

FREEDOM

INDUSTRIAL HYDRAULICS

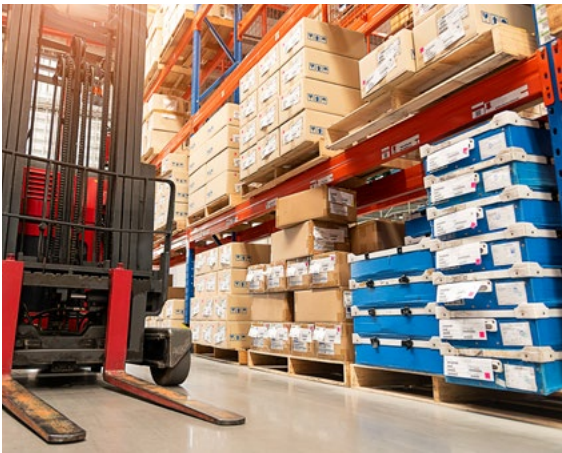


www.freedomhydraulics.com



Freedom Industrial Hydraulics is a hydraulic manufacturer of high pressure 10,000 psi industrial lifting equipment. FIH products are built for durability and toughness and are backed by the FIH limited lifetime warranty. Our engineering capabilities and manufacturing processes allow us to design and build quality products for applications where cylinders and pumps are used. If the job requires pushing, pulling, lifting, pressing or holding, FIH will work with you to meet your needs and specifications.

Freedom Industrial Hydraulics is centrally located in the heart of the Midwest in Riverside, Missouri. FIH's office and warehouse services North, South and Central America.



MISSION STATEMENT

Our mission is to be the best in the industries that we serve by offering top quality products with functional innovations. FIH will improve the safety and economic well-being of our customers by delivering superior customer service and providing adequate inventory stocking levels to meet our customers' ongoing demands.

SINGLE ACTING CYLINDERS	5-7
DOUBLE ACTING CYLINDERS	8-9
SINGLE ACTING HIGH TONNAGE CYLINDERS	10
DOUBLE ACTING HIGH TONNAGE CYLINDERS	11
ALUMINUM SPRING RETURN CYLINDERS	12-13
HOLLOW HOLE SINGLE ACTING CYLINDERS	14
HOLLOW HOLE DOUBLE ACTING CYLINDERS	15
FLAT BODY CYLINDERS	16
LOW PROFILE CYLINDERS	17
LOW PROFILE CYLINDER KIT	18
SADDLES	19
METAL AIR PUMPS	20-23
SINGLE ACTING	20
DOUBLE ACTING	21
REMOTE CONTROL	22
HAND OPERATED	23
ADJUSTABLE PRESSURE	23
METAL HAND PUMPS	24-27
SINGLE ACTING	24
DOUBLE ACTING	26
SPREADERS & SPREADER KITS	28-29
MAINTENANCE REPAIR KITS	30-31
PRESSES	32-33
VALVES & MANIFOLDS	34-35
FLOW CONTROL VALVES	34
MANIFOLDS	35
HOSES & OIL	36
COUPLERS & GAUGES	37
PRODUCT CROSS-REFERENCE	38-39

WHAT TYPE OF CYLINDER DO YOU NEED?

- 1

Select the hydraulic cylinder that best suits the application.
- 2

Select the hydraulic pump, with valve option, that best matches the cylinder and application
- 3

Select the accessories you need.

CYLINDER'S FORCE CAPACITY =

Cylinder Effective Area (sq. in.) x Pressure from Pump (psi)

CYLINDER'S OIL CAPACITY =

Cylinder Effective Area (sq. in.) x Cylinder Stroke (in.)

SYSTEM RESERVOIR CAPACITY =

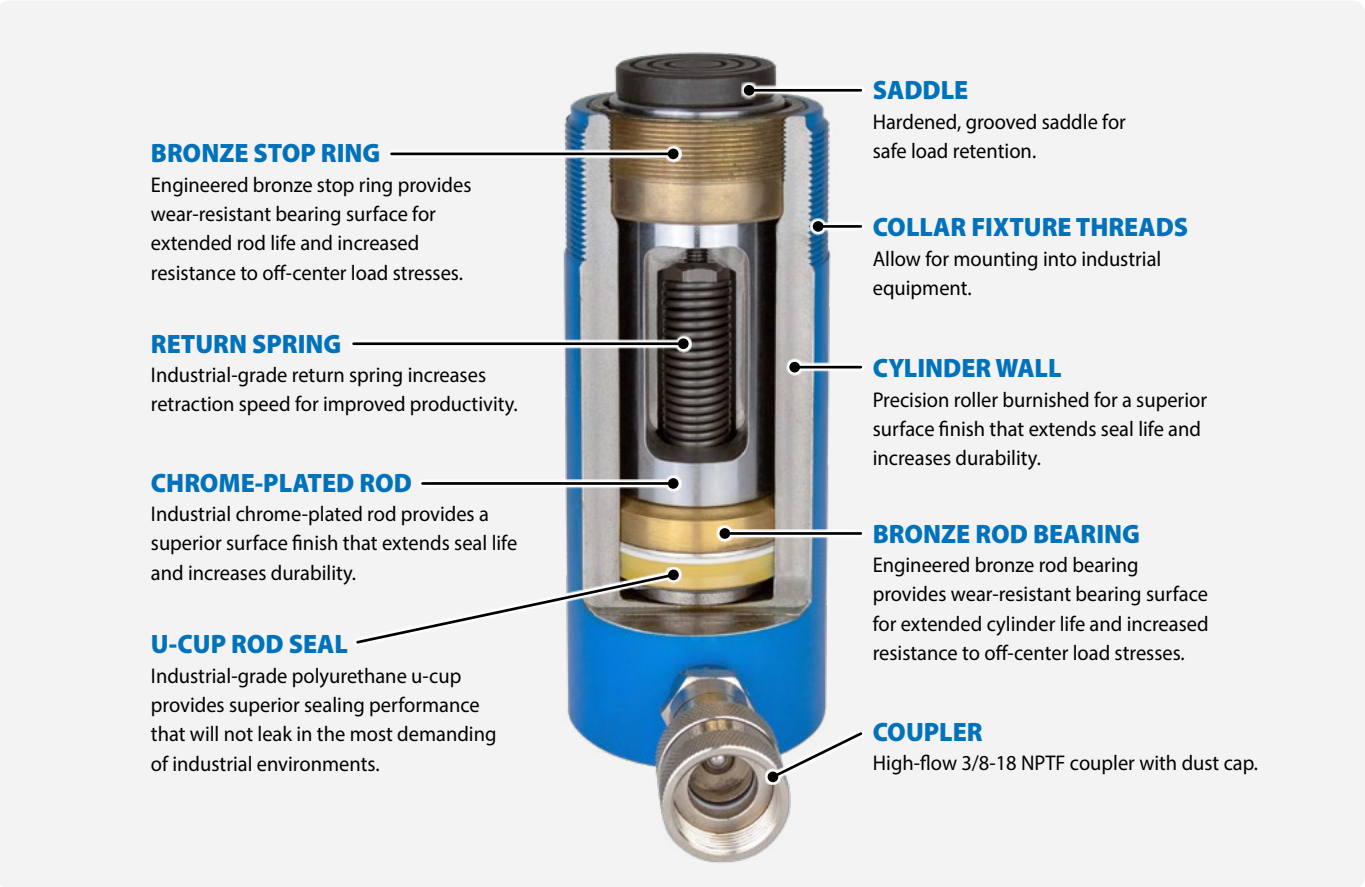
Oil Capacity of Cyl. (cu. in.) x Number of Cylinders in System



FEATURES

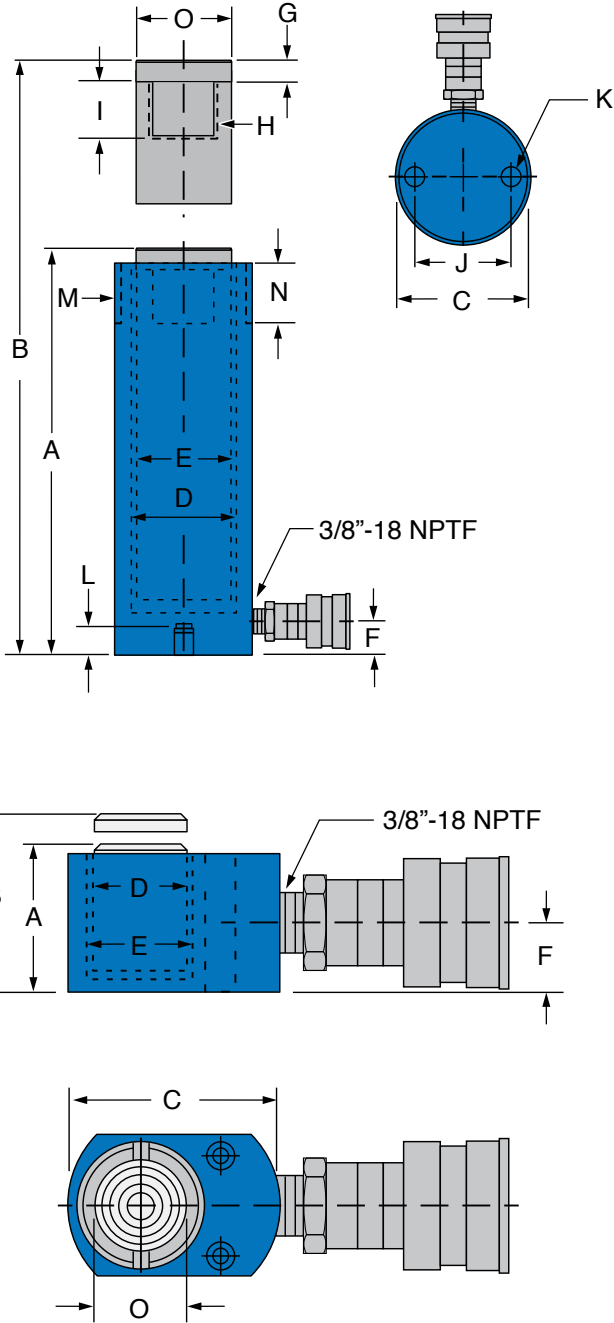
- Plunger wiper seal keeps out contamination and debris
- Upper and lower bronze bearings for minimal wear of cylinder rod and maximizing lifetime of cylinder
- Industrial grade springs for increased spring performance and lifetime
- Industrial grade steel construction withstands even the most demanding of applications
- Chrome plated piston rod eliminates corrosion and rust
- Base mounting holes, collar threads and plunger threads available on most models
- 3/8" NPTF female coupler and dust cap on all models

CQ38F High Flow Coupler included on all models



Capacity	Stroke	Model #	Cylinder Effective Area	Oil Capacity	A	B	C	D	E	F	G	H	I
					Collapsed Height	Extended Height	Outside Diameter	Cylinder Bore Dia.	Plunger Diameter	Base to Coupler Port	Saddle Distance above Cyl.	Piston Internal Thread	Piston Thread Length
(tons)	(in.)		(in. ²)	(in. ³)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)
5	0.64	S50	1.1	0.7	1.64	2.28	2.32	1.18	1	0.75	0	—	—
5	1.05	S51	1.1	1.2	4.35	5.4	1.5	1.18	1	0.79	0.25	3/4"-16UCF	0.57
5	3.02	S53	1.1	3.3	6.52	9.54	1.5	1.18	1	0.79	0.25	3/4"-16UCF	0.57
5	5.04	S55	1.1	5.5	8.48	13.52	1.5	1.18	1	0.79	0.25	3/4"-16UCF	0.57
5	7.06	S57	1.1	7.7	10.74	17.8	1.5	1.18	1	0.79	0.25	3/4"-16UCF	0.57
5	9.09	S59	1.1	10	12.81	21.9	1.5	1.18	1	0.79	0.25	3/4"-16UCF	0.57
10	1.00	S101	2.25	2.2	3.62	4.62	2.25	1.69	1.5	0.75	0.25	1"-8UNC	0.85
10	2.09	S102	2.25	4.7	4.84	6.93	2.25	1.69	1.5	0.75	0.25	1"-8UNC	0.89
10	4.06	S104	2.25	9.1	6.87	10.93	2.25	1.69	1.5	0.75	0.25	1"-8UNC	0.89
10	5.97	S106	2.25	13.4	9.84	15.81	2.25	1.69	1.5	0.75	0.25	1"-8UNC	0.89
10	7.88	S108	2.25	17.7	11.93	19.81	2.25	1.69	1.5	0.75	0.25	1"-8UNC	0.89
10	10.00	S1010	2.25	22.4	13.87	23.87	2.25	1.69	1.5	0.75	0.25	1"-8UNC	0.89
10	12.03	S1012	2.25	27.0	15.84	27.87	2.25	1.69	1.5	0.75	0.25	1"-8UNC	0.89
10	14.10	S1014	2.25	31.6	17.65	31.75	2.25	1.69	1.5	0.75	0.25	1"-8UNC	0.89
15	1.00	S151	3.04	3.0	4.75	5.75	2.75	1.97	1.57	1.02	0.37	1"-8UNC	1
15	1.84	S152	3.04	5.6	5.94	7.78	2.75	1.97	1.57	0.98	0.37	1"-8UNC	1
15	3.81	S154	3.04	11.6	8	11.81	2.75	1.97	1.57	0.98	0.37	1"-8UNC	1
15	5.81	S156	3.04	17.7	10.75	16.56	2.75	1.97	1.57	0.98	0.37	1"-8UNC	1
15	7.75	S158	3.04	23.6	12.81	20.56	2.75	1.97	1.57	0.98	0.37	1"-8UNC	1
15	9.82	S1510	3.04	29.9	14.81	24.63	2.75	1.97	1.57	0.98	0.37	1"-8UNC	1
15	11.94	S1512	3.04	36.4	16.75	28.69	2.75	1.97	1.57	0.98	0.37	1"-8UNC	1
15	14.00	S1514	3.04	42.7	18.69	32.69	2.75	1.97	1.57	0.98	0.37	1"-8UNC	1
25	1.06	S251	5.14	5.5	5.38	6.44	3.31	2.56	2.2	0.98	0.39	1 1/2"-16UNC	1
25	2.00	S252	5.14	10.3	6.88	8.88	3.31	2.56	2.2	0.98	0.39	1 1/2"-16UNC	1
25	3.94	S254	5.14	20.3	8.81	12.75	3.31	2.56	2.2	0.98	0.39	1 1/2"-16UNC	1
25	5.87	S256	5.14	30.2	10.88	16.75	3.31	2.56	2.2	0.98	0.39	1 1/2"-16UNC	1
25	7.93	S258	5.14	40.8	12.88	20.81	3.31	2.56	2.2	0.98	0.39	1 1/2"-16UNC	1
25	10.00	S2510	5.14	51.5	14.88	24.88	3.31	2.56	2.2	0.98	0.39	1 1/2"-16UNC	1
25	12.19	S2512	5.14	62.7	16.81	29	3.31	2.56	2.2	0.98	0.39	1 1/2"-16UNC	1
25	14.25	S2514	5.14	73.3	18.81	33.06	3.31	2.56	2.2	0.98	0.39	1 1/2"-16UNC	1
30	8.29	S308	6.49	53.8	15.4	23.69	4	2.87	2.2	1.97	0.39	1 1/2"-16UNC	1
55	2.12	S552	11.04	23.4	6.94	9.06	5	3.75	3.15	1.3	0.12	—	0.59
55	4.02	S554	11.04	44.4	8.97	12.99	5	3.75	3.15	1.38	0.12	—	0.59
55	6.22	S556	11.04	68.7	11.19	17.41	5	3.75	3.15	1.38	0.12	—	0.59
55	10.11	S5510	11.04	111.7	15.04	25.15	5	3.75	3.15	1.38	0.12	—	0.59
55	13.37	S5513	11.04	147.7	18.07	31.44	5	3.75	3.15	1.38	0.12	—	0.59
75	5.97	S756	16.1	96.1	11.45	17.42	5.75	4.53	3.74	1.18	0.22	—	0.49
75	13.09	S7513	16.1	210.7	19.5	32.59	5.75	4.53	3.74	1.18	0.22	—	0.49
100	2.08	S1002	20.57	42.8	8.66	10.74	6.99	5.12	4.13	1.57	0.12	—	0.59
100	6.73	S1006	20.57	138.5	14.1	20.83	6.99	5.12	4.13	1.57	0.12	—	0.59
100	10.12	S10010	20.57	208.2	18.05	28.17	6.99	5.12	4.13	1.57	0.12	—	0.59

