

HCR-Series, Double-Acting Cylinders

- Fast advance and retract
- Designed to withstand 10% side load of maximum capacity ¹⁾
- 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 60-61.

For full product features see pages 50-51.

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)
					Advance	Retract	
50	50	HCR502	56 (550)	78,5	393	200	183
	100	HCR504			785	401	233
	150	HCR506 ¹⁾			1178	601	283
	200	HCR508			1571	801	346
	250	HCR5010			1963	1001	396
100	50	HCR1002	102 (1002)	143,1	716	361	202
	100	HCR1004			1431	723	252
	150	HCR1006			2147	1084	302
	200	HCR1008			2863	1445	379
	250	HCR10010			3578	1806	429
150	50	HCR1502	153 (1497)	213,8	1069	504	220
	100	HCR1504			2138	1007	270
	150	HCR1506			3207	1511	320
	200	HCR1508			4276	2015	397
	250	HCR15010			5346	2518	447
200	50	HCR2002	202 (1985)	283,5	1418	648	231
	100	HCR2004			2835	1296	281
	150	HCR2006			4253	1944	331
	200	HCR2008			5671	2592	408
	250	HCR20010			7088	3240	458
250	50	HCR2502	259 (2541)	363,1	1815	680	241
	100	HCR2504			3631	1361	291
	150	HCR2506			5446	2041	341
	200	HCR2508			7261	2721	431
	250	HCR25010			9076	3402	481
300	50	HCR3002	310 (3036)	433,7	2169	598	296
	100	HCR3004			4337	1196	346
	150	HCR3006			6506	1794	396
	200	HCR3008			8675	2392	446
	250	HCR30010			10.843	2989	496
	300	HCR30012			13.012	3587	546

Collar Thread * (mm)

Model / Capacity ton	Thread Size	Thread Length
	W	X
HCR50	M130 x 2	30
HCR100	M175 x 3	46
HCR150	M215 x 3	55
HCR200	M250 x 3	63
HCR250	M280 x 3	64
HCR300 *	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		
HCR50	105	M12 x 1,75	22	2	90°
HCR100	150	M12 x 1,75	22	2	90°
HCR150	185	M12 x 1,75	22	2	90°
HCR200	215	M12 x 1,75	22	3	60°
HCR250	245	M12 x 1,75	22	3	60°
HCR300	260	M16 x 2	25	3	60°

¹⁾ HCR506 and HCR5012: 7% side load of maximum capacity.

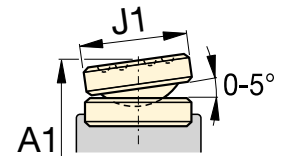
Double-Acting, High-Tonnage Cylinders

Capacity:
50 - 300 ton


Stroke:
50 - 300 mm

Maximum Operating Pressure:
700 bar

HCR Series

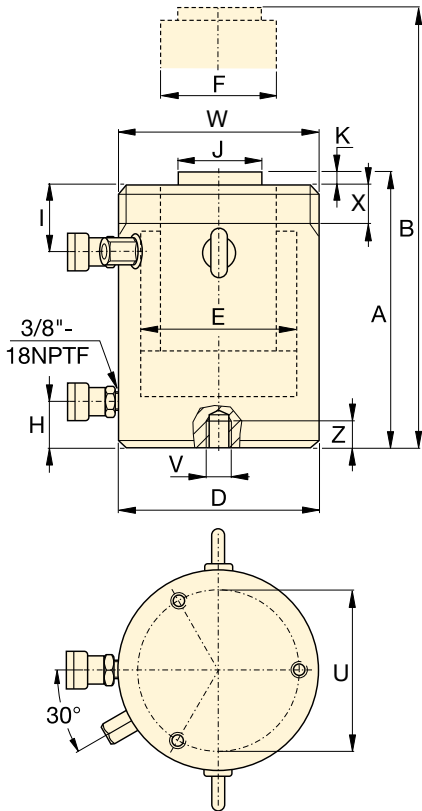


CATS-Series Tilt Saddle

Extended Height	Outside Diameter	Cylinder Bore Diameter	Plunger Diameter	Base to Advance Port	Top to Retract Port	Standard Saddle Diameter	Saddle Protrusion from Plunger	 (kg)	Model Number
B (mm)	D (mm)	E (mm)	F (mm)	H (mm)	I (mm)	J (mm)	K (mm)		
233	130	100	70	38	45	50	3	17	HCR502
333								21	HCR504
433								25	HCR506 ¹⁾
546								31	HCR508
646								34	HCR5010
746								38	HCR5012 ¹⁾
252	175	135	95	38	65	75	3	34	HCR1002
352								41	HCR1004
452								48	HCR1006
579								59	HCR1008
679								66	HCR10010
779								73	HCR10012
270	215	165	120	41	70	94	3	56	HCR1502
370								67	HCR1504
470								78	HCR1506
597								95	HCR1508
697								106	HCR15010
797								116	HCR15012
281	250	190	140	47	79	113	3	81	HCR2002
381								96	HCR2004
481								111	HCR2006
608								139	HCR2008
708								153	HCR20010
808								168	HCR20012
291	280	215	170	53	79	140	4	107	HCR2502
391								127	HCR2504
491								146	HCR2506
631								184	HCR2508
731								207	HCR25010
831								227	HCR25012
346	305	235	200	58	101	140	4	159	HCR3002
446								183	HCR3004
546								208	HCR3006
646								232	HCR3008
746								257	HCR30010
846								281	HCR30012

