



BVA[®]
HYDRAULICS

High Pressure Industrial Hydraulic Equipment



BUILT TO LAST



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BUILT TO LAST

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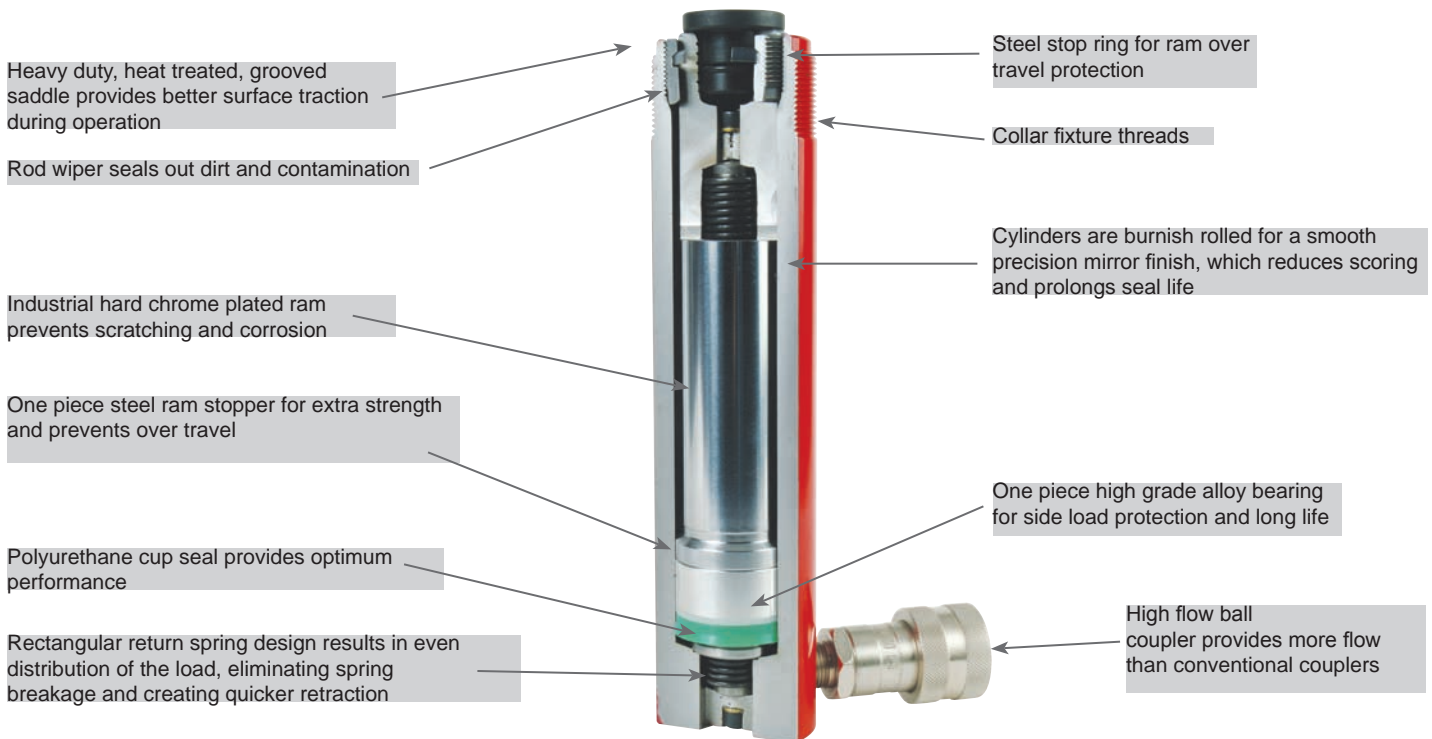
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THE BVA ADVANTAGE



- **BVA Lifetime Warranty • Repair Parts Available**
- **All Cylinders Are Tested to Exceed Industrial Standards**



BVA

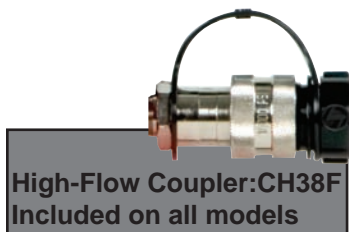
HYDRAULICS

SINGLE ACTING CYLINDERS



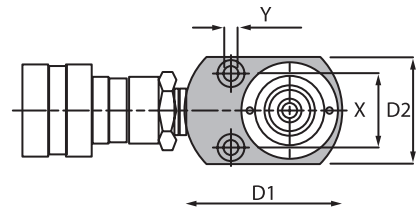
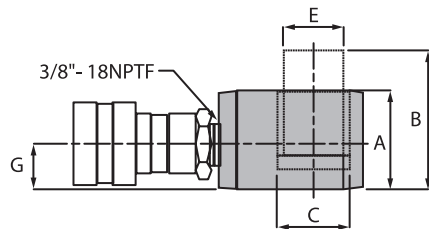
- 41 Models
- Rod wiper seals out dirt and contamination
- Collar fixture threads and thread protection cover
- Two base mounting holes on most models
- High strength steel construction from gun drilled solid bar
- One piece high grade alloy bearing for side load protection and long life
- Polyurethane cup seal provides for optimum performance
- Industrial hard chrome plated ram helps prevent rust and corrosion
- Solid steel cylinder body
- Heavy duty return spring provides quicker retraction
- Ideal for lifting and pressing
- Maximum working pressure: 10,000 psi / 700 bar

Cylinder Capacity (tons)	Stroke (in)	Model	Cylinder Effective Area (in ²)	Internal Pressure at Capacity (psi)	Oil Capacity (in ³)	Weight (Lbs)
2	3.07	H0203*	0.76	5,263	2.28	2.0
	0.63	H0500**	1.10	9,091	0.69	2.9
5	1.00	H0501	1.00	10,000	1.00	3.1
	3.07	H0503	1.00	10,000	3.07	3.5
	5.08	H0505	1.00	10,000	5.08	4.4
	7.09	H0507	1.00	10,000	7.09	4.9
	9.09	H0509	1.00	10,000	9.09	5.7
	1.00	H1001	2.24	8,928	2.24	4.0
10	2.01	H1002	2.24	8,928	4.50	5.1
	4.02	H1004	2.24	8,928	9.00	6.8
	5.94	H1006	2.24	8,928	13.31	9.5
	7.95	H1008	2.24	8,928	17.81	11.9
	9.96	H1010	2.24	8,928	22.31	14.1
	11.97	H1012	2.24	8,928	26.81	15.0
	14.02	H1014	2.24	8,928	31.40	16.6
15	0.99	H1501	3.14	9,554	3.11	7.3
	2.01	H1502	3.14	9,554	6.31	8.6
	3.98	H1504	3.14	9,554	12.50	11.2
	5.87	H1506	3.14	9,554	18.43	15.4
	7.87	H1508	3.14	9,554	24.71	17.6
	9.88	H1510	3.14	9,554	31.02	20.5
	12.01	H1512	3.14	9,554	37.71	23.1
	14.02	H1514	3.14	9,554	44.02	28.2
25	1.00	H2501	5.14	9,728	5.14	13.4
	2.01	H2502	5.14	9,728	10.33	14.6
	3.94	H2504	5.14	9,728	20.25	19.2
	5.94	H2506	5.14	9,728	30.53	23.2
	7.95	H2508	5.14	9,728	40.86	27.1
	9.96	H2510	5.14	9,728	51.19	30.9
	12.24	H2512	5.14	9,728	62.91	33.7
	14.25	H2514	5.14	9,728	73.25	37.7
30	8.27	H3008	6.49	9,245	53.67	40.8
55	2.01	H5502	10.99	10,009	22.09	34.2
	3.98	H5504	10.99	10,009	43.74	42.5
	6.22	H5506	10.99	10,009	68.36	57.5
	13.27	H5513	10.99	10,009	145.84	86.9
75	6.14	H7506	16.10	9,317	98.85	73.2
	13.11	H7513	16.10	9,317	211.07	121.3
100	2.01	H10002A	20.57	9,723	41.34	69.4
	6.61	H10006	20.57	9,723	135.97	121.3
	10.24	H10010	20.57	9,723	210.64	157.3



High-Flow Coupler:CH38F
Included on all models

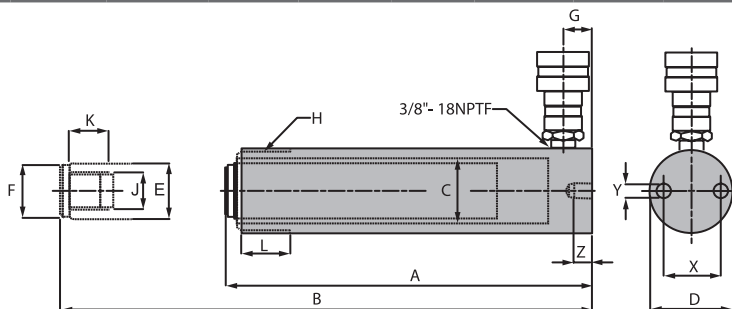
*H0203 come with CRZ14F



**H0500 only

INDUSTRIAL HYDRAULIC EQUIPMENT

Model	Collapsed Height A (in)	Extended Height B (in)	Cylinder Bore Diameter C (in)	Outside Diameter D (in)	Plunger Diameter E (in)	Saddle Diameter F (in)	Base to Inlet Port G (in)	Collar Thread H (in)	Collar Thread Length L (in)	Plunger Internal Thread J (in)	Plunger Thread Length K (in)	Base Mounting Hole		
												Bolt Circle X (in)	Thread Y (in)	Thread Depth Z (in)
H0203	5.39	8.46	1.00	1.31	0.87	1.00	0.46	1½"-16	0.54	-	-	-	-	-
H0500	1.61	2.24	1.18	2.36 x 1.58	0.98	-	0.75	-	-	-	-	1.10	0.2	-
H0501	4.58	5.58	1.13	1.50	1.00	0.98	0.79	1½"-16	1.10	¾"-16UNF	0.63	1.00	¼"-20UNC	0.55
H0503	6.65	9.72	1.13	1.50	1.00	0.98	0.79	1½"-16	1.10	¾"-16UNF	0.63	1.00	¼"-20UNC	0.55
H0505	8.70	13.78	1.13	1.50	1.00	0.98	0.79	1½"-16	1.10	¾"-16UNF	0.63	1.00	¼"-20UNC	0.55
H0507	10.71	17.80	1.13	1.50	1.00	0.98	0.79	1½"-16	1.10	¾"-16UNF	0.63	1.00	¼"-20UNC	0.55
H0509	12.72	21.81	1.13	1.50	1.00	0.98	0.79	1½"-16	1.10	¾"-16UNF	0.63	1.00	¼"-20UNC	0.55
H1001	3.62	4.62	1.69	2.26	1.49	-	0.77	2¼"-14	1.30	10-24UNC	0.24	1.56	5/16"-18UNC	0.55
H1002	4.84	6.85	1.69	2.26	1.49	1.38	0.77	2¼"-14	1.30	1"-8UNC	0.79	1.56	5/16"-18UNC	0.55
H1004	6.85	10.87	1.69	2.26	1.49	1.38	0.77	2¼"-14	1.30	1"-8UNC	0.79	1.56	5/16"-18UNC	0.55
H1006	9.84	15.78	1.69	2.26	1.49	1.38	0.77	2¼"-14	1.30	1"-8UNC	0.79	1.56	5/16"-18UNC	0.55
H1008	11.85	19.80	1.69	2.26	1.49	1.38	0.77	2¼"-14	1.30	1"-8UNC	0.79	1.56	5/16"-18UNC	0.55
H1010	13.86	23.82	1.69	2.26	1.49	1.38	0.77	2¼"-14	1.30	1"-8UNC	0.79	1.56	5/16"-18UNC	0.55
H1012	15.87	27.84	1.69	2.26	1.49	1.38	0.77	2¼"-14	1.30	1"-8UNC	0.79	1.56	5/16"-18UNC	0.55
H1014	17.72	31.74	1.69	2.26	1.49	1.38	0.77	2¼"-14	1.30	1"-8UNC	0.79	1.56	5/16"-18UNC	0.55
H1501	4.88	5.87	2.00	2.75	1.63	1.50	0.98	2¼"-16	1.18	1"-8UNC	0.98	1.88	¾"-16UNC	0.51
H1502	5.87	7.88	2.00	2.75	1.63	1.50	0.98	2¼"-16	1.18	1"-8UNC	0.98	1.88	¾"-16UNC	0.51
H1504	7.87	11.85	2.00	2.75	1.63	1.50	0.98	2¼"-16	1.18	1"-8UNC	0.98	1.88	¾"-16UNC	0.51
H1506	10.67	16.54	2.00	2.75	1.63	1.50	0.98	2¼"-16	1.18	1"-8UNC	0.98	1.88	¾"-16UNC	0.51
H1508	12.68	20.55	2.00	2.75	1.63	1.50	0.98	2¼"-16	1.18	1"-8UNC	0.98	1.88	¾"-16UNC	0.51
H1510	14.69	24.57	2.00	2.75	1.63	1.50	0.98	2¼"-16	1.18	1"-8UNC	0.98	1.88	¾"-16UNC	0.51
H1512	16.65	28.66	2.00	2.75	1.63	1.50	0.98	2¼"-16	1.18	1"-8UNC	0.98	1.88	¾"-16UNC	0.51
H1514	18.66	32.68	2.00	2.75	1.63	1.50	0.98	2¼"-16	1.18	1"-8UNC	0.98	1.88	¾"-16UNC	0.51
H2501	5.38	6.38	2.56	3.35	2.24	1.97	0.98	3-5/16"-12	1.93	1½"-16	1.18	2.31	½"-13UNC	0.75
H2502	6.82	8.83	2.56	3.35	2.24	1.97	0.98	3-5/16"-12	1.93	1½"-16	1.18	2.31	½"-13UNC	0.75
H2504	8.78	12.72	2.56	3.35	2.24	1.97	0.98	3-5/16"-12	1.93	1½"-16	1.18	2.31	½"-13UNC	0.75
H2506	10.79	16.73	2.56	3.35	2.24	1.97	0.98	3-5/16"-12	1.93	1½"-16	1.18	2.31	½"-13UNC	0.75
H2508	12.80	20.75	2.56	3.35	2.24	1.97	0.98	3-5/16"-12	1.93	1½"-16	1.18	2.31	½"-13UNC	0.75
H2510	14.80	24.76	2.56	3.35	2.24	1.97	0.98	3-5/16"-12	1.93	1½"-16	1.18	2.31	½"-13UNC	0.75
H2512	16.73	28.97	2.56	3.35	2.24	1.97	0.98	3-5/16"-12	1.93	1½"-16	1.18	2.31	½"-13UNC	0.75
H2514	18.74	32.99	2.56	3.35	2.24	1.97	0.98	3-5/16"-12	1.93	1½"-16	1.18	2.31	½"-13UNC	0.75
H3008	15.24	23.51	2.87	4.00	2.24	2.13	1.97	3-5/16"-12	1.93	1½"-16	1.18	2.2	½"-13UNC	0.7
H5502	6.93	8.94	3.74	5.00	3.15	2.76	1.22	5"-12	2.17	-	-	3.75	½"-13UNC	0.75
H5504	8.94	12.92	3.74	5.00	3.15	2.76	1.22	5"-12	2.17	-	-	3.75	½"-13UNC	0.75
H5506	11.14	17.36	3.74	5.00	3.15	2.76	1.22	5"-12	2.17	-	-	3.75	½"-13UNC	0.75
H5513	18.15	31.42	3.74	5.00	3.15	2.76	1.22	5"-12	2.17	-	-	3.75	½"-13UNC	0.75
H7506	11.22	17.36	4.53	5.79	3.74	2.76	1.18	5¾"-12	1.73	-	-	-	-	-
H7513	19.37	32.48	4.53	5.79	3.74	2.76	1.18	5¾"-12	1.73	-	-	-	-	-
H10002A	8.62	10.63	5.12	6.25	4.13	2.76	1.57	6¾"-12	2.24	-	-	-	-	-
H10006	14.06	20.67	5.12	6.97	4.13	2.76	1.57	6¾"-12	1.73	-	-	5.50	¾"-10UNC	1
H10010	17.68	27.92	5.12	6.97	4.13	2.76	1.57	6¾"-12	1.73	-	-	5.50	¾"-10UNC	1



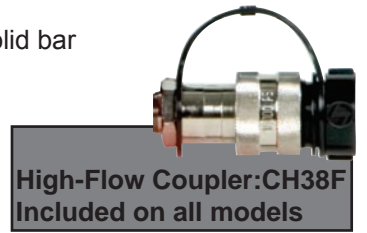
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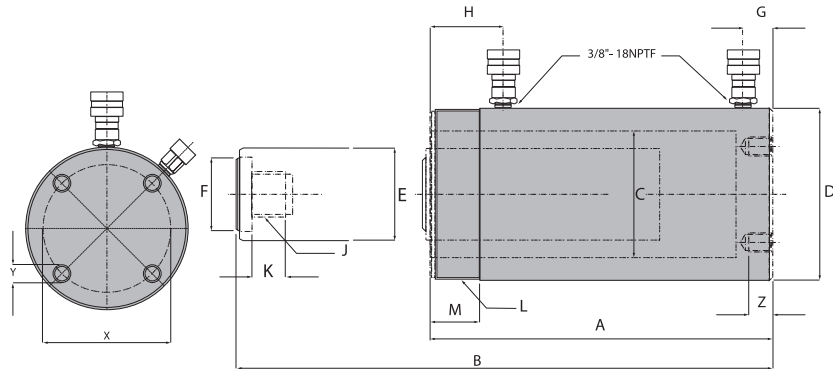
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HYDRAULICS

DOUBLE ACTING CYLINDERS

- Rod wiper seals out dirt and contamination
- High strength steel construction from gun drilled solid bar
- High flow 3/8" NPTF couplers
- One piece high grade alloy bearing for side load protection and long life
- Ideal for pushing and pulling
- Maximum working pressure: 10,000 psi / 700 bar
- Retract under hydraulic power for faster operation



**High-Flow Coupler:CH38F
Included on all models**



Cylinder Capacity (tons)	Stroke (in)	Model Number	Maximum Cylinder Capacity		Cylinder Effective Area		Oil Capacity		Weight (lbs)	Collapsed Height A (in)	Extended Height B (in)	Cylinder Bore Dia. C (in)
			Push (ton)	Pull (ton)	Push (in ²)	Pull (in ²)	Push (in ³)	Pull (in ³)				
10	10.04	HD1010	11.40	3.80	2.23	0.74	22.41	7.47	26.7	16.14	26.18	1.69
	11.97	HD1012	11.40	3.80	2.23	0.74	26.71	8.90	30.0	18.03	30.00	1.69
30	8.15	HD3008	32.90	16.20	6.49	3.19	52.93	26.02	43.0	15.31	23.46	2.87
	14.49	HD3014	32.90	16.20	6.49	3.19	94.09	46.26	60.6	21.65	36.14	2.87
55	6.18	HD5506	55.70	16.20	10.99	3.19	67.93	19.74	70.5	13.03	19.21	3.74
	13.19	HD5513	55.70	16.20	10.99	3.19	144.94	42.11	104.0	20.04	33.23	3.74
	20.12	HD5520	55.70	16.20	10.99	3.19	221.09	64.24	146.2	28.86	49.98	3.74
75	6.10	HD7506	81.70	25.90	16.09	5.12	98.10	31.21	93.7	13.70	19.80	4.53
	13.11	HD7513	81.70	25.90	16.09	5.12	210.93	67.06	136.8	20.71	33.82	4.53
100	6.57	HD10006	104.40	48.60	20.57	9.58	135.23	62.98	138.6	14.06	20.63	5.12
	13.11	HD10013	104.40	48.60	20.57	9.58	269.66	125.58	193.6	20.63	33.74	5.12
	18.15	HD10018	104.40	48.60	20.57	9.58	373.31	173.86	248.3	27.05	45.20	5.12