Model #	Base Mounting Holes			Collar Thread	Collar Thread Length	Saddle Diameter	Weight
	Bolt Circle	Thread	Thread Depth				
	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(lbs.)
S50	—	—	—	—	—	1	1.87
S51	1	1/4"-20UNC	0.51	1 1/2"-16UN	1.1	1	2.31
S53	1	1/4"-20UNC	0.51	1 1/2"-16UN	1.1	1	3.09
S55	1	1/4"-20UNC	0.51	1 1/2"-16UN	1.1	1	3.75
S57	1	1/4"-20UNC	0.51	1 1/2"-16UN	1.1	1	4.63
S59	1	1/4"-20UNC	0.51	1 1/2"-16UN	1.1	1	5.4
S101	1.56	5/16"-18UNC	0.55	2 1/4"-14UNC	1.14	1.38	3.80
S102	1.56	5/16"-18UNC	0.55	2 1/4"-14UNC	1.14	1.38	4.15
S104	1.56	5/16"-18UNC	0.55	2 1/4"-14UNC	1.14	1.38	6.80
S106	1.56	5/16"-18UNC	0.55	2 1/4"-14UNC	1.14	1.38	9.60
S108	1.56	5/16"-18UNC	0.55	2 1/4"-14UNC	1.14	1.38	11.40
S1010	1.56	5/16"-18UNC	0.55	2 1/4"-14UNC	1.14	1.38	13.20
S1012	1.56	5/16"-18UNC	0.55	2 1/4"-14UNC	1.14	1.38	15.00
S1014	1.56	5/16"-18UNC	0.55	2 1/4"-14UNC	1.14	1.38	16.60
S151	1.88	3/8"-16UNC	0.51	2 3/4"-16UNC	1.18	1.5	7.00
S152	1.88	3/8"-16UNC	0.51	2 3/4"-16UNC	1.18	1.5	8.40
S154	1.88	3/8"-16UNC	0.51	2 3/4"-16UNC	1.18	1.5	11.00
S156	1.88	3/8"-16UNC	0.51	2 3/4"-16UNC	1.18	1.5	15.00
S158	1.88	3/8"-16UNC	0.51	2 3/4"-16UNC	1.18	1.5	17.60
S1510	1.88	3/8"-16UNC	0.51	2 3/4"-16UNC	1.18	1.5	20.20
S1512	1.88	3/8"-16UNC	0.51	2 3/4"-16UNC	1.18	1.5	22.80
S1514	1.88	3/8"-16UNC	0.51	2 3/4"-16UNC	1.18	1.5	25.20
S251	2.31	1/2"-13UNC	0.75	3 5/16"-12UNC	1.95	2	11.60
S252	2.31	1/2"-13UNC	0.75	3 5/16"-12UNC	1.95	2	14.60
S254	2.31	1/2"-13UNC	0.75	3 5/16"-12UNC	1.95	2	18.60
S256	2.31	1/2"-13UNC	0.75	3 5/16"-12UNC	1.95	2	22.60
S258	2.31	1/2"-13UNC	0.75	3 5/16"-12UNC	1.95	2	26.60
S2510	2.31	1/2"-13UNC	0.75	3 5/16"-12UNC	1.95	2	30.60
S2512	2.31	1/2"-13UNC	0.75	3 5/16"-12UNC	1.95	2	34.20
S2514	2.31	1/2"-13UNC	0.75	3 5/16"-12UNC	1.95	2	38.20
S308	2.2	1/2"-13UNC	0.75	3 5/16"-12UNC	1.95	2	42.55
S552	3.75	1/2"-13UNC	0.87	5"-12UNC	1.75	2.76	32.63
S554	3.75	1/2"-13UNC	0.87	5"-12UNC	1.75	2.76	47.27
S556	3.75	1/2"-13UNC	0.87	5"-12UNC	1.75	2.76	56.04
S5510	3.75	1/2"-13UNC	0.87	5"-12UNC	1.75	2.76	71.91
S5513	3.75	1/2"-13UNC	0.87	5"-12UNC	1.75	2.76	84.83
S756	4.5	3/4"-10UNC	1	5 3/4"-12UNC	1.75	2.76	72.62
S7513	4.5	3/4"-10UNC	1	5 3/4"-12UNC	1.75	2.76	117.9
S1002	—	—	—	6 7/8"-12UNC	1.75	2.76	88.76
S1006	5.5	3/4"-10UNC	1	6 7/8"-12UNC	1.75	2.76	134.31
S10010	5.5	3/4"-10UNC	1	6 7/8"-12UNC	1.75	2.76	162.66



10-100 TON CAPACITY | 6"-20" STROKE | 10,000 PSI MAX. PRESSURE

FEATURES

- Ideal for push and pull applications
- Ideal for applications requiring rapid retraction
- Upper and lower bronze bearings for minimal wear of cylinder rod and maximizing lifetime of cylinder
- Plunger wiper seal keeps out contamination and debris
- Industrial grade steel construction will withstand even the most demanding applications
- Chrome plated piston rod eliminates corrosion and rust
- Built in safety valve prevents over-pressurization when retracting cylinder
- 3/8" NPTF female couplers and dust caps on all models



SD3014



SD5513



SD7513



SD10010



SD256



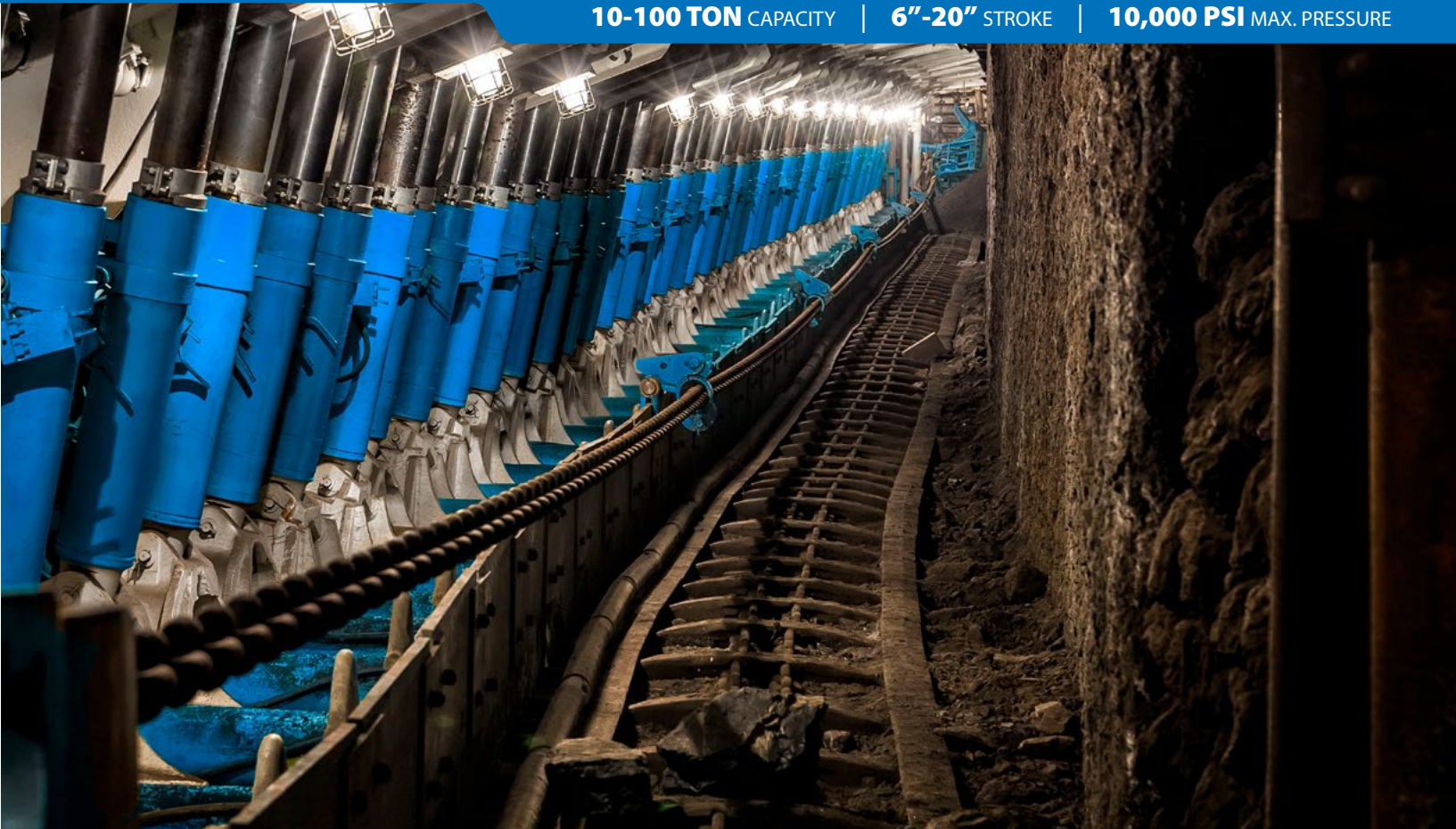
SD1012

CQ38F High Flow Coupler
included on all models



Capacity (tons)	Stroke (in.)	Model #	Cylinder Effective Area (in. ²)	Oil Capacity (in. ³)	A	B	C	D	E	F	G	H	I
					Collapsed Height (in.)	Extended Height (in.)	Outside Diameter (in.)	Cylinder Bore Dia. (in.)	Plunger Diameter (in.)	Base to Coupler Port (in.)	Saddle Distance above Cyl. (in.)	Piston Internal Thread (in.)	Piston Thread Length (in.)
10	10.04	SD1010	2.47	24.8	16.1	26.14	2.87	1.77	1.38	1.44	0.25	1"-8UNC	0.89
10	12.07	SD1012	2.47	29.8	17.99	30.06	2.87	1.77	1.38	1.44	0.25	1"-8UNC	0.89
25	6.26	SD256	5.14	32.2	12.42	18.68	4	2.56	2.17	1	0.39	1 1/2-16UNC	1
30	8.24	SD308	6.49	53.5	15.3	23.54	4	2.87	2.17	1.26	0.39	1 1/2-16UNC	1
30	14.49	SD3014	6.49	94	21.7	36.19	4	2.87	2.17	1.26	0.39	1 1/2-16UNC	1
55	6.14	SD556	11.04	67.8	13.14	19.28	5	3.75	3.15	1.14	0.12	—	0.59
55	13.16	SD5513	11.04	145.3	20.15	33.31	5	3.75	3.15	1.14	0.12	—	0.59
55	20.05	SD5520	11.04	221.4	28.9	48.95	5	3.75	3.15	1.14	0.12	—	0.59
75	6.13	SD756	16.1	98.7	13.7	19.83	5.75	4.53	3.74	1.18	0.24	—	0.47
75	13.16	SD7513	16.1	211.9	20.67	33.83	5.75	4.53	3.74	1.18	0.24	—	0.47
100	6.63	SD1006	20.57	136.4	14.63	21.26	7.01	5.12	3.74	1.5	0.24	—	0.47
100	10.00	SD10010	20.57	205.7	18.04	28.04	7.01	5.12	3.74	1.5	0.24	—	0.47
100	13.31	SD10013	20.57	273.8	21.34	34.65	7.01	5.12	3.74	1.5	0.24	—	0.47
100	18.32	SD10018	20.57	376.9	26.87	45.19	7.01	5.12	3.74	1.5	0.24	—	0.47

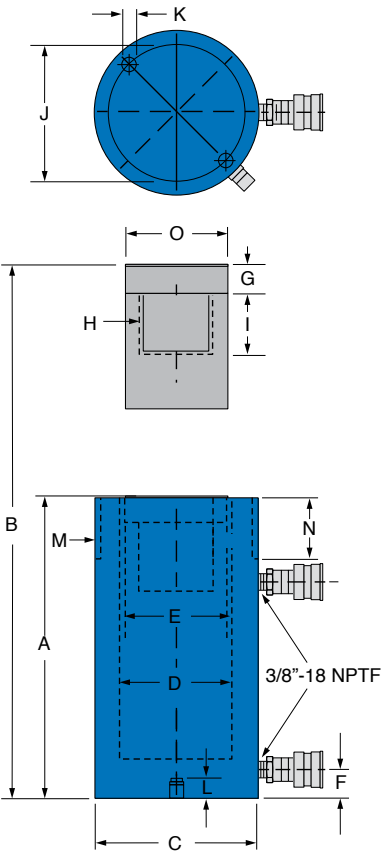
California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov



10-100 TON CAPACITY | 6"-20" STROKE | 10,000 PSI MAX. PRESSURE

Model #	Base Mounting Holes			Collar Thread (in.)	Collar Thread Length (in.)	Saddle Diameter (in.)	Weight (lbs.)
	Bolt Circle (in.)	Thread (in.)	Thread Depth (in.)				
	(in.)	(in.)	(in.)				
SD1010	—	—	—	2 1/4"-14UNC	1.26	1.38	25.53
SD1012	—	—	—	2 1/4"-14UNC	1.26	1.38	28.44
SD256	—	—	—	4"-12UNC	1.61	2	39.68
SD308	—	—	—	3 5/16"-12UNC	2.2	2	43.56
SD3014	—	—	—	3 5/16"-12UNC	2.2	2	61.29
SD556	—	—	—	5"-12UNC	2.01	2.76	71.25
SD5513	—	—	—	5"-12UNC	2.01	2.76	103.24
SD5520	—	—	—	5"-12UNC	2.01	2.76	145.50
SD756	—	—	—	5 3/4"-12UNC	1.5	2.76	92.68
SD7513	—	—	—	5 3/4"-12UNC	1.5	2.76	134.08
SD1006	5.51	3/4"-10UNC	1.06	6 7/8"-12UNC	2.01	2.95	139.82
SD10010	5.51	3/4"-10UNC	1.06	6 7/8"-12UNC	2.01	2.95	167.33
SD10013	5.51	3/4"-10UNC	1.06	6 7/8"-12UNC	2.01	2.95	199.12
SD10018	5.51	3/4"-10UNC	1.06	6 7/8"-12UNC	2.01	2.95	240.13

California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov



100-500 TON CAPACITY | 2"-12" STROKE | 10,000 PSI MAX. PRESSURE

FEATURES

- Plunger wiper seal keeps out contamination and debris
- Industrial grade steel construction withstands even the most demanding of applications
- Chrome plated piston rod eliminates corrosion and rust
- Single acting load return
- Roller burnished cylinders for a smooth finish
- Stop ring prevents piston from being overextended
- 3/8" NPTF female coupler and dust cap on all models



CQ38F High Flow Coupler included on all models



CQ38F High Flow Coupler included on all models

FEATURES

- Plunger wiper seal keeps out contamination and debris
- Industrial grade steel construction withstands even the most demanding of applications
- Chrome plated piston rod eliminates corrosion and rust
- Double acting for positive retraction
- Roller burnished cylinders for a smooth finish
- Stop ring prevents piston from being overextended
- 3/8" NPTF female coupler and dust cap on all models

Capacity* (tons)	Stroke* (in.)	Model #
100	2.00	SGS1002
100	4.00	SGS1004
100	6.00	SGS1006
100	8.00	SGS1008
100	10.00	SGS10010
100	12.00	SGS10012
150	2.00	SGS1502
150	4.00	SGS1504
150	6.00	SGS1506
150	8.00	SGS1508
150	10.00	SGS15010
150	12.00	SGS15012
200	2.00	SGS2002
200	6.00	SGS2006
200	12.00	SGS20012
300	2.00	SGS3002
300	6.00	SGS3006
300	12.00	SGS30012
400	2.00	SGS4002
400	6.00	SGS4006
400	12.00	SGS40012
500	2.00	SGS5002
500	6.00	SGS5006
500	12.00	SGS50012

*Actual tonnage and stroke may vary slightly.



