	HCL-3002	175	317	CATS-300	
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 54-55.

For full product features see pages 42-43.

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	HCL-4002	409 (4008)	572,6	2863	317
	100	HCL-4004			5726	367
	150	HCL-4006			8588	417
	200	HCL-4008			11.451	467
	250	HCL-40010			14.314	517
	300	HCL-40012			17.177	567
500	50	HCL-5002	522 (5114)	730,6	3653	357
	100	HCL-5004			7306	407
	150	HCL-5006			10.959	457
	200	HCL-5008			14.612	507
	250	HCL-50010			18.265	557
	300	HCL-50012			21.918	607
600	50	HCL-6002	611 (5987)	855,3	4276	380
	100	HCL-6004			8553	430
	150	HCL-6006			12.829	480
	200	HCL-6008			17.106	530
	250	HCL-60010			21.382	580
	300	HCL-60012			25.659	630
800	50	HCL-8002	831 (8149)	1164,2	5821	430
	100	HCL-8004			11.642	480
	150	HCL-8006			17.462	530
	200	HCL-8008			23.283	580
	250	HCL-80010			29.104	630
	300	HCL-80012			34.925	680
1000	50	HCL-10002	1085 (10.644)	1520,5	7603	484
	100	HCL-10004			15.205	534
	150	HCL-10006			22.808	584
	200	HCL-10008			30.411	634
	250	HCL-100010			38.013	684
	300	HCL-100012			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
HCL-400	300	M16 x 2	25	3	60°
HCL-500	340	M24 x 3	36	3	60°
HCL-600	370	M24 x 3	36	3	60°
HCL-800	440	M24 x 3	36	3	60°
HCL-1000	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.

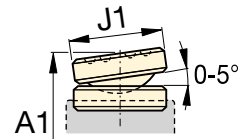
HCL Series




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	HCL-4002	210	365	CATS-400	
467								274	HCL-4004				415
567								311	HCL-4006				465
667								349	HCL-4008				515
767								387	HCL-40010				565
867								425	HCL-40012				615
407	400	305	Tr 305 x 6	75	179	5	72	341	HCL-5002	230	405	CATS-500	
507								390	HCL-5004				455
607								439	HCL-5006				505
707								489	HCL-5008				555
807								538	HCL-50010				605
907								587	HCL-50012				655
430	430	330	Tr 330 x 6	81	194	5	80	427	HCL-6002	250	433	CATS-600	
530								484	HCL-6004				483
630								541	HCL-6006				533
730								598	HCL-6008				583
830								655	HCL-60010				633
930								712	HCL-60012				683
480	505	385	Tr 385 x 6	95	224	5	90	668	HCL-8002	275	487	CATS-800	
580								746	HCL-8004				537
680								825	HCL-8006				587
780								904	HCL-8008				637
880								982	HCL-80010				687
980								1061	HCL-80012				737
534	570	440	Tr 440 x 6	110	249	5	105	959	HCL-10002	300	561	CATS-1000	
634								1059	HCL-10004				611
734								1160	HCL-10006				661
834								1260	HCL-10008				711
934								1360	HCL-100010				761
1034								1460	HCL-100012				811

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