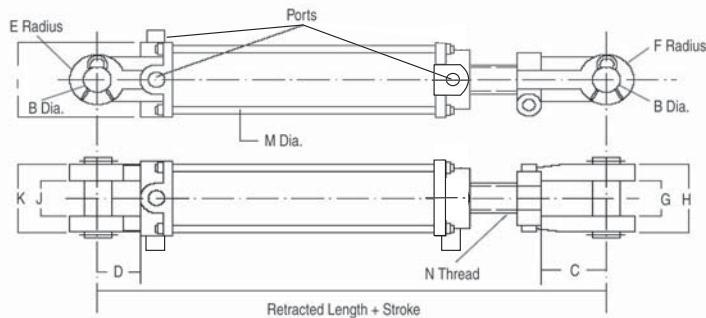


HTR TIE-ROD CYLINDERS

THE HTR LINE

Pressure Ratings: 2" - 4" Bore = 2500 PSI, 5" Bore = 2000 PSI



FEATURES:

- Ductile iron piston.
- Ductile iron gland, drilled oil passages.
- Honed steel tube, precision finished for extended seal life.
- High tensile, hard chrome plated rod.
- Ductile iron end mounts, female clevises with pins and clips included.
- Tube Seal: O-ring
- Rod Seal: Deep polypak with B lip design; metal canned wiper.
- 2-Piece 93A urethane piston seal, with a 70A nitrile energizer.
- All Seals: Manufactured to US specifications.
- NPT ports.

BORE (INCH)	B	C	D	E	F	G = J
2.0	1.015	2.125	1.625	1.000	1.000	1.142
2.5	1.015	2.125	1.625	1.000	1.000	1.142
3.0	1.015	2.125	1.625	1.125	1.000	1.142
3.5	1.015	2.125	1.625	1.125	1.125	1.142
4.0	1.015	2.125	1.625	1.125	1.125	1.142
5.0	1.015	2.125	2.250	1.250	1.500	1.260

Seal kits for these cylinders are shown at the end of the section.

"A" = Agricultural application w/ rod extension

PART NUMBER	BORE (INCH)	STROKE	ROD DIA (INCH)	H	I	K	M	N	TUBE OD	PORTS (NPT)	PIN CTR RETRACT-ED	WT LBS.	LIST PRICE	
HTR-2004	2.0	4	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	14.25	14.30	\$ 97.25	
HTR-2006	2.0	6	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	16.25	15.84	97.25	
HTR-2008	2.0	8	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	18.25	17.60	97.66	
HTR-2008A	2.0	8	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	20.25	17.60	97.66	
HTR-2010	2.0	10	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	20.25	18.70	107.05	
HTR-2012	2.0	12	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	22.25	20.24	112.08	
HTR-2014	2.0	14	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	24.25	22.00	117.14	
HTR-2016	2.0	16	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	26.25	23.54	121.36	
HTR-2016A	2.0	16	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	31.50	37.20	126.39	
HTR-2018	2.0	18	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	28.25	25.08	127.86	
HTR-2020	2.0	20	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	30.25	26.62	132.37	
HTR-2024	2.0	24	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	34.25	29.70	142.80	
HTR-2048	2.0	48	1-1/4	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	58.25	35.00	235.17	
HTR-2504	2.5	4	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	14.25	16.28	100.98	
HTR-2506	2.5	6	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	16.25	18.04	100.98	
HTR-2508	2.5	8	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	18.25	20.24	105.35	
HTR-2508A	2.5	8	1-1/4	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	20.25	22.00	109.48	
HTR-2510	2.5	10	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	20.25	21.34	116.01	
HTR-2512	2.5	12	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	22.25	23.10	128.67	
HTR-2514	2.5	14	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	24.25	24.86	134.74	
HTR-2516	2.5	16	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	26.25	26.62	139.74	
HTR-2518	2.5	18	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	28.25	28.38	145.06	
HTR-2520	2.5	20	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	30.25	30.14	150.87	
HTR-2524	2.5	24	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	34.25	33.66	162.05	
HTR-2536	2.5	36	1-1/4	2.520	3.150	2.520	M10	1-1/4-12UNF	2.875	3/8 NPT	46.25	38.25	218.09	
HTR-3004	3.0	4	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	14.25	21.56	114.60	
HTR-3006	3.0	6	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	16.25	23.76	114.60	
HTR-3008	3.0	8	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	18.25	26.62	116.76	

HTR TIE-ROD CYLINDERS

THE HTR LINE

Pressure Ratings: 2" - 4" Bore = 2500 PSI, 5" Bore = 2000 PSI

PART NUMBER	BORE (INCH)	STROKE	ROD DIA (INCH)	H	I	K	M	N	TUBE OD	PORTS (NPT)	PIN CTR RETRACT-ED	WT LBS.	LIST PRICE	
HTR-3008A	3.0	8	1-3/8	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	20.25	27.50	\$ 126.39	
HTR-3010	3.0	10	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	20.25	28.16	129.97	
HTR-3012	3.0	12	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	22.25	30.36	140.23	
HTR-3014	3.0	14	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	24.25	32.56	145.81	
HTR-3016	3.0	16	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	26.25	34.76	151.33	
HTR-3016A	3.0	16	1-3/8	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	31.50	42.90	175.32	
HTR-3018	3.0	18	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	28.25	36.96	156.79	
HTR-3020	3.0	20	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	30.25	39.16	174.25	
HTR-3024	3.0	24	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	34.25	43.34	187.75	
HTR-3030	3.0	30	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	40.25	48.00	225.06	
HTR-3036	3.0	36	1-1/2	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	46.25	54.55	250.43	
HTR-3048	3.5	48	1-1/2	2.600	4.130	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	58.25	74.69	275.92	
HTR-3504	3.5	4	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	14.25	23.32	128.35	
HTR-3506	3.5	6	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	16.25	25.52	134.39	
HTR-3508	3.5	8	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	18.25	28.82	135.55	
HTR-3508A	3.5	8	1-3/8	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	20.25	29.70	144.97	
HTR-3510	3.5	10	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	20.25	29.92	146.68	
HTR-3512	3.5	12	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	22.25	32.34	154.42	
HTR-3514	3.5	14	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	24.25	34.76	165.06	
HTR-3516	3.5	16	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	26.25	37.18	173.29	
HTR-3516A	3.5	16	1-3/8	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	31.50	50.60	197.08	
HTR-3518	3.5	18	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	28.25	39.60	181.99	
HTR-3520	3.5	20	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	30.25	42.02	190.64	
HTR-3524	3.5	24	1-1/2	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	34.25	51.70	218.44	
HTR-3530	3.5	30	1-1/2	2.600	4.130	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	40.25	55.00	253.01	
HTR-3532	3.5	32	1-1/2	2.600	4.130	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	42.25	58.00	279.54	
HTR-3536	3.5	36	1-1/2	2.600	4.130	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	46.25	62.00	275.09	
HTR-3548	3.5	48	1-1/2	2.600	4.130	2.600	M12	1-1/4-12UNF	3.875	1/2 NPT	58.25	74.69	333.87	
HTR-4004	4.0	4	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	14.25	29.48	171.36	
HTR-4006	4.0	6	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	16.25	33.60	175.26	
HTR-4008	4.0	8	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	18.25	35.86	172.49	
HTR-4008A	4.0	8	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2NPT	20.25	37.40	192.40	
HTR-4010	4.0	10	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	20.25	37.84	196.62	
HTR-4012	4.0	12	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	22.25	40.70	207.63	
HTR-4014	4.0	14	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	24.25	43.56	222.77	
HTR-4016	4.0	16	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	26.25	46.42	230.23	
HTR-4016A	4.0	16	1-3/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	31.50	57.20	271.45	
HTR-4018	4.0	18	1-1/2	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	28.25	50.60	238.82	
HTR-4020	4.0	20	1-1/2	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	30.25	53.46	248.41	
HTR-4024	4.0	24	1-1/2	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	32.25	59.18	263.03	
HTR-4024-2	4.0	24	2	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	34.25	68.00	286.71	
HTR-4030	4.0	30	1-3/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	40.25	75.00	322.31	
HTR-4030-2	4.0	30	2	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	40.25	78.00	332.75	
HTR-4036	4.0	36	1-3/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	46.25	82.00	369.91	
HTR-4048	4.0	48	1-3/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	58.25	98.00	426.79	
HTR-5004	5.0	4	1-1/2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	16.25	53.46	254.77	
HTR-5006	5.0	6	1-1/2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	18.25	56.76	269.45	
HTR-5008	5.0	8	1-1/2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	20.25	61.16	271.13	
HTR-5010	5.0	10	1-1/2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	22.25	63.36	295.20	
HTR-5012	5.0	12	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	24.25	73.04	319.31	
HTR-5014	5.0	14	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	26.25	77.00	343.67	
HTR-5016	5.0	16	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	28.25	81.18	361.99	
HTR-5018	5.0	18	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	30.25	85.14	380.14	



HTR TIE-ROD CYLINDERS

THE HTR LINE

Pressure Ratings: 2" - 4" Bore = 2500 PSI, 5" Bore = 2000 PSI

PART NUMBER	BORE (INCH)	STROKE	ROD DIA (INCH)	H	I	K	M	N	TUBE OD	PORTS (NPT)	PIN CTR RETRACT-ED	WT LBS.	LIST PRICE	
HTR-5020	5.0	20	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	32.25	89.10	\$ 398.35	
HTR-5024	5.0	24	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	36.25	97.24	441.39	
HTR-5030	5.0	30	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	42.25	109.56	505.26	

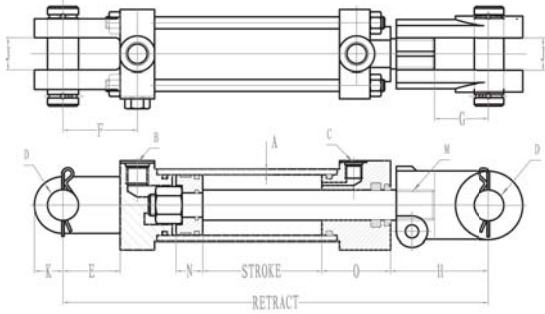
SEAL KIT NUMBER	Rod x Bore	LIST PRICE
HTR-2.0X1.12K	SK-P-U-10-1.125x2.000	\$ 11.84
HTR-2.5X1.12K	SK-P-U-10-1.125x2.500	12.14
HTR-2.5X1.25K-A	SK-P-U-10-1.250x2.500	9.48
HTR-3.0X1.25K	SK-P-U-10-1.250x3.000	12.71
HTR-3.0X1.37K-A	SK-P-U-10-1.375x3.000	9.74
HTR-3.0X1.50K	SK-P-U-10-1.500x3.000	19.97
HTR-3.5X1.25K	SK-P-U-10-1.250x3.500	13.46
HTR-3.5X1.37K-A	SK-I-U-10-1.375x3.500	10.07
HTR-3.5X1.50K	SK-P-U-10-1.500x3.500	14.33
HTR-4.0X1.25K	SK-P-U-10-1.250x4.000	24.04
HTR-4.0X1.50K	SK-P-U-10-1.500x4.000	24.90
HTR-4.0X1.75K	SK-P-U-10-1.750x4.000	26.05
HTR-4.0X2.00K	SK-P-U-10-2.000x4.000	32.38
HTR-5.0X1.50K	SK-P-UB-10-1.500x5.000	43.38
HTR-5.0X2.00K	SK-P-UB-10-2.000x5.000	53.81

CYLINDERS

HSTR (OLYMPUS) TIE ROD CYLINDERS

THE HSTR (Olympus) LINE

3000 PSI DOUBLE ACTING TIE ROD CYLINDERS



FEATURES:

- Honed Steel tube, precision finished for extended seal life
- Heavy duty, high strength tie rods
- Chromed, ground and polished piston rod
- Pin and clevis included
- Rod seal: Twin lip heavy duty polyurethane seal
- Rod Wiper: Heavy duty metal canned wiper
- 2-piece 93A urethane piston seal with 70A buna energizer
- All pistons designed to include high strength nylon wear bands
- Painted Black
- SAE O-Ring Ports

BORE (INCH)	A	D	E	F	G	J	K
2.0	0.188	1.015	1.812	2.375	2.375	1.063	0.938
2.5	0.188	1.015	1.844	1.000	2.375	1.063	0.938
3.0	0.188	1.015	2.125	1.125	2.438	1.063	1.063
3.5	0.188	1.015	2.125	1.125	2.438	1.063	1.250
4.0	0.188	1.015	2.125	1.125	2.438	1.063	1.250
5.0	0.250	1.265	2.500	1.250	2.625	1.063	1.407

Seal kits for these cylinders are shown at the end of the section.