Capacity* (tons)	Stroke* (in.)	Model #
100	2.00	SGD1002
100	4.00	SGD1004
100	6.00	SGD1006
100	8.00	SGD1008
100	10.00	SGD10010
100	12.00	SGD10012
150	2.00	SGD1502
150	4.00	SGD1504
150	6.00	SGD1506
150	8.00	SGD1508
150	10.00	SGD15010
150	12.00	SGD15012
200	2.00	SGD2002
200	6.00	SGD2006
200	12.00	SGD20012
300	2.00	SGD3002
300	6.00	SGD3006
300	12.00	SGD30012
400	2.00	SGD4002
400	6.00	SGD4006
400	12.00	SGD40012
500	2.00	SGD5002
500	6.00	SGD5006
500	12.00	SGD50012

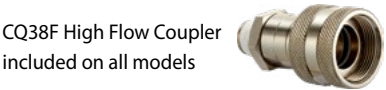
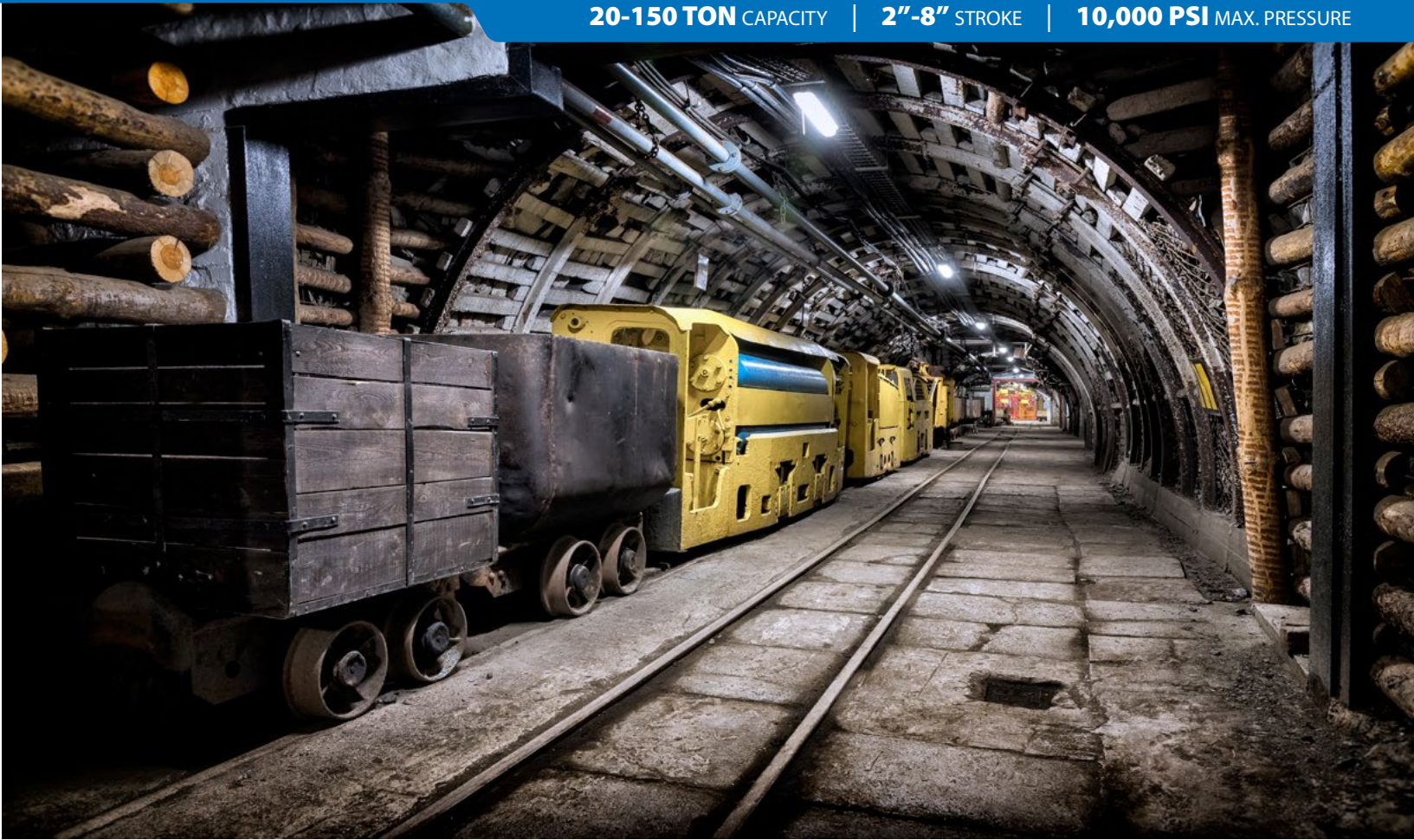
*Actual tonnage and stroke may vary slightly.

FEATURES

- Lightweight aluminum body allows for easy carrying and positioning
- Plunger wiper seal keeps out contamination and debris
- Bearing reduces side loading issues and increases life
- Single acting spring load return
- Steel base plate protects the cylinder base
- Stop ring prevents piston from being overextended
- 3/8" NPTF female coupler and dust cap on all models

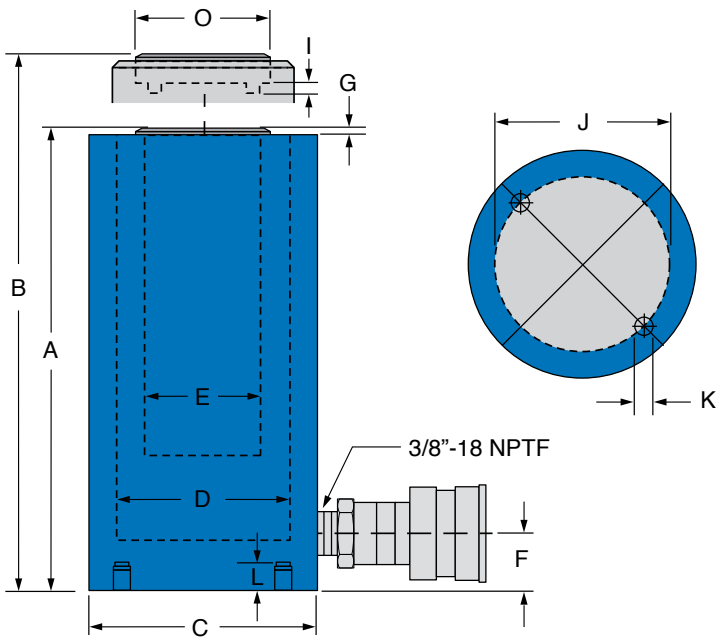


Capacity	Stroke	Model #	Cylinder Effective Area	Oil Capacity	A	B	C	D	E	F	G	I
					Collapsed Height	Extended Height	Outside Diameter	Cylinder Bore Dia.	Plunger Diameter	Base to Coupler Port	Saddle Distance above Cyl.	Piston Thread Length
(tons)	(in.)		(in. ²)	(in. ³)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)
20	2.02	SA202	4.83	9.8	7.23	9.25	3.35	2.48	1.97	1.32	0.12	0.59
20	3.98	SA204	4.83	19.2	9.21	13.19	3.35	2.48	1.97	1.32	0.12	0.59
20	5.98	SA206	4.83	28.9	10.82	16.8	3.35	2.48	1.97	1.32	0.12	0.59
30	1.99	SA302	6.85	13.6	7.17	9.16	3.94	2.95	2.56	1.07	0.12	0.47
30	3.99	SA304	6.85	27.3	9.14	13.13	3.94	2.95	2.56	1.07	0.12	0.47
30	6.01	SA306	6.85	41.2	11.09	17.1	3.94	2.95	2.56	1.07	0.12	0.47
50	2.02	SA502	10.99	22.2	7.29	9.31	5.12	3.74	3.15	0.95	0.12	0.59
50	4.00	SA504	10.99	43.9	9.29	13.29	5.12	3.74	3.15	0.95	0.12	0.59
50	5.99	SA506	10.99	65.8	11.28	17.27	5.12	3.74	3.15	0.95	0.12	0.59
100	4.01	SA1004	22.19	89	10.7	14.71	7.09	5.31	4.33	1.58	0.12	0.59
100	6.00	SA1006	22.19	133.1	12.65	18.65	7.09	5.31	4.33	1.58	0.12	0.59
100	7.96	SA1008	22.19	176.6	14.65	22.61	7.09	5.31	4.33	1.58	0.12	0.59
150	6.00	SA1506	35.23	211.4	13.54	19.54	9.06	6.7	5.51	1.78	0.12	0.59



CQ38F High Flow Coupler included on all models

Model #	Base Mounting Holes			Saddle Diameter	Weight
	Bolt Circle	Thread	Thread Depth		
	(in.)	(in.)	(in.)	(in.)	(lbs.)
SA202	2.76	M6 x P1.0	0.47	1.57	7.61
SA204	2.76	M6 x P1.0	0.47	1.57	9.48
SA206	2.76	M6 x P1.0	0.47	1.57	10.69
SA302	3.15	M6 x P1.0	0.47	2.22	10.91
SA304	3.15	M6 x P1.0	0.47	2.22	13.56
SA306	3.15	M6 x P1.0	0.47	2.22	15.98
SA502	4.33	M8 x P1.25	0.47	1.97	17.42
SA504	4.33	M8 x P1.25	0.47	1.97	21.16
SA506	4.33	M8 x P1.25	0.47	1.97	25.02
SA1004	6.3	M8 x P1.25	0.47	3.7	47.73
SA1006	6.3	M8 x P1.25	0.47	3.7	54.56
SA1008	6.3	M8 x P1.25	0.47	3.7	61.40
SA1506	7.87	M8 x P1.25	0.47	4.45	91.49



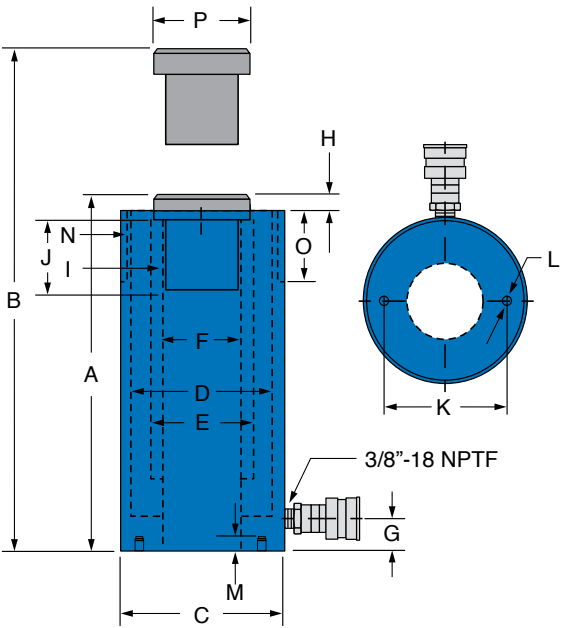
FEATURES

- Hollow Hole design allows for both push and pull applications
- Chrome plated piston rod eliminates corrosion and rust
- Dual wiper seals keep out contamination and debris
- Single acting spring load return
- Collar threads for easy fixturing
- 3/8" NPTF female coupler and dust cap on all models



Rated Cap.	Max. Cap.	Stroke	Model #	Cylinder Effective Area	Oil Capacity	A	B	C	D	E	F	G	H	Piston Internal Thread
						Collapsed Height	Extended Height	Outside Dia.	Cylinder Bore Dia.	Plunger Dia.	Center Hole Dia.	Base to Coupler Port	Saddle Distance above Cyl.	
(tons)	(tons)	(in.)		(in. ²)	(in. ³)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)
12	13.8	1.64	SHS121	2.79	4.61	4.72	6.38	2.72	2.13	1.38	0.77	0.98	—	—
12	13.8	1.64	SHS122	2.79	4.61	4.72	6.38	2.72	2.13	1.38	0.77	0.98	—	3/4"-16
12	13.8	3.00	SHS123	2.79	8.34	7.25	10.25	2.72	2.13	1.38	0.77	0.98	—	—
20	22.5	1.94	SHS202	4.54	8.93	6.13	8.07	3.88	2.87	2.13	1.06	0.75	0.28	1-9/16"-16
20	22.5	6.06	SHS206	4.54	27.68	12.12	18.18	3.88	2.87	2.13	1.06	0.75	0.28	1-9/16"-16
30	37.0	2.51	SHS302	7.39	18.62	7.03	9.54	4.50	3.54	2.48	1.31	0.85	0.39	1-13/16"-16
30	37.0	6.09	SHS306	7.39	45.24	13.00	19.09	4.50	3.54	2.48	1.31	1.00	0.39	1-13/16"-16
60	69.0	3.00	SHS603	13.87	41.49	9.77	12.77	6.25	4.92	3.54	2.12	1.26	0.50	2-3/4"-16
60	69.0	5.90	SHS606	13.87	83.52	12.75	18.65	6.25	4.92	3.54	2.12	1.26	0.50	2-3/4"-16
100	110.0	3.00	SHS1003	22.14	66.23	10.00	13.00	8.39	6.50	4.92	3.11	1.46	0.50	4"-16

Model #	Piston Thread Length	Base Mounting Holes			Collar Thread	Collar Thread Length	Saddle Dia.	Weight
		Bolt Circle	Thread	Thread Depth				
		(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(lbs.)
SHS121	—	—	—	—	2-3/4"-16	1.18	—	6.39
SHS122	0.63	—	—	—	2-3/4"-16	1.18	—	6.28
SHS123	—	2.00	5/16"-18	0.50	2-3/4"-16	1.18	—	9.04
SHS202	0.75	3.25	3/8"-16	0.39	3-7/8"-12	1.50	2.13	16.87
SHS206	0.75	3.25	3/8"-16	0.39	3-7/8"-12	1.50	2.13	30.2
SHS302	0.87	3.62	3/8"-16	0.55	4-1/2"-12	1.65	2.48	22.93
SHS306	0.87	3.62	3/8"-16	0.55	4-1/2"-12	1.65	2.48	40.9
SHS603	0.87	5.13	1/2"-13	0.55	6-1/4"-12	1.91	3.54	66.14
SHS606	0.87	5.13	1/2"-13	0.55	6-1/4"-12	1.91	3.54	81.66
SHS1003	0.87	7.00	5/8"-11	0.75	8-3/8"-12	2.38	4.92	110.8

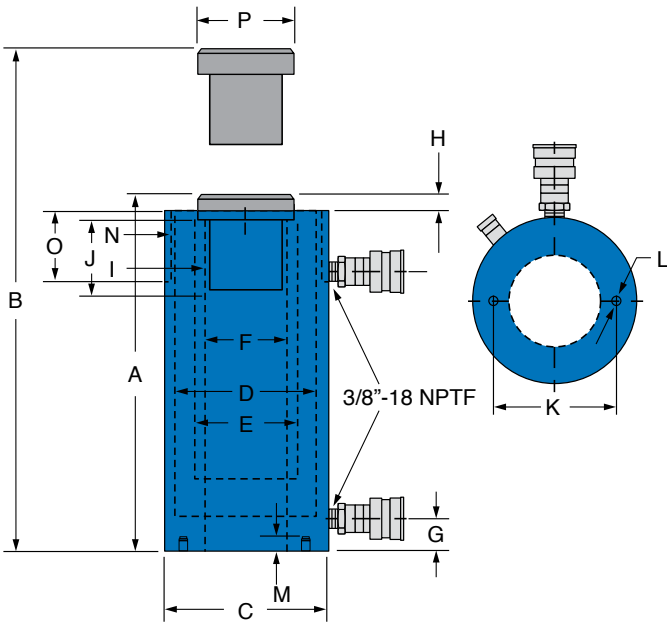


FEATURES

- Hollow Hole design allows for both push and pull applications
- Chrome plated piston rod eliminates corrosion and rust
- Dual wiper seals keep out contamination and debris
- Double acting for fast retraction
- Collar threads on select models for easy fixturing
- 3/8" NPTF female coupler and dust cap on all models



Rated Capacity	Maximum Capacity (tons)		Stroke	Model #	Cylinder Effective Area (in. ²)		Oil Capacity (in. ³)		A	B	C	D	E	F	G	H
									Collapsed Height	Extended Height	Outside Dia.	Cylinder Bore Dia.	Plunger Dia.	Center Hole Dia.	Base to Coupler Port	Saddle Distance above Cyl.
(tons)	Push	Pull	(in.)		Adv.	Ret.	Adv.	Ret.	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)
30	37.0	24.0	7.05	SHD307	7.39	4.71	52.5	33.5	13.04	20.09	4.50	3.54	2.55	1.31	1.00	0.37
30	37.0	24.0	10.06	SHD3010	7.39	4.71	74.8	47.1	17.1	27.16	4.50	3.54	2.55	1.31	1.00	0.37
60	69.0	45.7	3.50	SHD603	13.87	9.16	48.6	32.1	9.8	13.3	6.25	4.92	3.54	2.13	1.25	0.50
60	69.0	45.7	6.46	SHD606	13.87	9.16	90.2	59.5	12.81	19.27	6.25	4.92	3.54	2.13	1.25	0.50
60	69.0	45.7	10.14	SHD6010	13.87	9.16	140.3	92.6	17.24	27.38	6.25	4.92	3.54	2.13	1.25	0.50
100	110.0	63.0	1.57	SHD1001	22.14	12.56	33.2	18.8	6.6	8.17	8.38	6.50	5.11	3.13	1.41	0.50
100	110.0	63.0	3.00	SHD1003	22.14	12.56	66.5	37.7	10.01	13.01	8.38	6.50	5.11	3.13	1.41	0.50
100	110.0	63.0	6.00	SHD1006	22.14	12.56	132.8	75.3	13.51	19.51	8.38	6.50	5.11	3.13	1.41	0.50
100	110.0	63.0	10.07	SHD10010	22.14	12.56	224.2	127.2	18.22	28.29	8.38	6.50	5.11	3.13	1.41	0.50
150	164.0	83.0	8.07	SHD1508	32.94	16.55	263.4	132.3	13.77	21.84	9.75	7.48	5.90	3.13	1.50	0.19