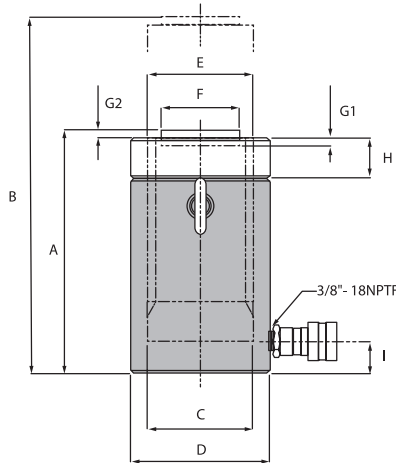
Model Number	Outside Dia. D (in)	Plunger Dia. E (in)	Saddle Dia. F (in)	Base to Adv. Port G (in)	Top to Return Port H (in)	Plunger Internal Thread J (in)	Plunger Thread Length K (in)	Collar Thread L (in)	Collar Thread Length M (in)	Base Mounting Hole		
										Bolt Circle X (in)	Thread Y (in)	Thread Depth Z (in)
HD1010	2.87	1.37	1.38	1.42	2.09	1"-8	0.98	2 1/4"-14	1.02	1.3	5/16"-18	0.6
HD1012	2.87	1.37	1.38	1.42	2.09	1"-8	0.98	2 1/4"-14	1.02	1.3	5/16"-18	0.6
HD3008	3.98	2.13	1.97	1.65	2.91	1 1/2"-16	0.98	3-5/16"-12	1.93	2.2	1/2"-13	0.7
HD3014	3.98	2.13	1.97	1.65	2.91	1 1/2"-16	0.98	3-5/16"-12	1.93	2.2	1/2"-13	0.7
HD5506	5.00	3.14	2.76	1.14	2.87	1"-12	0.98	5"-12	1.73	3.7	1/2"-13	0.7
HD5513	5.00	3.14	2.76	1.14	2.87	1"-12	0.98	5"-12	1.73	3.7	1/2"-13	0.7
HD5520	5.00	3.14	2.76	1.14	2.87	1"-12	0.98	5"-12	1.73	3.7	1/2"-13	0.7
HD7506	5.75	3.75	2.76	1.18	2.80	1"-12	1.50	5 3/4"-12	1.50	4	3/4"-10	0.9
HD7513	5.75	3.75	2.76	1.18	2.80	1"-12	1.50	5 3/4"-12	1.50	4	3/4"-10	0.9
HD10006	6.97	3.75	2.95	1.22	2.95	1 3/4"-12	1.38	6 7/8"-12	1.97	5.47	3/4"-10	0.98
HD10013	6.97	3.75	2.95	1.22	2.95	1 3/4"-12	1.38	6 7/8"-12	1.97	5.47	3/4"-10	0.98
HD10018	6.97	3.75	2.95	1.50	2.95	1 3/4"-12	1.38	6 7/8"-12	1.97	5.47	3/4"-10	0.98

INDUSTRIAL HYDRAULIC EQUIPMENT

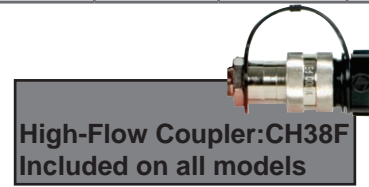
LOCK NUT CYLINDERS



- Single acting cylinder with mechanical safety lock nut
- Designed to support load for extended periods without hydraulic pressure.
- Overflow port prevents cylinders from over travel
- Load return
- Solid steel cylinder body
- Ideal for lifting and holding loads
- Plated pistons to resist corrosion and rust
- Maximum working pressure: 10,000 psi / 700 bar



Cylinder Capacity (tons)	Stroke (in)	Model Number	Cylinder Effective Area (in ²)	Oil Capacity (in ³)	Weight (lbs)
55	1.97	HLN5502	10.99	21.65	34.0
	3.94	HLN5504	10.99	43.27	44.5
	5.91	HLN5506	10.99	64.90	55.1
	7.87	HLN5508	10.99	86.54	65.9
	9.84	HLN5510	10.99	108.17	76.5
	11.81	HLN5512	10.99	129.80	87.1
100	1.97	HLN10002	20.57	40.49	67.2
	3.94	HLN10004	20.57	80.98	85.8
	5.91	HLN10006	20.57	121.48	104.3
	7.87	HLN10008	20.57	161.97	122.6
	9.84	HLN10010	20.57	202.46	141.1
	11.81	HLN10012	20.57	242.95	159.6
150	1.97	HLN15002	31.16	61.39	116.4
	3.94	HLN15004	31.16	122.79	145.0
	5.91	HLN15006	31.16	184.18	173.6
	7.87	HLN15008	31.16	245.27	202.1
	9.84	HLN15010	31.16	306.66	230.7
	11.81	HLN15012	31.16	368.05	259.3



Model Number	Collapsed Height A (in)	Extended Height B (in)	Cylinder Bore Diameter C (in)	Outside Diameter D (in)	Plunger Outside Thread E	Saddle Diameter F (in)	Depth of Plunger Hole G1 (in)	Saddle Protrusion From Plunger G2 (in)	Lock Nut Length H (in)	Base to Inlet Port I (in)
HLN5502	6.50	8.40	3.70	4.90	Tw95-6N	2.80	0.08	0.51	1.40	1.10
HLN5504	8.40	12.40	3.70	4.90	Tw95-6N	2.80	0.08	0.51	1.40	1.10
HLN5506	10.40	16.30	3.70	4.90	Tw95-6N	2.80	0.08	0.51	1.40	1.10
HLN5508	12.40	20.20	3.70	4.90	Tw95-6N	2.80	0.08	0.51	1.40	1.10
HLN5510	14.30	24.20	3.70	4.90	Tw95-6N	2.80	0.08	0.51	1.40	1.10
HLN5512	16.30	28.10	3.70	4.90	Tw95-6N	2.80	0.08	0.51	1.40	1.10
HLN10002	7.40	9.30	5.10	6.50	Tw130-4N	2.80	0.08	0.51	1.80	1.10
HLN10004	9.30	13.30	5.10	6.50	Tw130-4N	2.80	0.08	0.51	1.80	1.10
HLN10006	11.30	17.20	5.10	6.50	Tw130-4N	2.80	0.08	0.51	1.80	1.10
HLN10008	13.30	21.10	5.10	6.50	Tw130-4N	2.80	0.08	0.51	1.80	1.10
HLN10010	15.20	25.10	5.10	6.50	Tw130-4N	2.80	0.08	0.51	1.80	1.10
HLN10012	17.20	29.00	5.10	6.50	Tw130-4N	2.80	0.08	0.51	1.80	1.10
HLN15002	8.23	10.20	6.30	8.07	Tw160-4N	5.12	0.08	0.51	1.73	1.54
HLN15004	10.20	14.13	6.30	8.07	Tw160-4N	5.12	0.08	0.51	1.73	1.54
HLN15006	12.17	18.07	6.30	8.07	Tw160-4N	5.12	0.08	0.51	1.73	1.54
HLN15008	14.13	22.01	6.30	8.07	Tw160-4N	5.12	0.08	0.51	1.73	1.54
HLN15010	16.10	25.94	6.30	8.07	Tw160-4N	5.12	0.08	0.51	1.73	1.54
HLN15012	18.07	29.88	6.30	8.07	Tw160-4N	5.12	0.08	0.51	1.73	1.54

BUILT TO LAST

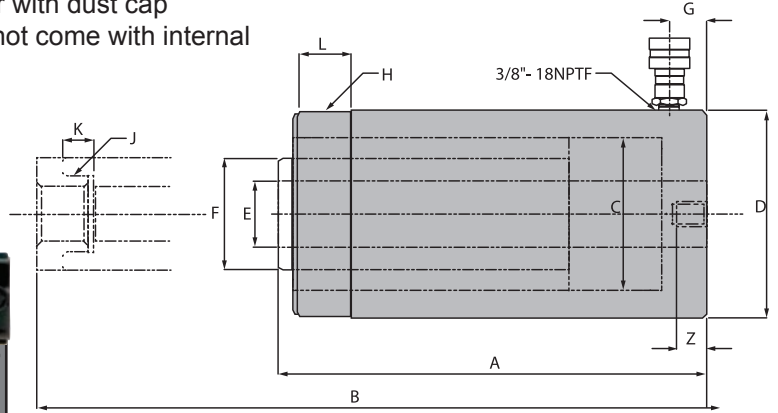


HOLLOW HOLE CYLINDERS

- Minimum leak risk
- Ideal for pulling and pushing applications
- Heavy duty compression spring
- Dual wipers help prevent contamination
- Collar thread protector
- High flow coupler with dust cap
- XT cylinders do not come with internal plunger threads



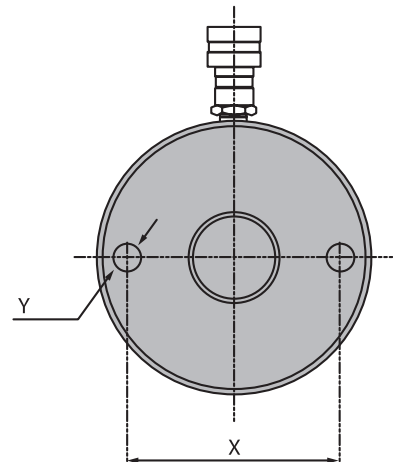
**High-Flow Coupler: CH38F
Included on all models**



*except HC1201T, HC1202T, and HC1202XT come with CRZ14F

Cylinder Capacity (tons)	Stroke (in)	Model Number	Cylinder Effective Area (in ²)	Internal Pressure at Capacity (psi)	Oil Cap. (in ³)	Min. Height A (in)	Max. Height B (in)	O.D. D (in)	Plunger			
									I.D. E (in)	O.D. F (in)	Internal Thread J (in)	Internal Thread Length K (in)
12	0.31	HC1201T*	2.91	8,236	0.89	2.36	2.67	2.76	0.77	1.38	3/4"-16UN	0.63
	1.61	HC1202T*	2.91	8,236	4.70	4.74	6.36	2.76	0.77	1.38	3/4"-16UN	0.63
	1.61	HC1202XT*	2.91	8,236	4.70	4.74	6.36	2.76	0.77	1.38	-	-
	2.99	HC1203XT	2.91	8,236	8.72	7.24	10.24	2.76	0.77	1.38	-	-
20	2.01	HC2002T	4.90	8,167	9.83	6.38	8.39	3.92	1.06	2.15	1-9/16"-16UN	0.75
	6.06	HC2006T	4.90	8,167	29.70	12.05	18.11	3.92	1.06	2.15	1-9/16"-16UN	0.75
30	2.52	HC3002T	6.32	9,488	15.93	7.05	9.57	4.50	1.31	2.48	1-13/16"-16UN	0.87
	6.11	HC3006T	6.32	9,488	38.67	13.02	19.13	4.50	1.31	2.48	1-13/16"-16UN	0.87
60	3.00	HC6003T	13.05	9,195	39.10	9.77	12.77	6.25	2.13	3.66	2 3/4"-16UN	0.75
	6.00	HC6006T	13.05	9,195	78.25	12.76	18.76	6.25	2.13	3.66	2 3/4"-16UN	0.75
100	3.00	HC10003T	22.13	9,036	66.31	10.00	13.00	8.39	3.11	4.92	4"-16UN	0.98

Model Number	Collar Thread		Base to Inlet Port G (in)	Base Mounting Hole			Weight (lbs)
	Dia. H (in)	Lgth. L (in)		Bolt Circle X (in)	Thread Y (in)	Thread Depth Z (in)	
HC1201T*	2 3/4"-16	1.81	0.57	2.00	5/16"-18UNC	0.35	3.3
HC1202T*	2 3/4"-16	1.81	0.59	2.00	5/16"-18UNC	0.35	6.2
HC1202XT*	2 3/4"-16	1.81	0.59	2.00	5/16"-18UNC	0.35	6.2
HC1203XT	2 3/4"-16	1.81	0.75	2.00	5/16"-18UNC	0.35	8.6
HC2002T	3 7/8"-12	1.50	0.75	3.25	3/8"-16UNC	0.37	15.9
HC2006T	3 7/8"-12	1.50	0.75	3.25	3/8"-16UNC	0.37	29.5
HC3002T	4 1/2"-12	1.66	0.91	3.62	3/8"-16UNC	0.55	22.9
HC3006T	4 1/2"-12	1.66	0.91	3.62	3/8"-16UNC	0.55	43.0
HC6003T	6 1/4"-12	1.91	1.06	5.12	1/2"-13UNC	0.55	65.7
HC6006T	6 1/4"-12	1.91	1.06	5.12	1/2"-13UNC	0.55	81.1
HC10003T	8 3/8"-12	2.38	1.06	7.01	5/8"-11UNC	0.75	113.3

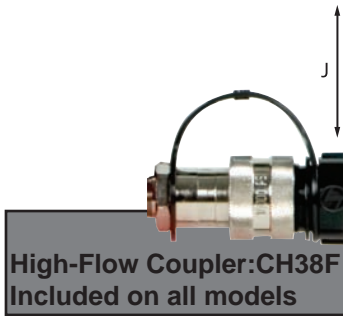


INDUSTRIAL HYDRAULIC EQUIPMENT

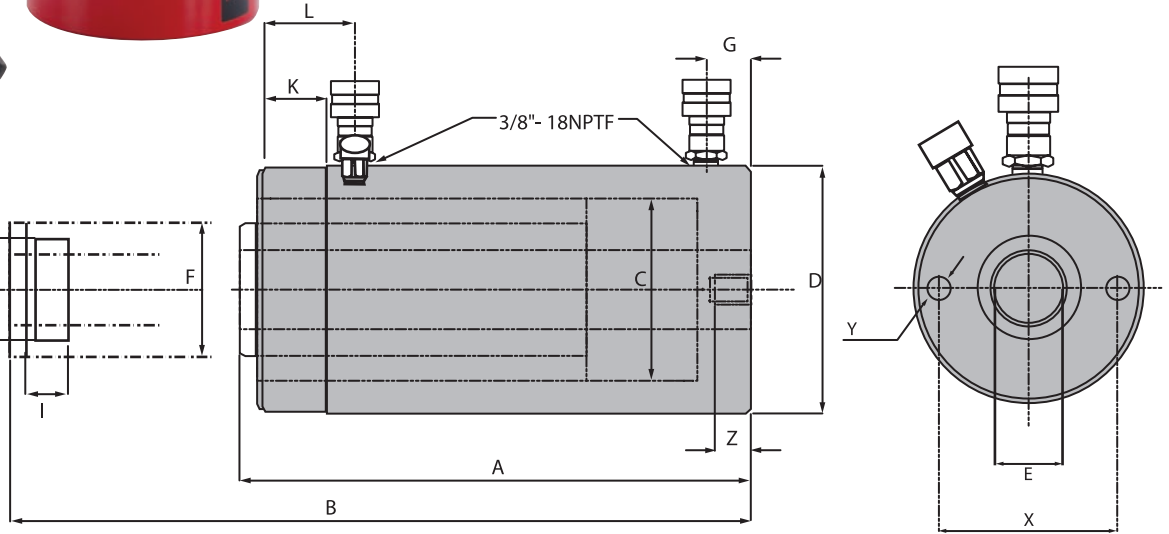
DOUBLE ACTING HOLLOW HOLE CYLINDERS



- Ideal for pushing and pulling applications.
- Dual wipers help prevent contamination
- Collar thread protector
- 3/8" high flow female coupler
- Heavy duty compression spring



High-Flow Coupler:CH38F
Included on all models



Cylinder Capacity		Stroke (in)	Mode Number	Oil Capacity		Collapsed Height (in)	Extended Height (in)	Center Hole I.D. (in)	Ram Plunger O.D (in)	Max. Pressure (PSI)	Product Weight (Lbs.)
Push (ton)	Pull (ton)			Push (in ³)	Pull (in ³)						
30	20	7.00	HDC3007	44.31	27.74	13.02	20.02	1.31	2.48	10.000	43.0
		10.13	HDC3010	64.15	40.16	17.00	27.13	1.31	2.48	10.000	56.7
60	44	3.50	HDC6003	45.75	30.49	9.77	13.28	2.13	3.62	10.000	65.7
		6.50	HDC6006	84.81	56.53	12.76	19.26	2.13	3.62	10.000	81.1
		10.12	HDC6010	132.10	88.04	17.25	27.37	2.13	3.62	10.000	112.4
100	71	1.50	HDC10001	33.23	21.18	6.50	8.00	3.11	4.92	10.000	73.7
		3.00	HDC10003	66.47	42.37	10.00	13.00	3.11	4.92	10.000	113.3
		6.00	HDC10006	132.39	84.73	13.49	19.49	3.11	4.92	10.000	153.2
		10.13	HDC10010	224.52	143.11	18.14	28.27	3.11	4.92	10.000	198.9

Mode Number	Min. Height A (in)	Max. Height B (in)	Dia. of Center Tube C (in)	O.D.D (in)	Plunger						Collar Thread		Base Mounting Hole		
					I.D. E (in)	O.D. F (in)	Base to Inlet Port G (in)	Top to Return Port L (in)	Internal Thread H (in)	Internal Thread Length I (in)	Dia. J (in)	Length K (in)	Bolt Circle X (in)	Thread Y (in)	Thread Depth Z (in)
HDC3007	13.02	20.02	3.35	4.50	1.31	2.48	0.91	2.38	1 13/16"-16UN	0.94	4½"-12	1.66	3.62	¾"-16UNC	0.55
HDC3010	17.00	27.13	3.35	4.50	1.31	2.48	0.91	2.38	1 13/16"-16UN	0.94	4½"-12	1.66	3.62	¾"-16UNC	0.55
HDC6003	9.77	13.28	4.92	6.25	2.13	3.62	1.06	2.64	2¾"-16UN	0.83	6¼"-12	1.91	5.12	½" 13UNC	0.55
HDC6006	12.76	19.26	4.92	6.25	2.13	3.62	1.06	2.64	2¾"-16UN	0.83	6¼"-12	1.91	5.12	½" 13UNC	0.55
HDC6010	17.25	27.37	4.92	6.25	2.13	3.62	1.06	2.64	2¾"-16UN	0.83	6¼"-12	1.91	5.12	½" 13UNC	0.55
HDC10001	6.50	8.00	6.50	8.39	3.11	4.92	1.06	1.75	4"- 16UN	1.06	-	-	7.01	5/8" 11UNC	0.75
HDC10003	10.00	13.00	6.50	8.39	3.11	4.92	1.06	3.39	4"- 16UN	1.06	8/8"-12	2.38	7.01	5/8" 11UNC	0.75
HDC10006	13.49	19.49	6.50	8.39	3.11	4.92	1.06	3.39	4"- 16UN	1.06	8/8"-12	2.38	7.01	5/8" 11UNC	0.75
HDC10010	18.14	28.27	6.50	8.39	3.11	4.92	1.06	3.39	4"- 16UN	1.06	8/8"-12	2.38	7.01	5/8" 11UNC	0.75

BUILT TO LAST



FLAT BODY CYLINDERS



- Made of high quality steel
- Extremely low collapsed height for applications with minimal clearance at the lift point
- Maximum working pressure 10,000 psi / 700 bar
- HF0503 and HF0503B come with 3/8" regular flow coupler