PART NUMBER	BORE	STK	ROD DIA.	RETRAC. DIMEN.	SHIP WT	PORTS (SAE)	H	M	N	O	LIST PRICE	RE-SELLER PRICE
HSTR-2004	2	4	1.125	14.25	18	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	\$ 133.27	\$ 76.86
HSTR-2006	2	6	1.125	16.25	19	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	139.15	80.25
HSTR-2008A	2	8	1.125	20.25	20	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	147.76	85.21
HSTR-2010	2	10	1.125	20.25	21	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	151.24	87.22
HSTR-2012	2	12	1.125	22.25	25	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	160.73	92.69
HSTR-2014	2	14	1.125	24.25	26	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	168.21	97.01
HSTR-2016A	2	16	1.125	31.50	28	#8 3/4-16	8.500	1.125-12UNF	0.875	2.375	175.94	101.46
HSTR-2018	2	18	1.125	28.25	29	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	173.64	100.14
HSTR-2020	2	20	1.125	30.25	31	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	180.42	104.05
HSTR-2024	2	24	1.125	34.25	31	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	195.30	112.63
HSTR-2030	2	30	1.125	40.25	39	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	217.64	125.51
HSTR-2506	2.5	6	1.125	16.25	22	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	150.48	86.78
HSTR-2508A	2.5	8	1.250	20.25	25	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	164.39	94.81
HSTR-2510	2.5	10	1.250	20.25	26	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	172.30	99.37
HSTR-2512	2.5	12	1.250	22.25	27	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	180.76	104.24
HSTR-2514	2.5	14	1.250	24.25	29	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	186.03	107.28
HSTR-2516A	2.5	16	1.250	31.50	33	#8 3/4-16	8.500	1.125-12UNF	1.000	2.375	208.27	120.11
HSTR-2518	2.5	18	1.250	28.20	34	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	202.73	116.91
HSTR-2520	2.5	20	1.250	30.25	36	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	210.79	121.56
HSTR-2524	2.5	24	1.250	34.25	39	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	230.61	132.99
HSTR-2530	2.5	30	1.250	40.25	44	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	258.97	149.35
HSTR-3006	3	6	1.125	16.25	24	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	167.73	96.73
HSTR-3008A	3	8	1.375	20.25	32	#8 3/4-16	5.750	1.125-12UNF	1.000	1.938	186.64	107.63
HSTR-3010	3	10	1.375	20.25	33	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	192.09	110.78
HSTR-3012	3	12	1.375	22.25	33	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	201.76	116.35
HSTR-3014	3	14	1.375	24.25	35	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	211.24	121.82

HSTR (OLYMPUS) TIE ROD CYLINDERS

THE HSTR (Olympus) LINE

3000 PSI DOUBLE ACTING TIE ROD CYLINDERS

CYLINDERS

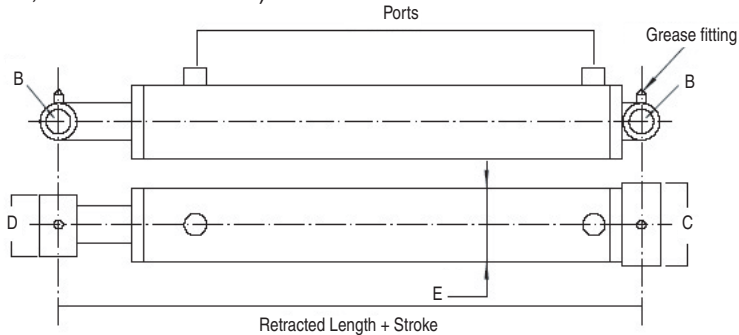
PART NUMBER	BORE	STK	ROD DIA.	RETRAC. DIMEN.	SHIP WT	PORTS (SAE)	H	M	N	O	LIST PRICE
HSTR-3016	3	16	1.375	26.25	38	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	\$ 221.03
HSTR-3016A	3	16	1.375	31.50	39	#8 3/4-16	9.000	1.125-12UNF	1.000	1.938	234.82
HSTR-3018	3	18	1.375	28.25	42	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	231.73
HSTR-3020	3	20	1.375	30.25	45	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	241.39
HSTR-3024	3	24	1.375	34.25	41	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	263.48
HSTR-3030	3	30	1.375	40.25	53	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	295.39
HSTR-3036	3	36	1.375	46.25	61	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	331.30
HSTR-3048	3	48	1.375	58.25	66	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	384.36
HSTR-3508A	3.5	8	1.375	20.25	35	#8 3/4-16	5.750	1.250-12UNF	1.000	2.000	209.55
HSTR-3510	3.5	10	1.375	20.25	36	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	216.18
HSTR-3512	3.5	12	1.375	22.25	38	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	227.09
HSTR-3514	3.5	14	1.375	24.25	41	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	237.76
HSTR-3516A	3.5	16	1.375	31.50	46	#8 3/4-16	9.000	1.250-12UNF	1.000	2.000	262.79
HSTR-3518	3.5	18	1.375	28.25	47	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	259.52
HSTR-3520	3.5	20	1.375	30.25	49	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	270.36
HSTR-3524	3.5	24	1.375	34.25	54	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	296.67
HSTR-3530	3.5	30	1.375	40.25	64	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	332.76
HSTR-3536	3.5	36	1.375	46.25	66	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	366.21
HSTR-3548	3.5	48	1.375	58.25	73	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	432.67
HSTR-4008A	4	8	1.750	20.25	45	#8 3/4-16	5.250	1.500-12UNF	1.250	1.813	268.24
HSTR-4010	4	10	1.750	20.25	48	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	275.45
HSTR-4012	4	12	1.750	22.25	49	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	289.48
HSTR-4014	4	14	1.750	24.25	51	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	303.30
HSTR-4016	4	16	1.750	26.25	58	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	318.24
HSTR-4016A	4	16	1.750	31.50	61	#8 3/4-16	8.500	1.500-12UNF	1.250	1.813	337.42
HSTR-4018	4	18	1.750	28.25	62	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	332.18
HSTR-4020	4	20	1.750	30.25	72	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	346.21
HSTR-4024	4	24	1.750	34.25	74	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	378.27
HSTR-4030	4	30	1.750	40.25	77	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	425.03
HSTR-4036	4	36	1.750	46.25	83	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	469.39
HSTR-4048	4	48	1.750	58.25	109	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	555.82
HSTR-5008A	5	8	2.000	20.25	67	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	405.36
HSTR-5012	5	12	2.000	24.25	75	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	445.94
HSTR-5014	5	14	2.000	26.25	80	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	465.73
HSTR-5016A	5	16	2.000	31.50	84	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	501.18
HSTR-5018	5	18	2.000	30.25	90	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	505.64
HSTR-5020	5	20	2.000	32.25	95	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	526.85
HSTR-5024	5	24	2.000	36.25	100	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	572.18
HSTR-5030	5	30	2.000	42.25	108	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	638.61
HSTR-5036	5	36	2.000	48.25	118	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	700.88
HSTR-5048	5	48	2.000	60.25	161	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	824.18

SEAL KIT NUMBER	Rod x Bore	LIST PRICE
HSTR-2.0X1.12K	SK-P-U-10-1.125x2.000	\$ 20.17
HSTR-2.5X1.25K	SK-P-U-10-1.250x2.500	20.92
HSTR-3.0X1.37K	SK-P-U-10-1.375x3.000	23.91
HSTR-3.5X1.37K	SK-P-U-10-1.375x3.500	25.88
HSTR-4.0X1.75K	SK-P-U-10-1.750x4.000	36.02
HSTR-5.0X2.0K	SK-P-U-10-2.000x5.000	47.46

HMW MECHANICAL WELDED CYLINDERS

THE HMW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS (4" Bore = 3000 PSI, 5" Bore = 2500 PSI)



FEATURES:

- Honed tubing
- Heavy duty welded construction
- Chromed, ground & polished piston rod
- Cast iron piston & gland
- Pin eye mounting on both ends
- Loaded u-seal & urethane wiper in gland
- O-ring/backup washers & u-seals for piston seals
- Threaded gland retainer
- Standard color is black

Bore	B	C	D	E	Ports(NPT)
1.50	0.77	2.25	2.00	2.0	1/4 NPT
2.00	1.02	2.75	2.25	2.5	3/8 NPT
2.50	1.02	3.25	2.25	3.0	1/2 NPT
3.00	1.02	3.75	2.25	3.5	1/2 NPT
3.50	1.27	4.25	2.25	4.0	1/2 NPT
4.00	1.52	4.75	2.50	4.5	1/2 NPT
5.00	1.77	5.75	3.25	5.5	1/2 NPT

Seal kits for these cylinders are shown at the end of the section.

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RETRACTED (INCH)	PIN CENTERS EXTENDED (INCH)	WEIGHT LBS	LIST PRICE	
HMW-1504	1.50	4	1"	12.00	16.00	9.04	\$ 119.13	
HMW-1506	1.50	6	1"	14.00	20.00	10.14	129.19	
HMW-1508	1.50	8	1"	16.00	24.00	11.47	138.25	
HMW-1510	1.50	10	1"	18.00	28.00	12.79	145.89	
HMW-2008	2.00	8	1-1/4"	16.00	24.00	13.45	131.78	
HMW-2010	2.00	10	1-1/4"	18.00	28.00	15.21	139.26	
HMW-2012	2.00	12	1-1/4"	20.00	32.00	16.98	144.85	
HMW-2014	2.00	14	1-1/4"	22.00	36.00	18.74	152.01	
HMW-2016	2.00	16	1-1/4"	24.00	40.00	20.51	162.17	
HMW-2018	2.00	18	1-1/4"	26.00	44.00	22.27	171.00	
HMW-2020	2.00	20	1-1/4"	28.00	48.00	24.03	176.41	
HMW-2024	2.00	24	1-1/4"	32.00	56.00	27.56	190.97	
HMW-2028	2.00	28	1-1/4"	36.00	64.00	31.09	199.74	
HMW-2030	2.00	30	1-1/4"	38.00	68.00	32.85	237.77	
HMW-2032	2.00	32	1-1/4"	40.00	72.00	34.84	252.52	
HMW-2036	2.00	36	1-1/4"	44.00	80.00	38.37	262.75	
HMW-2040	2.00	40	1-1/4"	48.00	88.00	41.90	289.32	
HMW-2048	2.00	48	1-1/4"	56.00	104.00	48.95	342.56	
HMW-2508	2.50	8	1-1/2"	16.00	24.00	19.85	143.75	
HMW-2510	2.50	10	1-1/2"	18.00	28.00	21.83	152.65	
HMW-2512	2.50	12	1-1/2"	20.00	32.00	24.03	157.22	
HMW-2514	2.50	14	1-1/2"	22.00	36.00	26.24	167.48	
HMW-2516	2.50	16	1-1/2"	24.00	40.00	28.44	172.91	



HMW MECHANICAL WELDED CYLINDERS

THE HMW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS (4" Bore = 3000 PSI, 5" Bore = 2500 PSI)

CYLINDERS

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RETRACTED (INCH)	PIN CENTERS EXTENDED (INCH)	WEIGHT LBS	LIST PRICE	
HMW-2518	2.50	18	1-1/2"	26.00	44.00	30.65	\$ 180.26	
HMW-2520	2.50	20	1-1/2"	28.00	48.00	32.85	193.04	
HMW-2524	2.50	24	1-1/2"	32.00	56.00	37.26	206.08	
HMW-2528	2.50	28	1-1/2"	36.00	64.00	41.45	227.38	
HMW-2530	2.50	30	1-1/2"	38.00	68.00	43.66	252.14	
HMW-2532	2.50	32	1-1/2"	40.00	72.00	45.86	269.64	
HMW-2536	2.50	36	1-1/2"	44.00	80.00	50.27	278.54	
HMW-2540	2.50	40	1-1/2"	48.00	88.00	54.68	316.86	
HMW-2548	2.50	48	1-1/2"	56.00	104.00	63.28	394.40	
HMW-3008	3.00	8	1-1/2"	16.00	24.00	24.70	161.46	
HMW-3010	3.00	10	1-1/2"	18.00	28.00	27.12	171.26	
HMW-3012	3.00	12	1-1/2"	20.00	32.00	29.55	184.53	
HMW-3014	3.00	14	1-1/2"	22.00	36.00	31.97	191.72	
HMW-3016	3.00	16	1-1/2"	24.00	40.00	34.40	199.06	
HMW-3018	3.00	18	1-1/2"	26.00	44.00	36.82	206.05	
HMW-3020	3.00	20	1-1/2"	28.00	48.00	39.25	216.38	
HMW-3024	3.00	24	1-1/2"	32.00	56.00	44.10	239.61	
HMW-3028	3.00	28	1-1/2"	36.00	64.00	48.95	265.66	
HMW-3030	3.00	30	1-1/2"	38.00	68.00	51.38	275.99	
HMW-3032	3.00	32	1-1/2"	40.00	72.00	53.58	289.74	
HMW-3036	3.00	36	1-1/2"	44.00	80.00	58.43	309.74	
HMW-3040	3.00	40	1-1/2"	48.00	88.00	63.28	364.82	
HMW-3048	3.00	48	1-1/2"	56.00	104.00	72.99	402.91	
HMW-3508	3.50	8	1-3/4"	18.00	26.00	32.63	188.61	
HMW-3510	3.50	10	1-3/4"	20.00	30.00	35.72	195.63	
HMW-3512	3.50	12	1-3/4"	22.00	34.00	38.81	205.37	
HMW-3514	3.50	14	1-3/4"	24.00	38.00	41.67	213.50	
HMW-3516	3.50	16	1-3/4"	26.00	42.00	44.76	234.53	
HMW-3518	3.50	18	1-3/4"	28.00	46.00	47.63	247.12	
HMW-3520	3.50	20	1-3/4"	30.00	50.00	50.72	259.03	
HMW-3524	3.50	24	1-3/4"	34.00	58.00	56.67	277.44	
HMW-3528	3.50	28	1-3/4"	38.00	66.00	62.62	322.49	
HMW-3530	3.50	30	1-3/4"	40.00	70.00	65.71	349.35	
HMW-3532	3.50	32	1-3/4"	42.00	74.00	68.80	359.51	
HMW-3536	3.50	36	1-3/4"	46.00	82.00	74.75	388.93	
HMW-3540	3.50	40	1-3/4"	50.00	90.00	80.70	407.09	
HMW-3548	3.50	48	1-3/4"	58.00	106.00	92.61	458.32	
HMW-4008	4.00	8	2"	18.00	26.00	40.79	221.65	
HMW-4010	4.00	10	2"	20.00	30.00	44.54	243.30	
HMW-4012	4.00	12	2"	22.00	34.00	48.29	257.09	
HMW-4014	4.00	14	2"	24.00	38.00	51.82	276.18	
HMW-4016	4.00	16	2"	26.00	42.00	55.57	285.76	
HMW-4018	4.00	18	2"	28.00	46.00	59.09	295.86	
HMW-4020	4.00	20	2"	30.00	50.00	62.84	307.83	
HMW-4024	4.00	24	2"	34.00	58.00	70.12	322.49	
HMW-4028	4.00	28	2"	38.00	66.00	77.40	365.05	
HMW-4030	4.00	30	2"	40.00	70.00	81.14	389.61	
HMW-4032	4.00	32	2"	42.00	74.00	84.67	408.48	
HMW-4036	4.00	36	2"	46.00	82.00	91.95	434.27	
HMW-4040	4.00	40	2"	50.00	90.00	99.23	462.85	
HMW-4048	4.00	48	2"	58.00	106.00	114.00	536.70	
HMW-5008	5.00	8	2-1/2"	20.00	28.00	71.88	366.02	
HMW-5010	5.00	10	2-1/2"	22.00	32.00	76.07	381.10	