Model #	Piston Internal Thread	Piston Thread Length	Base Mounting Holes			Collar Thread	Collar Thread Length	Saddle Dia.	Weight
			Bolt Circle	Thread	Thread Depth				
			(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(lbs.)
SHD307	1-13/16"-16	0.78	3.63	3/8"-16	0.62	4-1/2"-12	1.69	2.55	43.08
SHD3010	1-13/16"-16	0.78	3.63	3/8"-16	0.62	4-1/2"-12	1.69	2.55	55.25
SHD603	2-3/4"-16	0.70	5.12	1/2"-13	0.55	6-1/4"-12	1.91	3.54	66.8
SHD606	2-3/4"-16	0.70	5.12	1/2"-13	0.55	6-1/4"-12	1.91	3.54	82.01
SHD6010	2-3/4"-16	0.70	5.12	1/2"-13	0.55	6-1/4"-12	1.91	3.54	111.11
SHD1001	4/16"-16	0.75	7.00	5/8"-11	0.74	—	—	5.11	73.19
SHD1003	4/16"-16	0.75	7.00	5/8"-11	0.74	8-3/8"-12	2.38	5.11	111.66
SHD1006	4/16"-16	0.75	7.00	5/8"-11	0.74	8-3/8"-12	2.38	5.11	147.49
SHD10010	4/16"-16	0.75	7.00	5/8"-11	0.74	8-3/8"-12	2.38	5.11	194.56
SHD1508	4-1/4"-12	0.75	—	—	—	—	—	5.90	214.73

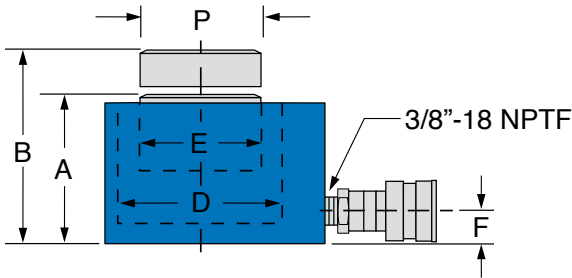
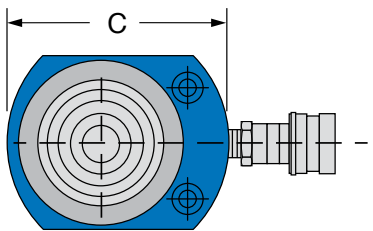
FEATURES

- Low collapsed height for applications that require minimal clearance in confined spaces
- Plunger wiper seal keeps out contamination and debris
- Industrial grade spring for increased spring performance
- Industrial grade steel construction withstands even the most demanding of applications
- Chrome plated piston rod eliminates corrosion and rust
- 3/8" NPTF female coupler and dust cap on all models

High Flow Coupler
included on all models



					A	B	C	D	E	F	P	
Capacity	Stroke	Model #	Cylinder Effective Area	Oil Capacity	Collapsed Height	Extended Height	Outside Diameter	Cylinder Bore Dia.	Plunger Diameter	Base to Coupler Port	Saddle Diameter	Weight
(tons)	(in.)		(in. ²)	(in. ³)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(lbs.)
5	0.23	SF5	1.1	0.3	1.3	1.53	2.36	1.18	1	0.71	1	1.65
10	0.40	SF10	2.25	0.9	1.7	2.1	3.27	1.69	1.5	0.75	1.5	3.31
20	0.43	SF20	4.38	1.9	2.05	2.48	4.02	2.36	2	0.77	2	5.95
30	0.50	SF30	6.85	3.4	2.33	2.83	4.53	2.95	2.5	0.75	2.5	9.04
50	0.63	SF50	9.86	6.2	2.64	3.27	5.51	3.54	2.76	0.75	2.76	14.33
75	0.55	SF75	16.1	8.9	3.14	3.69	6.5	4.53	3.35	0.75	3.35	25.13
100	0.62	SF100	20.57	12.8	3.39	4.01	7.01	5.12	3.74	0.75	3.74	31.64
150	0.55	SF150	31.16	17.1	3.99	4.54	8.5	6.3	4.53	0.94	4.53	56.77



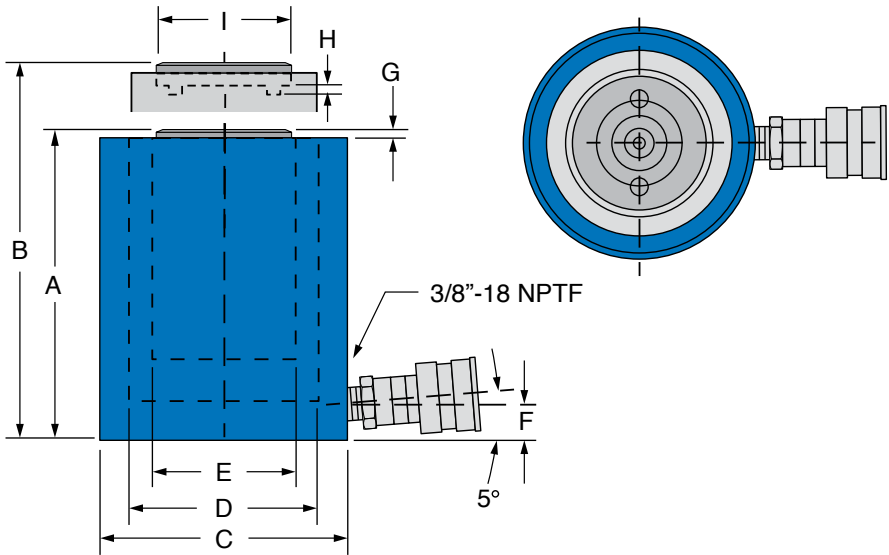
FEATURES

- Designed for use in confined spaces
- Plunger wiper seal keeps out contamination and debris
- Upper and lower bronze bearings for minimal wear of cylinder rod and maximizing lifetime of cylinder
- Industrial grade spring for increased spring performance and lifetime
- Industrial grade steel construction withstands even the most demanding of applications
- Chrome plated piston rod eliminates corrosion and rust
- 3/8" NPTF female coupler and dust cap on all models

High Flow Coupler
included on all models



					A	B	C	D	E	F	G	H	I	
Capacity	Stroke	Model #	Cylinder Effective Area	Oil Cap.	Collapsed Height	Extended Height	Outside Diameter	Cylinder Bore Dia.	Plunger Diameter	Base to Coupler Port	Saddle Distance above Cylinder	Piston Thread Length	Saddle Diameter	Weight
(tons)	(in.)		(in. ²)	(in. ³)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(lbs.)
10	1.51	SL101	2.47	3.7	3.5	5.01	2.76	1.77	1.57	0.61	0.04	0.28	1.42	5.73
20	1.76	SL202	4.38	7.7	3.88	5.64	3.62	2.36	1.97	0.61	0.04	0.31	1.5	10.36
30	2.46	SL302	6.85	16.8	4.63	7.09	4.02	2.95	2.56	0.63	0.04	0.35	2.13	14.77
50	2.49	SL502	9.86	24.6	5.01	7.5	4.88	3.54	2.76	0.73	0.04	0.55	2.36	22.27
100	2.25	SL1002	20.57	46.3	5.59	7.84	6.5	5.12	3.54	1.16	0.04	0.55	2.91	43.21



10 TON CAPACITY | 1.5" STROKE | 10,000 PSI MAX. PRESSURE

5-55 TON CAPACITY



FEATURES

- Designed for use in confined spaces
- Ideal for pushing applications
- Includes stackable adapters that fit into the base of the cylinder
- Industrial grade spring for increased spring performance
- Industrial grade steel construction withstands even the most demanding of applications
- Chrome plated piston rod eliminates corrosion and rust
- 3/8" NPTF female coupler and dust cap on all models

Adapter #	Length	Diameter
	(in.)	(in.)
1	0.98	1.75
2	1.97	1.75
3	2.95	1.75

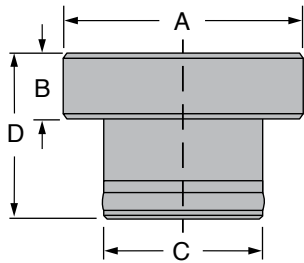
Capacity (tons)	Stroke (in.)	Model #	Cylinder Effective Area (in. ²)	Oil Capacity (in. ³)	A	B	C	D	E	F	G	I	Weight (lbs.)
					Collapsed Height (in.)	Extended Height (in.)	Outside Diameter (in.)	Cylinder Bore Dia. (in.)	Plunger Diameter (in.)	Base to Coupler Port (in.)	Saddle Distance above Cylinder (in.)	Saddle Diameter (in.)	
10	1.51	SL101K	2.36	3.6	3.5	5.01	2.76	1.73	1.5	1.02	0.04	1.82	9.79

⚠ California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov



STANDARD
GROOVED SADDLES

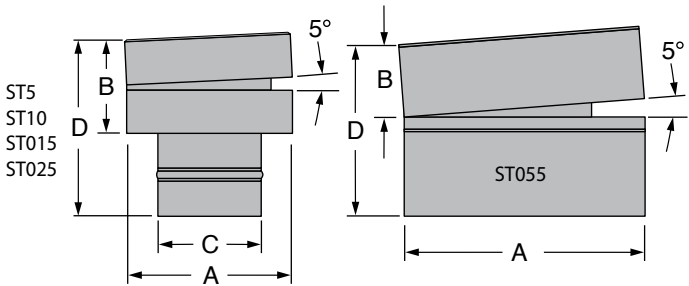
O-ring provides retention in cylinders



Model #	Capacity (tons)	Compatible Cylinders	Dimensions (in.)			
			A	B	C	D
SG5	5	S50-S59	1	0.25	0.67	0.84
SG10	10	S101-S1014	1.37	0.25	0.87	1.06
SG15	15	S151-S1514	1.49	0.37	0.82	1.38
SG25	25	S251-S2514	2	0.39	1.4	1.4

TILT SADDLES

Saddles tilt for added versatility in lifting applications



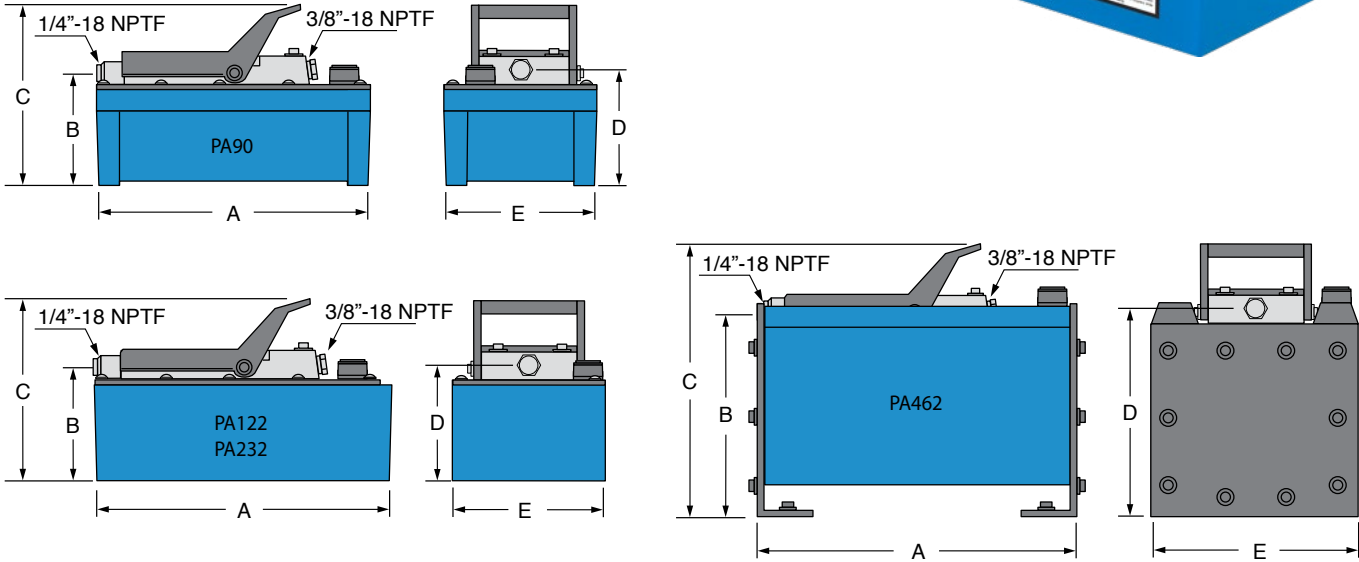
Model #	Capacity (tons)	Compatible Cylinders	Dimensions (in.)			
			A	B	C	D
ST5	5	S50-S59	0.98	0.63	0.69	1.18
ST10	10	S101-S1014	1.38	0.74	0.87	1.5
ST015	15	S151-S1514	1.5	0.73	0.87	1.57
ST025	25	S251-S2514	1.97	1.29	1.43	2.13
ST055	55	S552-S5513	2.76	0.59	—	1.8

⚠ California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov

SINGLE ACTING AIR PUMPS

FEATURES

- High strength metal reservoir eliminates reservoir cracking
- Shop air pressure range of 40-170 psi
- Ideal for frame machines and other OEM equipment
- Internal pressure relief valve protects from overloading
- Maximum working pressure at 10,000 psi