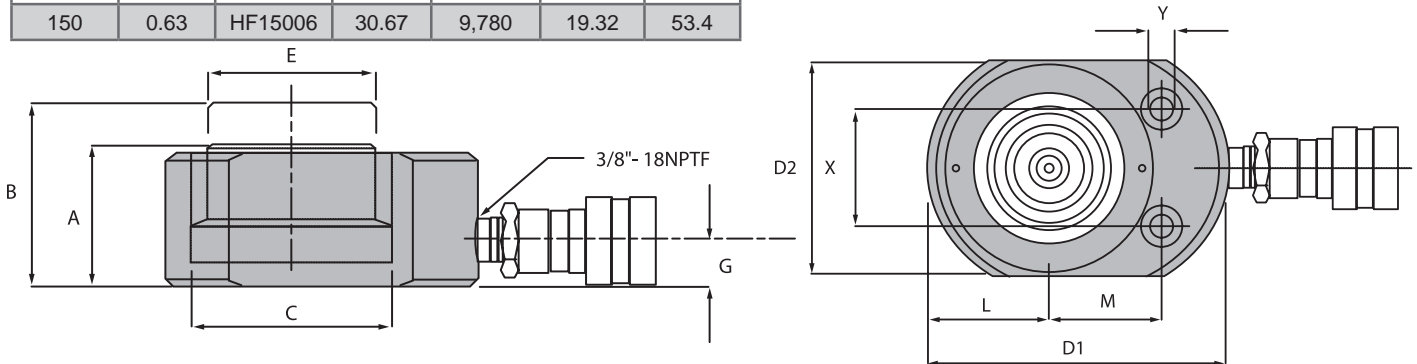


**High-Flow Coupler:CH38F
Included on all models**

*except HF0503 come with CR38F



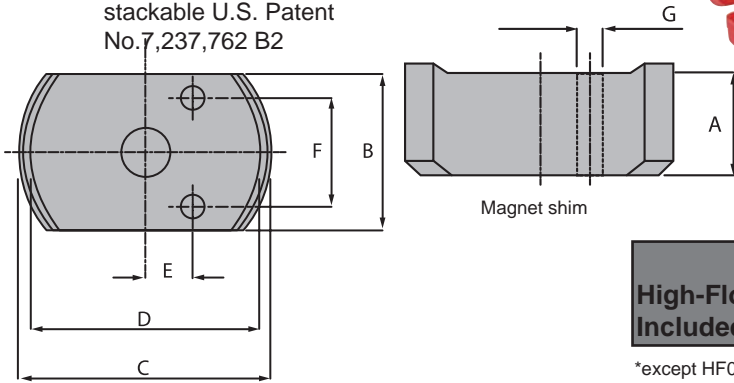
Cylinder Capacity (tons)	Stroke (in)	Model Number	Cylinder Effective Area (in ²)	Pressure at Capacity	Oil Capacity (in ³)	Weight (lbs)
5	0.24	HF0503*	1.10	9,090	0.26	1.3
10	0.43	HF1005	2.36	8,470	1.01	3.3
20	0.43	HF2005	4.38	9,130	1.88	5.9
30	0.51	HF3005	6.49	9,240	3.31	9.7
50	0.63	HF5006	9.86	10,140	6.21	14.9
75	0.63	HF7506	16.1	9,320	10.14	25.4
100	0.63	HF10006	19.64	10,180	12.37	31.5
150	0.63	HF15006	30.67	9,780	19.32	53.4



Model Number	Collapsed Height A (in)	Extended Height B (in)	Cylinder Bore Dia. C (in)	Outside Dim. D1 x D2 (in)	Plunger Dia. E (in)	Base to Port G (in)	Plunger to Base L (in)	Plunger to Mtg. Hole M (in)	Hole Pitch X (in)	Hole Dia. Y (in)	Counter Bore Dia. (in)	Counter Bore Depth (in)
HF0503*	1.26	1.50	1.18	2.4x1.6	0.98	0.69	0.80	0.87	1.12	0.2	0.31	0.17
HF1005	1.69	2.12	1.73	3.3x2.2	1.50	0.77	1.12	1.32	1.44	0.28	0.42	0.31
HF2005	2.01	2.44	2.36	4.0x3.0	2.00	0.75	1.54	1.56	1.94	0.40	0.59	0.39
HF3005	2.31	2.82	2.87	4.6x3.8	2.50	0.79	1.88	1.75	2.06	0.40	0.63	0.44
HF5006	2.64	3.27	3.54	4.5x4.5	2.76	0.79	2.25	2.13	2.62	0.43	0.75	0.50
HF7506	3.13	3.76	4.53	6.5x5.5	3.54	0.77	2.75	2.63	3.00	0.51	0.83	0.56
HF10006	3.37	4.00	5.00	7.0x6.0	3.54	0.79	3.00	2.94	3.00	0.51	0.83	0.56
HF15006	3.94	4.57	6.25	8.5x7.5	4.65	0.94	3.75	3.25	4.62	0.51	0.83	0.56

FLAT BODY CYLINDER KITS

- Various height magnetic adapters eliminate dangerous cribbing
- Convenient carrying case
- Magnetic adapters are stackable U.S. Patent No.7,237,762 B2



**High-Flow Coupler: CH38F
Included on all models**

Magnetic adapters are stackable U.S. Patent No.7,237,762 B2

*except HF0503B come with CR38F

Cylinder Capacity (tons)	Stroke (in)	Model Number	Cylinder Model	Oil Capacity (in ³)	Collapsed Height (in)	Adapter	Adapter Dimensions							Weight (lbs)
							A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	
5	0.24	HF0503B*	HF0503	0.26	1.26	I	0.25	1.61	2.56	2.32	0.48	1.10	0.24	5.5
						II	0.5	1.61	2.56	2.32	0.48	1.10	0.24	5.5
						III	1	1.61	2.56	2.32	0.48	1.10	0.24	5.5
						IV	1.25	1.61	2.56	2.32	0.48	1.10	0.24	5.5
10	0.43	HF1005B	HF1005	1.02	1.69	I	0.39	2.20	3.54	3.23	0.81	1.46	0.28	9.2
						II	0.79	2.20	3.54	3.23	-	-	-	9.2
						III	1.57	2.20	3.54	3.23	-	-	-	9.2
20	0.43	HF2005B	HF2005	1.90	2.01	I	0.39	2.99	4.25	3.94	1.08	1.93	0.39	15.0
						II	0.79	2.99	4.25	3.94	-	-	-	15.0
						III	1.57	2.99	4.25	3.94	-	-	-	15.0
30	0.51	HF3005B	HF3005	3.32	2.31	I	0.39	3.75	4.76	4.45	1.32	2.06	0.39	21.0
						II	0.79	3.75	4.76	4.45	-	-	-	21.0
						III	1.57	3.75	4.76	4.45	-	-	-	21.0

LOW PROFILE CYLINDER KIT

- Compact design for use in confined spaces
- Ideal for pushing applications
- Rod wiper helps seal out dirt and contamination
- Specially designed return spring ensures a quick retraction and extends the life of the spring
- Industrial hard chrome plated ram helps prevent scratching and corrosion
- Includes stackable 1", 2", and 3" aluminum adapters that conveniently snap into the base of the ram
- Includes high flow ball coupler and dust cap
- Convenient storage case to keep cylinder and adapters together

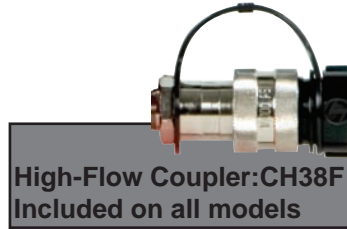


Cylinder Capacity	Model	Stroke	Cylinder Effective Area	Collapsed Height	Extended Height without adapter	Internal Pressure at Capacity	Cylinder Housing Dia.	Ram Plunger Dia.	Weight (lbs)
10 Ton	J72101	1.5"	2.35 in ²	3.48"	4.98"	8,511 PSI	2.75"	1.50"	10 Lbs.

BUILT TO LAST



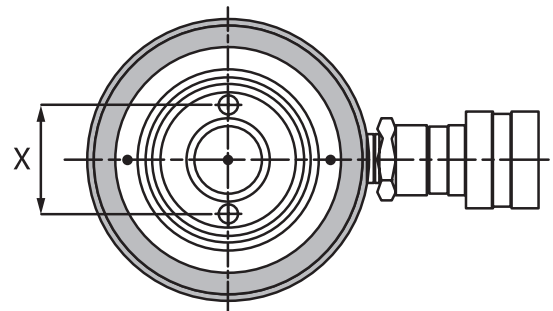
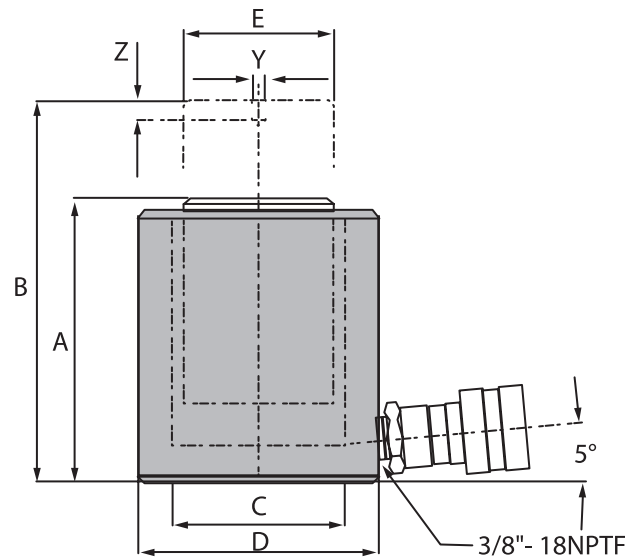
LOW PROFILE CYLINDERS



- Compact design for use in confined spaces
- Rod wiper helps seal out dirt and contamination
- Specially designed return spring ensures a quick retraction and extends the life of the spring
- Industrial hard chrome plated ram helps prevent scratching and corrosion
- Plunger end is grooved to reduce load slippage
- Includes high flow ball coupler and dust cap
- HL1001, HL2002, and HL3002 coupler is tilted upward for added clearance
- Maximum working pressure: 10,000 psi / 700 bar



Low profile cylinders are great for confined spaces

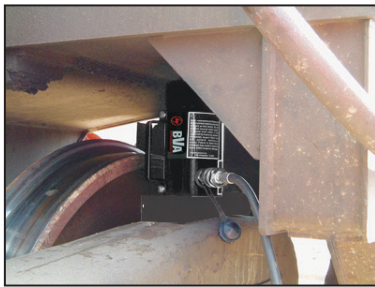
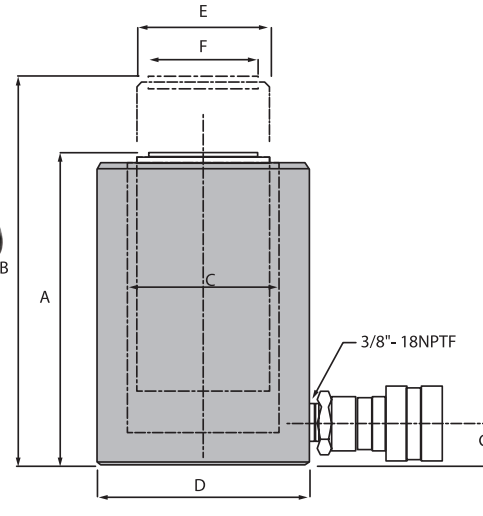


Cylinder Capacity (tons)	Stroke (in)	Model Number	Cylinder Effective Area (in ²)	Internal Pressure at Capacity (psi)	Oil Capacity (in ³)	Weight (lbs)
10	1.50	HL1001	2.35	8,511	3.53	5.7
20	1.75	HL2002	4.37	9,153	7.65	11.0
30	2.44	HL3002	6.49	9,245	15.84	15.0
50	2.36	HL5002	9.87	10,132	23.29	21.8
100	2.24	HL10002	19.64	10,183	44.07	45.4

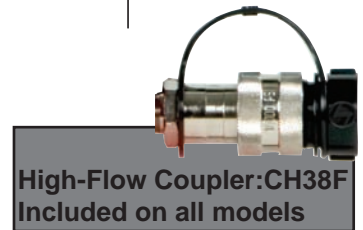
Model Number	Collapsed Height A (in)	Extended Height B (in)	Cylinder Bore Diameter C (in)	Outside Diameter D (in)	Plunger Diameter E (in)	Plunger Mounting		
						Bolt Circle X (in)	Thread Y (mm)	Thread Depth Z (in)
HL1001	3.48	4.98	1.73	2.75	1.50	1.03	M4	0.32
HL2002	3.90	5.65	2.36	3.63	2.00	1.56	M4	0.32
HL3002	4.61	7.05	2.87	4.00	2.50	1.56	M5	0.32
HL5002	4.80	7.17	3.54	4.88	2.76	1.56	M5	0.32
HL10002	5.55	7.80	5.00	6.50	3.54	2.19	M8	0.10

ALUMINUM CYLINDERS

- Lightweight aluminum alloy construction
- Up to 60 percent lighter than comparable tonnage steel rams
- Convenient carry handle
- Hard anodized aluminum piston rod provides extra protection against corrosion and wear
- Steel protective plate
- Maximum working pressure: 10,000 psi / 700 bar



Lightweight, yet powerful



High-Flow Coupler:CH38F Included on all models

Cylinder Capacity (tons)	Stroke (in)	Model Number	Cylinder Effective Area (in ²)	Internal Pressure at Capacity (psi)	Oil Capacity (in ³)	Collapsed Height A (in)	Extended Height B (in)	Cylinder Bore Dia. C (in)	Outside Dia. D (in)	Plunger Dia. E (in)	Saddle Dia. F (in)	Base to Inlet Port G (in)	Weight (lbs)
20	1.97	HU2002T	4.83	10,000	9.51	6.85	8.82	2.48	3.35	2.00	1.56	1.08	7.4
	3.94	HU2004T	4.83	10,000	19.02	8.82	12.76	2.48	3.35	2.00	1.56	1.08	8.5
	5.91	HU2006T	4.83	10,000	28.53	10.79	16.69	2.48	3.35	2.00	1.56	1.08	9.6
30	2.00	HU3002T	6.50	9,231	13.00	6.50	8.50	2.90	4.50	2.50	2.00	1.50	11.0
	4.00	HU3004T	6.50	9,231	26.00	8.50	12.50	2.90	4.50	2.50	2.00	1.50	14.0
	6.00	HU3006T	6.50	9,231	39.00	10.50	16.50	2.90	4.50	2.50	2.00	1.50	17.0
50	2.00	HU5002T	11.00	9,091	22.00	6.50	8.50	3.70	5.50	3.10	2.50	150	17.0
	4.00	HU5004T	11.00	9,091	44.00	8.50	12.50	3.70	5.50	3.10	2.50	150	21.0
	6.00	HU5006T	11.00	9,091	66.00	10.50	16.50	3.70	5.50	3.10	2.50	150	25.0
	10.00	HU5010T	11.00	9,091	110.00	14.50	24.50	3.70	5.50	3.10	2.50	150	34.0
75	4.00	HU7504	15.00	10,000	60.00	8.50	12.50	4.40	6.50	3.90	3.00	150	29.0
	6.00	HU7506	15.00	10,000	90.00	10.50	16.50	4.40	6.50	3.90	3.00	150	35.0
100	2.00	HU10002	20.70	9,662	41.40	6.50	8.50	5.10	8.00	4.30	3.50	150	36.0
	4.00	HU10004	20.70	9,662	82.80	8.50	12.50	5.10	8.00	4.30	3.50	150	43.0
	6.00	HU10006	20.70	9,662	124.40	10.50	16.50	5.10	8.00	4.30	3.50	150	51.0
	10.00	HU10010	20.70	9,662	207.0	14.50	24.50	5.10	8.00	4.30	3.50	150	68.0

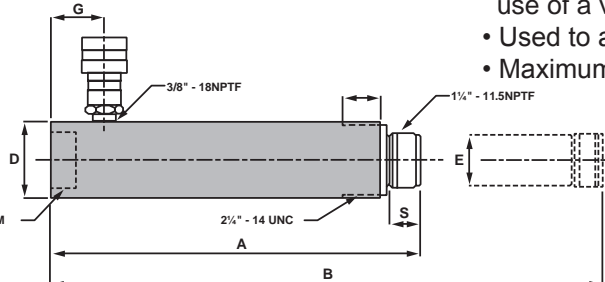
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BVA

HYDRAULICS

THREADED CYLINDERS

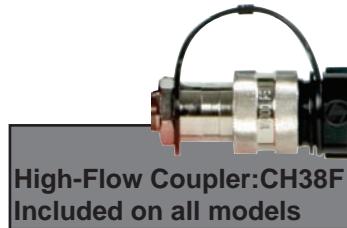


Threaded base allows for easy installation of attachments and mounting applications

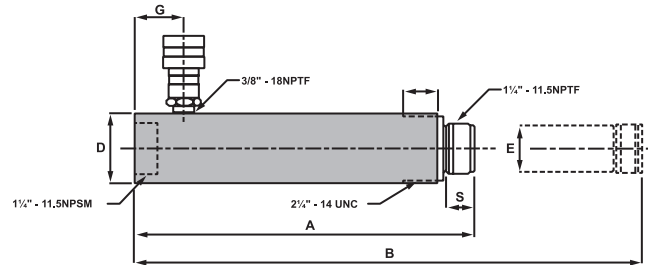
- Ideal for frame pulling machine
- High quality threaded single acting cylinders
- Spring return
- Removable threaded plunger adapter allows for the use of a variety of threaded attachments
- Used to attach accessories to rod end and base
- Maximum working pressure: 10,000 psi / 700 bar

Cylinder Capacity (tons)	Stroke (in)	Model Number	Cylinder Effective Area (in ²)	Internal Pressure at Capacity (psi)	Oil Capacity (in ³)	Collapsed Height A (in)	Extended Height B (in)	Outside Dia. D (in)	Plunger Dia. E (in)	Base to Inlet Port G (in)	Collar Thread Length L (in)	Saddle Height S (in)	Weight (lbs)
4	5.07	HT0405	1.00	10,120	5.00	10.31	15.39	1.5	1.33	1.33	0.84	1.00	5.0
10	5.95	HT1006	2.24	8,928	13.33	11.46	17.41	2.26	1.49	1.67	1.13	0.94	10.6
	9.96	HT1010	2.24	8,928	22.30	15.47	25.43	2.26	1.49	1.67	1.13	0.94	14.1
20	5.16	HT2005	5.14	10,741	25.70	11.77	16.93	3.35	2.24	1.85	1.63	1.40	22.0

PULL CYLINDERS



- High strength steel construction
- One piece high grade alloy bearing for side load protection and longer life
- Polyurethane cup seal helps provide for optimum performance
- External plunger threads
- Internal base threads
- Used for pulling and tensioning
- Maximum working pressure: 10,000 psi / 700 bar



Cylinder Capacity (tons)	Stroke (in)	Model Number	Cylinder Effective Area (in ²)	Internal Pressure at Capacity (psi)	Oil Capacity (in ³)	Collapsed Height A (in)	Extended Height B (in)	Outside Diameter D (in)	Cylinder Bore Diameter C (in)	Top to Inlet Port G (in)	Collar	
											Thread H	Thread Length L (in)
2.5	5.00	HP0205	0.56	7,905	2.78	10.55	15.55	1.89	1.13	1.65	1½"-16	0.98
5	5.55	HP0505	1.14	8,772	6.34	11.93	17.48	2.25	1.69	1.50	2¼"-14	1.00
10	5.95	HP1006	2.44	7,663	14.48	11.75	17.70	3.35	2.17	1.50	M85x2	1.00