HMW MECHANICAL WELDED CYLINDERS

THE HMW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS (4" Bore = 3000 PSI, 5" Bore = 2500 PSI)

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RETRACTED (INCH)	PIN CENTERS EXTENDED (INCH)	WEIGHT LBS	LIST PRICE	RESELLER
HMW-5012	5.00	12	2-1/2"	24.00	36.00	80.48	\$ 424.05	
HMW-5014	5.00	14	2-1/2"	26.00	40.00	84.67	455.76	
HMW-5016	5.00	16	2-1/2"	28.00	44.00	89.08	480.87	
HMW-5018	5.00	18	2-1/2"	30.00	48.00	93.49	506.08	
HMW-5020	5.00	20	2-1/2"	32.00	52.00	97.68	528.51	
HMW-5024	5.00	24	2-1/2"	36.00	60.00	106.28	546.12	
HMW-5028	5.00	28	2-1/2"	40.00	68.00	115.10	569.29	
HMW-5030	5.00	30	2-1/2"	42.00	72.00	119.29	591.00	
HMW-5032	5.00	32	2-1/2"	44.00	76.00	123.70	636.47	
HMW-5036	5.00	36	2-1/2"	48.00	84.00	132.30	668.58	
HMW-5040	5.00	40	2-1/2"	52.00	92.00	140.90	739.68	
HMW-5048	5.00	48	2-1/2"	60.00	108.00	158.10	812.75	

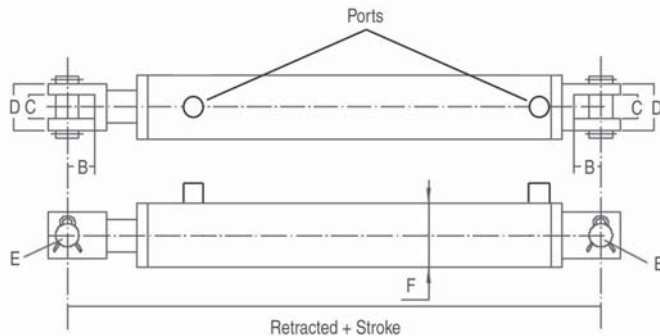
SEAL KIT NUMBER	Rod x Bore	LIST PRICE
HMW-1.5X1.00K	SK-P-U-5-1.000x1.500	\$ 21.87
HMW-2.0X1.25K	SK-P-U-5-1.250x2.000	34.47
HMW-2.5X1.50K	SK-P-U-5-1.500x2.500	45.67
HMW-3.0X1.50K	SK-P-U-5-1.500x3.000	50.99
HMW-3.5X1.75K	SK-P-U-5-1.750x3.500	60.90
HMW-4.0X2.00K	SK-P-U-5-2.000x4.000	59.07
HMW-5.0X2.50K	SK-P-U-5-2.500x5.000	94.80

These seal kits are replacements for both the HMW and HCW cylinders.

CLEVIS WELDED CYLINDERS

THE HCW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS (4" Bore = 3000 PSI, 5" Bore = 2500 PSI)



FEATURES:

- Skived, honed tubing
- Heavy duty welded construction
- Chromed, ground & polished piston rod will operate at full pressure through 16" stroke
- Cast iron piston, cast steel butt, gland & clevis
- Loaded u-seal & urethane wiper in gland, u-seal on piston
- Threaded gland
- Pins & clips included
- Standard color is black
- Stroke control may be installed on 8" strokes

Seal kits for these cylinders are shown at the end of the section.

Bore	B	C	D	E	F	Ports(NPT)
2.00	2.125	1.125	2.07	1.00	2.5	3/8 NPT
2.50	2.125	1.125	2.07	1.00	3.0	1/2 NPT
3.00	2.125	1.125	2.07	1.00	3.5	1/2 NPT
3.50	2.125	1.125	2.07	1.00	4.0	1/2 NPT
4.00	2.000	1.125	2.07	1.00	4.5	1/2 NPT
5.00	2.000	1.500	2.44	1.00	5.5	1/2 NPT

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RE-TRACTED (INCH)	PIN CENTERS EXTENDED (INCH)	WEIGHT LBS	LIST PRICE	
HCW-2004	2.00	4	1-1/4"	14.25	18.25	12.79	\$ 125.21	
HCW-2006	2.00	6	1-1/4"	16.25	22.25	14.55	125.21	
HCW-2008	2.00	8	1-1/4"	20.25	28.25	16.32	131.88	
HCW-2010	2.00	10	1-1/4"	20.25	30.25	17.86	140.58	
HCW-2012	2.00	12	1-1/4"	22.25	34.25	19.40	145.02	
HCW-2014	2.00	14	1-1/4"	24.25	38.25	21.17	152.01	
HCW-2016	2.00	16	1-1/4"	26.25	42.25	22.93	162.33	
HCW-2018	2.00	18	1-1/4"	28.25	46.25	24.48	172.33	
HCW-2020	2.00	20	1-1/4"	30.25	50.25	26.24	176.57	
HCW-2024	2.00	24	1-1/4"	34.25	58.25	29.55	191.07	
HCW-2028	2.00	28	1-1/4"	38.25	66.25	32.85	199.94	
HCW-2030	2.00	30	1-1/4"	40.25	70.25	34.62	237.77	
HCW-2032	2.00	32	1-1/4"	42.25	74.25	36.16	252.65	
HCW-2034	2.00	34	1-1/4"	44.25	78.25	37.93	258.09	
HCW-2036	2.00	36	1-1/4"	46.25	82.25	39.69	262.75	
HCW-2504	2.50	4	1-1/2"	14.25	18.25	16.98	136.34	
HCW-2506	2.50	6	1-1/2"	16.25	22.25	19.18	136.34	
HCW-2508	2.50	8	1-1/2"	20.25	28.25	21.39	143.92	
HCW-2510	2.50	10	1-1/2"	20.25	30.25	23.37	152.65	
HCW-2512	2.50	12	1-1/2"	22.25	34.25	25.58	157.38	
HCW-2514	2.50	14	1-1/2"	24.25	38.25	27.78	167.48	
HCW-2516	2.50	16	1-1/2"	26.25	42.25	29.77	173.04	
HCW-2518	2.50	18	1-1/2"	28.25	46.25	31.97	180.26	
HCW-2520	2.50	20	1-1/2"	30.25	50.25	34.18	193.20	
HCW-2524	2.50	24	1-1/2"	34.25	58.25	38.37	206.21	
HCW-2528	2.50	28	1-1/2"	38.25	66.25	42.56	227.61	



CLEVIS WELDED CYLINDERS

THE HCW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS (4" Bore = 3000 PSI, 5" Bore = 2500 PSI)

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RE-TRACTED (INCH)	PIN CENTERS EXTENDED (INCH)	WEIGHT LBS	LIST PRICE	
HCW-2530	2.50	30	1-1/2"	40.25	70.25	44.76	\$ 252.14	
HCW-2532	2.50	32	1-1/2"	42.25	74.25	46.97	269.74	
HCW-2534	2.50	34	1-1/2"	44.25	78.25	48.95	274.30	
HCW-2536	2.50	36	1-1/2"	46.25	82.25	51.16	278.54	
HCW-3004	3.00	4	1-1/2"	14.25	18.25	21.83	151.26	
HCW-3006	3.00	6	1-1/2"	16.25	22.25	24.26	151.26	
HCW-3008	3.00	8	1-1/2"	20.25	28.25	26.90	160.00	
HCW-3010	3.00	10	1-1/2"	20.25	30.25	29.11	171.26	
HCW-3012	3.00	12	1-1/2"	22.25	34.25	31.53	184.66	
HCW-3014	3.00	14	1-1/2"	24.25	38.25	33.96	191.72	
HCW-3016	3.00	16	1-1/2"	26.25	42.25	36.60	199.26	
HCW-3018	3.00	18	1-1/2"	28.25	46.25	39.03	206.05	
HCW-3020	3.00	20	1-1/2"	30.25	50.25	41.45	216.50	
HCW-3024	3.00	24	1-1/2"	34.25	58.25	46.31	239.81	
HCW-3028	3.00	28	1-1/2"	38.25	66.25	51.16	265.99	
HCW-3030	3.00	30	1-1/2"	40.25	70.25	53.58	276.67	
HCW-3032	3.00	32	1-1/2"	42.25	74.25	56.23	289.84	
HCW-3034	3.00	34	1-1/2"	44.25	78.25	58.65	299.97	
HCW-3036	3.00	36	1-1/2"	46.25	82.25	61.08	309.74	
HCW-3504	3.50	4	1-3/4"	14.25	18.25	26.24	178.93	
HCW-3506	3.50	6	1-3/4"	16.25	22.25	29.33	178.93	
HCW-3508	3.50	8	1-3/4"	20.25	28.25	32.41	189.74	
HCW-3510	3.50	10	1-3/4"	20.25	30.25	35.50	195.63	
HCW-3512	3.50	12	1-3/4"	22.25	34.25	38.59	206.54	
HCW-3514	3.50	14	1-3/4"	24.25	38.25	41.67	213.50	
HCW-3516	3.50	16	1-3/4"	26.25	42.25	44.76	234.53	
HCW-3518	3.50	18	1-3/4"	28.25	46.25	48.07	247.12	
HCW-3520	3.50	20	1-3/4"	30.25	50.25	51.16	260.19	
HCW-3524	3.50	24	1-3/4"	34.25	58.25	57.33	277.44	
HCW-3528	3.50	28	1-3/4"	38.25	66.25	63.50	321.36	
HCW-3530	3.50	30	1-3/4"	40.25	70.25	66.59	350.49	
HCW-3532	3.50	32	1-3/4"	42.25	74.25	69.90	359.51	
HCW-3534	3.50	34	1-3/4"	44.25	78.25	72.99	374.40	
HCW-3536	3.50	36	1-3/4"	46.25	82.25	76.07	390.10	
HCW-4004	4.00	4	2"	14.25	18.25	30.65	214.85	
HCW-4006	4.00	6	2"	16.25	22.25	34.40	214.85	
HCW-4008	4.00	8	2"	20.25	28.25	39.25	227.09	
HCW-4010	4.00	10	2"	20.25	30.25	42.12	243.30	
HCW-4012	4.00	12	2"	22.25	34.25	46.08	257.09	
HCW-4014	4.00	14	2"	24.25	38.25	50.05	276.18	
HCW-4016	4.00	16	2"	26.25	42.25	53.80	285.76	
HCW-4018	4.00	18	2"	28.25	46.25	57.77	295.86	
HCW-4020	4.00	20	2"	30.25	50.25	61.52	307.83	
HCW-4024	4.00	24	2"	34.25	58.25	69.46	322.49	
HCW-4028	4.00	28	2"	38.25	66.25	77.18	365.05	
HCW-4030	4.00	30	2"	40.25	70.25	81.14	395.02	
HCW-4032	4.00	32	2"	42.25	74.25	84.89	408.48	
HCW-4034	4.00	34	2"	44.25	78.25	88.86	421.52	
HCW-4036	4.00	36	2"	46.25	82.25	92.61	439.68	
HCW-5004	5.00	4	2-1/2"	16.25	20.25	63.95	353.72	
HCW-5006	5.00	6	2-1/2"	18.25	24.25	68.36	353.72	
HCW-5008	5.00	8	2-1/2"	20.25	28.25	72.77	366.28	
HCW-5010	5.00	10	2-1/2"	22.25	32.25	77.18	381.10	

CYLINDERS

CLEVIS WELDED CYLINDERS

THE HCW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS (4" Bore = 3000 PSI, 5" Bore = 2500 PSI)

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RE-TRACTED (INCH)	PIN CENTERS EXTENDED (INCH)	WEIGHT LBS	LIST PRICE	
HCW-5012	5.00	12	2-1/2"	24.25	36.25	81.59	\$ 424.05	
HCW-5014	5.00	14	2-1/2"	26.25	40.25	86.00	455.76	
HCW-5016	5.00	16	2-1/2"	28.25	44.25	90.41	480.87	
HCW-5018	5.00	18	2-1/2"	30.25	48.25	94.82	506.08	
HCW-5020	5.00	20	2-1/2"	32.25	52.25	99.23	528.51	
HCW-5024	5.00	24	2-1/2"	36.25	60.25	108.05	546.12	
HCW-5028	5.00	28	2-1/2"	40.25	68.25	116.87	569.29	
HCW-5030	5.00	30	2-1/2"	42.25	72.25	121.28	591.00	
HCW-5032	5.00	32	2-1/2"	44.25	76.25	125.69	636.73	
HCW-5034	5.00	34	2-1/2"	46.25	80.25	130.10	652.69	
HCW-5036	5.00	36	2-1/2"	48.25	84.25	134.51	668.58	

SEAL KIT NUMBER	Rod x Bore	LIST PRICE
HMW-1.5X1.00K	SK-P-U-5-1.000x1.500	\$ 21.87
HMW-2.0X1.25K	SK-P-U-5-1.250x2.000	34.47
HMW-2.5X1.50K	SK-P-U-5-1.500x2.500	45.67
HMW-3.0X1.50K	SK-P-U-5-1.500x3.000	50.99
HMW-3.5X1.75K	SK-P-U-5-1.750x3.500	60.90
HMW-4.0X2.00K	SK-P-U-5-2.000x4.000	59.07
HMW-5.0X2.50K	SK-P-U-5-2.500x5.000	94.80

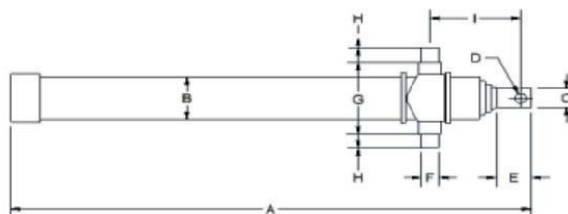
These seal kits are replacements for both the HMW and HCW cylinders.