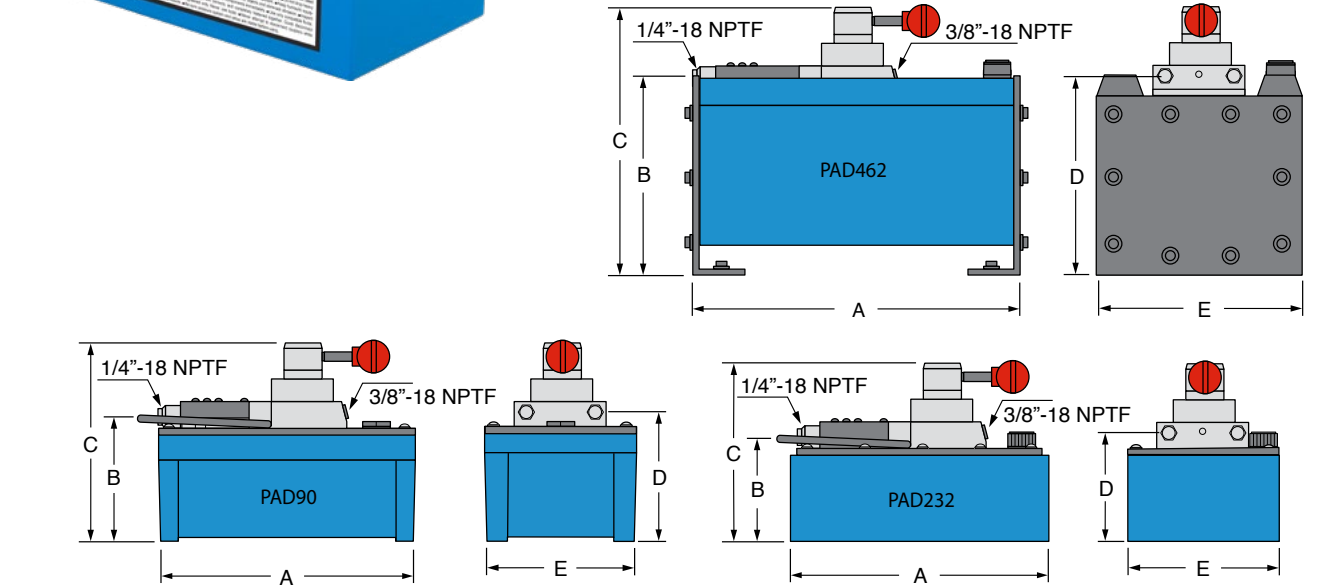
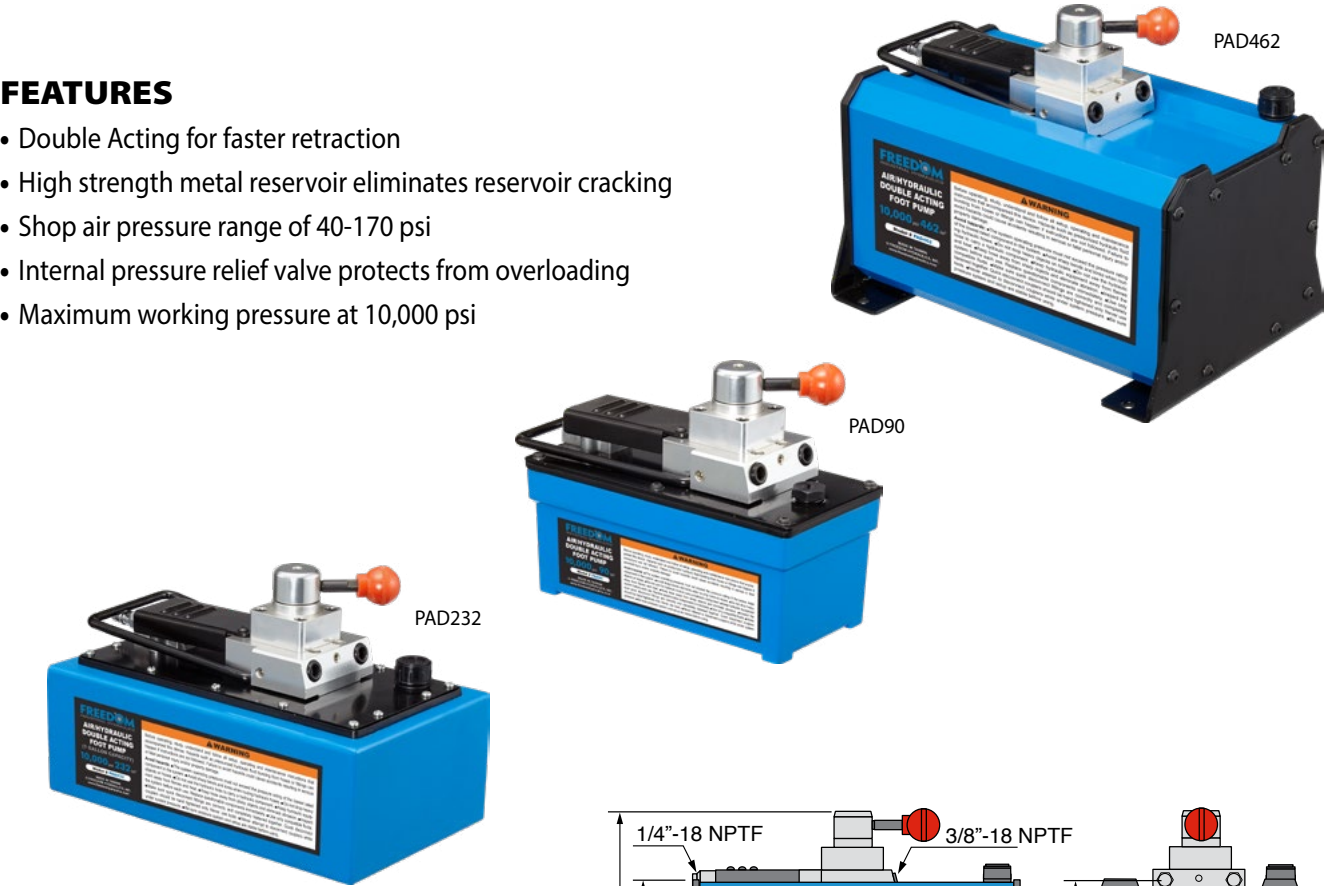
Model #	Usable Oil Capacity (in. ³)	Oil Output Flow Range (in. ³ /min.)		Air Pressure Range (psi)	Dimensions (in.)					Valve Function		Weight (lbs.)
		0 PSI	10,000 PSI		A	B	C	D	E			
PA90	90	87	21	40-170	10.06	5.16	7.96	5.3	5	Single Acting	ADVANCE / HOLD / RETRACT	15.54
PA122	122	88	21	40-170	11.34	5.31	8.11	5.47	5.75	Single Acting	ADVANCE / HOLD / RETRACT	19.07
PA232	232	86	20	40-170	12.6	5.29	8.09	5.44	7.38	Single Acting	ADVANCE / HOLD / RETRACT	25.9
PA462	462	86	20	40-170	13.78	7.64	10.44	7.8	9.84	Single Acting	ADVANCE / HOLD / RETRACT	39.79

California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov

DOUBLE ACTING AIR PUMPS

FEATURES

- Double Acting for faster retraction
- High strength metal reservoir eliminates reservoir cracking
- Shop air pressure range of 40-170 psi
- Internal pressure relief valve protects from overloading
- Maximum working pressure at 10,000 psi



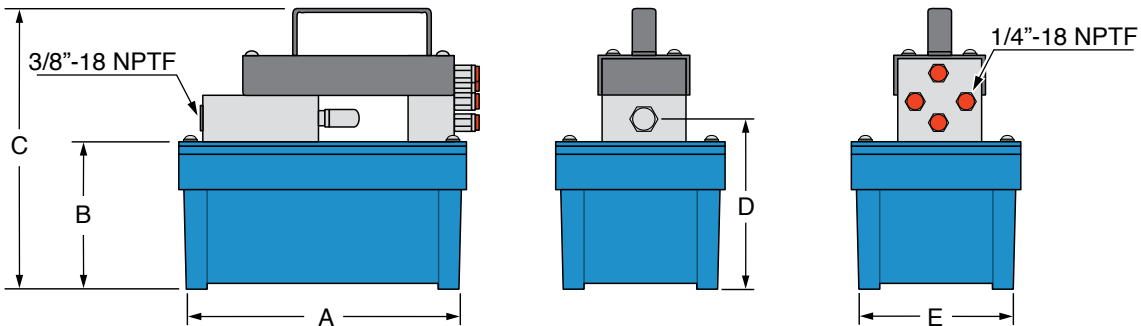
Model #	Usable Oil Capacity (in. ³)	Oil Output Flow Range (in. ³ /min.)		Air Pressure Range (psi)	Dimensions (in.)					Valve Function		Weight (lbs.)
		0 PSI	10,000 PSI		A	B	C	D	E			
PAD90	90	84	19	40-170	5.03	2.58	8.15	2.72	5	Double Acting	4W3P	16.87
PAD232	232	84	19	40-170	12.6	5.29	8.28	5.56	7.38	Double Acting	4W3P	24.69
PAD462	462	85	19	40-170	13.78	7.64	10.63	7.91	9.84	Double Acting	4W3P	41.23

California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov

REMOTE CONTROL AIR PUMPS

FEATURES

- Pump is equipped with 10 ft. hand held remote for operating remotely
- High strength metal reservoir eliminates reservoir cracking
- Shop air pressure range of 40-170 psi
- Ideal for frame machines and other OEM equipment
- Internal pressure relief valve protects from overloading
- Maximum working pressure at 10,000 psi

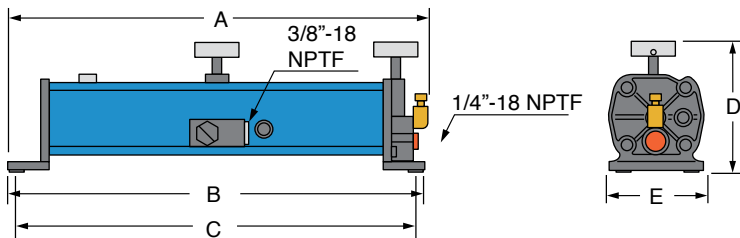


Model #	Usable Oil Capacity (in. ³)	Oil Output Flow Range (in ³ /min)		Air Pressure Range (psi)	Dimensions (in.)					Valve Function		Weight (lbs.)
		0 PSI	10,000 PSI		A	B	C	D	E			
PA90R	90	68	10	40-170	10.28	6.61	8.05	5.24	5	Single Acting	ADVANCE / HOLD / RETRACT	18.74
PA232R	232	69	10	40-170	12.6	6.81	8.27	5.43	7.36	Single Acting	ADVANCE / HOLD / RETRACT	29.32

HAND OPERATED AIR PUMP

FEATURES

- Pump is designed for hand operation
- Fastest available no-load flow rate in the Freedom air pump line
- High strength metal reservoir eliminates reservoir cracking
- Shop air pressure range of 40-170 psi
- Ideal for frame machines and other OEM equipment
- Internal pressure relief valve protects from overloading
- Maximum working pressure at 10,000 psi

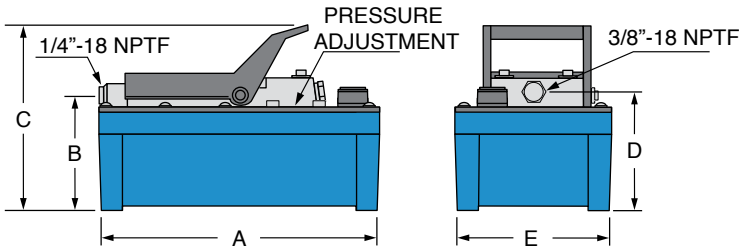


Model #	Usable Oil Capacity (in. ³)	Oil Output Flow Range (in ³ /min)		Air Pressure Range (psi)	Dimensions (in.)					Valve Function		Weight (lbs.)
		0 PSI	10,000 PSI		A	B	C	D	E			
PA36H	36	159	11	120	18.50	17.99	17.20	5.20	5.47	Single Acting	ADVANCE / HOLD / RETRACT	8.71

ADJUSTABLE PRESSURE AIR PUMP

FEATURES

- Pump is equipped with an adjustable pressure setting for restricting maximum pressure to user's operational needs below 10,000 psi
- High strength metal reservoir eliminates reservoir cracking
- Shop air pressure range of 40-170 psi
- Ideal for frame machines and other OEM equipment
- Internal pressure relief valve protects from overloading
- Maximum working pressure at 10,000 psi



Model #	Usable Oil Capacity (in. ³)	Oil Output Flow Range (in ³ /min)		Air Pressure Range (psi)	Dimensions (in.)					Valve Function		Weight (lbs.)
		0 PSI	10,000 PSI		A	B	C	D	E			
PA90A	90	87	21	40-170	10.04	5.16	7.95	5.31	5.00	Single Acting	ADVANCE / HOLD / RETRACT	15.54

METAL RESERVOIR | 3/8"-18 NPTF PORTS | 10,000 PSI MAX. PRESSURE

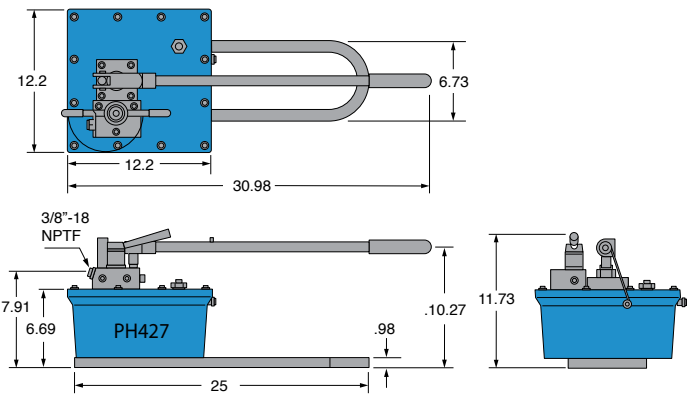
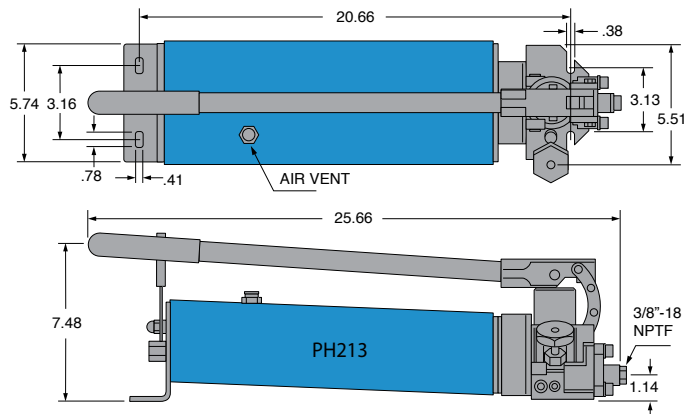
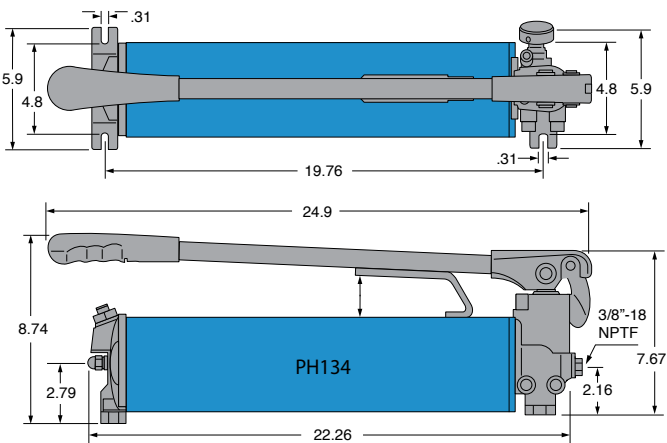
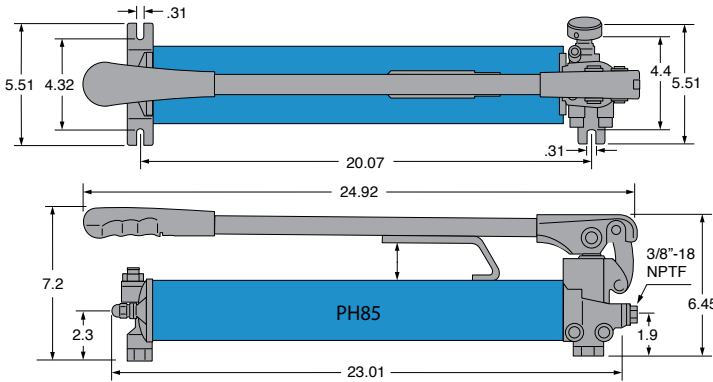
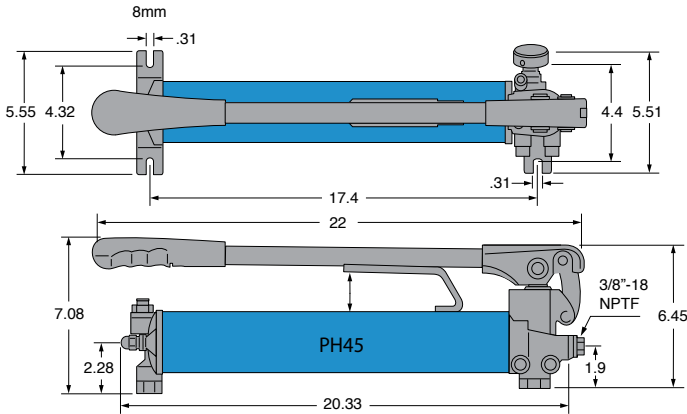
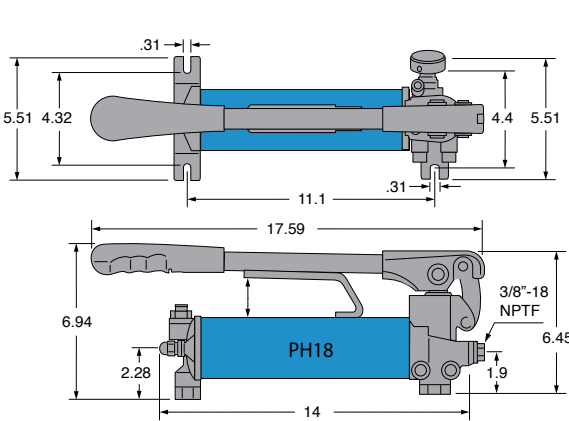
SINGLE ACTING HAND PUMPS