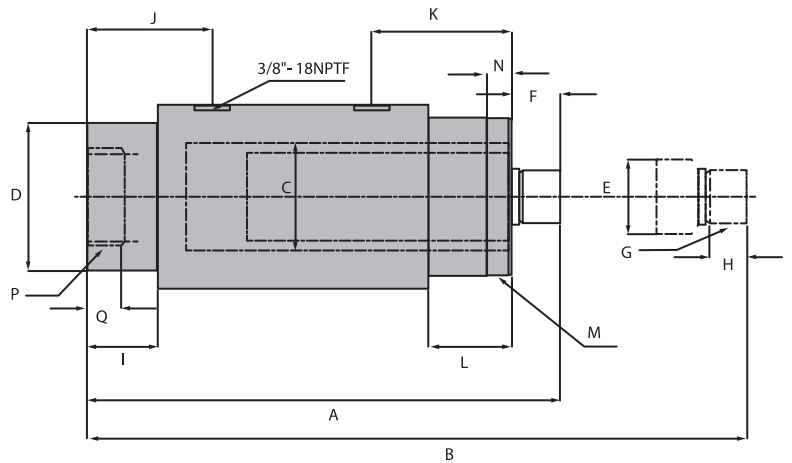
Model Number	Adapter		Plunger			Base Mounting Hole		Weight (lbs)
	Thread F (in)	Length P (in)	Dia. E (in)	Thread Length K (in)	Thread Q (mm)	Thread Y	Depth Z (in)	
HP0205	¾"-14NPTF	1.13	0.75	0.76	M16 x 1.5	¾"-14NPTF	0.72	6.4
HP0505	1¼"-11.5NPTF	1.25	1.18	0.93	M28 x 1.5	1¼"-11.5NPTF	0.95	9.3
HP1006	-	-	1.26	1.02	M30 x 2	M30x2	0.98	20.9

PRECISION DOUBLE ACTING CYLINDERS



- Provides hydraulic power on both advance and retract
- Designed for high cycling in production applications
- High strength steel construction from gun drilled solid bar
- Rod wiper seals keep dirt and contamination out
- Clevis eye attachments are available
- Maximum working pressure : 10,000 psi / 700 bar

*** Note: Precision double acting cylinders do not come with couplers.**



Cylinder Capacity (tons)	Model Number	Push Effective Area (in ²)	Pull Effective Area (in ²)	Collapsed Height A (in)	Extended Height B (in)	Cylinder Bore Dia. C (in)	Outside Dia. D (in)
9	HPD0906	1.77	1.01	13.78	19.88	1.50	2.52
	HPD0910	1.77	1.01	17.80	27.91	1.50	2.52
16	HPD1606	3.14	1.56	15.31	21.57	2.00	2.99
	HPD1610	3.14	1.56	19.29	29.53	2.00	2.99

Model Number	Plunger				Base to Adv. Port J (in)	Top to Return Port K (in)	Collar					Weight (lbs)
	Dia. E (in)	Protrusion F (in)	Thread G (in)	Thread Length H (in)			Length L (in)	Thread M (in)	Thread Length N (in)	Int. Base Thread P (in)	Int. Base Thread Length Q (in)	
HPD0906	0.98	0.98	3/4"-16	0.75	1.50	2.20	1.50	2"-12	0.60	1-11/16"-18	1.37	14.6
HPD0910	0.98	0.98	3/4"-16	0.75	1.50	2.20	1.50	2"-12	0.60	1-11/16"-18	1.37	18.5
HPD1606	1.42	1.16	1 1/8"-12	0.98	2.12	2.87	2.12	2 5/8"-16	0.98	2-3/16"-16	1.61	22.0
HPD1610	1.42	1.16	1 1/8"-12	0.98	2.12	2.87	2.12	2 5/8"-16	0.98	2-3/16"-16	1.61	28.2



HIGH TONNAGE SINGLE ACTING CYLINDERS

Load Return

- Cylinders are burnish rolled for a smooth precision mirror finish.
- Rod wiper seals out dirt and contamination
- Base mounting holes on most models
- Load return
- High strength steel construction from gun drilled solid bar
- High flow 3/8" NPTF couplers
- Polyurethane cup seal provides optimum performance
- Industrial hard chrome plated ram helps prevent rust and corrosion
- Solid steel cylinder body provides strength for high tonnage applications
- Maximum working pressure: 10,000 psi / 700 bar



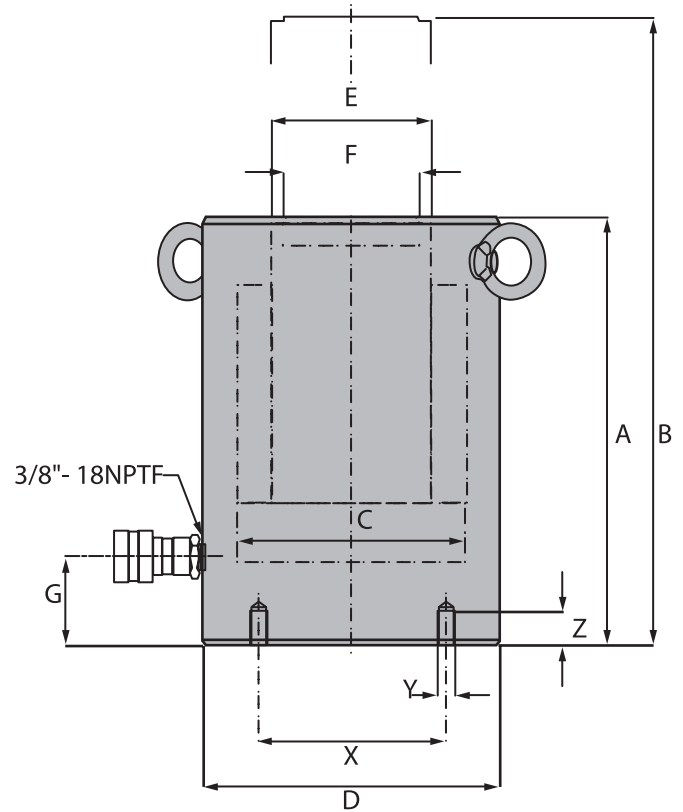
*** Note: BVA will build any cylinder to customers exact requirements.**

Cylinder Capacity (tons)	Stroke (in)	Model Number	Cylinder Effective Area (in ²)	Internal Pressure at Capacity (psi)	Oil Capacity (in ³)	Weight (lbs)
50	1.97	HG5002	10.99	9103	21.63	32.6
	3.94	HG5004	10.99	9103	43.25	40.8
	5.91	HG5006	10.99	9103	64.88	48.9
	7.87	HG5008	10.99	9103	86.51	57.1
	9.84	HG5010	10.99	9103	108.13	65.3
	11.81	HG5012	10.99	9103	129.76	73.4
100	1.97	HG10002	20.57	9723	40.50	61.0
	3.94	HG10004	20.57	9723	81.00	74.1
	5.91	HG10006	20.57	9723	121.50	87.3
	7.87	HG10008	20.57	9723	161.99	100.4
	9.84	HG10010	20.57	9723	202.49	113.6
	11.81	HG10012	20.57	9723	242.99	126.7
150	1.97	HG15002	30.43	9862	59.89	102.4
	3.94	HG15004	30.43	9862	119.78	122.0
	5.91	HG15006	30.43	9862	179.68	141.8
	7.87	HG15008	30.43	9862	239.57	161.6
	9.84	HG15010	30.43	9862	299.46	181.4
	11.81	HG15012	30.43	9862	359.35	201.7
200	1.97	HG20002	40.99	9761	80.68	121.0
	5.91	HG20006	40.99	9761	242.05	201.0
	7.87	HG20008	40.99	9761	322.73	242.0
	11.81	HG20012	40.99	9761	484.10	322.0



**High-Flow Coupler:CH38F
Included on all models**

INDUSTRIAL HYDRAULIC EQUIPMENT



Model Number	Collapsed Height A (in)	Extended Height B (in)	Cylinder Bore Diameter C (in)	Outside Diameter D (in)	Plunger Diameter E (in)	Saddle Diameter F (in)	Base to Inlet Port G (in)	Base Mounting Hole		
								Bolt Circle X (in)	Thread Y (mm)	Thread Depth Z (in)
HG5002	6.38	8.35	3.74	5.12	2.76	1.97	2.05	2.56	M12	0.87
HG5004	8.35	12.28	3.74	5.12	2.76	1.97	2.05	2.56	M12	0.87
HG5006	10.31	16.22	3.74	5.12	2.76	1.97	2.05	2.56	M12	0.87
HG5008	12.28	20.16	3.74	5.12	2.76	1.97	2.05	2.56	M12	0.87
HG5010	14.25	24.09	3.74	5.12	2.76	1.97	2.05	2.56	M12	0.87
HG5012	16.22	28.03	3.74	5.12	2.76	1.97	2.05	2.56	M12	0.87
HG10002	7.17	9.13	5.12	6.50	3.74	2.95	2.13	3.74	M12	0.87
HG10004	9.13	13.07	5.12	6.50	3.74	2.95	2.13	3.74	M12	0.87
HG10006	11.10	17.01	5.12	6.50	3.74	2.95	2.13	3.74	M12	0.87
HG10008	13.07	20.94	5.12	6.50	3.74	2.95	2.13	3.74	M12	0.87
HG10010	15.04	24.88	5.12	6.50	3.74	2.95	2.13	3.74	M12	0.87
HG10012	17.01	28.82	5.12	6.50	3.74	2.95	2.13	3.74	M12	0.87
HG15002	7.72	9.69	6.22	8.07	4.33	3.70	2.40	5.12	M12	0.87
HG15004	9.69	13.62	6.22	8.07	4.33	3.70	2.40	5.12	M12	0.87
HG15006	11.65	17.56	6.22	8.07	4.33	3.70	2.40	5.12	M12	0.87
HG15008	13.62	21.50	6.22	8.07	4.33	3.70	2.40	5.12	M12	0.87
HG15010	15.59	25.43	6.22	8.07	4.33	3.70	2.40	5.12	M12	0.87
HG15012	17.56	29.37	6.22	8.07	4.33	3.70	2.40	5.12	M12	0.87
HG20002	8.50	10.47	7.22	9.25	5.31	4.45	2.62	6.5	M12	0.87
HG20006	12.44	18.35	7.22	9.25	5.31	4.45	2.62	6.5	M12	0.87
HG20008	14.41	22.28	7.22	9.25	5.31	4.45	2.62	6.5	M12	0.87
HG20012	18.35	30.16	7.22	9.25	5.31	4.45	2.62	6.5	M12	0.87

BUILT TO LAST



BVA
HYDRAULICS

HIGH TONNAGE DOUBLE ACTING CYLINDERS (HDG Series)



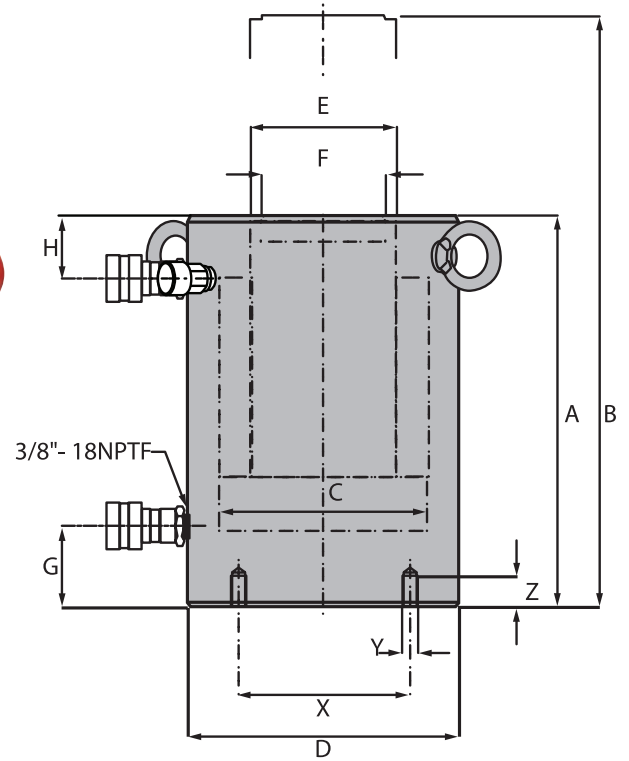
- Cylinders are burnish rolled for a smooth precision mirror finish.
- Industrial hard chrome plated ram prevents scratching and corrosion
- Base mounting holes standard on all models
- Rod wiper seals out dirt and contamination
- High strength steel construction from gun drilled solid bar
- High flow 3/8" NPTF couplers
- Ideal for pushing and pulling
- Maximum working pressure: 10,000 psi / 700 bar



**High-Flow Coupler:CH38F
Included on all models**

Cylinder Capacity (tons)	Stroke (in)	Model Number	Maximum Cylinder Capacity		Cylinder Effective Area		Oil Capacity		Weight (lbs)
			Push (ton)	Pull (ton)	Push (in ²)	Pull (in ²)	Push (in ³)	Pull (in ³)	
50	1.97	HDG5002	54.93	25.11	10.99	5.02	21.63	9.89	32.6
	3.94	HDG5004	54.93	25.11	10.99	5.02	43.25	19.77	40.8
	5.91	HDG5006	54.93	25.11	10.99	5.02	64.88	29.66	48.9
	7.87	HDG5008	54.93	25.11	10.99	5.02	86.51	39.54	57.1
	9.84	HDG5010	54.93	25.11	10.99	5.02	108.13	49.43	65.3
	11.81	HDG5012	54.93	25.11	10.99	5.02	129.76	59.32	73.4
100	1.97	HDG10002	102.86	47.93	20.57	9.59	40.50	18.87	61.0
	3.94	HDG10004	102.86	47.93	20.57	9.59	81.00	37.74	74.1
	5.91	HDG10006	102.86	47.93	20.57	9.59	121.50	56.61	87.3
	7.87	HDG10008	102.86	47.93	20.57	9.59	161.99	75.49	100.4
	9.84	HDG10010	102.86	47.93	20.57	9.59	202.49	94.36	113.6
	11.81	HDG10012	102.86	47.93	20.57	9.59	242.99	113.23	126.7
150	1.97	HDG15002	152.11	78.49	30.43	15.70	59.89	30.90	102.4
	3.94	HDG15004	152.11	78.49	30.43	15.70	119.78	61.79	122.0
	5.91	HDG15006	153.90	75.00	30.78	14.96	181.75	88.32	141.8
	7.87	HDG15008	152.11	78.49	30.43	15.70	239.57	123.59	161.6
	9.84	HDG15010	152.11	78.49	30.43	15.70	299.46	154.48	181.4
	11.81	HDG15012	152.11	78.49	30.43	15.70	359.35	185.38	201.7
200	1.97	HDG20002	204.92	94.02	40.99	18.80	80.68	37.01	121.0
	5.91	HDG20006	206.10	98.00	41.22	19.68	243.40	116.23	201.0
	7.87	HDG20008	204.92	94.02	40.99	18.80	322.73	148.03	242.0
	11.81	HDG20012	206.10	98.00	41.22	19.68	486.79	232.46	322
300	5.91	HDG30006	353.60	117.00	70.71	23.46	417.56	138.55	511
400	11.81	HDG40012	433.90	150.00	86.79	29.99	1025.00	354.18	928
500	5.91	HDG50006	566.30	192.00	113.25	38.37	668.77	226.61	1,058

INDUSTRIAL HYDRAULIC EQUIPMENT



Model Number	Col-lapsed Height A (in)	Extended Height B (in)	Cylinder Bore Dia. C (in)	Outside Dia. D (in)	Plunger Dia. E (in)	Saddle Dia. F (in)	Base to Adv. Port G (in)	Top to Return Port H (in)	Base Mounting Hole		
									Bolt Circle X (in)	Thread Y (mm)	Thread Depth Z (in)
HDG5002	6.38	8.35	3.74	5.12	2.76	1.97	2.05	1.29	2.56	M12	0.87
HDG5004	6.38	8.35	3.74	5.12	2.76	1.97	2.05	1.29	2.56	M12	0.87
HDG5006	8.35	12.28	3.74	5.12	2.76	1.97	2.05	1.29	2.56	M12	0.87
HDG5008	10.31	16.22	3.74	5.12	2.76	1.97	2.05	1.29	2.56	M12	0.87
HDG5010	12.28	20.16	3.74	5.12	2.76	1.97	2.05	1.29	2.56	M12	0.87
HDG5012	14.25	24.09	3.74	5.12	2.76	1.97	2.05	1.29	2.56	M12	0.87
HDG10002	16.22	28.03	3.74	5.12	2.76	1.97	2.05	1.29	2.56	M12	0.87
HDG10004	7.17	9.13	5.12	6.50	3.74	2.95	2.13	1.89	3.74	M12	0.87
HDG10006	9.13	13.07	5.12	6.50	3.74	2.95	2.13	1.89	3.74	M12	0.87
HDG10008	11.10	17.01	5.12	6.50	3.74	2.95	2.13	1.89	3.74	M12	0.87
HDG10010	13.07	20.94	5.12	6.50	3.74	2.95	2.13	1.89	3.74	M12	0.87
HDG10012	15.04	24.88	5.12	6.50	3.74	2.95	2.13	1.89	3.74	M12	0.87
HDG15002	17.01	28.82	5.12	6.50	3.74	2.95	2.13	1.89	3.74	M12	0.87
HDG15004	7.72	9.69	6.22	8.07	4.33	3.70	2.40	2.22	5.12	M12	0.87
HDG15006	9.69	13.62	6.22	8.07	4.33	3.70	2.40	2.22	5.12	M12	0.87
HDG15008	13.62	21.50	6.22	8.07	4.33	3.70	2.40	2.22	5.12	M12	0.87
HDG15010	15.59	25.43	6.22	8.07	4.33	3.70	2.40	2.22	5.12	M12	0.87
HDG15012	17.56	29.37	6.22	8.07	4.33	3.70	2.40	2.22	5.12	M12	0.87
HDG20002	8.50	10.47	7.22	9.25	5.31	4.45	2.62	2.22	6.5	M12	0.87
HDG20006	12.44	18.35	7.24	9.25	5.24	4.45	2.62	2.22	6.50	M12	0.87
HDG20008	14.41	22.28	7.22	9.25	5.31	4.45	2.62	2.22	6.5	M12	0.87
HDG20012	18.35	30.16	7.24	9.25	5.24	4.45	2.62	2.22	6.50	M12	0.87
HDG30006	16.22	22.13	9.49	12.20	7.76	6.97	3.98	2.95	7.09	M16	1.42
HDG40012	24.59	36.40	10.51	13.78	8.50	7.72	4.49	4.13	8.07	M16	1.42
HDG50006	20.43	26.34	12.01	15.75	9.76	8.98	4.49	5.31	9.84	M24	1.50

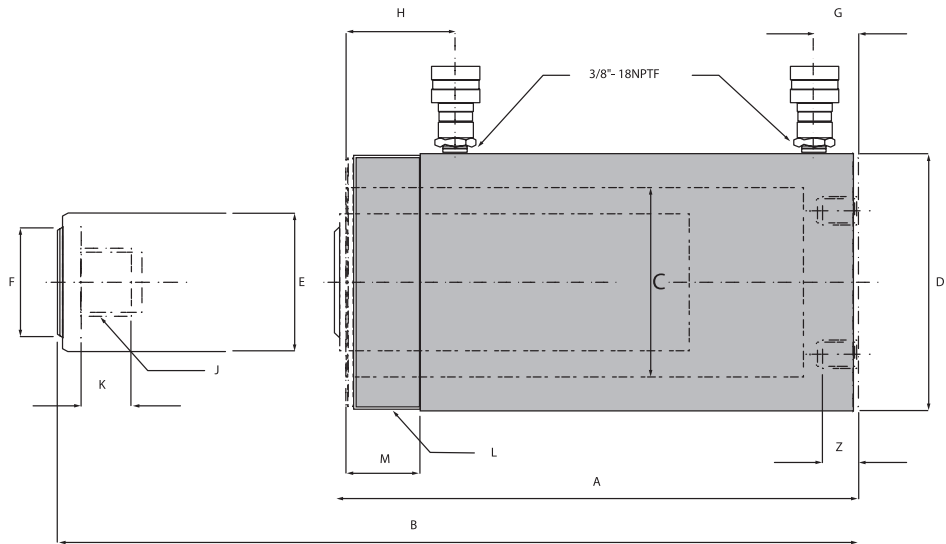
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HIGH TONNAGE DOUBLE ACTING CYLINDERS (HD Series)