CYLINDERS

THE HTC LINE

3000 PSI SINGLE ACTING CYLINDERS

7 Tons and 12 Tons Inverse



PART NUMBER	CAPACITY	STROKE	CLOSED (A)	B	C	D	E	F	G	H	I	PORT	WEIGHT LBS.	LIST PRICE	
HTC-3378	7 TONS	78"	35.5"	4	2	1.0625	2.25	1.25	6.5	1.25	7	1/2" NPT	108 LBS	\$ 660.32	
HTC-3390	7 TONS	90"	39.5"	4	2	1.0625	2.5	1.25	6.5	1.25	7	1/2" NPT	100 LBS	699.39	
HTC-33108	7 TONS	108"	45"	4	2	1.0625	2.5	1.25	6.5	1.25	7	1/2" NPT	120 LBS	753.16	
HTC-4378	12 TONS	78"	34.75"	5	2	1.0625	2.25	1.5	7.5	1.5	7	1/2" NPT	129 LBS	833.81	
HTC-4390	12 TONS	90"	38.75"	5	2	1.0625	2.25	1.5	7.5	1.5	7	1/2" NPT	129 LBS	880.48	
HTC-43108	12 TONS	108"	44.75"	5	2	1.0625	2.25	1.5	7.5	1.5	7	1/2" NPT	156 LBS	944.81	
HTC-43120	12 TONS	120"	48.75"	5	2	1.0625	2.25	1.5	7.5	1.5	7	1/2" NPT	167 LBS	1,018.65	
SEAL KIT NUMBER		SERIES		LIST PRICE											
HTC-756045K		HTC 33 Series		\$ 71.94											
HTC-927560K		HTC 43 Series		104.60											

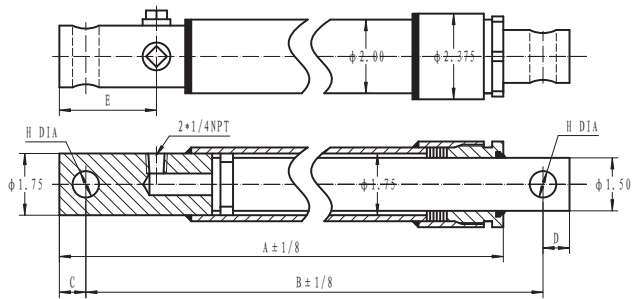
See page 25 for a complete list of Power Units and pricing.

SNOW PLOW CYLINDERS

Snow Plow Cylinders

SNOW PLOW

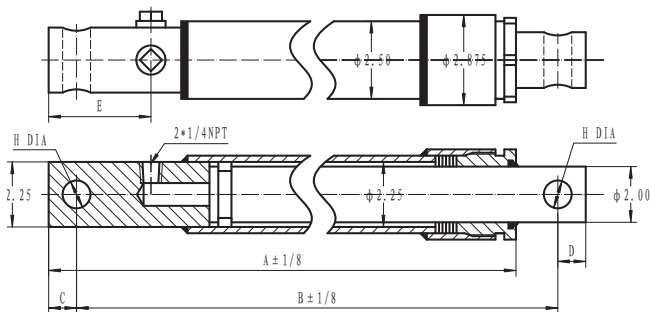
2500 PSI SINGLE ACTING CYLINDERS



FEATURES:

- Ductile iron piston.
- Ductile iron gland, drilled oil passages.
- Honed steel tube, precision finished for extended seal life.
- High tensile, hard chrome plated rod.
- Tube Seal: O-ring
- All Seals: Manufactured to US specifications.

PART NUMBER	DESCRIPTION	A	B	C & D	E	H	WT LBS.	LIST PRICE	
HSPM-1506-0625	MYER 1.5" X 6"	11-7/8	12.00	11/16	2.00	5/8	12	\$ 89.21	
HSPM-1510-0625	MYER 1.5" X 10"	15-7/8	16-1/4	11/16	2.00	5/8	14	101.52	
HSPM-1512-0625	MYER 1.5" X 12"	17-7/8	18.00	11/16	2.00	5/8	15	107.33	
HSPW-1506-0750	WESTERN 1.5" X 6"	12-5/8	13.00	11/16	2-3/4	3/4	12	89.21	
HSPW-1508-0750	WESTERN 1.5" X 8"	14-5/8	15-1/4	11/16	2-3/4	3/4	13	95.79	
HSPW-1510-0750	WESTERN 1.5" X 10" X 3/4"	16-5/8	17-1/4	11/16	2-3/4	3/4	14	101.52	
HSPW-1510-1000	WESTERN 1.5" X 10" X 1"	16-5/8	17-1/2	11/16	2-3/4	1.00	14	101.52	
HSPA-1510-0750	ARTIC 1.5" X 10"	16-5/8	17.00	3/4	2-3/4	3/4	14	101.52	
HSPA-1512-0750	ARTIC 1.5" X 12"	18-5/8	19.00	3/4	2-3/4	3/4	15	107.33	
HSPF-1512-1000	FISHER 1.5" X 12"	18-7/16	19-3/8	3/4	2-5/8	1.00	15	107.33	
HSPF-1510-1000	FISHER & DIAMOND 1.5" X 10"	16-3/8	17-1/4	3/4	2-11/16	1.00	14	101.52	
SEAL KIT NUMBER	DESCRIPTION	LIST PRICE							
HSP-SP150K	1-1/2" ROD CYLINDER	\$ 10.73							
HSP-SP200K	2" ROD CYLINDER	12.57							



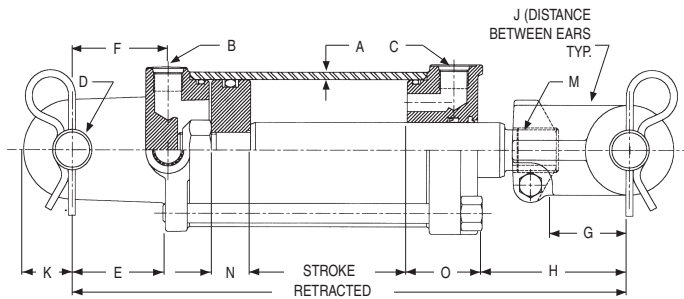
PART NUMBER	DESCRIPTION	A	B	C & D	E	H	WT LBS.	LIST PRICE	
HSPM-2012-0625	MYER 2.0" X 12"	17-1/4	18.00	3/4	2-3/16	5/8	18	\$ 136.12	
HSPW-2016-1000	WESTERN & DIAMOND 2.0" X 16"	22-5/8	23-5/8	11/16	2-3/4	1.00	21	157.79	
HSPW-2006-0750	WESTERN 2.0" X 6"	12-5/8	13-3/16	3/4	2-3/4	3/4	13	115.73	
HSPW-2010-1000	WESTERN 2.0" X 10"	16-5/8	17-1/4	11/16	2-3/4	1.00	16	132.18	
HSPF-2016-125	FISHER 2.0" X 16"	22-1/2	23-1/4	7/8	2-3/4	1-1/4	20	157.79	

TIE-ROD CYLINDERS



THE ROYAL PLATE LINE

3000 PSI DOUBLE ACTING TIE ROD CYLINDERS



FEATURES:

- Honed tubing (Royal Plate series have cylinder finish tubing)
- Heavy duty, high strength tie rods
- Chromed, ground & polished piston rod will operate at full pressure through 16" stroke
- Cast iron piston, ductile iron butt, gland & clevis
- Carboxylated nitrile u-cup & urethane wiper in gland
- Pins & clips included
- Standard color is red
- Stroke control may be installed on 8" strokes
- Side ports available on request at no additional cost

Seal kits for these cylinders are shown at the end of the section.
"A" = Agricultural application w/ rod extension.

PART NUMBER	MFGR NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	A	B/C PORT SIZE	D	E	F	G	H	J	K	M	N	O	SHIP WT.	LIST PRICE	
PTR-2004	8404	2	4	1	14 1/4	1/8	3/4-16 SAE	1.015	2 5/16	2 7/16	1 13/16	3 1/4	1.06	15/16	1-14	7/8	2 1/4	18	\$217.20	
PTR-2006	8406	2	6	1	16 1/4	1/8	3/4-16 SAE	1.015	2 5/16	2 7/16	1 13/16	3 1/4	1.06	15/16	1-14	7/8	2 1/4	19	218.80	
PTR-2008	8408	2	8	1	20 1/4	1/8	3/4-16 SAE	1.015	2 5/16	2 7/16	1 13/16	3 1/4	1.06	15/16	1-14	7/8	2 1/4	20	222.00	
PTR-2010	8410	2	10	1	20 1/4	1/8	3/4-16 SAE	1.015	2 5/16	2 7/16	1 13/16	3 1/4	1.06	15/16	1-14	7/8	2 1/4	21	229.30	
PTR-2012	9012	2	12	1 1/8	22 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	7/8	2 3/8	25	232.30	
PTR-2014	9014	2	14	1 1/8	24 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	7/8	2 3/8	26	237.00	
PTR-2016A	9016	2	16	1 1/8	31 1/2	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	8 1/2	1.06	15/16	1 1/8-12	7/8	2 3/8	28	247.50	
PTR-2018	9018	2	18	1 1/8	28 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	7/8	2 3/8	29	253.80	
PTR-2020	9020	2	20	1 1/8	30 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	7/8	2 3/8	31	262.40	
PTR-2024	9024	2	24	1 1/8	34 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	7/8	2 3/8	35	279.30	
PTR-2030	9030	2	30	1 1/8	40 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	7/8	2 3/8	39	304.70	
PTR-2506	7006	2 1/2	6	1 1/8	16 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	1	2 3/8	22	237.00	
PTR-2508	9108	2 1/2	8	1 1/4	20 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	5 1/4	1.06	15/16	1 1/8-12	1	2 3/8	25	242.10	
PTR-2510	9110	2 1/2	10	1 1/4	20 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	1	2 3/8	26	251.40	
PTR-2512	9112	2 1/2	12	1 1/4	22 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	1	2 3/8	27	262.50	
PTR-2514	9114	2 1/2	14	1 1/4	24 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	1	2 3/8	29	273.70	
PTR-2516	9116	2 1/2	16	1 1/4	31 1/2	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	8 1/2	1.06	15/16	1 1/8-12	1	2 3/8	33	286.80	
PTR-2518	9118	2 1/2	18	1 1/4	28 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	1	2 3/8	34	296.10	
PTR-2520	9120	2 1/2	20	1 1/4	30 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	1	2 3/8	36	307.20	
PTR-2524	9124	2 1/2	24	1 1/4	34 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	1	2 3/8	39	329.70	
PTR-2530	9130	2 1/2	30	1 1/4	40 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 3/8	1 13/16	3 1/4	1.06	15/16	1 1/8-12	1	2 3/8	44	362.90	
PTR-3006	7106	3	6	1 1/8	16 1/4	1/8	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	3 3/4	1.06	15/16	1 1/8-12	1	1 15/16	24	241.70	
PTR-3008	9208	3	8	1 3/8	20 1/4	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	5 3/4	1.06	15/16	1 1/8-12	1	1 15/16	32	254.40	
PTR-3010	9210	3	10	1 3/8	20 1/4	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	3 3/4	1.06	15/16	1 1/8-12	1	1 15/16	33	265.60	
PTR-3012	9212	3	12	1 3/8	22 1/4	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	3 3/4	1.06	15/16	1 1/8-12	1	1 15/16	33	278.50	
PTR-3014	9214	3	14	1 3/8	24 1/4	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	3 3/4	1.06	15/16	1 1/8-12	1	1 15/16	35	291.10	
PTR-3016	10616	3	16	1 3/8	26 1/4	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 1/8-12	1	1 15/16	29	305.90	
PTR-3016A	9216	3	16	1 3/8	31 1/2	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	9	1.06	15/16	1 1/8-12	1	1 15/16	39	305.90	
PTR-3018	9218	3	18	1 3/8	28 1/4	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	3 3/4	1.06	15/16	1 1/8-12	1	1 15/16	42	316.80	
PTR-3020	9220	3	20	1 3/8	30 1/4	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	3 3/4	1.06	15/16	1 1/8-12	1	1 15/16	45	329.80	