FEATURES

- High strength metal reservoir eliminates reservoir cracking
- 2 speed pump bodies for faster operation
- Ideal for frame machines and other OEM equipment
- Internal pressure relief valve protects from overloading
- Maximum working pressure at 10,000 psi
- Large reservoir capacities for larger applications



Model #	Usable Oil Capacity (in. ³)	Valve Function	Pump Type	Pressure Rating		Oil Displacement Per Stroke		Maximum Operating Force (lbs.)	Piston Stroke	Oil Outlet Port	Weight (lbs.)
				1st Stage (psi)	2nd Stage (psi)	1st Stage (in. ³)	2nd Stage (in. ³)				
PH18	18	Single Acting	2 Speed	290	10000	1.19	0.08	51	0.98	3/8"-18NPTF	14.11
PH45	45	Single Acting	2 Speed	290	10000	1.19	0.17	92	0.98	3/8"-18NPTF	16.54
PH85	85	Single Acting	2 Speed	290	10000	1.19	0.17	81	0.98	3/8"-18NPTF	22.05
PH134	122	Single Acting	2 Speed	400	10000	2.39	0.17	81	0.98	3/8"-18NPTF	28.44
PH213	213	Single Acting	2 Speed	400	10000	1.83	0.16	96	0.83	3/8"-18NPTF	36.60
PH427	433	Single Acting	2 Speed	400	10000	6.81	0.25	78	1.26	3/8"-18NPTF	55.13



California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov

California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov

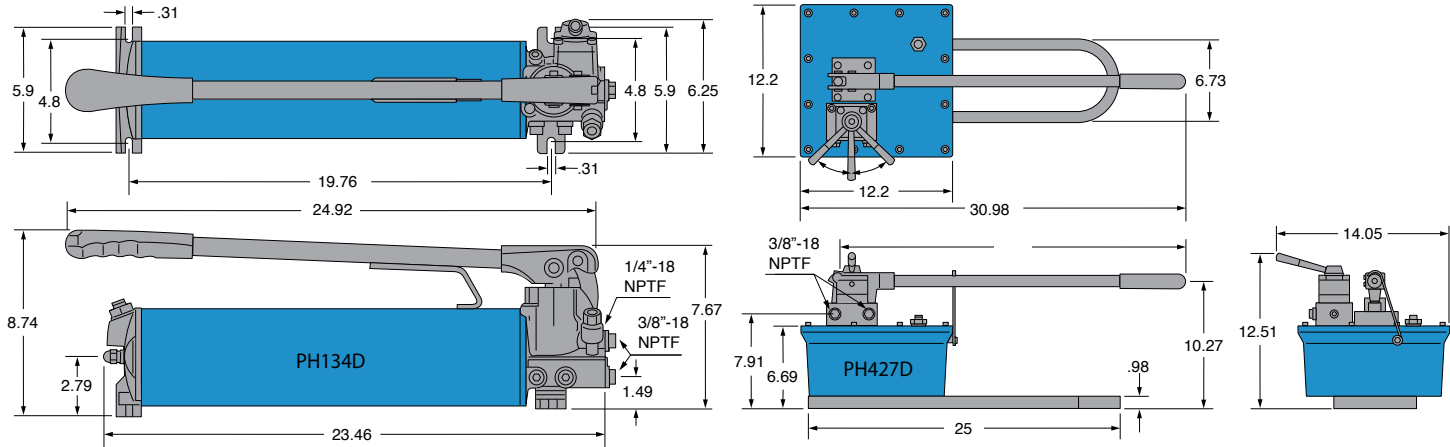
METAL RESERVOIR | 3/8"-18 NPTF PORTS | 10,000 PSI MAX. PRESSURE

METAL RESERVOIR | 3/8"-18 NPTF PORTS | 10,000 PSI MAX. PRESSURE

DOUBLE ACTING HAND PUMPS

FEATURES

- 4W3P valve for double acting cylinder applications
- High strength metal reservoir eliminates reservoir cracking
- 2 speed pump bodies for faster operation
- Ideal for frame machines and other OEM equipment
- Internal pressure relief valve protects from overloading
- Maximum working pressure at 10,000 psi
- Large reservoir capacities for larger applications



Model #	Usable Oil Capacity (in. ³)	Valve Function	Pump Type	Pressure Rating		Oil Displacement Per Stroke		Maximum Operating Force (lbs.)	Piston Stroke	Oil Outlet Port	Weight (lbs.)
				1st Stage (psi)	2nd Stage (psi)	1st Stage (in. ³)	2nd Stage (in. ³)				
PH134D	122	Double Acting	2 Speed	400	10000	2.39	0.17	81	0.98	3/8"-18NPTF	30.21
PH427D	433	Double Acting	2 Speed	400	10000	6.81	0.25	78	1.26	3/8"-18NPTF	60.20

⚠ California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov

⚠ California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov



0.5-1.4 TON CAPACITY | 3/8"-18 NPTF PORTS | 10,000 PSI MAX. PRESSURE

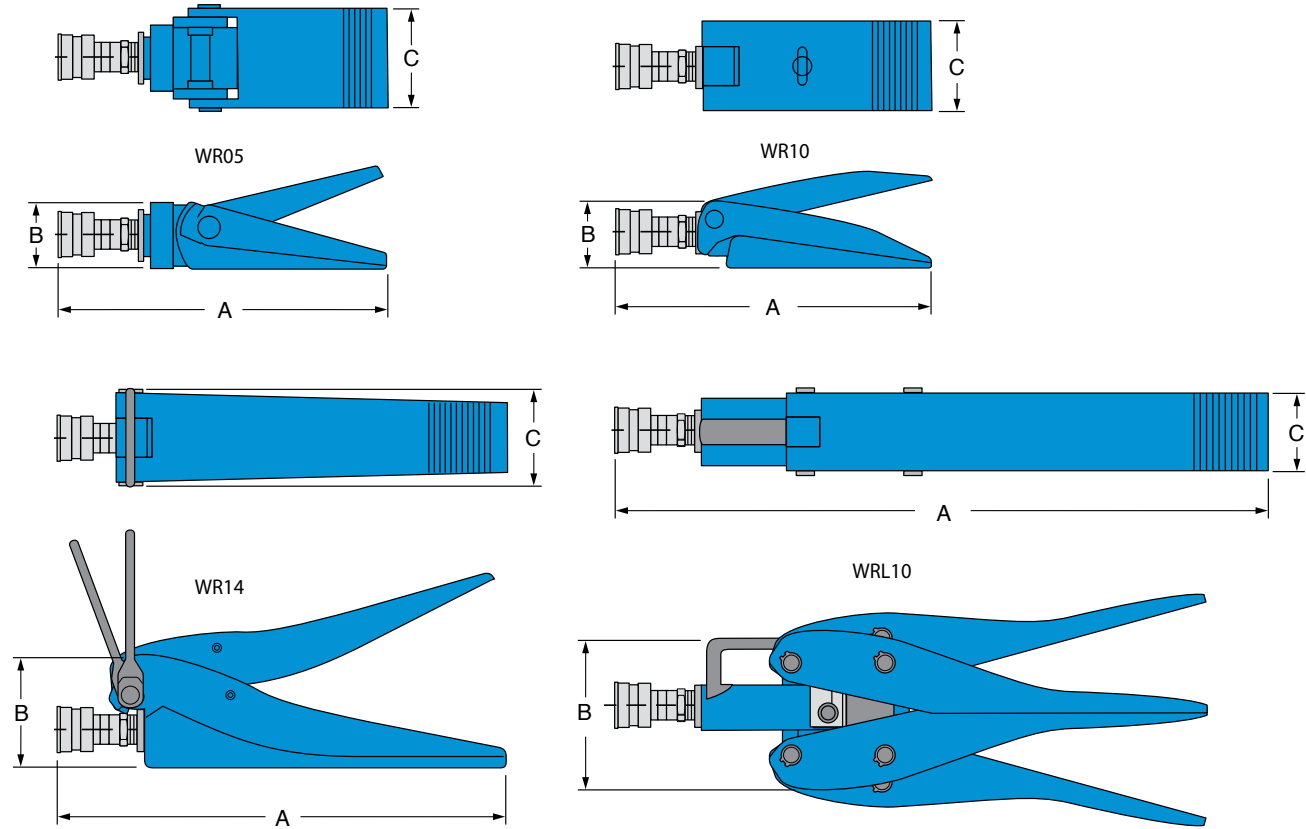
HYDRAULIC SPREADERS

FEATURES

- Designed to work in confined working spaces
- Ideal for wedging, prying, and opening
- Spring return for easy operation



Model #	Capacity (tons)	Oil Capacity (in. ³)	Cylinder Effective Area (in. ²)	Collapsed Height (in.)	Extended Height (in.)	Dimensions (in.)			Weight (lbs.)
						A	B	C	
WR05	0.5	0.582	0.987	0.69	2.4	9.44	2.2	2.51	4.28
WR10	1	0.77	1.095	0.51	3.75	9.05	2.08	2.12	5.11
WR14	1.4	3.851	2.796	1.03	12	17.1	4.29	4.68	24.69
WRL10	1	5.002	2.249	0.58	11.6	21.25	6.45	2.75	25.84



California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov

0.5-1.4 TON CAPACITY | 3/8"-18 NPTF PORTS | 10,000 PSI MAX. PRESSURE

HYDRAULIC SPREADER KITS



Model #	Capacity (tons)	Oil Capacity (in. ³)	Cylinder Effective Area (in. ²)	Collapsed Height (in.)	Extended Height (in.)	Dimensions (in.)			Weight (lbs.)
						A	B	C	
WR14K	1.4	3.851	2.796	1.03	12	17.1	4.29	4.68	37.81
WRL10K	1	5.002	2.249	0.58	11.6	21.25	6.45	2.75	39.35

California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov



4 TON KIT (Forged Adapters)
MK4

FEATURES

- Pump gauge included to enable pump user to know tonnage being applied
- "Quick-Lock" design for fast and easy assembly and disassembly
- Long handle provides ease of pumping
- Thick walled extension tubes for added strength and longer life
- Roto-molded plastic case for organized component storage and ease of carrying
- Flexible hydraulic hose with spring guards at both ends
- Forged steel adapters for added strength and durability
- **Kit Weight:** 41 lbs.



CAUTION! **MAX. 50%**

When cylinders are used w/ maintenance set attachments or components, the maximum system pressure must be limited to half the rated pressure (5,000 P.S.I.).

4 Ton Kit Includes:

- PLASTIC CASE
- 10,000 P.S.I. PUMP w/ GAUGE
- 6' HOSE
- 4" STROKE RAM
- WEDGE RAM (1/2 TON CAP.)
- 4", 8", 12" AND 16" EXTENSION TUBES
- TUBE CONNECTOR
- SERRATED SADDLE
- RUBBER HEAD
- WEDGE HEAD
- RAM TOE
- PLUNGER TOE
- RUBBER FACED FLAT BASE
- 90 DEGREE "V" BASE

10 TON KIT (Forged Adapters)
MK10

FEATURES

- All the same features found in the 4 ton kit
- **Kit Weight:** 83 lbs.



10 Ton Kit Includes:

- WHEELED PLASTIC CASE
- 10,000 P.S.I. PUMP w/ GAUGE
- 6' HOSE
- 6" STROKE RAM
- WEDGE RAM (1/2 TON CAP.)
- 5", 10", 14" AND 19" EXTENSION TUBES
- TUBE CONNECTOR
- SERRATED SADDLE
- RUBBER HEAD
- WEDGE HEAD
- 90 DEGREE "V" BASE
- FLAT BASE
- RAM TOE
- PLUNGER TOE

20 TON KIT (Forged Adapters)
MK20

INTENDED USE

A deluxe kit for repairing heavy equipment, industrial machinery, mining equipment and some heavy construction applications.

FEATURES

- Two steel cases with carrying handles share the weight for easier handling of kit
- Two-speed pump w/ gauge quickly raises ram to load and secondary pump provides powerstroke
- Pump gauge included to enable pump user to know tonnage being applied
- **Kit Weight:** 153 lbs.

20 Ton Kit Includes:

- STEEL CASE (1 OF 2)
- 2-SPEED PUMP w/ GAUGE
- 5' HOSE
- RAM, 5" STROKE
- 3-1/2" DIA. SADDLE (2)
- THREADED COUPLER (3)
- TOE LIFT
- WEDGE HEAD
- "V" HEAD
- STEEL CASE (2 OF 2)
- 3" EXTENSION TUBE (2)
- 5" EXTENSION TUBE
- 10" EXTENSION TUBE
- 20" EXTENSION TUBE
- 27-1/2" EXTENSION TUBE
- 6-1/2" DIA. BASE (2)



CAUTION! **MAX. 50%**

When cylinders are used w/ maintenance set attachments or components, the maximum system pressure must be limited to half the rated pressure (5,000 P.S.I.).

50 TON CAPACITY | 6.25"-13.25" STROKE | 10,000 PSI MAX. PRESSURE

FEATURES

- Welded frame, fully assembled, tested, and ready to put to work
- Safety overload system protects power unit
- Hand operated winch raises and lowers press bed
- Liquid filled gauge measures ram force in pounds and tons
- Self-retracting ram is bearing mounted for lateral movement on head channel



50 TON CAPACITY
Hand Pump Operated Press



50 TON CAPACITY
Air/Hydraulic Pump Operated

AVAILABLE IN 6.25" AND 13.25" STROKE



50 TON CAPACITY
Electro/Hydraulic Pump Operated

AVAILABLE IN 6.25" AND 13.25" STROKE

100 TON CAPACITY | 10.25" STROKE | 10,000 PSI MAX. PRESSURE



100 TON CAPACITY
Electro/Hydraulic Pump
Operated

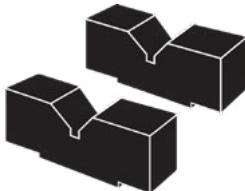


Capacity (tons)	Stroke (in.)	Model #	Throat Height		Throat Width (in.)	Bed Height Adjustments (in.)	Between Uprights (in.)	Between Bed Rails (in.)	Base		Overall Height (in.)	Weight (lbs.)
			Min. (in.)	Max. (in.)					Width (in.)	Depth (in.)		
50	6.25	HPH506	7.5	32.625	34.5	7 x 5	5.625	7.375	50	40	72.75	804
50	6.25	HPA506	7.5	32.625	34.5	7 x 5	5.625	7.375	50	40	72.75	801
50	13.25	HPA5013	7.5	32.625	34.5	7 x 5	5.625	7.375	50	40	72.75	833
50	6.25	HPE506	7.5	32.625	34.5	7 x 5	5.625	7.375	50	40	72.75	814
50	13.25	HPE5013	7.5	32.625	34.5	7 x 5	5.625	7.375	50	40	72.75	846
100	10.25	HPE10010	18.25	45.75	40.25	8 x 4.5	5.625	9	58	40	81	1777

OPTIONAL EQUIPMENT:



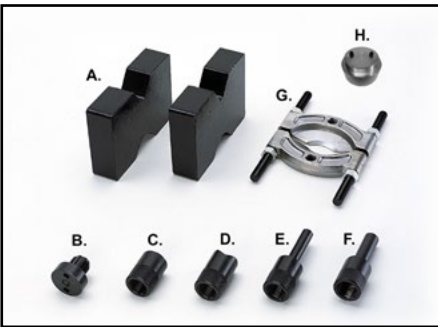
50 TON CAPACITY
Pair of Arbor Plates
78056A Weight: 108 lbs.