- Rod wiper seals out dirt and contamination
- High strength steel construction from gun drilled solid bar
- High flow 3/8" NPTF couplers
- One piece high grade alloy bearing for side load protection and long life
- Ideal for pushing and pulling
- Maximum working pressure: 10,000 psi / 700 bar
- Threaded cylinders, removable saddle, thicker cylinder walls (than HDG series)

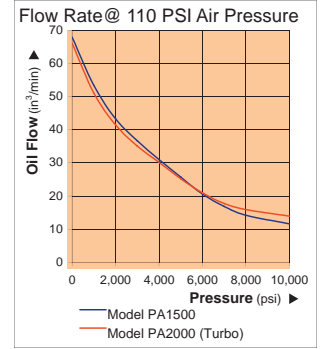


High-Flow Coupler:CH38F
Included on all models

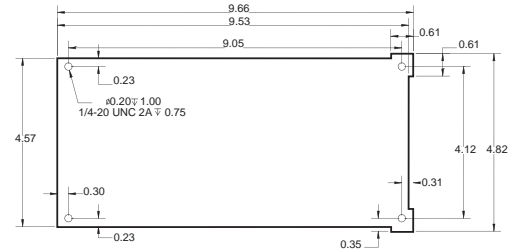
Cylinder Capacity (tons)	Stroke (in)	Model Number	Maximum Cylinder Capacity		Cylinder Effective Area		Oil Capacity		Collapsed Height A (in)	Extended Height B (in)	Cylinder Bore Dia. C (in)	Outside Dia. D (in)
			Push (ton)	Pull (ton)	Push (in ²)	Pull (in ²)	Push (in ³)	Pull (in ³)				
200	6.00	HD20006	221.00	112.50	44.21	22.50	265.28	135.00	16.94	22.94	7.50	9.75
	13.00	HD20013	221.00	112.50	44.21	22.50	574.78	293.00	23.94	36.94	7.50	9.75
	24.00	HD20024	221.00	112.50	44.21	22.50	1061.00	528.00	36.13	60.13	7.50	9.75
300	6.00	HD30006	354.60	190.00	70.93	38.00	425.56	228.00	19.13	25.13	9.50	12.25
500	6.00	HD50006	565.70	315.00	113.15	63.00	678.92	378.00	22.75	28.75	12.00	15.63

Model Number	Plunger Dia. E (in)	Saddle Dia. F (in)	Base to Adv. Port G (in)	Top to Return Port H (in)	Collar Thread L (in)	Collar Thread Length M (in)	Plunger Internal Thread J (in)	Plunger Thread Length K (in)	Base Mounting Hole			Weight (lbs)
									Bolt Circle X (in)	Thread Y (in)	Thread Depth Z (in)	
HD20006	5.25	5.25	2.25	3.81	-	-	-	-	5.00	1-8	1.00	325.00
HD20013	5.25	5.25	2.25	3.81	9¼-12	2.13	2½-12	2.50	5.00	1-8	1.00	440.00
HD20024	5.25	5.25	3.38	4.00	9¼-12	2.13	2½-12	2.50	5.00	1-8	1.00	616.00
HD30006	6.50	6.50	3.50	4.50	12¼-12	2.31	2½-12	3.25	6.25	1¼-7	1.75	441.00
HD50006	8.00	8.00	4.75	6.00	15½-8	3.13	3¼-12	4.25	8.00	1¼-5	2.12	953.00

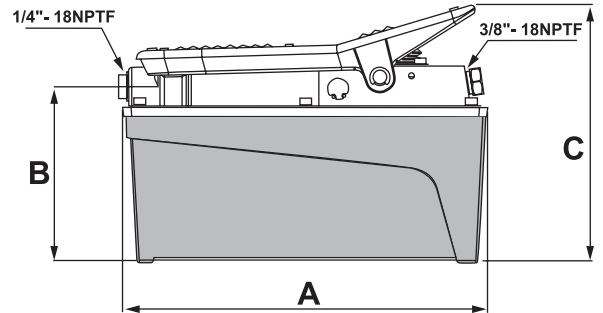
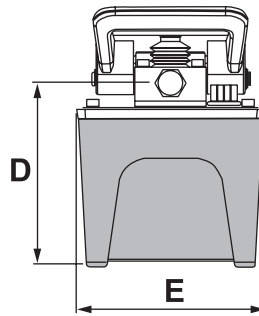
METAL AIR PUMPS



- High strength reinforced alloy reservoir is lightweight and corrosion resistant
- U.S. Patent No.5,946,912, a built-in by-pass device protects hydraulic system from over pumping damage
- A compact yet powerful Air Turbo Motor U.S. Patent No.5,341,723 is equipped to raise the load to the desired height efficiently, effortlessly, and safely
- Suggested air pressure range: 110-175 psi. / 7.5-12 bar
- Dust cover protection for the release control valve
- Maximum working pressure: 10,000 psi / 700 bar



Air pumps can be used in a variety of industrial settings



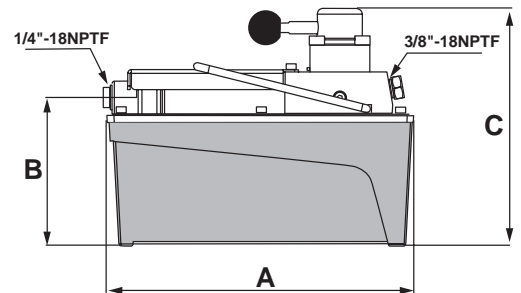
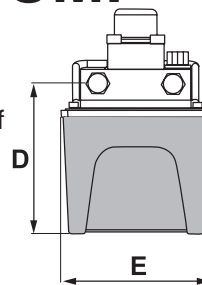
Used with Cylinder	Usable Oil Capacity (in ³)	Model Number	Pressure Rating (psi)	Oil Output Flow Rate (in ³ /min)		Input Air Pressure Range (psi)	Dimensions (in)					Weight (lbs)
				No Load	Load		A	B	C	D	E	
Single Acting	91.5	PA1500	10,000	66	11	110-175	10.35	5.00	7.28	5.16	5.35	18.1
	91.5	PA1500B*	10,000	66	11	110-175	10.35	5.00	7.28	5.16	5.35	18.1
	122.1	PA2000	10,000	65	12	110-175	11.57	6.02	7.91	6.18	5.98	20.1
	231.9	PA3801	10,000	65	11	110-175	12.64	5.08	7.36	5.24	7.36	27.1
	460.6	PA7550	10,000	65	11	110-175	12.64	5.00	8.31	6.14	8.43	36.0

* Note: PA1500B comes with base mounting holes.

DOUBLE ACTING AIR PUMP



- PA1500M offers a 4-way control valve for operation of double acting cylinders



Used with Cylinder	Usable Oil Capacity (in ³)	Model Number	Pressure Rating (psi)	Oil Output Flow Rate (in ³ /min)		Input Air Pressure Range (psi)	Dimensions (in)					Weight (lbs)
				No Load	Load		A	B	C	D	E	
Double Acting	91.5	PA1500M	10,000	66	11	110-175	10.51	5.00	7.99	5.35	5.35	19.1



BVA HYDRAULICS

REMOTE CONTROL AIR PUMPS

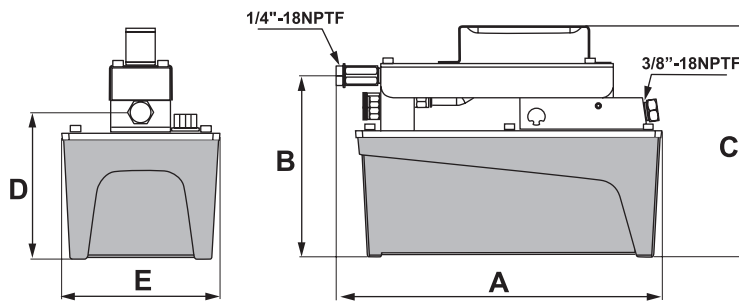


PA1500L



PA3801L

- 10 ft. hand held remote allows user to operate the air pump from a safe distance
- Air pump comes with convenient carry handle

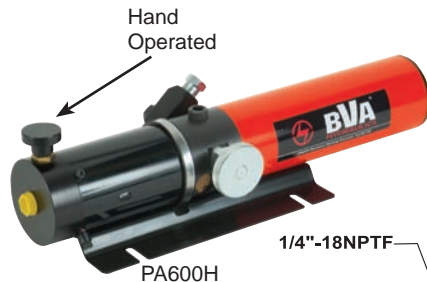


Used with Cylinder	Usable Oil Capacity (in ³)	Model Number	Pressure Rating (psi)	Oil Output Flow Rate (in ³ /min)		Input Air Pressure Range (psi)	Dimensions (in)					Weight (lbs)
				No Load	Load		A	B	C	D	E	
Single Acting	91.5	PA1500L	10,000	61	10	110-175	10.98	6.30	8.03	5.12	5.35	19.4
	231.9	PA3801L	10,000	61	10	110-175	12.64	6.42	8.15	5.20	7.36	30.4

ALL POSITION AIR PUMPS



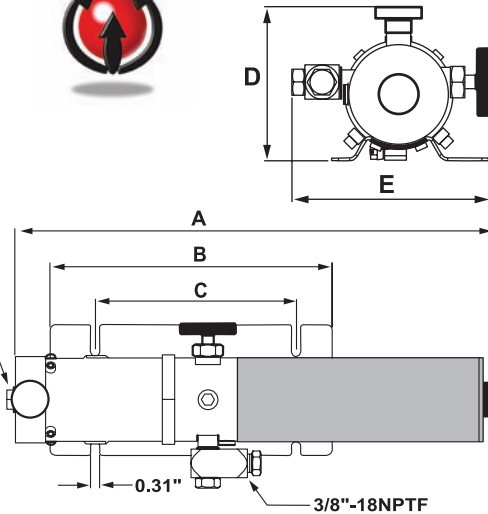
PA600



Hand Operated

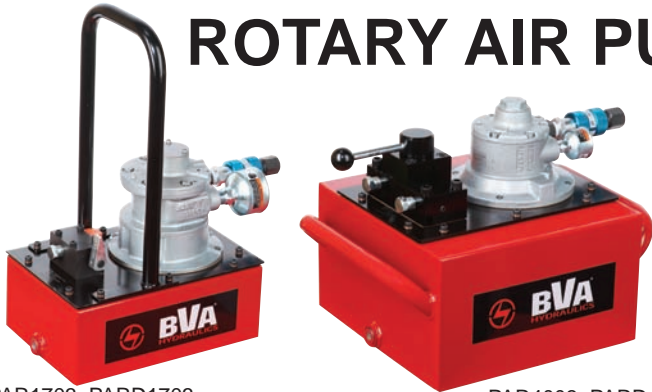
PA600H

- Pump can work in any position
- Mounting plate allows for the pump to be securely fastened
- Hydraulic port swivels for easy connection



Used with Cylinder	Usable Oil Capacity (in ³)	Model Number	Pressure Rating (psi)	Oil Output Flow Rate (in ³ /min)		Input Air Pressure Range (psi)	Dimensions (in)					Weight (lbs)
				No Load	Load		A	B	C	D	E	
Single Acting	36.6	PA600	10,000	61	9	110-175	16.77	9.84	7.01	6.18	5.59	14.1
	36.6	PA600H	10,000	61	9	110-175	16.77	9.84	7.01	4.49	5.75	12.5

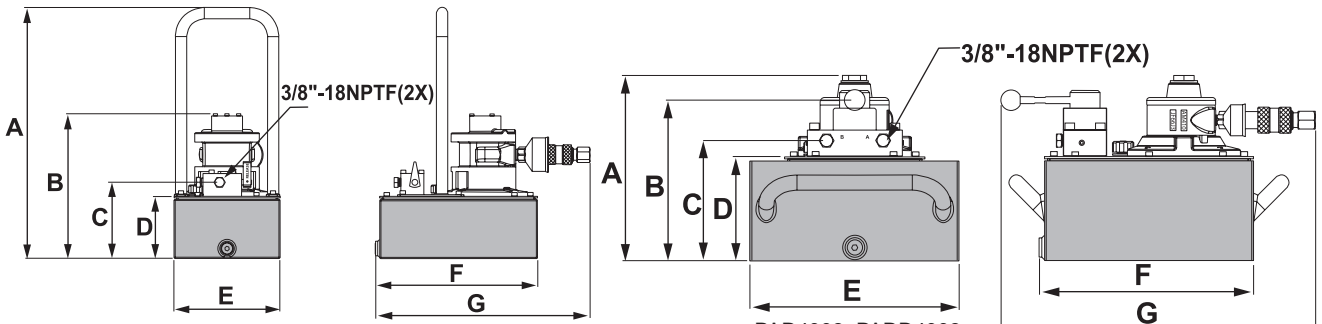
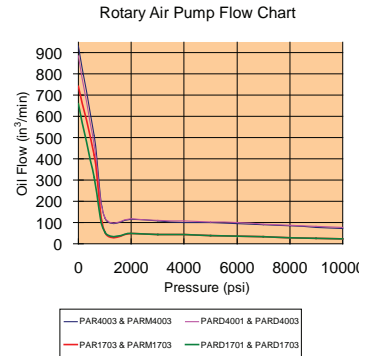
ROTARY AIR PUMPS



PAR1703, PARD1703

PAR4003, PARD4003

- Two speed operation for fast cylinder advance and improved productivity
- Models available with auto return valve
- Internal relief valves for overload protection
- Also available with hand held air control valve



PAR1703, PARD1703

PAR4003, PARD4003

Used with Cylinder	Motor Size (hp)	Usable Oil Capacity (gal)	Model Number	Pressure Rating (psi)	Pressure Rating		Oil Output Flow Rate		Valve Type	Valve Function	Air pressure range (psi)
					1st Stage (psi)	2nd Stage (psi)	1st Stage (in³/min)	2nd Stage (in³/min)			
Single Acting	1.7	1	PARD1701	10,000	700	10,000	313	22	Dump	Advance/Return	60 ~ 80
	1.7	3	PARD1703	10,000	700	10,000	313	22	Dump	Advance/Return	60 ~ 80
	1.7	3	PAR1703	10,000	700	10,000	417	22	Manual PW3	Advance/Hold/Return	60 ~ 80
	4	1	PARD4001	10,000	700	10,000	465	70	Dump	Advance/Return	60 ~ 100
	4	3	PARD4003	10,000	700	10,000	465	70	Dump	Advance/Return	60 ~ 100
Double Acting	4	3	PAR4003	10,000	700	10,000	512	70	Manual PW3	Advance/Hold/Return	60 ~ 100
	1.7	3	PARM1703	10,000	700	10,000	417	22	Manual PW4	Advance/Hold/Return	60 ~ 80
	4	3	PARM4003	10,000	700	10,000	512	70	Manual PW4	Advance/Hold/Return	60 ~ 100

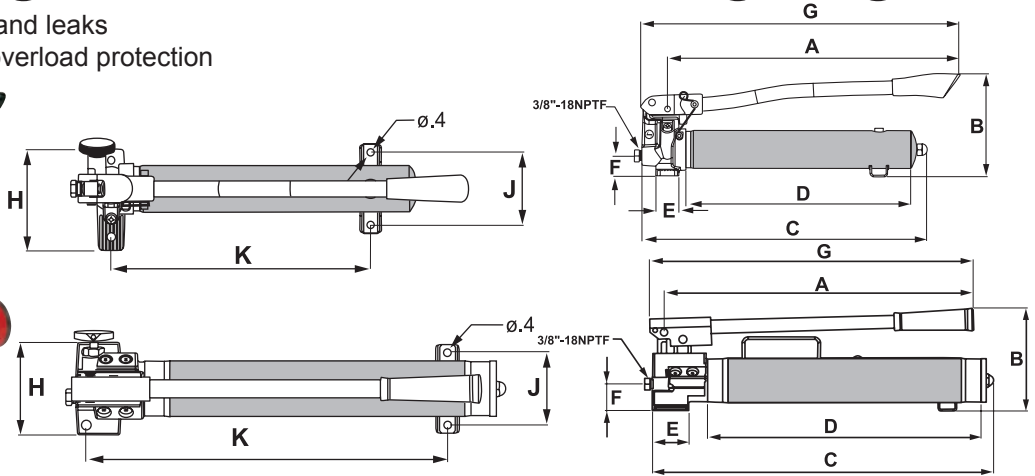
Model Number	Air Consumption (cfm)	Sound Level (dBA)	Dimensions (in)							Weight (lbs)
			A	B	C	D	E	F	G	
PARD1701	44	93	19.10	9.39	5.79	4.72	8.07	12.34	15.90	42
PARD1703	44	93	-	11.95	8.35	7.28	12.01	12.34	17.96	54
PAR1703	44	93	11.94	10.53	8.21	7.28	12.01	12.34	18.08	55
PARD4001	95	100	19.10	11	5.79	4.72	8.07	12.34	16.34	54
PARD4003	95	100	-	13.56	8.35	7.28	12.01	12.34	18.4	66
PAR4003	95	100	13.55	10.53	8.21	7.28	12.01	12.34	18.52	67
PARM1703	44	93	11.94	10.53	8.21	7.28	12.01	12.34	18.08	55
PARM4003	95	100	13.55	10.53	8.21	7.28	12.1	12.34	18.52	67



BVA HYDRAULICS

SINGLE SPEED METAL HAND PUMPS

- All metal reservoirs resist cracks and leaks
- Internal pressure relief valve for overload protection

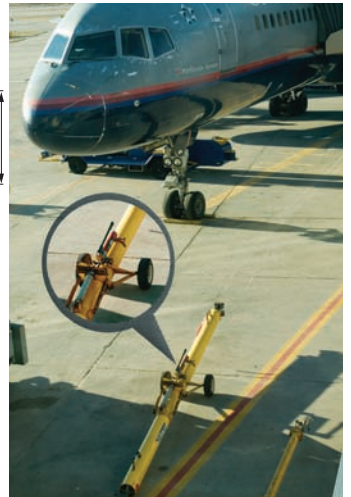
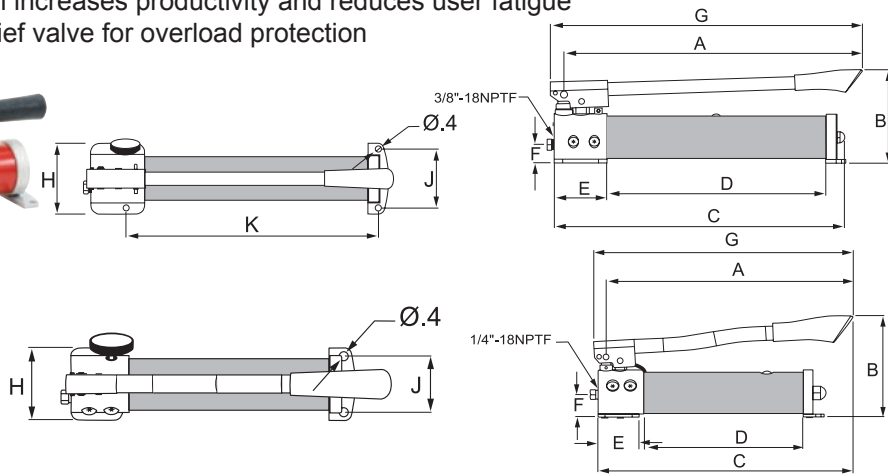


Used with Cylinder	Pump Type	Usable Oil Capacity (in ³)	Model Number	Pressure Rating (psi)	Oil Displacement per Stroke	Max. Operating Force (lbs)	Piston Stroke (in)	Oil Outlet Port	Weight (lbs)
Single Acting	Single Speed	36.5	P601S	10,000	0.15	109	0.79	3/8"-18NPTF	13.0
		67.0	P1201S	10,000	0.13	89	0.82	3/8"-18NPTF	20.0