TIE-ROD CYLINDERS



THE ROYAL PLATE LINE

3000 PSI DOUBLE ACTING TIE ROD CYLINDERS

PART NUMBER	MFGR NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	A	B/C PORT SIZE	D	E	F	G	H	J	K	M	N	O	SHIP WT.	LIST PRICE	
PTR-3024	9224	3	24	1 3/8	34 1/4	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	3 3/4	1.06	15/16	1 1/8-12	1	1 15/16	47	\$ 361.50	
PTR-3030	9230	3	30	1 3/8	40 1/4	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	3 3/4	1.06	15/16	1 1/8-12	1	1 15/16	53	411.50	
PTR-3036	9236	3	36	1 3/8	46 1/4	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	3 3/4	1.06	15/16	1 1/8-12	1	1 15/16	61	461.50	
PTR-3048	9248	3	48	1 3/8	58 1/4	3/16	3/4-16 SAE	1.015	2 7/16	2 7/16	1 13/16	3 3/4	1.06	15/16	1 1/8-12	1	1 15/16	66	568.70	
PTR-3508A	9308A	3 1/2	8	1 3/8	20 1/4	3/16	3/4-16 SAE	1.015	2 3/8	2 7/16	1 13/16	5 3/4	1.06	1 1/4	1 5/16-12	1	1 13/16	35	275.90	
PTR-3510	9310A	3 1/2	10	1 3/8	20 1/4	3/16	3/4-16 SAE	1.015	2 3/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 13/16	36	289.30	
PTR-3512	9312A	3 1/2	12	1 3/8	22 1/4	3/16	3/4-16 SAE	1.015	2 3/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 13/16	38	305.90	
PTR-3514	9314A	3 1/2	14	1 3/8	24 1/4	3/16	3/4-16 SAE	1.015	2 3/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 13/16	41	322.10	
PTR-3516A	9316A	3 1/2	16	1 3/8	31 1/2	3/16	3/4-16 SAE	1.015	2 3/8	2 7/16	1 13/16	9	1.06	1 1/4	1 5/16-12	1	1 13/16	46	341.30	
PTR-3518	9318A	3 1/2	18	1 3/8	28 1/4	3/16	3/4-16 SAE	1.015	2 3/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 13/16	47	354.60	
PTR-3520	9320A	3 1/2	20	1 3/8	30 1/4	3/16	3/4-16 SAE	1.015	2 3/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 13/16	49	370.90	
PTR-3524	9324A	3 1/2	24	1 3/8	34 1/4	3/16	3/4-16 SAE	1.015	2 3/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 13/16	54	403.50	
PTR-3530	9330A	3 1/2	30	1 3/8	40 1/4	3/16	3/4-16 SAE	1.015	2 3/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 13/16	64	464.00	
PTR-3536	9336A	3 1/2	36	1 3/8	46 1/4	3/16	3/4-16 SAE	1.015	2 3/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 13/16	66	524.20	
PTR-3548	9348A	3 1/2	48	1 3/8	58 1/4	3/16	3/4-16 SAE	1.015	2 3/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 13/16	73	645.30	
PTR-4008	9408	4	8	1 3/4	20 1/4	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	5 1/4	1.06	1 1/4	1 1/2-12	1	1 13/16	45	376.10	
PTR-4010	9410	4	10	1 3/4	20 1/4	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1	1 13/16	48	392.50	
PTR-4012	9412	4	12	1 3/4	22 1/4	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1	1 13/16	49	412.80	
PTR-4014	9414	4	14	1 3/4	24 1/4	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1	1 13/16	51	432.90	
PTR-4016	108816	4	16	1 3/4	26 1/4	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1	1 13/16	48	456.70	
PTR-4016A	9416	4	16	1 3/4	31 1/2	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	8 1/2	1.06	1 1/4	1 1/2-12	1	1 13/16	61	456.70	
PTR-4018	9418	4	18	1 3/4	28 1/4	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1	1 13/16	62	473.30	
PTR-4020	9420	4	20	1 3/4	30 1/4	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1	1 13/16	72	493.50	
PTR-4024	9424	4	24	1 3/4	34 1/4	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1	1 13/16	74	521.80	
PTR-4030	9430	4	30	1 3/4	40 1/4	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1	1 13/16	77	582.20	
PTR-4036	9436	4	36	1 3/4	46 1/4	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1	1 13/16	83	642.80	
PTR-4048	9448	4	48	1 3/4	58 1/4	3/16	3/4-16 SAE	1.015	2 5/16	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1	1 13/16	109	763.70	
PTR-5008	9508	5	8	2	20 1/4	1/4	7/8-14 SAE	1.265	2 3/4	2 5/8	2	4	1.06	1 1/4	1 1/2-12	1	2 1/2	67	521.60	
PTR-5012	9512	5	12	2	24 1/4	1/4	7/8-14 SAE	1.265	2 3/4	2 5/8	2	4	1.06	1 1/4	1 1/2-12	1	2 1/2	75	567.10	
PTR-5014	9514	5	14	2	26 1/4	1/4	7/8-14 SAE	1.265	2 3/4	2 5/8	2	4	1.06	1 1/4	1 1/2-12	1	2 1/2	80	589.90	
PTR-5016A	9516	5	16	2	31 1/2	1/4	7/8-14 SAE	1.265	2 3/4	2 5/8	2	7 1/4	1.06	1 1/4	1 1/2-12	1	2 1/2	84	620.30	
PTR-5018	9518	5	18	2	28 1/4	1/4	7/8-14 SAE	1.265	2 3/4	2 5/8	2	4	1.06	1 1/4	1 1/2-12	1	2 1/2	90	622.70	
PTR-5020	9520	5	20	2	32 1/4	1/4	7/8-14 SAE	1.265	2 3/4	2 5/8	2	4	1.06	1 1/4	1 1/2-12	1	2 1/2	95	658.20	
PTR-5024	9524	5	24	2	36 1/4	1/4	7/8-14 SAE	1.265	2 3/4	2 5/8	2	4	1.06	1 1/4	1 1/2-12	1	2 1/2	100	689.40	
PTR-5030	9530	5	30	2	42 1/4	1/4	7/8-14 SAE	1.265	2 3/4	2 5/8	2	4	1.06	1 1/4	1 1/2-12	1	2 1/2	108	761.10	
PTR-5036	9536	5	36	2	48 1/4	1/4	7/8-14 SAE	1.265	2 3/4	2 5/8	2	4	1.06	1 1/4	1 1/2-12	1	2 1/2	118	837.20	
PTR-5048	9548	5	48	2	60 1/4	1/4	7/8-14 SAE	1.265	2 3/4	2 5/8	2	4	1.06	1 1/4	1 1/2-12	1	2 1/2	161	1,007.40	

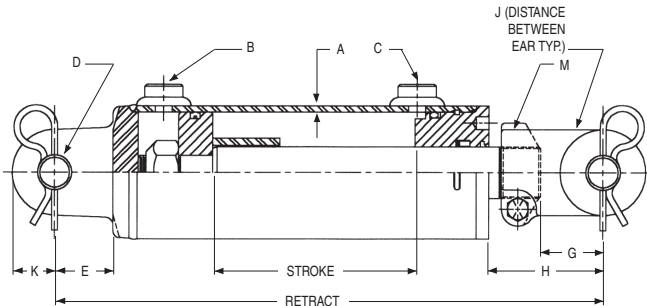
SEAL KIT NUMBER	Rod x Bore	LIST PRICE
PMCK-B200000	SK-I-U-10-1-1/8X2 (tie rod kit)	\$ 32.00
PMCK-B250000	SK-P-U-10-1-1/4X2-1/2	44.78
PMCK-B300000	SK-P-U-10-1-3/8X3	38.33
PMCK-B350000	SEAL KIT	32.00
PMCK-B400000	SK-P-U-10-1-3/4X4	63.00
PMCK-B450000	SK-P-U-10-2X4-1/2	64.22
PMCK-B500000	SK-P-U-10-2.000x5.000	57.51

WELDED CYLINDERS



THE SWORD LINE

3000 PSI DOUBLE ACTING CYLINDERS



FEATURES:

- Skived, honed tubing
- Heavy duty welded construction
- Chromed, ground & polished piston rod will operate at full pressure through 16" stroke
- Cast iron piston, cast steel butt, gland & clevis
- Carboxylated nitrile u-cup & urethane wiper in gland, crown seal on piston
- Square ring gland retainer provides positive lock
- Pins & clips included
- Standard color is white
- Stroke control may be installed on 8" strokes

CYLINDERS

PART NUMBER	MFGR. NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	A	B/C PORT SIZE	D	E	G	H	J	K	M	SHIP WT.	LIST PRICE	
PCW-1508	19408	2	8	3/4	20 1/4	3/16	1/2 NPTF	.765	2 5/8	2 5/8	5 1/4	5/8	3/4	-	13	\$282.70	
PCW-1510	19410	2	10	3/4	20 1/4	3/16	1/2 NPTF	.765	2 5/8	2 5/8	5 1/4	5/8	3/4	-	14	289.70	
PCW-2008	42008	2	8	1 1/8	20 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	5 9/16	1 1/16	1	1 1/8 12	10	287.10	
PCW-2010	42010	2	10	1 1/8	20 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	20	295.40	
PCW-2012	42012	2	12	1 1/8	22 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	22	303.40	
PCW-2016A	42016	2	16	1 1/8	31 1/2	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	8 13/16	1 1/16	1	1 1/8 12	25	329.00	
PCW-2020	42020	2	20	1 1/8	30 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	28	343.90	
PCW-2024	42024	2	24	1 1/8	34 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	31	360.60	
PCW-2508	42508	2 1/2	8	1 1/4	20 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	5 9/16	1 1/16	1	1 1/8 12	21	302.10	
PCW-2510	42510	2 1/2	10	1 1/4	20 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	22	310.60	
PCW-2512	42512	2 1/2	12	1 1/4	22 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	23	310.60	
PCW-2516	42516	2 1/2	16	1 1/4	31 1/2	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	8 13/16	1 1/16	1	1 1/8 12	27	346.50	
PCW-2520	42520	2 1/2	20	1 1/4	30 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	31	364.50	
PCW-2524	42524	2 1/2	24	1 1/4	34 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	35	383.40	
PCW-3008	43008	3	8	1 3/8	20 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	5 9/16	1 1/16	1 1/8	1 1/8 12	23	334.00	
PCW-3010	43010	3	10	1 3/8	20 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1 1/8	1 1/8 12	26	351.70	
PCW-3012	43012	3	12	1 3/8	22 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1 1/8	1 1/8 12	28	362.40	
PCW-3016A	43016	3	16	1 3/8	31 1/2	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	8 13/16	1 1/16	1 1/8	1 1/8 12	33	382.70	
PCW-3020	43020	3	20	1 3/8	30 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1 1/8	1 1/8 12	39	407.60	
PCW-3024	43024	3	24	1 3/8	34 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1 1/8	1 1/8 12	43	453.80	
PCW-3508	43508	3 1/2	8	1 1/2	20 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	5 3/8	1 1/16	1 1/4	1 1/2 12	29	419.70	
PCW-3510	43510	3 1/2	10	1 1/2	20 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 3/8	1 1/16	1 1/4	1 1/2 12	31	437.80	
PCW-3512	43512	3 1/2	12	1 1/2	22 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 3/8	1 1/16	1 1/4	1 1/2 12	33	455.80	
PCW-3516A	43516	3 1/2	16	1 1/2	31 1/2	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	8 3/8	1 1/16	1 1/4	1 1/2 12	38	506.10	
PCW-3520	43520	3 1/2	20	1 1/2	30 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 3/8	1 1/16	1 1/4	1 1/2 12	43	541.40	
PCW-3524	43524	3 1/2	24	1 1/2	34 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 3/8	1 1/16	1 1/4	1 1/2 12	48	581.10	
PCW-4008	44008	4	8	1 3/4	20 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	5 3/8	1 1/8	1 1/4	1 1/2 12	40	466.70	
PCW-4010	44010	4	10	1 3/4	20 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 3/8	1 1/8	1 1/4	1 1/2 12	43	486.60	
PCW-4012	44012	4	12	1 3/4	22 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 3/8	1 1/8	1 1/4	1 1/2 12	45	506.30	
PCW-4016A	44016	4	16	1 3/4	31 1/2	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	8 3/8	1 1/8	1 1/4	1 1/2 12	54	561.00	
PCW-4020	44020	4	20	1 3/4	30 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 3/8	1 1/8	1 1/4	1 1/2 12	58	601.50	
PCW-4024	44024	4	24	1 3/4	34 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 3/8	1 1/8	1 1/4	1 1/2 12	60	642.00	
PCW-4030	44030	4	30	1 3/4	40 1/4	3/16	1/2 NPTF	1.015	1 3/4	1 13/16	3 3/8	1 1/8	1 1/4	1 1/2 12	65	703.00	

SEAL KIT NUMBER	Rod x Bore	LIST PRICE
PMCK-19400	3/4 X 1-1/2	\$ 42.89
PMCK-42000	1-1/8 X 2	77.67
PMCK-42500	SEAL KIT	20.11
PMCK-43000	1-3/8 X 3	52.78
PMCK-43500	1-1/2 X 3-1/2	59.78
PMCK-44000	1-3/4 X 4	63.89

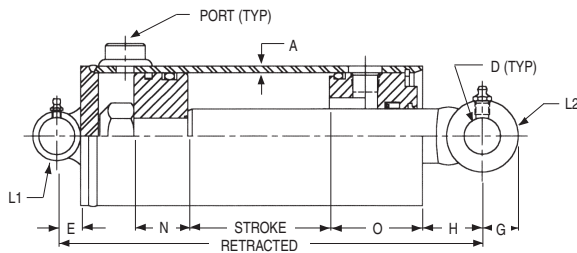
"A" = Agricultural application w/ rod extension.

WELDED CYLINDERS



THE ROYAL LINE

2500 PSI DOUBLE ACTING CYLINDERS



FEATURES:

- Honed tubing
- Heavy duty welded construction
- Chromed, ground & polished piston rod
- Cast iron piston & gland
- Pin eye mounting on both ends
- Quad ring/backup washer & urethane wiper in gland
- O-ring/backup washers & cast iron ring for piston seals
- Truarc type gland retainer
- Standard color is red

Seal kits for these cylinders are shown at the end of the section.