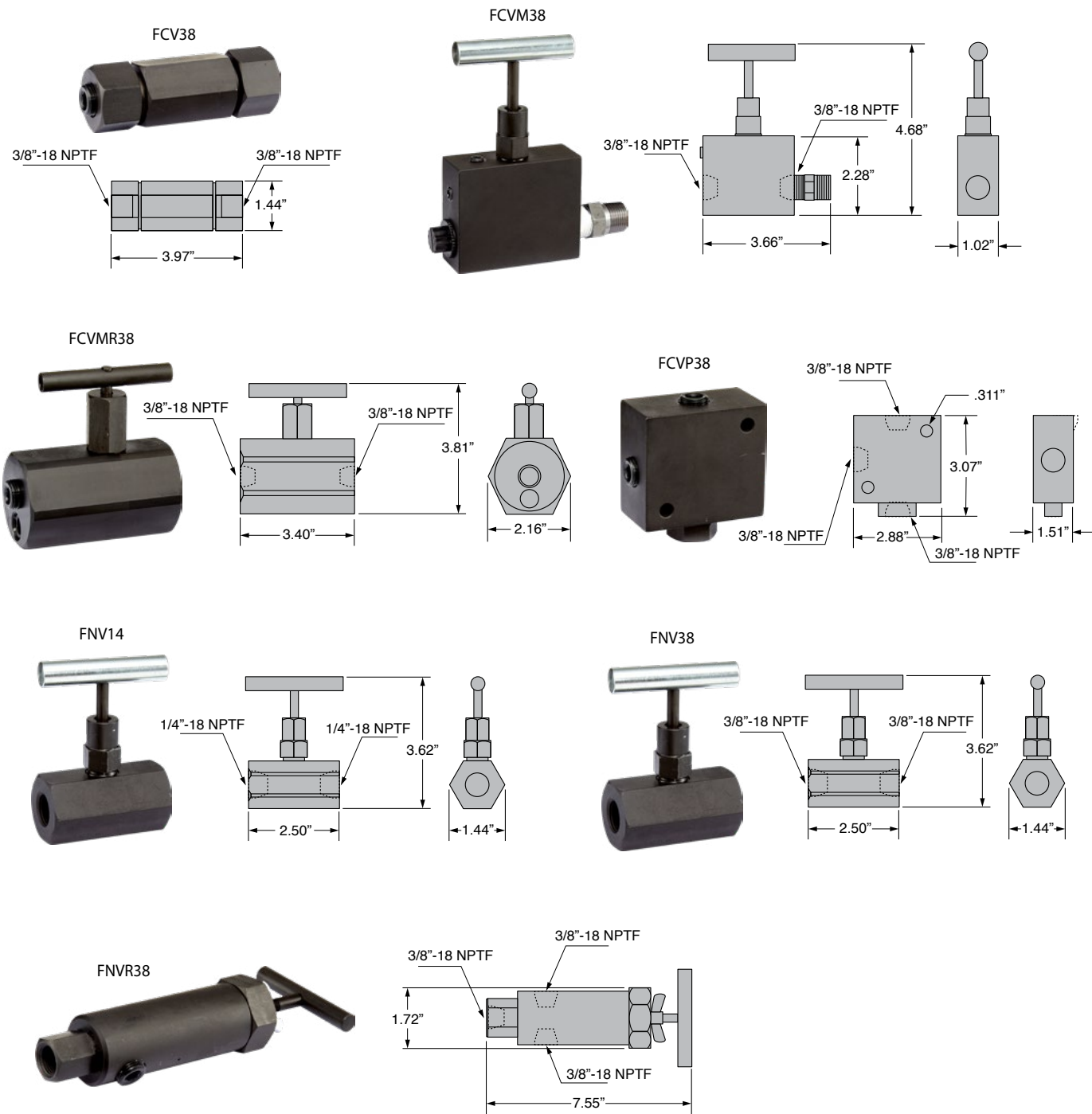
100 TON CAPACITY
Pair of Arbor Plates
78111A Weight: 153 lbs.

Accessory Kit for
50 Ton Shop Presses
78060

Weight: 147 lbs.

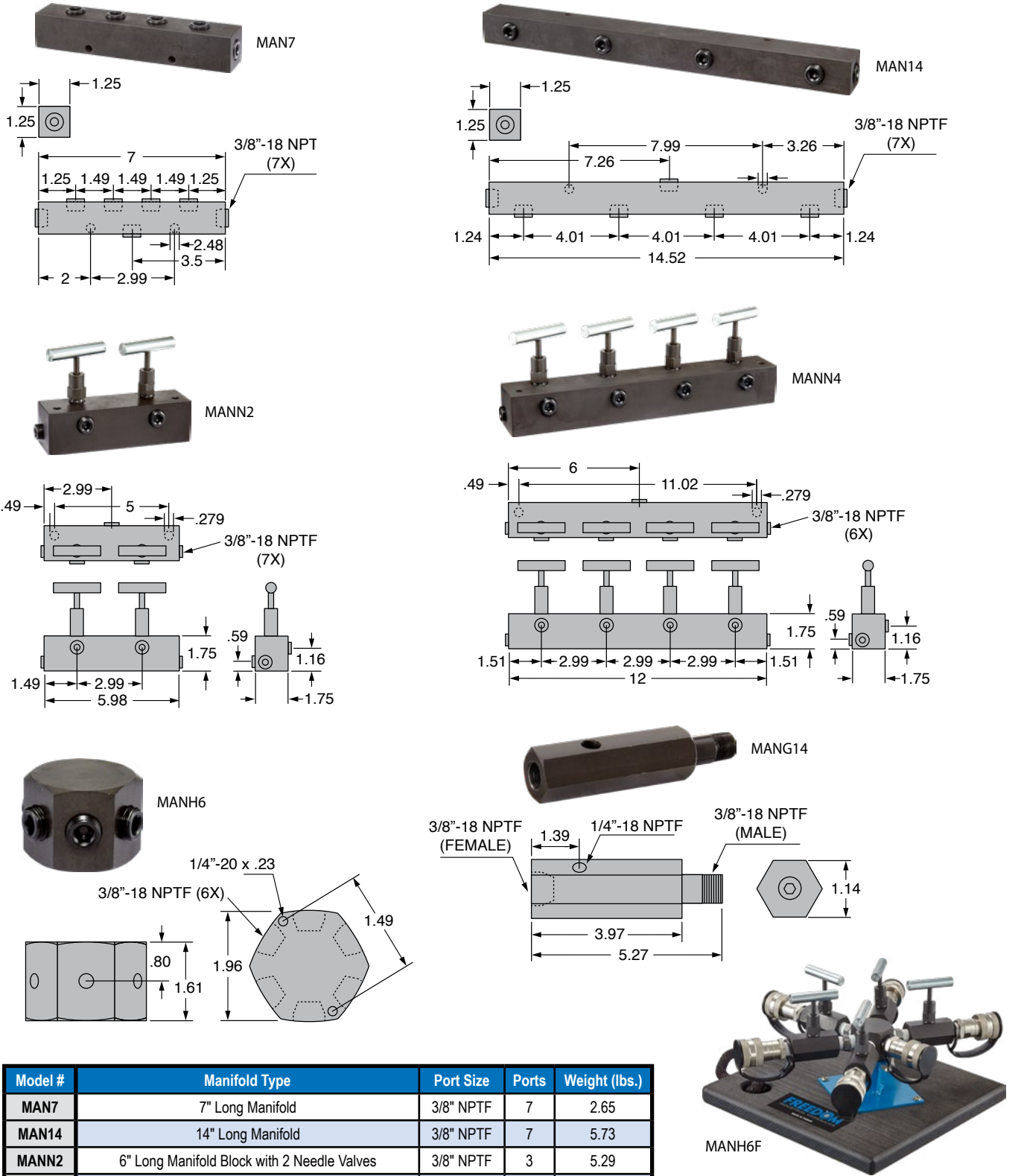


- INCLUDES:
- A. MODEL 78056A - Arbor Plates
 - B. MODEL 78059 - Threaded Adapter
 - C. MODEL 78061 - Ram Cap
 - D. MODEL 78062 - "V" Pushing Adapter
 - E. MODEL 78063 - 1" Diameter Ram
 - F. MODEL 78064 - 1-1/4" Diameter Ram
 - G. MODEL 78066 - Bearing Puller
 - H. MODEL 45100453 - Adapter



Model #	Valve Type	Description	Weight (lbs.)
FCV38	Check Valve	In-Line Directional Check Valve, 3/8" NPTF Female Ports	1.06
FCVM38	Check Valve	Manually Released Check Valve, 3/8" NPTF Female Ports	1.94
FCVMR38	Check Valve	Manually Released Check Valve with Pressure Relief Bypass, 3/8" NPTF Female Ports	3.4
FCVP38	Check Valve	Pilot Operated Check Valve 3/8" NPTF Female Ports	2.73
FNV14	Needle Valve	Needle Valve, 1/4" NPTF Female Ports	0.99
FNV38	Needle Valve	Needle Valve, 3/8" NPTF Female Ports	0.99
FNVR38	Pressure Relief Valve	In-Line Adjustable Pressure Relief Valve, 3/8" NPTF Female Ports	1.94

California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov



Model #	Manifold Type	Port Size	Ports	Weight (lbs.)
MAN7	7" Long Manifold	3/8" NPTF	7	2.65
MAN14	14" Long Manifold	3/8" NPTF	7	5.73
MANN2	6" Long Manifold Block with 2 Needle Valves	3/8" NPTF	3	5.29
MANN4	12" Long Manifold Block with 4 Needle Valves	3/8" NPTF	5	10.8
MANH6	6 Port Hexagon Manifold	3/8" NPTF	6	1.28
MANG14	5" Gauge Manifold w/ 1/4" Gauge Port	3/8"-18NPTF 1/4"-18NPTF	2	1.23
MANH6F	MANH6 with Needle Valves, Couplers, and Support Base	3/8" NPTF	6	15.56

- FEATURES (MANH6F)**
- Controls the flow of 5 hydraulic hoses from one central location
 - Sturdy design for long product life

California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov

HYDRAULIC HOSES



1/4" HOSES

Model #	Hose I.D. (in.)	Hose End Fittings	Operating Pressure (psi)	Hose Length (ft.)
H9462	1/4"	3/8"-18 NPTF	10,000	2
H9463	1/4"	3/8"-18 NPTF	10,000	3
H9446	1/4"	1/4"-18 NPTF	10,000	6
H9466	1/4"	3/8"-18 NPTF	10,000	6
H9468	1/4"	3/8"-18 NPTF	10,000	8
H94610	1/4"	3/8"-18 NPTF	10,000	10
H94612	1/4"	3/8"-18 NPTF	10,000	12
H94620	1/4"	3/8"-18 NPTF	10,000	20
H94630	1/4"	3/8"-18 NPTF	10,000	30



3/8" HOSES

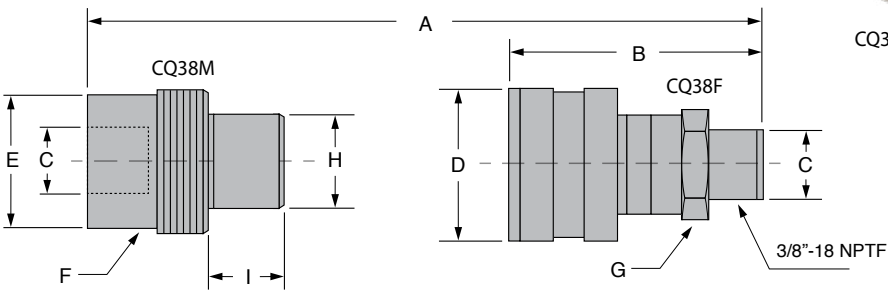
Model #	Hose I.D. (in.)	Hose End Fittings	Operating Pressure (psi)	Hose Length (ft.)
H9666	3/8"	3/8"-18 NPTF	10,000	6
H96610	3/8"	3/8"-18 NPTF	10,000	10
H96620	3/8"	3/8"-18 NPTF	10,000	20
H96630	3/8"	3/8"-18 NPTF	10,000	30
H96650	3/8"	3/8"-18 NPTF	10,000	50

F32 HYDRAULIC OIL (1 GALLON)

F32 HYDRAULIC FLUID SPECIFICATION CHART	
ISO Viscosity	32
Kinematic Viscosity @ 100°C, cSt (ASTM D-445)	5.40
Kinematic Viscosity @ 40°C, cSt (ASTM D-445)	32.00
Viscosity Index (ASTM D-2270)	100
Turbine Oxidation (ASTM D-943)	5000
RPVOT, min (ASTM D-2272)	300
Emulsion Separation, min (ASTM D-1401)	10
Pour Point, °C (ASTM D-97)	-37
Flash Point, °F (ASTM D-92)	435



HYDRAULIC COUPLERS



Model #	Coupler Type	Half	Dimensions (in.)									Weight (lbs.)
			A	B	C	D	E	F	G	H	I	
CQ38M	High-Flow	Male	3.45	--	3/8-18NPTF	--	1.06	0.90	--	0.75	0.63	0.22
CQ38F	High-Flow	Female	3.45	2.83	3/8-18NPTF	1.40	--	--	0.98	--	--	0.25

GAUGES



FEATURES

- Highly accurate
- Calibrated in dual scale for reading in PSI and kPa
- GS series gauges are glycerin filled
- Stainless steel case protects against vibration, pulsation, and corrosion
- Stainless steel internal wetted parts
- ASME B40.100 compliant
- RoHS compliant

Model #	Face Diameter	Gauge Type	Accuracy	Internals	Thread
	(in.)				
GS2514	2.5	Wet	±1.5%	Stainless	1/4"-18NPTF
GS4014	4	Wet	±1%	Stainless	1/4"-18NPTF
GS6014	6	Wet	±1%	Stainless	1/4"-18NPTF