Optional Tilt Saddle		
Saddle Diameter J1 (mm)	Collapsed Height ²⁾ A1 (mm)	Saddle Model Number
71	197	CATS50
	247	
	297	
	360	
	410	
	460	
71	212	CATS101
	262	
	312	
	389	
	439	
	489	
97	239	CATS150
	289	
	339	
	416	
	466	
	516	
126	249	CATS200
	299	
	349	
	426	
	476	
	526	
175	280	CATS300
	330	
	380	
	470	
	520	
	570	
175	335	CATS300
	385	
	435	
	485	
	535	
	585	

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



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- 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 58-59.

For full product features see pages 50-51.

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)
					Advance	Retract	
400	50	HCR4002	409 (4008)	572,6	2863	962	321
	100	HCR4004			5726	1924	371
	150	HCR4006			8588	2886	421
	200	HCR4008			11.451	3848	471
	250	HCR40010			14.314	4811	521
	300	HCR40012			17.177	5773	571
500	50	HCR5002	522 (5114)	730,6	3653	1199	344
	100	HCR5004			7306	2397	394
	150	HCR5006			10.959	3596	444
	200	HCR5008			14.612	4795	494
	250	HCR50010			18.265	5994	544
	300	HCR50012			21.918	7192	594
600	50	HCR6002	611 (5987)	855,3	4276	1414	352
	100	HCR6004			8553	2827	402
	150	HCR6006			12.829	4241	452
	200	HCR6008			17.106	5655	502
	250	HCR60010			21.382	7069	552
	300	HCR60012			25.659	8482	602
800	50	HCR8002	831 (8149)	1164,2	5821	1800	404
	100	HCR8004			11.642	3599	454
	150	HCR8006			17.462	5399	504
	200	HCR8008			23.283	7198	554
	250	HCR80010			29.104	8998	604
	300	HCR80012			34.925	10.797	654
1000	50	HCR10002	1085 (10.644)	1520,5	7603	3063	442
	100	HCR10004			15.205	6126	492
	150	HCR10006			22.808	9189	542
	200	HCR10008			30.411	12.252	592
	250	HCR100010			38.013	15.315	642
	300	HCR100012			45.616	18.378	692

Optional Collar Thread (mm)

Model / Capacity ton	Thread Size	Thread Length	Collar thread is optional on 300 ton models and higher. For collar thread on cylinder add suffix "E002" to model number. Example: HCR4006E002
	W	X	
HCR400	M350 x 3	83	
HCR500	M400 x 4	90	
HCR600	M430 x 4	100	
HCR800	M505 x 5	122	The collar thread length is designed for the full rated cylinder capacity.
HCR1000	M570 x 5	137	

Base Mounting Holes (mm)

Model / Capacity ton	Bolt Circle	Thread Size	Minimum Thread Depth	Number of Holes	Angle from Coupler
	U	V	Z		
HCR400	300	M16 x 2	25	3	60°
HCR500	340	M24 x 3	36	3	60°
HCR600	370	M24 x 3	36	3	60°
HCR800	440	M24 x 3	36	3	60°
HCR1000	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.

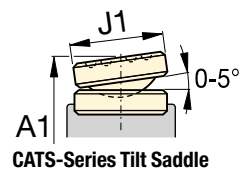
HCR Series




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)	 (kg)	Model Number	Optional Tilt Saddle		
										Saddle Diameter J1 (mm)	Collapsed Height * A1 (mm)	Saddle Model Number
371	350	270	220	74	111	159	4	227	HCR4002	210	369	CATS400
471								258	HCR4004			
571								289	HCR4006			
671								321	HCR4008			
771								352	HCR40010			
871								383	HCR40012			
394	400	305	250	79	121	179	4	320	HCR5002	230	392	CATS500
494								361	HCR5004			
594								402	HCR5006			
694								443	HCR5008			
794								484	HCR50010			
894								525	HCR50012			
402	430	330	270	85	121	194	4	379	HCR6002	250	405	CATS600
502								427	HCR6004			
602								474	HCR6006			
702								521	HCR6008			
802								568	HCR60010			
902								615	HCR60012			
454	505	385	320	100	143	224	4	608	HCR8002	275	461	CATS800
554								674	HCR8004			
654								740	HCR8006			
754								806	HCR8008			
854								872	HCR80010			
954								938	HCR80012			
492	570	440	340	114	153	249	4	843	HCR10002	300	519	CATS1000
592								921	HCR10004			
692								1000	HCR10006			
792								1079	HCR10008			
892								1158	HCR100010			
992								1236	HCR100012			

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