PART NUMBER	MFGR. NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	PORT SIZE	A	D	E	G	H	L1	L2	N	O	SHIP WT.	LIST PRICE	
PMW-2508	5408	2 1/2	8	1 3/8	16	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	17	\$ 260.10	
PMW-2512	5412	2 1/2	12	1 3/8	20	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	20	273.30	
PMW-2516	5416	2 1/2	16	1 3/8	24	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	23	287.40	
PMW-2520	5420	2 1/2	20	1 3/8	28	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	27	300.70	
PMW-2524	5424	2 1/2	24	1 3/8	32	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	30	313.30	
PMW-2530	5430	2 1/2	30	1 3/8	38	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	35	332.90	
PMW-2532	5432	2 1/2	32	1 3/8	40	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	41	344.30	
PMW-2536	5436	2 1/2	36	1 3/8	44	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	44	358.60	
PMW-2542	5442	2 1/2	42	1 3/8	50	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	47	414.10	
PMW-3008	8308	3	8	1 1/2	16	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	22	289.70	
PMW-3012	8312	3	12	1 1/2	20	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	26	314.20	
PMW-3016	8316	3	16	1 1/2	24	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	31	341.50	
PMW-3020	8320	3	20	1 1/2	28	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	35	365.90	
PMW-3024	8324	3	24	1 1/2	32	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	41	390.10	
PMW-3030	8330	3	30	1 1/2	38	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	46	425.60	
PMW-3032	8332	3	32	1 1/2	40	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	48	437.10	
PMW-3036	8336	3	36	1 1/2	44	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	52	460.90	
PMW-3040	8340	3	40	1 1/2	48	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	56	472.80	
PMW-3042	8342	3	42	1 1/2	50	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	59	484.50	
PMW-3048	8348	3	48	1 1/2	56	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	65	529.30	
PMW-3508	5508	3 1/2	8	1 1/2	16	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	26	360.60	
PMW-3512	5512	3 1/2	12	1 1/2	20	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	29	386.60	
PMW-3516	5516	3 1/2	16	1 1/2	24	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	34	412.60	
PMW-3520	5520	3 1/2	20	1 1/2	28	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	38	438.60	
PMW-3524	5524	3 1/2	24	1 1/2	32	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	44	449.30	
PMW-3530	5530	3 1/2	30	1 1/2	38	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	48	487.30	
PMW-3532	5532	3 1/2	32	1 1/2	40	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	52	499.70	
PMW-3536	5536	3 1/2	36	1 1/2	44	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	56	524.90	
PMW-3540	5540	3 1/2	40	1 1/2	48	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	60	550.00	
PMW-3542	5542	3 1/2	42	1 1/2	50	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	64	562.60	
PMW-3548	5548	3 1/2	48	1 1/2	56	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	70	680.20	
PMW-4008	5608	4	8	2	17	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	35	454.10	
PMW-4012	5612	4	12	2	21	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	41	464.80	
PMW-4016	5616	4	16	2	25	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	48	490.70	
PMW-4020	5620	4	20	2	29	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	56	516.10	

WELDED CYLINDERS



THE ROYAL LINE

2500 PSI DOUBLE ACTING CYLINDERS

PART NUMBER	MFGR. NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	PORT SIZE	A	D	E	G	H	L1	L2	N	O	SHIP WT.	LIST PRICE	
PMW-4024	5624	4	24	2	33	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	62	\$ 537.50	
PMW-4030	5630	4	30	2	39	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	72	577.80	
PMW-4032	5632	4	32	2	41	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	74	626.80	
PMW-4036	5636	4	36	2	45	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	80	646.40	
PMW-4040	5640	4	40	2	49	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	85	692.00	
PMW-4042	5642	4	42	2	51	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	92	704.20	
PMW-4048	5648	4	48	2	57	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	100	738.20	
PMW-4060	5660	4	60	2	69	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	120	861.80	

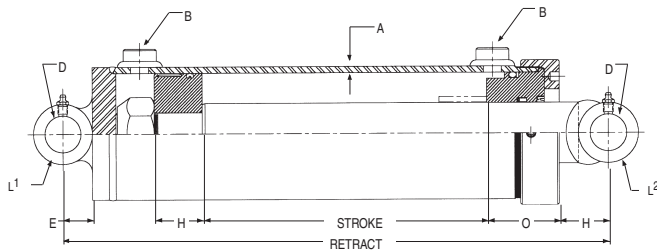
SEAL KIT NUMBER	Rod x Bore	LIST PRICE
PMCK-5400	1-3/8 X 2-1/2	\$ 50.89
PMCK-5500	1-1/2 X 3-1/2	63.00
PMCK-5600	2 X 4	67.78
PMCK-8300	1-1/2 X 3	54.00
PMCK-5500	1-1/2 X 3-1/2	63.00
PMCK-5600	2 X 4	67.78

WELDED CYLINDERS



THE GLADIATOR LINE

3000 PSI DOUBLE ACTING CYLINDERS



FEATURES:

- Heavy duty welded construction
- 3000 PSI (2:1 safety factor for buckling on 36" stroke and less. Longer stroke consult factory)
- Steel gland cap retainer with lock screw
- 3/4 NPTF full-flow ports
- Standard color is highway yellow
- High grade gray iron piston & gland
- Precision skived tube for long seal life
- All steel spacer tube for bearing length on 48" or more of stroke
- Ground and polished chrome C-1045 steel piston rod for maximum life
- Heavy duty torqued locknut for piston retainer
- Polyurethane "U" cup and heavy duty wiper in gland. Crown seal with bearing rings on piston

PART NUMBER	MFGR. NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	A	B PORT SIZE	D	E	H	L1	O	L2	SHIP WT.	LIST PRICE	
PMW-5008	21008	5	8	2 1/2	19	1/4	3/4 NPTF	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	75	\$ 756.90	
PMW-5012	21012	5	12	2 1/2	23	1/4	3/4 NPTF	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	85	819.40	
PMW-5016	21016	5	16	2 1/2	27	1/4	3/4 NPTF	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	90	855.80	
PMW-5020	21020	5	20	2 1/2	31	1/4	3/4 NPTF	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	105	915.50	
PMW-5024	21024	5	24	2 1/2	35	1/4	3/4 NPTF	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	115	983.10	
PMW-5030	21030	5	30	2 1/2	41	1/4	3/4 NPTF	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	130	1,075.50	
PMW-5036	21036	5	36	2 1/2	47	1/4	3/4 NPTF	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	145	1,150.10	
PMW-5048	21048	5	48	2 1/2	61	1/4	3/4 NPTF	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	180	1,425.10	
PMW-5054	21054	5	54	2 1/2	68	1/4	3/4 NPTF	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	195	1,515.30	
PMW-5060	21060	5	60	2 1/2	75	1/4	3/4 NPTF	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	215	1,619.20	
PMW-6008	22008	6	8	3	19	1/4	3/4 NPTF	1.515	1 1/4	2	6 3/4	3 1/8	4	100	943.10	
PMW-6012	22012	6	12	3	23	1/4	3/4 NPTF	1.515	1 1/4	2	6 3/4	3 1/8	4	110	994.60	
PMW-6016	22016	6	16	3	27	1/4	3/4 NPTF	1.515	1 1/4	2	6 3/4	3 1/8	4	125	1,066.30	
PMW-6024	22024	6	24	3	35	1/4	3/4 NPTF	1.515	1 1/4	2	6 3/4	3 1/8	4	150	1,234.60	
PMW-6030	22030	6	30	3	41	1/4	3/4 NPTF	1.515	1 1/4	2	6 3/4	3 1/8	4	170	1,366.70	
PMW-6036	22036	6	36	3	47	1/4	3/4 NPTF	1.515	1 1/4	2	6 3/4	3 1/8	4	190	1,498.90	
PMW-6048	22048	6	48	3	61	1/4	3/4 NPTF	1.515	1 1/4	2	6 3/4	3 1/8	4	240	1,922.70	
PMW-6054	22054	6	54	3	68	1/4	3/4 NPTF	1.515	1 1/4	2	6 3/4	3 1/8	4	265	2,086.50	
PMW-6060	22060	6	60	3	75	1/4	3/4 NPTF	1.515	1 1/4	2	6 3/4	3 1/8	4	290	2,154.70	

SEAL KIT NUMBER	Rod x Bore	LIST PRICE
PMCK-21000	2-1/2 X 5	\$ 87.22
PMCK-22000	3 X 6	119.89

SINGLE ACTING TELESCOPIC CYLINDERS



These cylinders are available from Custom Hoists, Commercial®, Hyco and SHC. Request the manufacturer you want.

4,000 Series Single Acting Telescopic Cylinders



FEATURES

- Self-Bleeding design
- Pre-loaded v-packing with a self-adjusting wave spring energizer to maintain a continuous force on the packing.
- Threaded headnuts for added strength and field seal adjustment.
- Longer Bearing Length (overlap) for stability.
- Stock Models inventoried at 5 warehouse locations throughout the U.S. to meet your immediate requirements.
- For Front Mount Dump Body Cylinder Force and Stroke Calculations link

MANUFACTURERS SERVICE MANUALS ARE AVAILABLE.
CALL FOR DETAILS.

Individual Plunger Lifting Capacities for
Single-Acting Telescopic Cylinders

Plunger Dia. (In.)	Cross Section Area (Sq. In.)	Specific Operating Pressures			
		1500 PSI (LBS)	1800 PSI (LBS)	2000 PSI (LBS)	2500 PSI (LBS)
2	3.14	4,710	5,672	6,280	7,850
3	7.06	10,590	12,708	14,120	17,650
4	12.56	18,840	22,608	25,120	31,400
5	19.63	29,445	35,334	39,260	49,075
6	28.27	42,405	50,886	56,540	70,675
7	38.48	57,720	69,264	76,960	96,200
8	50.26	75,390	90,468	100,520	125,650
8-1/4	53.50	80,250	96,300	107,000	133,750
9-1/8	65.40	98,100	117,720	130,800	163,500
9-3/4	74.50	111,750	134,100	149,000	186,250

Cylinder Identification

85 - 2 - 250

LARGEST MOVING STAGE ———
 NUMBER OF MOVING STAGES ———
 STROKE IN INCHES ———
 CYLINDER SEQUENCE NUMBER ———

SINGLE ACTING TELESCOPIC CYLINDERS



These cylinders are available from Custom Hoists, Commercial®, Hyco and SHC. Request the manufacturer you want.

COMMERCIAL FEATURES

- Longer sleeve overlap for improved stability and higher column loading.
- Heavy walled tubing in the first stage offers up to 27% more cross-sectional area providing up to 76% greater tube burst strength than our competition.
- Beveled mating surfaces of the overlap collar and stop ring for greater impact resistance during dumping operations.
- Snap-on, glass-filled bearings that absorb contaminants without damaging the cylinder walls.
- Threaded stop rings for easier servicing and more reliable stopping action.
- External packing nuts to give added support to the tube and make servicing easier.
- Wave springs and chevron packing for positive, self-compensating seals.
- Hytrel rod wipers resist high temperatures without extruding.
- Cast steel pin-eye and rod-end mountings give dependable strength.

MANUFACTURERS SERVICE MANUALS ARE AVAILABLE. CALL FOR DETAILS.

DOUBLE ACTING CYLINDERS:

- Operating pressure up to 2000 psi.
- Main cylinder outside diameter from 3-3/4" to 10-13/16".
- Lifting capacity to 153,180 lbs.
- Chrome-plated sleeves are available on special order.
- Pin-eye and trunion mountings are standard. If other types are required, dimensions must be specified.

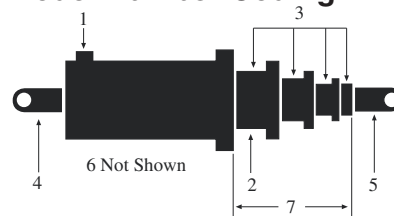
SINGLE ACTING CYLINDERS:

- Operating pressure up to 2000 psi.
- Main cylinder outside diameter from 3-3/4" to 11-1/8".
- All cylinders have NPT ports, unless otherwise specified.
- Lifting capacity to 138,060 lbs.
- Chrome-plated sleeves and plungers are available on special order.
- Pin-eye and trunion mountings are standard. If other types are required, dimensions must be specified.

S.A. Cylinder Information

Sleeve O.D. in inches	Effective Area in sq. inches	Load Capacity lbs. at 2000 p.s.i.	Displacement per in. of stroke in gallons
2.75	5.94	11,880	.026
3.75	11.04	22,080	.048
4.75	17.72	35,440	.077
5.75	25.96	51,920	.112
6.75	35.78	71,560	.155
7.905	48.70	97,400	.210
9.375	69.03	138,060	.299

Model Number Coding



Model Number S84DC-40-161

1. S = Single-acting Type Cylinder
SD = Double-acting telescopic type
2. 8 = 7-7/8" nominal diameter of largest sleeve
3. 4 = 4 stages or sleeves
4. D = Type of mounting on base end
5. C = Type of mounting on rod end
6. -40 = Modification or design variation
7. 161 = Length of stroke (161")

D.A. Cylinder Information

Sleeve or plunger O.D. (inches)	Bore of Main or Sleeve (inches)	Effective Area extended (sq. inches)	Effective Area retracted (sq. inches)	Load Capacity at 2000 p.s.i. extended (pounds)	Load Capacity at 2000 p.s.i. retracted (pounds)	Displacement per in. of stroke extended (gallons)	Displacement per in. of stroke retracted (gallons)
2.75	3.25	8.295	2.355	16,590	4,710	.036	.010
3.75	4.25	14.186	3.142	28,372	6,284	.061	.014
4.75	5.25	21.648	3.927	43,296	7,854	.094	.017
5.75	6.25	30.680	4.713	61,360	9,426	.133	.020
6.75	7.25	41.282	5.497	82,564	10,994	.179	.024
7.905	8.437	55.680	6.973	111,360	13,946	.242	.030
9.375	9.143	76.590	7.560	153,180	15,120	.331	.038

SINGLE ACTING TELESCOPIC CYLINDERS



These cylinders are available from Custom Hoists, Commercial®, Hyco and SHC. Request the manufacturer you want.