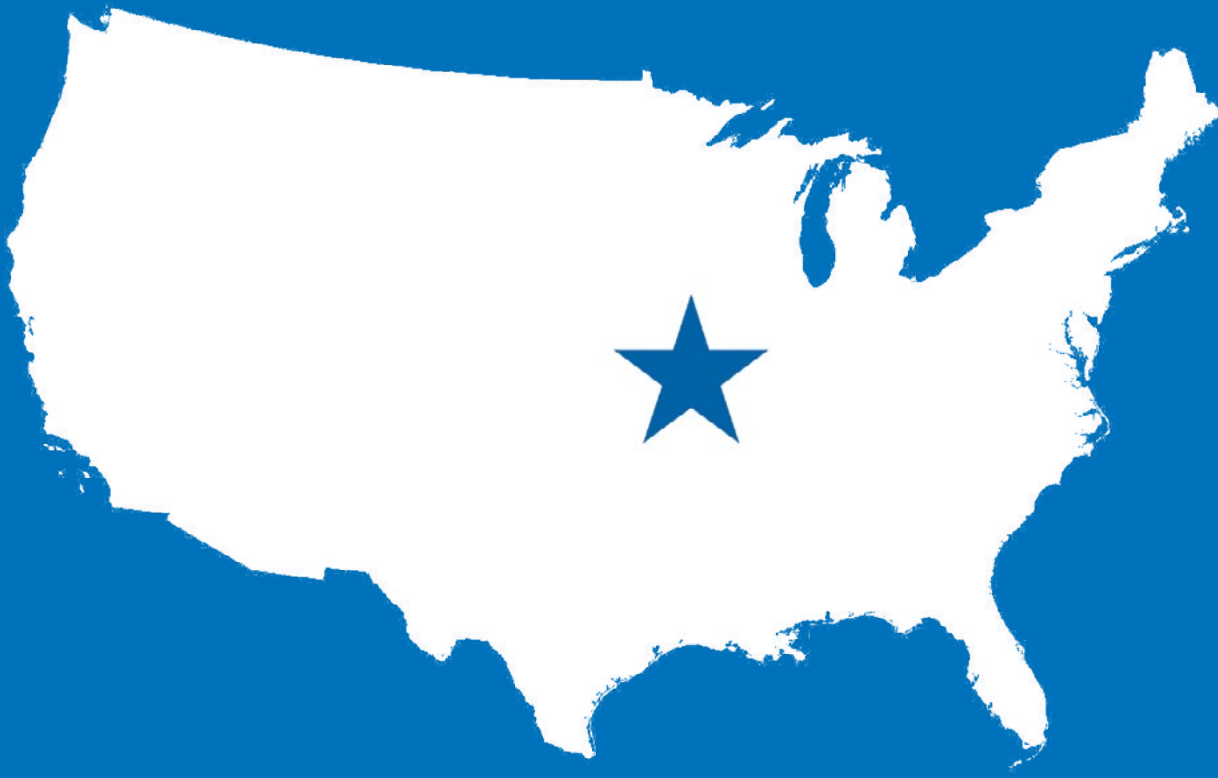
FREEDOM	BVA	Enerpac	"Power Team"	Simplex	FREEDOM	BVA	Enerpac	"Power Team"	Simplex
S23	H0203	N/A	N/A	N/A	SGS1006	HG10006	CLSG-1006	R1006C	RLR1006
S50	H0500	RC-50	N/A	R50	SGS1008	HG10008	CLSG-1008	N/A	N/A
S51	H0501	RC-51	C51C	R51	SGS10010	HG10010	CLSG-10010	N/A	RLR10010
S53	H0503	RC-53	C53C	R53	SGS10012	HG10012	CLSG-10012	N/A	N/A
S55	H0505	RC-55	C55C	R55	SGS1502	HG15002	CLSG-1502	R1502C	RLR1502
S57	H0507	RC-57	C57C	R57	SGS1504	HG15004	CLSG-1504	N/A	N/A
S59	H0509	RC-59	C59C	R59	SGS1506	HG15006	CLSG-1506	R1506C	N/A
S101	H1001	RC-101	C101C	R101	SGS1508	HG15008	CLSG-1508	N/A	N/A
S102	H1002	RC-102	C102C	R102	SGS15010	HG15010	CLSG-15010	R15010C	N/A
S104	H1004	RC-104	C104C	R104	SGS15012	HG15012	CLSG-15012	N/A	RLR15012
S106	H1006	RC-106	C106C	R106	SGS2002	HG20002	CLSG-2002	R2002C	RLR2002
S108	H1008	RC-108	C108C	R108	SGS2006	HG20006	CLSG-2006	R2006C	RLR2006
S1010	H1010	RC-1010	C1010C	R1010	SGS20012	HG20012	CLSG-20012	N/A	RLR20012
S1012	H1012	RC-1012	C1012C	R1012	SGS3002	N/A	CLSG-30002	R3552C	RLR3002
S1014	H1014	RC-1014	C1014C	R1014	SGS3006	N/A	CLSG-30006	R3556C	RLR3006
S151	H1501	RC-151	C151C	N/A	SGS30012	N/A	CLSG-30012	N/A	RLR30012
S152	H1502	RC-152	C152C	R152	SGS4002	N/A	CLSG-40002	R4302C	RLR4002
S154	H1504	RC-154	C154C	R154	SGS4006	N/A	CLSG-40006	R4306C	RLR4006
S156	H1506	RC-156	C156C	R156	SGS40012	N/A	CLSG-40012	N/A	RLR40012
S158	H1508	RC-158	C158C	N/A	SGS5002	N/A	CLSG-50002	R5652C	RLR5002
S1510	H1510	RC-1510	C1510C	R1510	SGS5006	N/A	CLSG-50006	R5656C	RLR5006
S1512	H1512	RC-1512	C1512C	N/A	SGS50012	N/A	CLSG-50012	N/A	RLR50012
S1514	H1514	RC-1514	C1514C	R1514	SGD1002	HDG10002	CLRG-1002	R1002D	N/A
S251	H2501	RC-251	C251C	R251	SGD1004	HDG10004	CLRG-1004	N/A	N/A
S252	H2502	RC-252	C252C	R252	SGD1006	HDG10006	CLRG-1006	R1006D	RDA1006
S254	H2504	RC-254	C254C	R254	SGD1008	HDG10008	CLRG-1008	N/A	N/A
S256	H2506	RC-256	C256C	R256	SGD10010	HDG10010	CLRG-10010	R10010D	N/A
S258	H2508	RC-258	C258C	R258	SGD10012	HDG10012	CLRG-10012	N/A	RDA10012
S2510	H2510	RC-2510	C2510C	R2510	SGD1502	HDG15002	CLRG-1502	R1502D	N/A
S2512	H2512	RC-2512	C2512C	R2512	SGD1504	HDG15004	CLRG-1504	N/A	N/A
S2514	H2514	RC-2514	C2514C	R2514	SGD1506	HDG15006	CLRG-1506	R1506D	RDA1506
S308	H3008	RC-308	N/A	R308	SGD1508	HDG15008	CLRG-1508	N/A	N/A
S552	H5502	RC-502	C552C	R552	SGD15010	HDG15010	CLRG-15010	N/A	N/A
S554	H5504	RC-504	C554C	R554	SGD15012	HDG15012	CLRG-15012	N/A	RDA15012
S556	H5506	RC-506	C556C	R556	SGD2002	HDG20002	CLRG-2002	R2002D	RDA2002
S5510	H5510	N/A	C5510C	N/A	SGD2006	HDG20006	CLRG-2006	R2006D	RDA2006
S5513	H5513	RC-5013	C5513C	R5513	SGD20012	HDG20012	CLRG-20012	N/A	N/A
S756	H7506	RC-756	C756C	R756	SGD3002	N/A	CLRG-3002	N/A	RDA3002
S7513	H7513	RC-7513	C7513C	R7513	SGD3006	HDG30006	CLRG-3006	N/A	RDA3006
S1002	H10002	N/A	C1002C	N/A	SGD30012	N/A	CLRG-30012	N/A	RDA30012
S1006	H10006	RC-1006	C1006C	R1006	SGD4002	N/A	CLRG-4002	R4302D	RDA4002
S10010	H10010	RC-10010	C10010C	R10010	SGD4006	N/A	CLRG-4006	R4306D	RDA4006
SD1010	HD1010	RR-1010	RD106	RDA1010	SGD40012	HDG40012	CLRG-40012	N/A	RDA40012
SD1012	HD1012	RR-1012	RD1010	N/A	SGD5002	N/A	CLRG-5002	R5652D	RDA5002
SD256	HD2506	N/A	RD256	N/A	SGD5006	HDG50006	CLRG-5006	R5656D	RDA5006
SD308	HD3008	RR-308	N/A	RDA308	SGD50012	N/A	CLRG-50012	N/A	RDA50012
SD3014	HD3014	RR-3014	N/A	RDA3014	SA202	HU2002T	RAC-202	RA202	N/A
SD556	HD5506	RR-506	RD556	RDA556	SA204	HU2004T	RAC-204	RA204	N/A
SD5513	HD5513	RR-5013	RD5513	N/A	SA206	HU2006T	RAC-206	RA206	N/A
SD5520	HD5520	RR-5020	RD5518	RDA5520	SA302	HU3002T	RAC-302	RA302	RAS302B
SD756	HD7506	RR-756	N/A	N/A	SA304	HU3004T	RAC-304	RA304	N/A
SD7513	HD7513	RR-7513	N/A	N/A	SA306	HU3006T	RAC-306	RA306	RAS306B
SD1006	HD10006	RR-1006	RD1006	RDA1006	SA502	HU5002T	RAC-502	RA552	RAS502B
SD10010	HD10010	N/A	N/A	N/A	SA504	HU5004T	RAC-504	RA554	RAS504B
SD10013	HD10013	RR-10013	RD10013	RDA10012	SA506	HU5006T	RAC-506	RA556	RAS506B
SD10018	HD10018	RR-10018	RD10020	N/A	SA1004	HU10004	RAC-1004	N/A	RAS1004B
SGS1002	HG10002	CLSG-1002	R1002C	N/A	SA1006	HU10006	RAC-1006	RA1006	RAS1006B
SGS1004	HG10004	CLSG-1004	N/A	N/A	SA1008	N/A	RAC-1008	N/A	N/A

California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov

FREEDOM	BVA	Enerpac	"Power Team"	Simplex	FREEDOM	BVA	Enerpac	"Power Team"	Simplex
SA1506	N/A	RAC-1506	N/A	RAS1506B	PA90R	PA1500L	PARG-1102N	PA50M	GA90R
SHS121	HC1201T	RCH-120	RH120	RC120A	PA232R	PA3801L	PARG-1105N	N/A	N/A
SHS122	HC1202T	RCH-121	RH121T	RC121A	PH45	N/A	P-77	P59	P42
SHS123	HC1203XT	RCH-123	RH123	RC123A	PH85	N/A	N/A	N/A	N/A
SHS202	HC2002T	RCH-202	RH202	RC202A	PH18	P350	P-142	P19	P22
SHS206	HC2006T	RCH-206	RH206	RC206A	PH134	P2301	P-80	P157	P82A
SHS302	HC3002T	RCH-302	RH302	RC302A	PH213	P4301	P-801	N/A	P230
SHS306	HC3006T	RCH-306	RH306	RC306A	PH427	P8701	P-462	P460	P461
SHS603	HC6003T	RCH-603	RH603	RC603A	PH134D	P2301M	P-84	P157D	P140D
SHS606	HC6006T	RCH-606	RH606	RC606A	PH427D	P8701M	P-464	P460D	P461D
SHS1003	HC10003T	RCH-1003	RH1003	RC1003A	MK4	J50040	MSFP-5	N/A	N/A
SHD307	HDC3007	RRH-307	RH306D	RCD307A	MK10	J50100	MSFP-10	IM10H	MK106
SHD3010	HDC3010	RRH-3010	RH3010	N/A	MK20	J50200	MS2-20	N/A	N/A
SHD603	HDC6003	RRH-603	N/A	N/A	WR05	SR05	N/A	N/A	N/A
SHD606	HDC6006	RRH-606	N/A	N/A	WR10	SR10	WR-5	HS2000	S2000A
SHD6010	HDC6010	RRH-6010	RH6010	RCD6010A	WR14	N/A	N/A	N/A	N/A
SHD1001	HDC10001	RRH-1001	RH1001	RCD1001A	WRL10	N/A	WR-15	N/A	S3000A
SHD1003	HDC10003	RRH-1003	N/A	RCD1003A	WR14K	N/A	N/A	N/A	N/A
SHD1006	HDC10006	RRH-1006	RH1006	RCD1006A	WRL10K	N/A	N/A	N/A	N/A
SHD10010	HDC10010	RRH-10010	RH10010	RCD10010A	FCV38	CVC3	V-17	9580	N/A
SHD1508	HDC15008	RRH-1508	RH1508	N/A	FCVMR38	CVM3	N/A	N/A	V10E
SF5	HF0503	RSM-50	RLS50	R50	FCVMR38	CVMS3	V-66	N/A	N/A
SF10	HF1005	RSM-100	RLS100	RFS10	FCVP38	CVP3	V-42	9581	V2
SF20	HF2005	RSM-200	RLS200	RFS20	FNV14	CVN1	V-182	N/A	N/A
SF30	HF3005	RSM-300	RLS300	RFS30	FNV38	CVN3	V-82	9575	V5B
SF50	HF5006	RSM-500	RLS500S	RFS50	FNVR38	CVR3	V-152	9633	V1
SF75	HF7506	RSM-750	RLS750S	RFS75	MAN14	CM14	A-65	9627	N/A
SF100	HF10006	RSM-1000	RLS1000S	RFS100	MAN7	CM7	A-64	9648	N/A
SF150	HF15006	RSM-1500	RLS1500S	RFS150	MANH6	CMH6	A-66	9635	M3
SF5K	HF0503B	N/A	N/A	N/A	MANN2	MFC2	AM-21	9642	M2A
SF10K	HF1005B	N/A	N/A	N/A	MANN4	MFC4	AM-41	9644	M4A
SF20K	HF2005B	N/A	N/A	N/A	MANG14	CF3814	GA-3	9670	GA1
SF30K	HF3005B	N/A	N/A	N/A	CQ38F	CH38F	CR-400	9796	C211
SF50K	HF5006B	N/A	N/A	N/A	CQ38M	CH38M	CH-604	9798	C213
SL101	HL1001	RCS-101	RSS101	RLS101	HPH506	IMP5506	IPH-5031	SPM556	IMS556
SL202	HL2002	RCS-201	RSS202	RLS201	HPA506	IAP5506	IPA-5021	SPA556	N/A
SL302	HL3002	RCS-302	RSS302	RLS302	HPA5013	IAP5513	IPA-5073	N/A	N/A
SL502	HL5002	RCS-502	RSS502	RLS502	HPE506	IEP5506	IPE-5005	SPE556	IES556
SL1002	HL10002	RCS-1002	RSS1002	RLS1002	HPE5013	IEP5513	IPE-5060	SPE5513	IES5513
SL101K	J72101	N/A	N/A	N/A	HPE10010	IEPD10010	IPE-10010	SPE10010	IES10010
SG5	SD05	A-53G	25746	N/A	F32	FJZ01	HF-101	9637	AO1
SG10	SD10	A-102G	31772	MK-10	H9462	CS3814A	H-9202	N/A	N/A
SG15	SD15	A-152G	31772	N/A	H9463	CS3814B	H-9203	9755	HA3
SG25	SD25	A-252G	31776	N/A	H9446	CS1414	H-9206Q	N/A	N/A
ST5	SDT05	N/A	N/A	N/A	H9466	CS3814	H-9206	9756	HA6
ST10	SDT10	CAT-10	350144	ATS10	H9468	N/A	N/A	9757	N/A
ST015	SDT15	CAT-10	350144	N/A	H94610	CS3814C	H-9210	9758	HA10
ST025	SDT25	CAT-50	350145	ATS25	H94612	N/A	N/A	9759	N/A
ST055	SDT55	CAT100	350376	N/A	H94620	CS3814D	H-9220	9760	HA20
PA36H	PA600H	N/A	PA9H	N/A	H94630	CS3814G	H-9230	9761	N/A
PA90	PA1500	N/A	PA6	GA90	H9666	CS3838	H-9306	9776	HD6
PA90A	PA1500A	N/A	N/A	N/A	H96610	CS3838C	H-9310	9777	HD20
PA122	PA2000	PATG-1102N	N/A	N/A	H96620	CS3838D	H-9320	9778	N/A
PA232	PA3801	PATG-1105N	PA6M-1	GA9230	H96630	CS3838E	H-9330	9735	N/A
PA462	PA7550	N/A	PA6-2	GA9460	H96650	CS3838F	H-9350	9779	HD50
PAD90	PA1500M	PAMG-1402N	PA6DM	N/A	GS2514	N/A	G2536L	N/A	N/A
PAD232	PA3801M	PAMG-1405N	PA6DM-1	GA9230D	GS4014	GW4014-CERT	G4089L	N/A	N/A
PAD462	PA7550M	N/A	PA6D2	GA9460D	GS6014	N/A	N/A	N/A	N/A

California residents - These products may contain a chemical known to cause cancer or reproductive harm. www.P65Warnings.ca.gov

A NATIONAL NETWORK OF FREEDOM AUTHORIZED SERVICE CENTERS PROVIDE SERVICE AND REPAIR



LIMITED LIFETIME WARRANTY

FREEDOM products and parts are warranted against defects in materials and workmanship for the life of the product or the part.

This warranty is expressly limited to persons who purchase FREEDOM products or parts for the purpose of resale or use in the ordinary course of the buyer's business.

This warranty does not cover any product or part that has been abused, misused, worn out, neglected, ground or otherwise altered, used for a purpose other than for which it was intended, or used in a manner inconsistent with any instructions regarding its use. In addition, this warranty does not cover any chains, batteries or electric motors, which are sold with FREEDOM products. All electric motors are separately warranted by their manufacturer under the conditions stated in their separate warranty.

THIS WARRANTY IS EXCLUSIVE AND FREEDOM MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, WITH RESPECT TO THE SPECIFIED PRODUCTS OR PARTS MANUFACTURED AND/OR SOLD BY IT, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER MATTER. No agent, employee or representative of FREEDOM, or any other person, has authority to bind FREEDOM to any affirmation, representation or warranty concerning FREEDOM products or parts except as set forth herein.

If any FREEDOM product or part is determined by FREEDOM, in its sole judgment, to be defective, FREEDOM will, at its option, either repair or replace such defective product or part. THIS REMEDY SHALL BE THE EXCLUSIVE REMEDY AVAILABLE FOR ANY DEFECTIVE FREEDOM PRODUCT OR PART AND FOR ALL DAMAGES RESULTING FROM ANY CAUSE WHATSOEVER, INCLUDING, WITHOUT LIMITATION, FREEDOM'S NEGLIGENCE. IN NO EVENT SHALL FREEDOM BE LIABLE TO ANY BUYER OR OTHER PERSON FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, WHETHER FOR DEFECTIVE OR NONCONFORMING GOODS, OR UNDER ANY THEORY OF LIABILITY, INCLUDING, BUT NOT LIMITED TO, BREACH OF CONTRACT (EXPRESS OR IMPLIED), NEGLIGENCE, STRICT LIABILITY OR OTHERWISE. The purpose of this exclusive remedy shall be to provide the buyer with repair or replacement of FREEDOM products or parts determined by FREEDOM to be defective in material or workmanship. This exclusive remedy shall not be deemed to have failed of its essential purpose so long as FREEDOM is willing and able to repair or replace said defective product or part in the prescribed manner.



is a registered trademark of Norco Industries, Inc.
www.freedomhydraulics.com

FACTORY WAREHOUSE
226 NW Platte Valley Drive
Riverside, MO 64150
816-541-3243 ph.
816-541-3246 fax

CORPORATE HEADQUARTERS
365 W. Victoria St.
Compton, CA 90220
310-639-4000 ph.
310-639-7411 fax

2019 Copyright
Catalog No. 4001
Printed in U.S.A.