Model Number	Dimensions (in)									
	A	B	C	D	E	F	G	H	J	K
P601S	18.94	6.46	19.53	15.35	1.57	1.26	20.79	5.20	3.74	14.45
P1201S	21.73	6.73	23.07	3.74	1.06	1.73	21.73	5.31	3.74	18.27

TWO SPEED ALUMINUM HAND PUMPS

- Lightweight aluminum alloy for easy handling
- Two speed operation increases productivity and reduces user fatigue
- Internal pressure relief valve for overload protection



Used with Cylinder	Pump Type	Usable Oil Capacity (in ³)	Model Number	Pressure Rating		Oil Displacement per Stroke		Max. Operating Force (lbs)	Piston Stroke (in)	Oil Outlet Port	Weight (lbs)
				1st Stage (psi)	2nd Stage (psi)	1st Stage (in ³)	2nd Stage (in ³)				
Single Acting	Two Speed	21.4	P350	200	10,000	0.18	0.05	88	0.38	1/4"-18NPTF	6.6
		61.0	P1000	200	10,000	0.81	0.14	99	0.82	3/8"-18NPTF	13.7

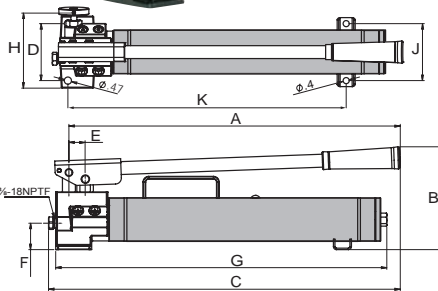
Model Number	Dimensions (in)									
	A	B	C	D	E	F	G	H	J	K
P350	13.43	5.91	13.89	9.09	2.36	1.34	14.13	3.35	2.56	-
P1000	21.77	6.34	23.03	14.96	3.59	1.26	19.96	4.88	3.94	16.93

TWO SPEED METAL HAND PUMPS

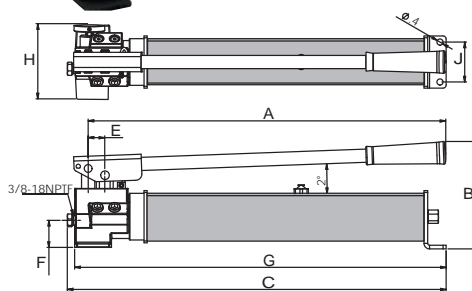
- All metal reservoirs resist cracks and leaks
- Two speed operation increases productivity and reduces user fatigue
- Internal pressure relief valve for over load protection
- Load release valve for single acting cylinder usage
- Large oil capacity to power a wide range of cylinders and tools



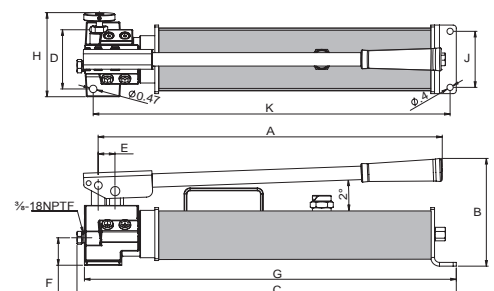
P1201



P2001



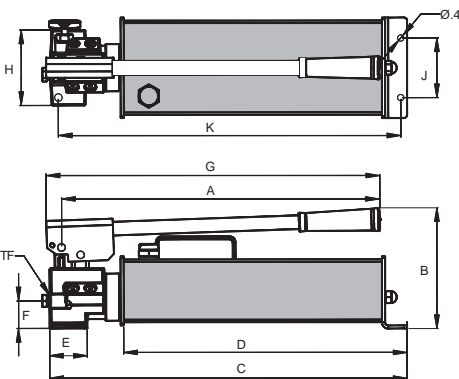
P2301



Used with Cylinder	Pump Type	Usable Oil Capacity (in ³)	Model Number	Pressure Rating		Oil Displacement per Stroke		Max. Operating Force (lbs)	Piston Stroke (in)	Oil Outlet Port	Weight (lbs)
				1st Stage (psi)	2nd Stage (psi)	1st Stage (in ³)	2nd Stage (in ³)				
Single Acting	Two Speed	67.0	P1201	200	10,000	0.81	0.14	99	0.82	3/8"-18NPTF	20.5
		122.0	P2001	200	10,000	0.81	0.14	95	0.82	3/8"-18NPTF	24.2
		128.0	P2301	200	10,000	0.81	0.14	99	0.82	3/8"-18NPTF	27.7
		250.0	P4301	200	10,000	0.81	0.14	99	0.82	3/8"-18NPTF	37.6
		476.0	P8701	290	10,000	7.71	0.29	143	1.69	3/8"-18NPTF	76.0



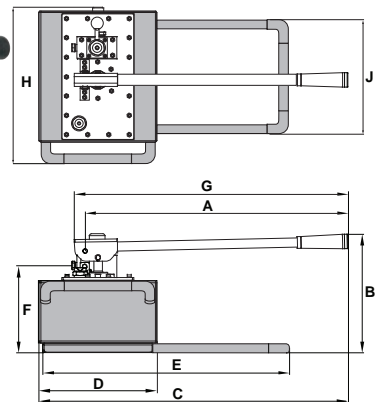
P4301



Model Number	Dimensions (in)										
	A	B	C	D	E	F	G	H	J	K	
P1201	21.73	6.73	23.07	3.74	1.06	1.73	21.73	4.92	3.74	18.27	
P2001	22.91	6.89	24.29	-	1.06	1.73	23.82	4.80	2.56	-	
P2301	21.73	6.81	23.98	3.74	1.06	1.73	23.50	5.31	3.54	22.56	
P4301	21.73	7.68	22.87	3.74	1.06	1.73	22.40	5.31	3.74	21.46	
P8701	25.79	11.61	30.35	11.54	24.17	8.25	26.94	15.24	11.18	-	



P8701



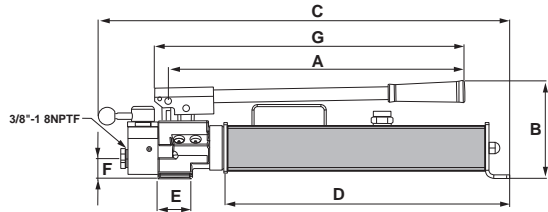
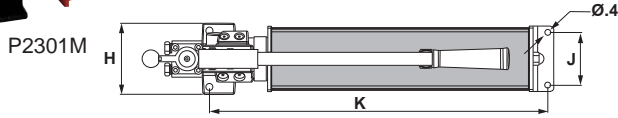
BUILT TO LAST



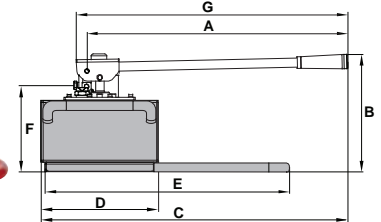
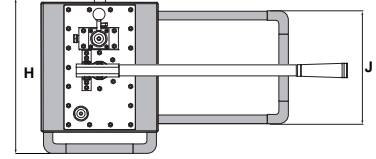
BVA
HYDRAULICS

DOUBLE ACTING HAND PUMPS

- 4-way control valve for operation of double acting cylinders
- Large oil capacities to power a wide range of cylinders and tools
- Two speed operation increases productivity and reduces user fatigue



P8701M



Used with Cylinder	Pump Type	Usable Oil Capacity (in ³)	Model Number	Pressure Rating		Oil Displacement per Stroke		Max. Operating Force (lbs)	Piston Stroke (in)	Oil Outlet Port	Weight (lbs)
				1st Stage (psi)	2nd Stage (psi)	1st Stage (in ³)	2nd Stage (in ³)				
Double Acting	Two Speed	128.0	P2301M	200	10,000	0.81	0.14	99	0.82	3/8"-18NPTF	32.3
		476.0	P8701M	290	10,000	7.31	0.29	143	1.67	3/8"-18NPTF	77.4

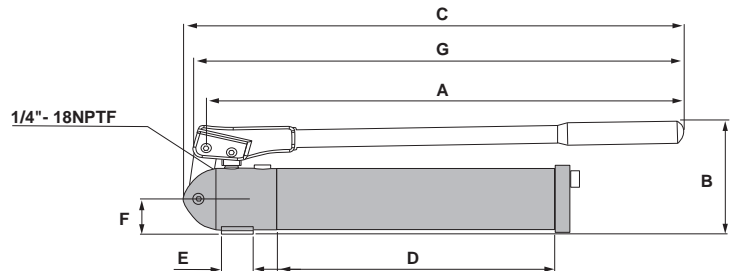
Model Number	Dimensions (in)									
	A	B	C	D	E	F	G	H	J	K
P2301M	25.45	6.81	27.44	3.74	1.06	25.93	21.73	4.72	3.54	22.56
P8701M	25.79	11.61	30.35	11.54	24.17	8.25	26.94	15.24	11.18	-

LOW PRESSURE HAND PUMP

- Lightweight and portable for use with punch drivers
- Rugged steel pump with chrome handle
- Single speed
- Mounting bracket for easy, permanent mounting
- Maximum working pressure 7,200 psi



P240L



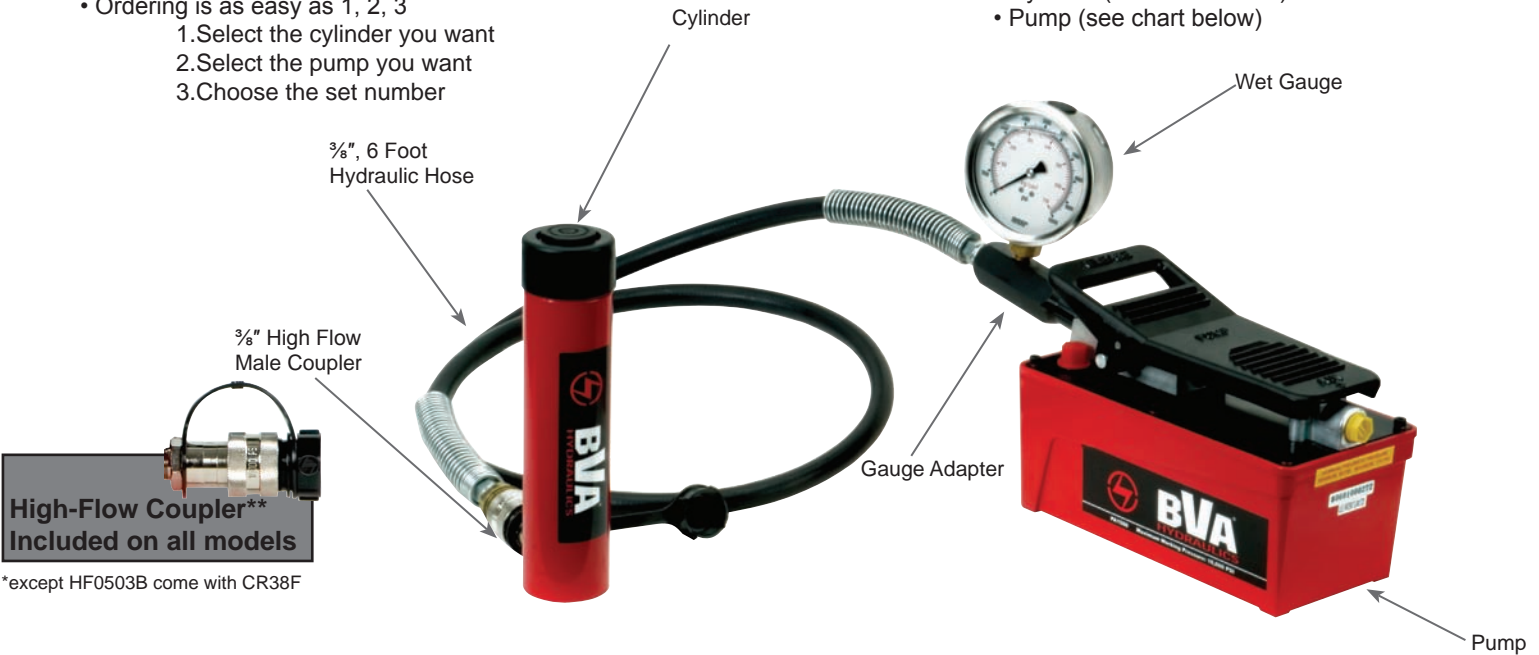
Used with Cylinder	Pump Type	Usable Oil Capacity (in ³)	Model Number	Pressure Rating (psi.)	Oil Displacement per Stroke (in ³)	Max. Operating Force (lbs)	Piston Stroke (in)	Oil Outlet Port	Weight (lbs)
Single Acting	Low Pressure Single Speed	14.7	P240L	7,200	0.09	55.7	0.63	1/4" - 18 NPTF	9.02

Model Number	Dimensions (in)									
	A	B	C	D	E	F	G	H	J	
P240L	16.57	12.01	24.78	12.28	13.21	15.53	4.53	12.32	2.43	

PUMP/CYLINDER COMBO

- Matched sets provide a combination of components for single acting cylinder applications
- Ordering is as easy as 1, 2, 3
 1. Select the cylinder you want
 2. Select the pump you want
 3. Choose the set number

- Each Set Includes:
- 3/8", 6 Foot Hydraulic Hose (CS3838)
 - Gauge Adapter (CF3814)
 - 4" Wet Gauge (GW4014)
 - 3/8" High Flow Male Coupler (CH38M)
 - Cylinder (see chart below)
 - Pump (see chart below)



Type	Combo Capacity (ton)	Cylinder			Combo Model Number						
		Model	Stroke (in)	Collapsed Height (in)	with Hand Pump			with Air Pump			
					Model P350	Model P1000	Model P2001	Model PA1500	Model PA1500L	Model PA3801	
Single Acting Cylinders	5	H0505	5.08	8.70	SP3-0505						
	10	H1002	2.01	4.84		SP10-1002			SA15-1002		
		H1006	5.94	9.84		SP10-1006			SA15-1006	SAL15-1006	
		H1010	9.96	13.86		SP10-1010			SA15-1010	SAL15-1010	
		HT1006	5.95	11.46		SP10-1006T			SA15-1006T	SAL15-1006T	
	15	HT1010	9.96	15.47		SP10-1010T			SA15-1010T	SAL15-1010T	
		H1504	3.86	8.66		SP10-1504			SA15-1504		
		H1506	5.87	10.67		SP10-1506			SA15-1506		
		25	H2502	2.01	6.82		SP10-2502			SA15-2502	
	H2504		3.94	8.78		SP10-2504			SA15-2504		
	H2506		5.94	10.79		SP10-2506			SA15-2506		
	H2508		7.95	12.80				SP20-2508	SA15-2508		
55	H5506	6.25	11.13				SP20-5506	SA15-5506			
100	H10006	6.63	13.25							SA38-10006	
Single Acting Flat Boby Cylinder	5	HF0503B*	0.24	1.26	SP3-0503B						
	10	HF1005B	0.43	1.69	SP3-1005B						
Single Acting Hollow Hole Cylinder	12	HC1201T	0.31	2.36	SP3-1201T						
	12	HC1202XT	1.61	4.74	SP3-1202XT						
	12	HC1203XT	2.99	7.24		SP10-1203XT					
	20	HC2002T	2.01	6.38		SP10-2002T			SA15-2002T		



ELECTRIC PUMPS

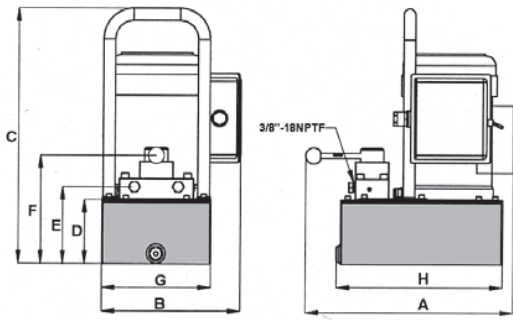
*Positive locking valve available
please refer to page 45



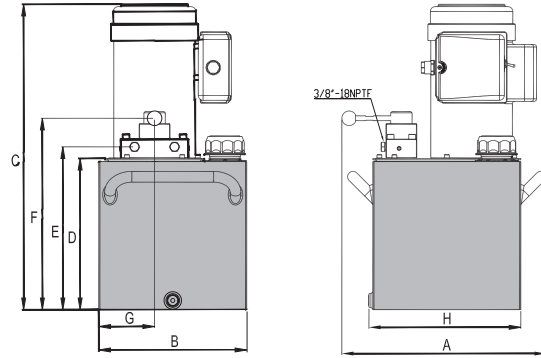
- Quiet operation meets OSHA regulations (80dBA)
- 2 speed operation allows for faster cylinder advance
- Full load starting capacities
- Internal filter keeps contamination from damaging pump
- Rugged durable design meets the demands of industrial applications
- Precision components to minimize wear and improve overall dependability
- All pumps are single phase

Use with Cylinder	Motor Size (hp)	Usable Oil Capacity (gal)	Model Number	Pressure Rating		Oil Output Flow Rate		Valve Type	Valve Function	Current Draw (amps)	Motor Voltage (volts)	Weight (lbs)
				1st Stage (psi)	2nd Stage (psi)	1st Stage (in ³ /min)	2nd Stage (in ³ /min)					
Single Acting	0.5	1.0	PE0501T	350	10,000	293	18	3-way, 3-position	Advance/ Hold/ Return	9	115	59.5
	1.0	2.0	PE1002T	700	10,000	397	37			12	115	70.5
	1.5	3.0	PE1503T	700	10,000	476	61			17	115	88.5
	1.5	5.0	PE1505T	700	10,000	476	61			17	115	94.0
	1.5	10.0	PE1510T	700	10,000	476	61			17	115	116.0
	1.5	15.0	PE1515T	700	10,000	476	61			17	115	127.0
	1.5	25.0	PE1525T	700	10,000	476	61			17	115	148.0
	3.0	5.0	PE3005T	700	10,000	592	110			17	230	101.0
	3.0	10.0	PE3010T	700	10,000	592	110			17	230	123.0
	3.0	15.0	PE3015T	700	10,000	592	110			17	230	134.0
Double Acting	3.0	25.0	PE3025T	700	10,000	592	110	4-way, 3-position	Advance/ Hold/ Return	17	230	155.0
	0.5	1.0	PEM0501T	350	10,000	293	18			9	115	59.5
	1.0	2.0	PEM1002T	700	10,000	397	37			12	115	70.5
	1.5	3.0	PEM1503T	700	10,000	476	61			17	115	88.5
	1.5	5.0	PEM1505T	700	10,000	476	61			17	115	94.0
	1.5	10.0	PEM1510T	700	10,000	476	61			17	115	116.0
	1.5	15.0	PEM1515T	700	10,000	476	61			17	115	127.0
	1.5	25.0	PEM1525T	700	10,000	476	61			17	115	148.0
	3.0	5.0	PEM3005T	700	10,000	592	110			17	230	101.0
	3.0	10.0	PEM3010T	700	10,000	592	110			17	230	123.0
	3.0	15.0	PEM3015T	700	10,000	592	110			17	230	134.0
	3.0	25.0	PEM3025T	700	10,000	592	110			17	230	155.0