Fluid Capacity: Volume To Fully Extend

Plunger Dia. (Inches)	Effective Area (Sq. Inches)	Load Capacity (Lbs. @ 2000 PSI)	Displacement (Gal./In. of Stroke)
3	7.07	14,140	.031
4	12.56	25,120	.054
5	19.63	9,260	.085
6	28.27	56,540	.122
7	38.48	76,960	.166
8.12	51.78	103,560	.224
8.25	53.46	106,920	.231
9.38	69.10	138,200	.299

Follow example to determine displacement of the complete cylinder **Example:** Model 824-200

8.12 in. plunger .224

7 in. plunger .166

6 in. plunger .122

5 in. plunger .085

.597

.597 x 200 = 29.8 Gallons to fully extend
4

Features

GENERAL DATA

Operating pressures to 2000 psi. Plunger diameters range from 2" to 9.375". Lifting capacities to 138,200 lbs. Pin-eye mountings standard—trunion type available. Chrome-plated plungers available.

AUTOMATIC AIR BLEEDERS

Every standard Hycotel single-acting telescopic cylinder comes equipped with an automatic air bleeder. This completely eliminates time-consuming and potentially hazardous manual air bleeding operation.

GUIDE RINGS & RETAINING RINGS

Hycotel® features replaceable plunger guide rings, designed and balanced to be well lubricated and made of specially compounded material for long wearing performance. The retainer rings work in conjunction with the piston design to be positively locked into stop position grooves when the cylinder is fully extended.

"DUAL-LIP" WIPER

This dual lip design wiper of Hytel is a more efficient "dirt wiper." The dual lip provides an improved means of keeping dirt out.

Cylinder Identification

C70000-814-200D

PART NO.

PORT LOCATION

FIRST PLUNGER DIA.

TOTAL STROKE

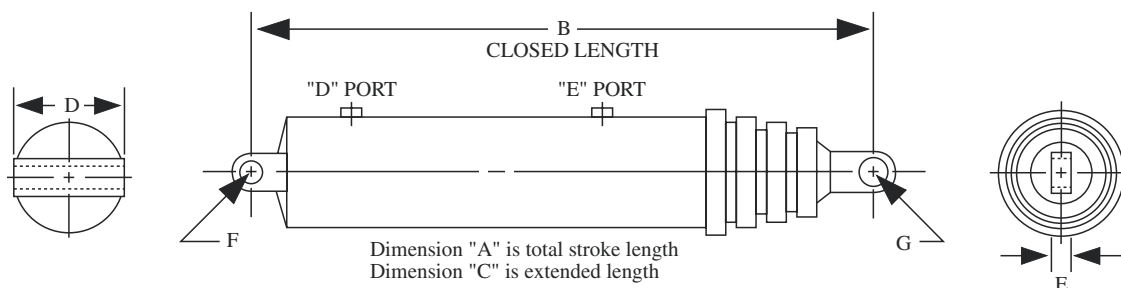
(NOTE - EACH SMALLER PLUNGER DIA. DECREASES IN 1" INCREMENTS)

NO. OF PLUNGERS

NOTE: "D" and "E" suffix in Part No. represents a specific port location.

For dimensional data, consult our sales staff.

A "T" suffix in Part No. represents Trunion Mount.



SINGLE ACTING TELESCOPIC CYLINDERS

SOUTHERN HYDRAULIC CYLINDER, INC.

These cylinders are available from Custom Hoists, Commercial®, Hyco and SHC. Request the manufacturer you want.

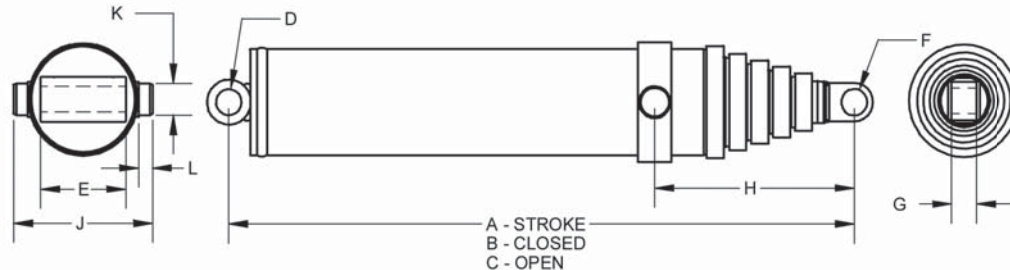
STANDARD SINGLE ACTING TELESCOPIC CYLINDER SPECIFICATIONS

Model Number	Stroke (A)	Closed (B)	Open (C)	Dia. Body	Stage Dia.			(D)	(E)	(F)	(G)	(H)	(J)	(K)	(L)	Ret Vol (Gal)	Ext Vol (Gal)	Dry Wt. (Lbs)
SHC-M32DB-43	40.38	29.69	70.07	4.00	3	2	-	1.50	4.00	1.25	1.88	-	-	-	-	.58	1.46	60
SHC-M32DB-50	46.67	32.84	79.51	4.00	3	2	-	1.50	4.00	1.25	1.88	-	-	-	-	.66	1.68	66
SHC-M42DB-43	39.50	30.19	69.69	5.00	4	3	-	1.50	5.00	1.50	2.75	-	-	-	-	1.06	2.72	86
SHC-M42DB-50	47.25	33.69	80.94	5.00	4	3	-	1.50	5.00	1.50	2.75	-	-	-	-	1.23	3.23	95
SHC-M42MB-50	51.25	35.07	86.32	5.00	4	3	-	-	-	1.50	2.75	8.50	8.81	1.75	.88	1.33	3.50	97
SHC-M42DB-60	57.88	39.07	96.95	5.00	4	3	-	1.50	5.00	1.50	2.75	-	-	-	-	1.48	3.93	109
SHC-M42MB-65	65.00	42.07	107.07	5.00	4	3	-	-	-	1.50	2.75	8.50	8.81	1.75	.88	1.66	4.41	115
SHC-M43MB-74	73.88	34.63	108.51	5.00	4	3	2	-	-	1.25	1.88	8.50	8.81	1.75	.88	1.07	3.45	106
SHC-M43DB-75	67.34	33.62	100.96	5.00	4	3	2	1.50	5.00	1.25	1.88	-	-	-	-	.98	3.15	105
SHC-M43MB-75	68.25	32.75	101.00	5.00	4	3	2	-	-	1.25	1.88	8.50	8.81	1.75	.88	.99	3.19	100
SHC-M43DB-98	89.83	41.13	130.96	5.00	4	3	2	1.50	5.00	1.25	1.88	-	-	-	-	1.29	4.19	124
SHC-M43MB-98	96.42	42.19	138.61	5.00	4	3	2	-	-	1.25	2.00	8.69	8.81	1.75	.88	1.37	4.50	128
SHC-M53DB-60	57.11	29.81	86.92	6.00	5	4	3	1.50	6.25	1.50	2.75	-	-	-	-	1.39	4.56	122
SHC-M53DC-72	72.00	35.13	107.13	6.00	5	4	3	2.00	7.00	1.69	1.63	-	-	-	-	1.72	5.73	142
SHC-M53DB-74	69.14	33.82	102.96	6.00	5	4	3	1.50	6.25	1.50	2.75	-	-	-	-	1.65	5.51	137
SHC-M53MB-74	74.00	34.63	108.63	6.00	5	4	3	-	-	1.50	2.75	8.50	8.81	1.75	.88	1.75	5.89	141
SHC-M53DB-90	86.55	39.63	126.18	6.00	5	4	3	1.50	6.25	1.50	2.75	-	-	-	-	2.02	6.87	159
SHC-M53MB-90	86.06	38.63	124.69	6.00	5	4	3	-	-	1.50	2.75	8.50	8.81	1.75	.88	2.01	6.83	156

ALL ITEMS LISTED ARE STOCK ITEMS. ALL LISTED ITEMS ARE MARION STYLE CYLINDERS.

PORTS 1/2"-14 NPT ON SERIES 32, 42, 43, & 53 (SHC-M53DC-72, SHC-M53DC-84, & SHC-M53DC-84A USE 3/4"-14 NPT)

OTHER SIZES AND OPTIONS ARE AVAILABLE.



CYLINDER IDENTIFICATION SHC - M 53 DB - 75

FIRST PLUNGER
DIAMETER

NO. OF PLUNGERS
NOTE - EACH SMALLER PLUNGER DIA.
DECREASES IN 1" INCREMENTS

APPROX. STROKE

BASE MOUNT
DB - CROSS TUBE
DC - CROSS TUBE
MB - TRUNNION

ROD MOUNT
CROSS DRILLED
LUG
CROSS DRILLED

SINGLE ACTING EXTEND LOAD CAPACITY

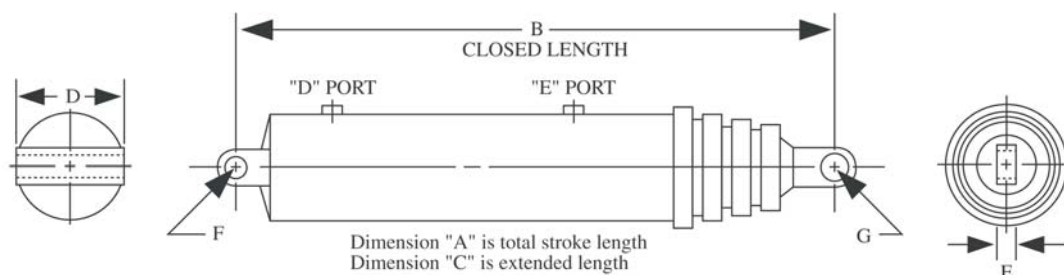
LOAD CAPACITY : LBS @ PSI

*ALL DIMENSIONS AND CALCULATIONS NOMINAL

PLUNGER DIA.	1500 PSI	2000 PSI	2500 PSI
2	4,700	6,280	7,850
3	10,600	14,130	17,670
4	18,850	25,130	31,410
5	29,450	39,270	49,080
6	42,410	56,540	70,680
7	57,720	76,960	96,210
8.25	80,180	106,910	133,640

SINGLE ACTING TELESCOPIC CYLINDER STOCK

These cylinders are available from Custom Hoists, Commercial®, Hyco and SHC. Request the manufacturer you want. See page 21-23 for specifications.

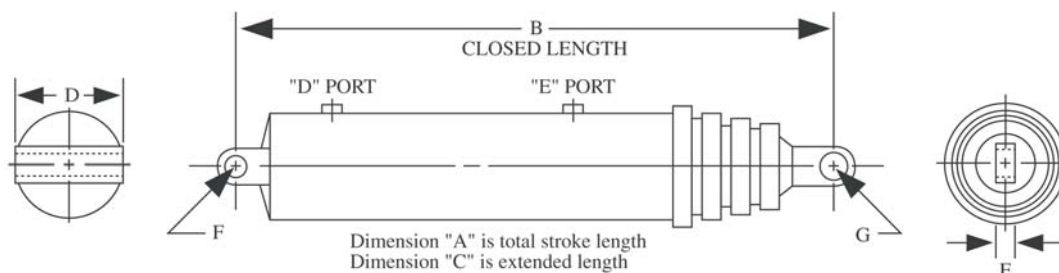


Stroke lengths for Hyco 70,000 series cylinders may be slightly different than those shown in chart.

CYLINDER NO.	A	B	C	D	E	F	G
5372-SA	72.00	37.12	109.12	8.13	1.50	2.00	1.68
5384-SA	84.00	41.12	125.12	8.12	1.50	2.06	1.56
53104-SA	104.00	47.75	151.75	8.13	1.50	2.00	1.68
6384-SA	84.00	41.00	125.00	7.62	2.00	2.12	2.06
63104-SA	103.87	47.62	151.50	7.62	2.00	2.12	2.06
63108-SA	108.00	49.00	157.00	7.625	2.00	2.12	2.06
63111-SA	111.00	50.00	161.00	7.00	2.00	2.00	2.00
63120-SA	120.00	53.00	173.00	7.625	2.00	2.12	2.06
63120-TSA	120.00	53.375	173.375	TRIUNION MOUNT	4.00	N/A	1.56
63126-SA	126.00	55.00	181.00	7.00	2.00	2.12	2.06
D63128-SA	126.50	54.63	181.13	6.75	2.00	2.00	1.63
63140-TSA	139.87	60.00	199.97	TRIUNION MOUNT	4.00	N/A	1.56
64135-SA	134.88	47.13	182.00	8.00	2.69	1.75	1.50
64156-SA	155.87	52.37	208.12	8.00	2.68	1.87	1.56
73110-SA	110.63	50.06	160.69	8.25	2.00	2.00	2.00
73120-SA	120.00	53.12	173.12	8.625	1.50	2.12	2.06
D73126	125.25	55.12	180.37	6.75	2.00	2.00	1.63
73130-SA	130.12	56.50	186.62	8.625	1.50	2.12	2.06
73140-SA	140.00	60.00	200.00	8.25	2.00	2.00	2.00
D73142-SA	142.13	60.75	202.88	6.75	2.00	2.00	1.63
74120-SA	120.00	44.75	164.75	8.625	2.00	2.12	2.06
74135-SA	135.00	48.25	183.25	8.625	2.00	2.12	2.06
74140-SA	140.25	49.25	189.75	8.625	2.00	2.12	2.06
74156-SA	156.00	53.37	209.37	8.625	2.00	2.12	2.06
74161-SA	161.00	54.62	215.62	8.62	2.00	2.12	2.06
74167-SA	167.25	56.25	223.50	8.62	2.00	2.12	2.06
84148-SA	147.75	51.50	199.25	9.50	2.00	2.12	2.06
84156-SA	155.75	53.50	209.25	9.50	2.00	2.12	2.06
84170-SA	169.75	57.00	226.75	9.50	2.00	2.12	2.06
84180-SA	179.75	59.50	239.25	9.50	2.00	2.12	2.06
85170-SA	170.00	49.87	219.87	9.50	2.00	2.12	2.06
85190-SA	190.00	54.00	244.00	9.50	2.00	2.12	2.06
85197-SA	196.13	55.25	251.38	9.50	2.00	2.00	2.00
85220-SA	220.00	60.00	280.00	9.50	2.00	2.12	2.06
85220-TSA	218.25	60.38	278.63	TR	2.00	TR	2.00
85235-SA	235.00	65.00	300.00	9.50	2.00	2.12	2.06
85235-TSA	233.25	63.38	296.33	TR	2.00	TR	2.00
85250-SA	250.00	68.00	318.00	9.50	2.00	2.12	2.06
85250-TSA	248.25	68.38	316.63	TR	2.00	TR	2.00
85265-SA	265.00	71.00	336.00	9.50	2.00	2.12	2.06
85265-TSA	264.25	74.88	339.13	TR	2.00	TR	2.00

SINGLE ACTING TELESCOPIC CYLINDER STOCK

These cylinders are available from Custom Hoists, Commercial®, Hyco and SHC. Request the manufacturer you want. See page 21-23 for specifications.

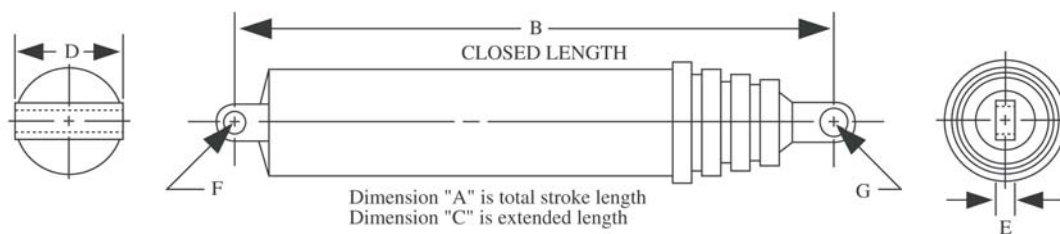


Stroke lengths for Hyco 70,000 series cylinders may be slightly different than those shown in chart.

CYLINDER NO.	A	B	C	D	E	F	G
825190-SA	190.00	54.00	244.00	10.25	2.00	2.12	2.06
825220-SA	220.00	60.00	280.00	10.25	2.00	2.12	2.06
825235-SA	235.00	65.00	300.00	10.25	2.00	2.12	2.06
825250-SA	250.00	68.00	318.00	10.25	2.00	2.12	2.06
825265-SA	264.62	74.50	339.12	10.25	2.00	2.12	2.06
825280-SA	279.62	77.62	357.25	10.25	2.00	2.12	2.06
95220-SA	219.75	60.12	279.87	10.75	2.00	2.12	2.06
95235-SA	234.75	65.00	299.75	10.75	2.00	2.12	2.06
95250-SA	249.75	72.62	322.37	10.75	2.00	2.12	2.06
95265-SA	264.75	75.62	340.37	10.75	2.00	2.12	2.06
975220-SA	219.75	60.00	280.00	12.00	2.00	2.12	2.06
975235-SA	234.75	65.25	300.00	12.00	2.00	2.12	2.06
975250-SA	249.75	72.62	322.37	12.00	2.00	2.12	2.06
HPT53100	99.12	46.25	145.37	7.75	1.50	2.06	1.78
HPT53110	105.12	47.87	153.00	7.75	1.50	2.06	1.78
HPT53120	122.37	54.00	176.37	7.75	1.50	2.06	1.78
HPT53130	127.62	54.50	182.12	7.75	1.50	2.06	1.78
HPT63120	120.75	54.00	174.75	8.00	2.00	2.50	2.25
HPT63130	125.25	55.50	180.75	8.00	2.00	2.50	2.25
HPT63140	138.75	60.00	198.75	8.00	2.00	2.50	2.25
HPT63160	160.12	69.12	229.25	8.00	2.00	2.50	2.25
475	43.12	31.68	74.81	1.50	2.50	3.37	1.81
495	64.75	31.75	96.50	1.50	2.50	3.37	1.81
498	89.50	41.87	131.37	1.50	2.50	3.37	1.81
SHC-M32DB-43	40.38	29.69	70.07	1.50	4.00	1.25	1.88
SHC-M32DB-50	46.67	32.84	79.51	1.50	4.00	1.25	1.88
SHC-M42DB-43	39.50	30.19	69.69	1.50	5.00	1.50	2.75
SHC-M42DB-50	47.25	33.69	80.94	1.50	5.00	1.50	2.75
SHC-M42MB-50	51.25	35.07	86.32	-	-	1.50	2.75
SHC-M42DB-60	57.88	39.07	96.95	1.50	5.00	1.50	2.75
SHC-M42MB-65	65.00	42.07	107.07	-	-	1.50	2.75
SHC-M43MB-74	73.88	34.63	108.51	-	-	1.25	1.88
SHC-M43DB-75	67.34	33.62	100.96	1.50	5.00	1.25	1.88
SHC-M43MB-75	68.25	32.75	101.00	-	-	1.25	1.88
SHC-M43DB-98	89.83	41.13	130.96	1.50	5.00	1.25	1.88
SHC-M43MB-98	96.42	42.19	138.61	-	-	1.25	2.00
SHC-M53DB-60	57.11	29.81	86.92	1.50	6.25	1.50	2.75
SHC-M53DC-72	72.00	35.13	107.13	2.00	7.00	1.69	1.63
SHC-M53DB-74	69.14	33.82	102.96	1.50	6.25	1.50	2.75
SHC-M53MB-74	74.00	34.63	108.63	-	-	1.50	2.75
SHC-M53DB-90	86.55	39.63	126.18	1.50	6.25	1.50	2.75
SHC-M53MB-90	86.06	38.63	124.69	-	-	1.50	2.75

DOUBLE ACTING TELESCOPIC CYLINDERS

These cylinders are available from Custom Hoists, Commercial®, and Hyco. Request the manufacturer you want. See page 21 & 28 for specifications.



CYLINDER NO.	A	B	C	D	E	F	G
52112-DA	111.75	75.50	187.25	2.00	2.00	2.01	2.01
53110-DA	109.62	56.75	166.37	2.00	2.00	3.03	1.56
53155-DA	155.75	75.50	231.25	2.00	2.00	2.00	1.50
53182-DA	182.00	81.00	263.00	3.87	6.50	2.00	2.00
6282-DA	82.00	56.50	138.50	2.25	2.25	3.03	3.03
6397-DA	97.12	52.37	149.50	1.50	1.50	1.28	1.28
63108-DA	107.62	50.75	158.37	7.12	3.87	1.78	1.78
63118-DA	118.00	58.50	176.50	3.00	4.00	2.50	2.50
63124-DA	124.50	76.87	201.48	2.00	2.00	2.031	2.06
63132-DA	131.62	62.37	194.00	7.12	3.87	1.78	1.78
63167-DA	167.00	85.25	252.25	4.00	3.69	2.00	2.00
64118-DA	118.13	49.38	167.50	2.25	2.25	1.50	1.50
64136-DA	135.62	49.37	185.00	2.00	2.25	1.56	1.56
64150-DA	150.00	56.56	206.56	2.25	2.25	1.50	1.50
72156-DA	156.12	96.00	252.12	N/A	2.00	N/A	2.06
74131-DA	131.50	53.37	184.87	1.50	1.50	1.28	1.28
74171-DA	171.12	62.37	233.50	7.00	4.00	1.78	1.78
83126-DA	126.00	72.00	198.00	3.00	3.00	2.51	2.51
84176-TD2	176.25	69.00	245.25	TRIUNION MOUNT	2.00	TRIUNION MOUNT	1.75
84176-TD3	176.25	69.00	245.25	TRIUNION MOUNT	2.00	N/A	1.76
84178-DA	178.25	69.00	247.25	2.00	2.00	1.78	1.78
85125-DA	125.00	49.75	174.75	2.50	2.50	2.00	2.00
85156-DA	155.625	55.50	211.125	2.00	2.00	2.00	2.00
85195-DA	195.00	69.37	264.87	2.00	2.00	2.03	2.03
85220-TD2	220.00	69.25	289.25	TRIUNION MOUNT	2.00	N/A	1.76
85220-TD3	220.25	69.25	289.50	TRIUNION MOUNT	2.00	N/A	1.76
85300-DA	300.25	87.37	387.62	1.75	2.00	2.00	2.18
85348-DA	347.87	100.00	447.87	2.00	2.00	2.06	2.18
85378-DA	378.00	104.75	482.75	2.00	2.00	2.12	2.06
86177-DA	176.75	53.37	230.12	1.50	1.50	1.28	1.28
915125-DA	125.00	49.75	174.75	2.50	2.50	2.00	2.00
95160-DA	159.75	61.00	220.75	2.00	2.00	2.02	2.02
96170-DA	169.75	50.625	220.37	2.50	2.50	2.00	2.00
96199-DA	199.12	57.87	257.00	2.00	2.00	2.03	2.03
96412-DA	412.25	99.62	511.87	TRIUNION MOUNT	2.00	TRIUNION MOUNT	2.06
96456-DA	456.50	107.00	563.50	TRIUNION MOUNT	2.00	TRIUNION MOUNT	2.06
974176-DA	176.12	69.12	245.25	3.00	3.00	2.52	2.52
974190-DA	189.62	71.00	260.62	2.25	2.00	2.25	2.02
976199-DA	199.12	57.87	257.00	2.00	2.00	2.03	2.03

DOUBLE ACTING TELESCOPIC CYLINDERS

These cylinders weights are average weights for Custom Hoists and Hyco manufactured cylinders. Cylinders manufactured by Commercial® Intertech are usually 50-70 pounds heavier than weights listed.

CYLINDER #	WT. (LBS.)	CYLINDER #	WT. (LBS.)	CYLINDER #	WT. (LBS.)	CYLINDER #	WT. (LBS.)
5360-SA	134	825235-SA	725	85220-TD3	764	HL-1-4106	67
5372-SA	160	825250-SA	765	85300-DA	848	HL-1-4108	90
5384-SA	175	825265-SA	795	85348-DA	875	HL-1-4110	105
53104-SA	200	825280-SA	835	85378-DA	952	HL-1-4272	68
6384-SA	215	95220-SA	780	86177-DA	485	HL-1-4305	50
63104-SA	249	95235-SA	825	915125-DA	528	HL-1-4328	185
63108-SA	256	95250-SA	868	95160-DA	740	HL-1-4330	192
63111-SA	260	95265-SA	890	96170-DA	568	HL-1-4339	104
63120-SA	279	975220-SA	858	96199-DA	795	HL-1-4340	175
63120-TSA	279	975235-SA	967	96412-DA	1350	HL-1-4341	85
63126-SA	286	975250-SA	1076	96456-DA	1408	HL-1-4348	170
D63128-SA	278	HPT53100	190	974176-DA	978	HL-1-4884	150
63140-TSA	330	HPT53110	193	974190-DA	995	HL-1-4887	121
64135-SA	260	HPT53120	230	976199-DA	864	LCH-15527	97
64156-SA	310	HPT53130	214	475	102	LCH-2R1006A	168
73110-SA	350	HPT63120	267	495	102	LCH-PO-1166	190
73120-SA	336	HPT63130	270	498	132	LCH-PO-265	102
D73126	355	HPT63140	288	D3021GDA	55	MX-401222	260
73130-SA	358	HPT63160	328	D3526GDA	70	MX-401282	105
73140-SA	404	52112-DA	318	D4021EDA	96	MX-401826	51
D73142-SA	383	53110-DA	246	D4028EDA	105	MX-404614	176
74120-SA	311	53155-DA	307	D4030FDA	96	PG-3128C	67
74135-SA	335	53182-DA	357	D4035HDA	125	PG-6042BDA	239
74140-SA	347	6282-DA	253	D4128EDA	91	PG-7078DA	442
74156-SA	370	6397-DA	275	D4522JDA	84	PKM-1341-LM	61
74161-SA	390	63108-DA	283	D4522EDA	100	PKM-1351-LM	214
74167-SA	390	63118-DA	317	D4526BDA	104	PKM-2162-LM	24
84148-SA	451	63124-DA	383	D4548BDA	165	SHC-M32DB-43	57
84156-SA	455	63132-DA	332	D5532EDA	135	SHC-M32DB-50	63
84170-SA	494	63167-DA	320	DD-BB8133-1	188	SHC-M42DB-43	81
84180-SA	524	64118-DA	280	DD-BB8134-1	150	SHC-M42DB-50	91
85170-SA	450	64136-DA	271	DD-BB8281-1	114	SHC-M42MB-50	100
85190-SA	506	64150-DA	305	DD-BB8374-1	174	SHC-M42DB-60	115
85197-SA	525	72156-DA	630	DD-BB8379-1	110	SHC-M42MB-65	116
85220-SA	567	74131-DA	334	DD-BB8748-1	85	SHC-M43DB-75	98
85220-TSA	585	74171-DA	575	DD-AB19461	368	SHC-M43MB-75	107
85235-SA	619	83126-DA	555	DD-AB19774	110	SHC-M53DB-60	115
85235-TSA	637	84176-TD2	700	DD-AB19775	175	SHC-M53DB-74	137
85250-SA	654	84176-TD3	550	HL-1-4070	83	SHC-M53MB-74	140
85250-TSA	672	84178-DA	560	HL-1-4093	150	SHC-M53MB-90	154
85265-SA	674	85125-DA	510	HL-1-4094	125		
85265-TSA	692	85156-DA	495	HL-1-4100	73		
825190-SA	595	85195-DA	620	HL-1-4101	100		
825220-SA	667	85220-TD2	764	HL-1-4103	119		