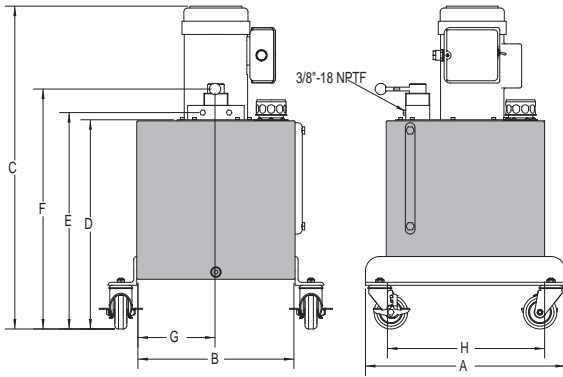
INDUSTRIAL HYDRAULIC EQUIPMENT



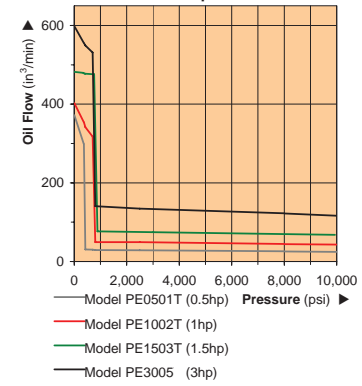
PE0501T & PEM0501T only



PE & PEM Series



Electric Pumps Flow Chart



Model Number	Dimensions (in)							
	A	B	C	D	E	F	G	H
PE0501T	14.92	10.28	19.09	4.72	5.67	7.99	8.07	12.36
PE1002T	16.65	12.01	17.83	5.94	6.89	9.21	4.53	12.36
PE1503T	16.65	12.01	19.72	7.24	8.19	10.51	4.53	12.36
PE1505T	16.57	12.01	24.78	12.28	13.21	15.53	4.53	12.32
PE1510T	20.87	16.54	31.48	18.98	19.93	22.25	8.27	16.54
PE1515T	20.87	16.54	34.63	22.13	23.08	25.40	8.27	16.54
PE1525T/	25.59	21.26	34.63	22.13	23.08	25.40	10.63	21.26
PE3005T	16.54	12.01	26.54	12.28	13.23	15.51	4.53	12.36
PE3010T	20.87	16.54	33.24	18.98	19.93	22.25	8.27	16.54
PE3015T	20.87	16.54	36.39	22.13	23.08	25.40	8.27	16.54
PE3025T	25.59	21.26	36.39	22.13	23.08	25.40	10.63	21.26
PEM0501T	14.92	10.28	19.09	4.72	5.67	7.99	8.07	12.36
PEM1002T	16.65	12.01	17.83	5.94	6.89	9.21	4.53	12.36
PEM1503T	16.65	12.01	19.72	7.24	8.19	10.51	4.53	12.36
PEM1505T	16.57	12.01	24.78	12.28	13.21	15.53	4.53	12.32
PEM1510T	20.87	16.54	31.48	18.98	19.93	22.25	8.27	16.54
PEM1515T	20.87	16.54	34.63	22.13	23.08	25.40	8.27	16.54
PEM1525T	25.59	21.26	34.63	22.13	23.08	25.40	10.63	21.26
PEM3005T	16.54	12.01	26.54	12.28	13.23	15.51	4.53	12.36
PEM3010T	20.87	16.54	33.24	18.98	19.93	22.25	8.27	16.54
PEM3015T	20.87	16.54	36.39	22.13	23.08	25.40	8.27	16.54
PEM3025T	25.59	21.26	36.39	22.13	23.08	25.40	10.63	21.26



*Positive locking valve available
please refer to page 45

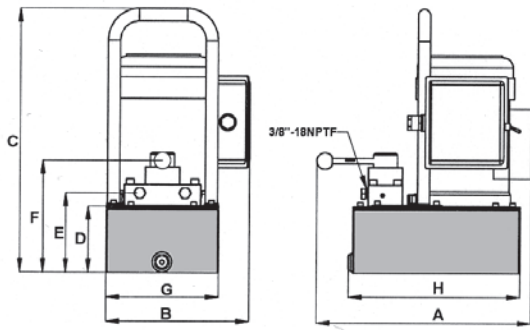
ELECTRIC PUMPS with PENDANT SWITCH



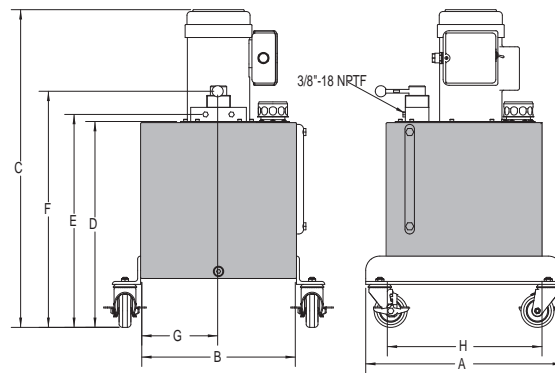
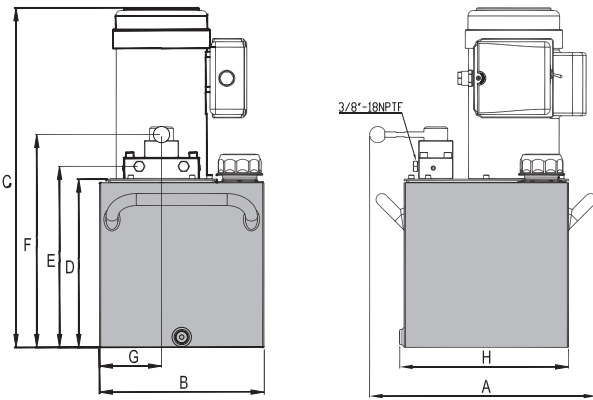
- Quiet operation meets OSHA regulations (80dBA)
- 2 speed operation allows for faster cylinder advance
- Full load starting capacities
- Internal filter keeps contamination from damaging pump
- 10 ft. hand held pendant switch allows user to turn on/off motor
- All pumps are single phase
- Pumps come with manual valve
- Toggle switch only turns on/off motor

Use with Cylinder	Motor Size (hp)	Usable Oil Capacity (gal)	Model Number	Pressure Rating		Oil Output Flow Rate		Valve Type	Valve Function	Current Draw (amps)	Motor Voltage (volts)	Weight (lbs)
				1st Stage (psi)	2nd Stage (psi)	1st Stage (in ³ /min)	2nd Stage (in ³ /min)					
Single Acting	0.5	1.0	PEW0501T	350	10,000	293	18	3-way, 3-position	Advance/ Hold/ Return	9	115	59.5
	1.0	2.0	PEW1002T	700	10,000	397	37			12	115	70.5
	1.5	3.0	PEW1503T	700	10,000	476	61			17	115	88.5
	1.5	5.0	PEW1505T	700	10,000	476	61			17	115	94.0
	1.5	10.0	PEW1510T	700	10,000	476	61			17	115	116.0
	1.5	15.0	PEW1515T	700	10,000	476	61			17	115	127.0
	1.5	25.0	PEW1525T	700	10,000	476	61			17	115	148.0
	3.0	5.0	PEW3005T	700	10,000	592	110			17	230	101.0
	3.0	10.0	PEW3010T	700	10,000	592	110			17	230	123.0
	3.0	15.0	PEW3015T	700	10,000	592	110			17	230	134.0
Double Acting	0.5	1.0	PEWM0501T	350	10,000	293	18	4-way, 3-position	Advance/ Hold/ Return	9	115	59.5
	1.0	2.0	PEWM1002T	700	10,000	397	37			12	115	70.5
	1.5	3.0	PEWM1503T	700	10,000	476	61			17	115	88.5
	1.5	5.0	PEWM1505T	700	10,000	476	61			17	115	94.0
	1.5	10.0	PEWM1510T	700	10,000	476	61			17	115	116.0
	1.5	15.0	PEWM1515T	700	10,000	476	61			17	115	127.0
	1.5	25.0	PEWM1525T	700	10,000	476	61			17	115	148.0
	3.0	5.0	PEWM3005T	700	10,000	592	110			17	230	101.0
	3.0	10.0	PEWM3010T	700	10,000	592	110			17	230	123.0
	3.0	15.0	PEWM3015T	700	10,000	592	110			17	230	134.0
3.0	25.0	PEWM3025T	700	10,000	592	110	17	230	155.0			

INDUSTRIAL HYDRAULIC EQUIPMENT



Electric pumps can be used in a variety of industrial settings



Model Number	Dimensions (in)							
	A	B	C	D	E	F	G	H
PEW0501T	14.92	10.28	19.09	4.72	5.67	7.99	8.07	12.36
PEW1002T	16.65	12.01	17.83	5.94	6.89	9.21	4.53	12.36
PEW1503T	16.65	12.01	19.72	7.24	8.19	10.51	4.53	12.36
PEW1505T	16.57	12.01	24.78	12.28	13.21	15.53	4.53	12.32
PEW1510T	20.87	16.54	31.48	18.98	19.93	22.25	8.27	16.54
PEW1515T	20.87	16.54	34.63	22.13	23.08	25.40	8.27	16.54
PEW1525T	25.59	21.26	34.63	22.13	23.08	25.40	10.63	21.26
PEW3005T	16.54	12.01	26.54	12.28	13.23	15.51	4.53	12.36
PEW3010T	20.87	16.54	33.24	18.98	19.93	22.25	8.27	16.54
PEW3015T	20.87	16.54	36.39	22.13	23.08	25.40	8.27	16.54
PEW3025T	25.59	21.26	36.39	22.13	23.08	25.40	10.63	21.26
PEWM0501T	14.92	10.28	19.09	4.72	5.67	7.99	8.07	12.36
PEWM1002T	16.65	12.01	17.83	5.94	6.89	9.21	4.53	12.36
PEWM1503T	16.65	12.01	19.72	7.24	8.19	10.51	4.53	12.36
PEWM1505T	16.57	12.01	24.78	12.28	13.21	15.53	4.53	12.32
PEWM1510T	20.87	16.54	31.48	18.98	19.93	22.25	8.27	16.54
PEWM1515T	20.87	16.54	34.63	22.13	23.08	25.40	8.27	16.54
PEWM1525T	25.59	21.26	34.63	22.13	23.08	25.40	10.63	21.26
PEWM3005T	16.54	12.01	26.54	12.28	13.23	15.51	4.53	12.36
PEWM3010T	20.87	16.54	33.24	18.98	19.93	22.25	8.27	16.54
PEWM3015T	20.87	16.54	36.39	22.13	23.08	25.40	8.27	16.54
PEWM3025T	25.59	21.26	36.39	22.13	23.08	25.40	10.63	21.26



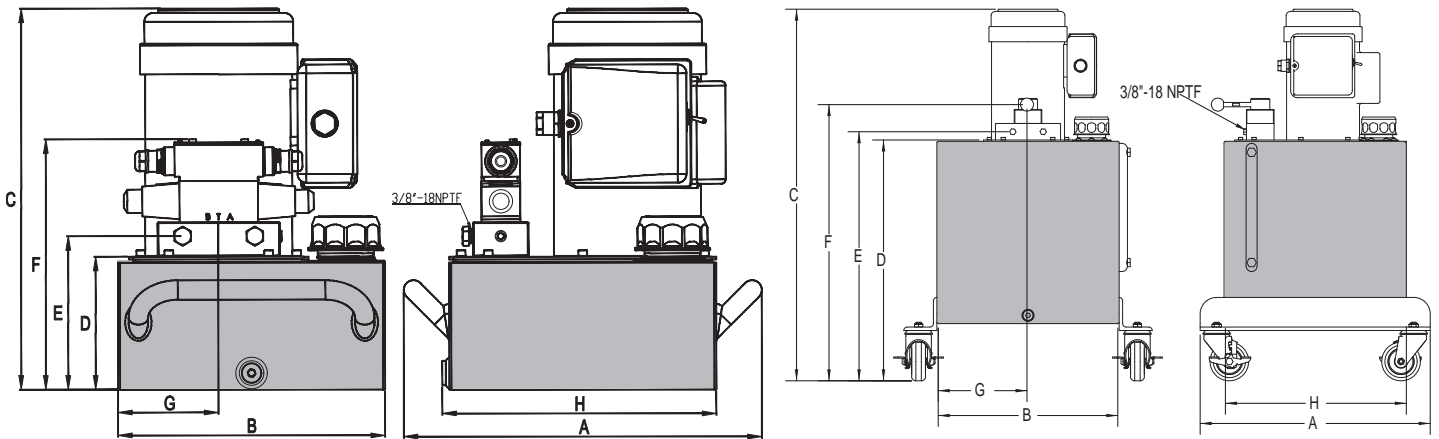
ELECTRIC PUMPS with LOCKING SOLENOID VALVE



- Locking valve provides positive load holding
- Quiet operation meets OSHA regulations (80dBA)
- Ideal for applications where a remote control is required
- 2 speed operation allows for faster cylinder advance
- Full load starting capabilities
- Internal filter keeps contamination from damaging pump
- 10 ft. hand held remote controls the solenoid valve

Use with Cylinder	Motor Size (hp)	Usable Oil Capacity (gal)	Model Number	Pressure Rating		Oil Output Flow Rate		Valve Type	Valve Function	Current Draw (amps)	Motor Voltage (volts)	Weight (lbs)
				1st Stage (psi)	2nd Stage (psi)	1st Stage (in ³ /min)	2nd Stage (in ³ /min)					
Single Acting	0.5	1.0	PESL0501T	350	10,000	293	18	3-way, 3-position	Advance/ Hold/ Return	9	115	61.5
	0.5	2.0	PESL0502T	700	10,000	293	18			9	115	65.3
	1.0	2.0	PESL1002T	700	10,000	311	37			12	115	72.6
	1.5	3.0	PESL1503T	700	10,000	476	61			17	115	90.4
	1.5	5.0	PESL1505T	700	10,000	476	61			17	115	98.0
	1.5	10.0	PESL1510T	700	10,000	476	61			17	115	118.0
	1.5	15.0	PESL1515T	700	10,000	476	61			17	115	129.0
	1.5	25.0	PESL1525T	700	10,000	592	110			17	230	150.0
	3.0	10.0	PESL3010T	700	10,000	592	110			17	230	125.0
	3.0	15.0	PESL3015T	700	10,000	592	110			17	230	136.0
Double Acting	0.5	1.0	PESML0501T	350	10,000	293	18	4-way, 3-position	Advance/ Hold/ Return	9	115	61.5
	0.5	2.0	PESML0502T	700	10,000	293	18			9	115	65.3
	1.0	2.0	PESML1002T	700	10,000	311	37			12	115	72.6
	1.5	3.0	PESML1503T	700	10,000	476	61			17	115	90.4
	1.5	5.0	PESML1505T	700	10,000	476	61			17	115	98.0
	1.5	10.0	PESML1510T	700	10,000	476	61			17	115	118.0
	1.5	15.0	PESML1515T	700	10,000	476	61			17	115	129.0
	1.5	25.0	PESML1525T	700	10,000	592	110			17	230	150.0
	3.0	10.0	PESML3010T	700	10,000	592	110			17	230	125.0
	3.0	15.0	PESML3015T	700	10,000	592	110			17	230	136.0
3.0	25.0	PESML3025T	700	10,000	592	110	17	230	157.0			

INDUSTRIAL HYDRAULIC EQUIPMENT



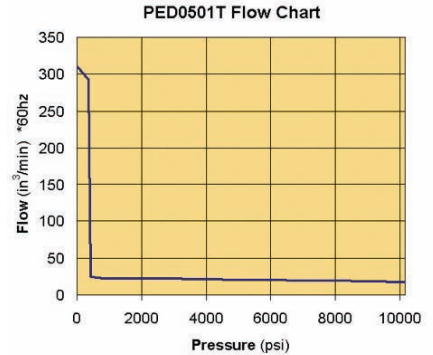
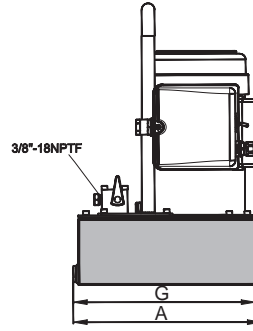
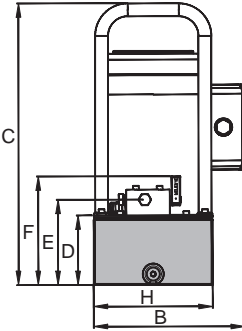
Model Number	Dimensions (in)							
	A	B	C	D	E	F	G	H
PESL0501T	12.74	10.26	19.10	4.72	5.65	11.96	8.07	12.36
PESL0502T	12.74	10.26	19.10	4.72	5.65	11.96	8.07	12.36
PESL1002T	17.88	12.01	17.88	5.98	6.90	13.16	4.51	12.36
PESL1503T	17.88	12.01	17.88	5.98	6.90	13.16	4.51	12.32
PESL1505T	16.10	12.01	17.13	5.98	6.90	13.16	4.51	12.36
PESL1510T	20.87	16.54	31.48	18.98	19.89	26.38	8.27	16.54
PESL1515T	20.87	16.54	34.63	22.13	23.04	29.53	8.27	16.54
PESL1525T	25.59	21.26	34.63	22.13	23.04	29.53	10.63	21.26
PESL3010T	20.87	16.54	33.24	18.98	19.89	26.38	8.27	16.54
PESL3015T	20.87	16.54	36.39	22.13	23.04	29.53	8.27	16.54
PESL3025T	25.59	21.26	36.39	22.13	23.04	29.53	10.63	21.26
PESML0501T	12.74	10.26	19.10	4.72	5.65	11.96	8.07	12.36
PESML0502T	12.74	10.26	19.10	4.72	5.65	11.96	8.07	12.36
PESML1002T	17.88	12.01	17.88	5.98	6.90	13.16	4.51	12.36
PESML1503T	17.88	12.01	17.88	5.98	6.90	13.16	4.51	12.32
PESML1505T	16.10	12.01	17.13	5.98	6.90	13.16	4.51	12.36
PESML1510T	20.87	16.54	31.48	18.98	19.89	26.38	8.27	16.54
PESML1515T	20.87	16.54	34.63	22.13	23.04	29.53	8.27	16.54
PESML1525T	25.59	21.26	34.63	22.13	23.04	29.53	10.63	21.26
PESML3010T	20.87	16.54	33.24	18.98	19.89	26.38	8.27	16.54
PESML3015T	20.87	16.54	36.39	22.13	23.04	29.53	8.27	16.54
PESML3025T	25.59	21.26	36.39	22.13	23.04	29.53	10.63	21.26



ELECTRIC PUMP with AUTO RETURN VALVE



- Quiet operation meets OSHA regulations (80dBA)
- Best suited for punching, crimping, and cutting applications
- 2 speed operation allows for faster cylinder advance
- Full load starting capabilities
- Internal filter keeps contamination from damaging pump
- Rugged durable design meets the demands of industrial applications
- 10 ft. remote pendant switch to control motor on/off



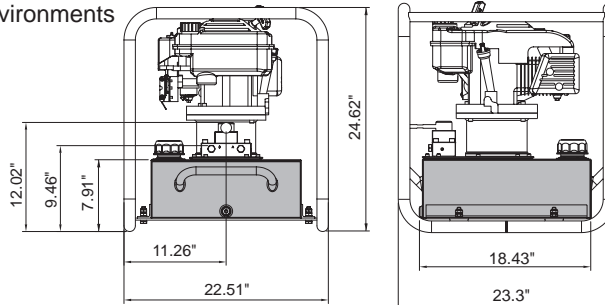
Motor Size (hp)	Usable Oil Capacity (gal)	Model Number	Pressure Rating		Oil Output Flow Rate		Valve Type	Valve Function	Current Draw (amps)	Motor Voltage (volts)	Sound Level (dBA)	Weight (lbs)
			1st Stage (psi)	2nd Stage (psi)	1st Stage (in³/min)	2nd Stage (in³/min)						
0.5	1.0	PED0501T	350	10,000	233	18	2-way, 2-position	Advance/Return	9	115	80	66.2

Model Number	Dimensions (in)						
	A	B	C	D	E	F	G
PED0501T	12.76	10.28	19.09	4.72	5.79	7.36	12.36

GAS PUMP with HONDA ENGINE



- Gas engine pump will provide 10,000 psi hydraulic force at remote locations
- Industrial grade 5.5 hp Honda gas engine
- Manual control valve for use with single or double acting cylinders or tools
- Two speed pump designed for rapid cylinder advance
- Gas pump features a sturdy protective roll cage for use in the toughest environments

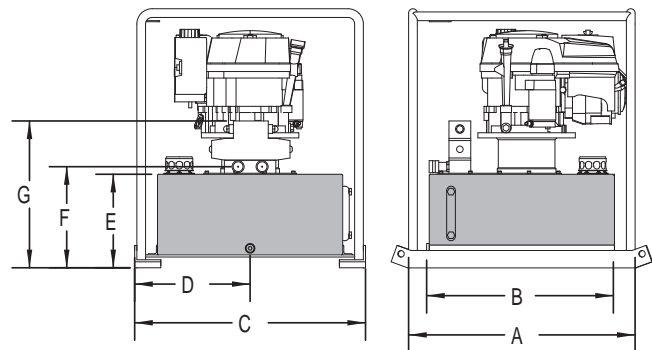


Motor Size (hp)	Usable Oil Capacity (gal)	Model Number	Max. Pressure Output (psi)	Pressure Rating (psi)		Oil Output Flow Rate (in³/min)		Valve Type	Valve Function	Rotation Speed (rpm)	Sound Level (dBA)	Weight (lbs)
				1st Stage	2nd Stage	1st Stage	2nd Stage					
5.5	5	PG5505	10,000	700	10,000	427	100	3 way, 3 position	Advance/ Hold/ Return	3,600	93	121.2
5.5	5	PGM5505	10,000	700	10,000	427	100	4 way, 3 position	Advance/ Hold/ Return	3,600	93	121.2

GAS PUMP with SOLENOID VALVE and HONDA ENGINE



- Gas engine pump will provide 10,000 psi hydraulic force at remote locations
- Industrial grade 10.2 hp Honda gas engine
- Ideal for applications when a remote control is required
- Two speed pump designed for rapid cylinder advance
- Gas pump features a sturdy protective roll cage for use in the toughest environments



Motor Size (hp)	Usable Oil Capacity (gal)	Model Number	Max. Pressure Output (psi)	Pressure Rating (psi)		Oil Output Flow Rate (in ³ /min)		Valve Type	Valve Function	Rotation Speed (rpm)	Sound Level (dBA)	Weight (lbs)
				1st Stage	2nd Stage	1st Stage	2nd Stage					
10.2	5	PGSL1005	10,000	700	10,000	600	200	3 way, 3 position	Advance/ Hold/ Return	3,600	93	194
10.2	5	PGSML1005	10,000	700	10,000	600	200	4 way, 3 position	Advance/ Hold/ Return	3,600	93	194
10.2	10	PGSL1010	10,000	700	10,000	600	200	3 way, 3 position	Advance/ Hold/ Return	3,600	93	223
10.2	10	PGSML1010	10,000	700	10,000	600	200	4 way, 3 position	Advance/ Hold/ Return	3,600	93	223
10.2	15	PGSL1015	10,000	700	10,000	600	200	3 way, 3 position	Advance/ Hold/ Return	3,600	93	252
10.2	15	PGSML1015	10,000	700	10,000	600	200	4 way, 3 position	Advance/ Hold/ Return	3,600	93	252

Model Number	Dimensions (in)						
	A	B	C	D	E	F	G
PGSL1005	26.57	21.5	20.94	10.47	11.50	12.43	15.47
PGSML1005	26.57	21.5	20.94	10.47	11.50	12.43	18.74
PGSL1010	28.25	23.37	27	13.5	12	12.93	17.375
PGSML1010	28.5	23.37	27	13.5	12	12.93	19.765
PGSL1015	28.25	23.37	27	13.5	12	12.93	17.375
PGSML1015	28.25	23.37	27	13.5	12	12.93	19.765

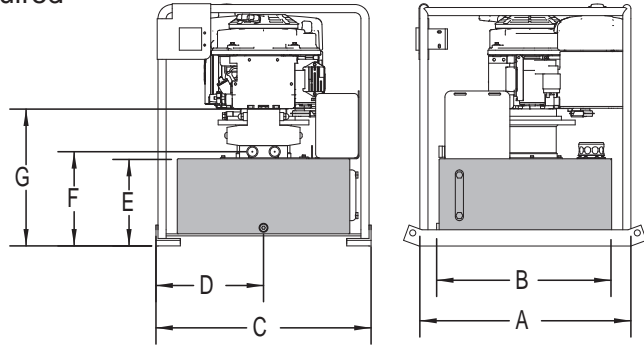
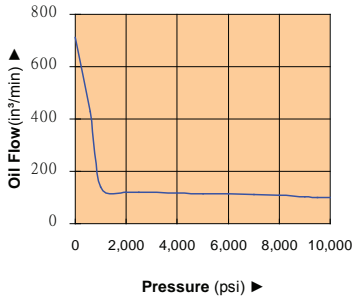


DIESEL PUMP with SOLENOID VALVE AND HATZ ENGINE



- Pump will provide 10,000 psi. hydraulic force at remote locations
- Industrial grade 7.3 hp HATZ Diesel engine
- Locking solenoid control valve for use with single or double acting cylinders or tools
- 10 ft. hand remote controls the solenoid valve
- Two speed pump designed for rapid cylinder advance
- Pump features a sturdy protective roll cage for use in the toughest environments
- Ideal for application when diesel fuel and/or remote control is required

PG5505 Flow Chart



Motor Size (hp)	Usable Oil Capacity (gal)	Model Number	Max. Pressure Output (psi)	Pressure Rating (psi)		Oil Output Flow Rate (in³/min)		Valve Type	Valve Function	Rotation Speed (rpm)	Fuel Tank Size	dBA @ 7 m	Weight (lbs)
				1st Stage	2nd Stage	1st Stage	2nd Stage						
7.3	5	PDSL7305	10,000	700	10,000	600	200	Manual / Solenoid Optional	Advance/ Hold/ Return	3,600	5L/1.32gal	76	215
7.3	5	PDSML7305	10,000	700	10,000	600	200	Manual / Solenoid Optional	Advance/ Hold/ Return	3,600	5L/1.32gal	76	215
7.3	10	PDSL7310	10,000	700	10,000	600	200	Manual / Solenoid Optional	Advance/ Hold/ Return	3,600	5L/1.32gal	76	249
7.3	10	PDSML7310	10,000	700	10,000	600	200	Manual / Solenoid Optional	Advance/ Hold/ Return	3,600	5L/1.32gal	76	249
7.3	15	PDSL7315	10,000	700	10,000	600	200	Manual / Solenoid Optional	Advance/ Hold/ Return	3,600	5L/1.32gal	76	283
7.3	15	PDSML7315	10,000	700	10,000	600	200	Manual / Solenoid Optional	Advance/ Hold/ Return	3,600	5L/1.32gal	76	283

Model Number	Dimensions (in)						
	A	B	C	D	E	F	G
PDSL7305	26.57	21.5	20.94	10.47	11.50	12.43	15.47
PDSML7305	26.57	21.5	20.94	10.47	11.50	12.43	18.74
PDSL7310	28.25	23.37	27	13.5	12	12.93	17.375
PDSML7310	28.25	23.37	27	13.5	12	12.93	19.765
PDSL7315	28.25	26	27	13.5	12	12.93	17.375
PDSML7315	28.25	26	27	13.5	12	12.93	19.765

MAINTENANCE KITS

- Sets are portable for easy use in the plant or on the job site
- Custom fitted, rugged blow molded storage case
- 10 ton set has wheel for easy movement
- Designed for applications of pushing, spreading, pressing, and more



J50040



J50200

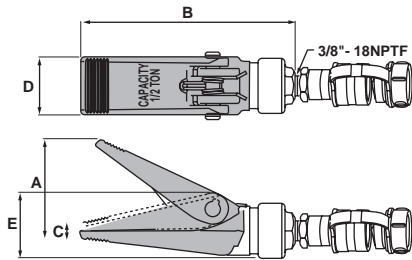
J50100

Capacity (tons)	Pump Capacity (psi)	Model Number	Ram			Number of attachments	Weight (lbs)
			Collapsed Height (in ²)	Extended Height (in ²)	Effective Area (in ²)		
4	8,000	J50040	11.00	15.75	0.998	14	46.0
10	10,000	J50100	13.63	19.75	2.411	13	81.0
20	10,000	J50200	11.77	16.93	5.14	16	206.0

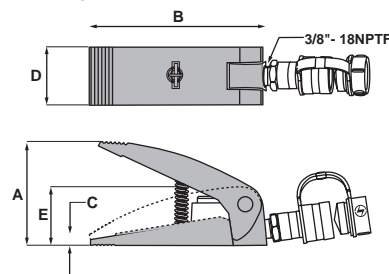
*When extension tubes and/or offset attachments are used, the capacity is reduced.

SPREADERS

- Designed to work in confined working space
- Ideal for wedging, prying, and opening
- High strength forged steel
- Spring return for easy operation



SR05



SR10

Cylinder Capacity (tons)	Model Number	Cylinder Effective Area (in ²)	Oil Capacity (in ³)	Dimensions (in)					Weight (lbs)
				A	B	C	D	E	
0.5	SR05	1.22	0.58	3.54	7.57	0.51	2.05	2.36	4.8
1	SR10	1.09	0.86	3.90	6.57	0.47	2.17	2.20	5.1

BUILT TO LAST



BVA

HYDRAULICS

25/55/100 TON

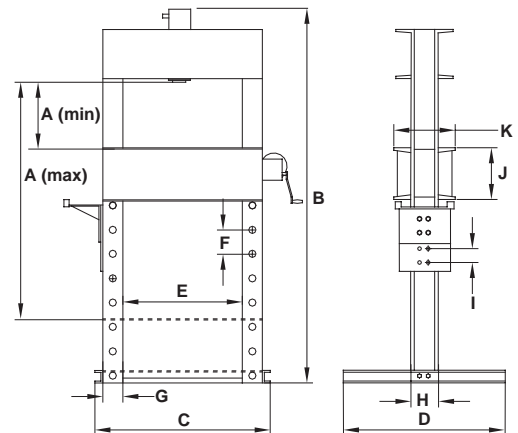
SHOP PRESSES

- Heavy steel welded construction
- Multi-position bed for work height adjustment
- Ideal for the removal or installation of gears, universal joints, pulleys, wrist pins, and other press jobs
- Excellent for bending, bonding, or straightening applications



Capacity (tons)	Model Number	Pump Type	Pump Model	Cylinder Model	Bed Position	Cylinder Stroke (in)	Product Size (H X L X W)	Working Space (A Min. / A Max.) (in)
25	IMP2506	Manual	P1000	H2506	8	6	71"X 48"X 28"	4½" ~ 47¼"
	IAP2506	Air	PA1500	H2506	8	6	71"X 48"X 28"	4½" ~ 47¼"
55	IAP5506	Air	PA1500	H5506	9	6	79"X 56" X 30"	14" ~ 55½"
	IEP5506	Electric	PEW0501T	H5506	9	6	79"X 56" X 30"	14" ~ 55½"
	IMP5506	Manual	P2301	H5506	9	6	79"X 56" X 30"	14" ~ 55½"
	IAP5513	Air	PA3801	H5513	9	13	79"X 56" X 30"	14" ~ 55½"
	IEP5513	Electric	PEW0501T	H5513	9	13	79"X 56" X 30"	14" ~ 55½"
	IEPD5513	Electric	PEWM1002T	HD5513	9	13	79"X 56" X 30"	14" ~ 55½"
100	IEP10010	Electric	PEW1002T	H10010	8	10	89"X 63"X 30"	11¼" ~ 51"

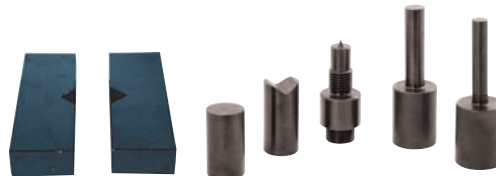
Model Number	Dimensions (in)											Weight (lbs)	
	A (Min.)	A (Max.)	B	C	D	E	F	G	H	I	J		K
IMP2506	4.5	47.25	71	48	28	30	6	3	6.5	3	6	11.5	560
IAP2506	4.5	47.25	71	48	28	30	6	3	6.5	3	6	11.5	560
IAP5506	14.0	55.5	79	56	30	35.4	6	4	9	3	10	14.8	760
IEP5506	14.0	55.5	79	56	30	35.4	6	4	9	3	10	14.8	760
IMP5506	14.0	55.5	79	56	30	35.4	6	4	9	3	10	14.8	760
IAP5513	14.0	55.5	79	56	30	35.4	6	4	9	3	10	14.8	760
IEP5513	14.0	55.5	79	56	30	35.4	6	4	9	3	10	14.8	760
IEPD5513	14.0	55.5	79	56	30	35.4	6	4	9	3	10	14.8	770
IEP10010	11.3	51.0	89	63	30	35.5	8	-	10	-	12	16.0	1,550



25 TON SHOP PRESS ACCESSORIES

CS25 includes:

- 300-002-229 • Ram forcing cap
- 300-002-807 • V push adapter
- 300-002-953 • Threaded adapter
- 300-002-510 • ¾" push adapter
- 300-002-511 • 1" push adapter
- AP25 • Arbor plates (in pairs)



55 TON SHOP PRESS ACCESSORIES

CS55 includes:

- 400-002-230 • Ram forcing cap
- 400-002-368 • Threaded adapter
- 400-002-757 • 1½" push adapter
- 400-002-756 • 1¼" push adapter
- 400-002-808 • V push adapter
- AP55 • Arbor plates (in pairs)



AP100 • Arbor plates (in pairs)

INDUSTRIAL HYDRAULIC EQUIPMENT

MANUAL BOTTLE JACKS

- Hydraulic system is protected from internal damage by a patented by-pass mechanism, U.S. Patent No.5,946,912
- Machined and polished cylinders with die-cut threads provide non-abrasive leak-free, durable performance
- Fabricated from hard-cast steel with heat-treated critical stress areas
- Unique cross-type forged release valve assures positive load control
- A wide, rugged base provides stability and strength



Capacity (ton)	Model Number	Min. Height (in)	Max. Height (in)	Hydraulic Lifting (in)	Extension Screw (in)	Base Size Length (in)	Base Size Width (in)	Weight (lbs)
12	J10125	9½	18½	6	3½	5¼	5½	17.5
	J10129	6	10½	3	1½	5¼	5½	14.9
20	J10205	9½	18½	6	3½	6¼	5½	27.5
	J10209	6½	11¼	3½	1½	6¼	5½	21.8
30	J10300	11	18	7	-	8½	6½	53.5
50	J10500	12	19	7	-	10½	7-¾	96.4



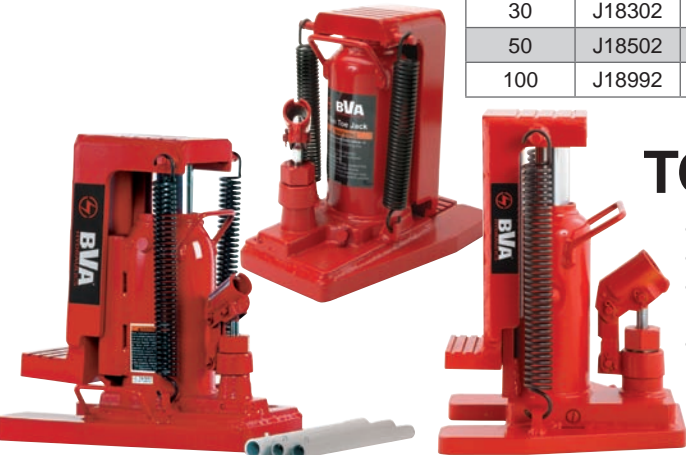
AIR/MANUAL BOTTLE JACKS

- Effortless air operation will greatly reduce operator fatigue and speed up the efficiency of industrial work
- A compact yet powerful air turbo motor U.S. Patent No. 5,341,723 is equipped to raise the load to the desired height efficiently, effortlessly, and safely
- Hydraulic system is protected from internal damage by a patented by-pass mechanism, U.S. Patent No.5,946,912
- Versatile "Quick Connector" design provides for easy removal of air hose from air motor allowing compact storage or remote operation
- All air bottle jacks have chrome plated rams

Capacity (ton)	Model Number	Min. Height (in)	Max. Height (in)	Hydraulic Lifting (in)	Extension Screw (in)	Base Size Length (in)	Base Size Width (in)	Input Air Pressure Range (psi)	Weight (lbs)
12	J18122	9½	18½	5½	3½	7½	6½	110-175	28.6
20	J18202	9¾	18¾	5½	3½	8¼	7¼	110-175	37.4
30	J18302	11	18	7	-	10¼	8¼	110-175	60.5
50	J18502	12	19	7	-	10½	7-¾	110-175	128.5
100	J18992	12	18½	6½	-	12½	9-¾	110-175	205.9

TOE JACKS

- Heat treated and chrome plated medium-carbon steel cylinder
- Chrome plated ram promotes longer seal life and optimum performance
- U.S. Patented by-pass device protects hydraulic system from over traveling damage
- Hydraulic system is protected from internal damage by a patented by-pass mechanism, U.S. Patent No.5,946,912



Capacity (tons)	Model Number	Toe Saddle		Head Saddle		Hydraulic Lifting (in)	Base Size (L x W) (in)	Weight (lbs)
		Min. Height (in)	Max. Height (in)	Min. Height (in)	Max. Height (in)			
3	J13060	0.62	5.75	9.0	14.12	5.12	6.00 x 4.37	36.1
6	J13120	0.88	6.00	10.50	15.63	5.13	11.00 x 7.50	55.0
10	J13200	1.13	6.25	11.00	16.13	5.13	11.63 x 9.00	84.0
15	J13300	1.13	6.63	13.13	18.63	5.50	12.50 x 10.75	116.6

BUILT TO LAST



BVA
HYDRAULICS

MINI JACKS

- Low profile mini jack
- Pocket size and lightweight
- Convenient for storage



Capacity (tons)	Model Number	Minimum Height (in)	Maximum Height (in)	Hydraulic Lifting (in)	Base Size (L x W) (in)	Weight (lbs)
5	J11050	2.37	3.13	0.76	4.13 x 4.00	4.6
5	J11055	3.37	4.88	1.51	4.13 x 4.00	5.3
10	J11100	4.75	6.25	1.63	4.88 x 4.38	12.5
20	J11200	5.13	6.75	1.63	5.38 x 4.75	16.7



MECHANICAL JACKS

- Mechanically hold loads without slip or creep
- Ratchet design for ease of operation
- High strength steel ram
- Convenient carry handle



Capacity (tons)	Model Number	Minimum Height (in)	Maximum Height (in)	Handle Length (in)	Base Size Diameter (in ²)	Weight (lbs)
5	MJ0505	9.45	14.57	15.69	3.86	12.8
10	MJ1006	11.02	16.93	16.88	4.33	19.45

BEAD BREAKER

- 5" opening
- Works on single rimmed wheels
- Constructed from rugged steel
- Works with any 10,000 PSI pump
- Hydraulic pressure does all the unseating
- Light weight and portable



J22910

J22953 Bead Breaker Combo

Includes:

- J22910 Bead breaker
- PA1500 Metal air pump
- CS3838C Hydraulic hose
- CH38 Hydraulic coupler set



Capacity	Model	Maximum Ram Size	Hydraulic Oil Capacity	Product Size	Weight (lbs)
5 Ton	J22910	26"	250 mL	17½" X 5½" X 12"	36

INDUSTRIAL HYDRAULIC EQUIPMENT

SADDLES



SD Series



HTD10



SDT10

Saddle Type	Model Number	For use with Cylinder Capacity (ton)
Grooved	SD05	5
	SD10	10
	SD15	15
	SD25	25
Threaded	HTD10	10

Saddle Type	Model Number	For use with Cylinder Capacity (ton)
Tilt	SDT05	5
	SDT10	10
	SDT15	15
	SDT25	25
	SDT55	55

CLEVIS EYES



CEP Series



CED Series



CEB Series



CP10

Clevis Type	For use with Cylinder Capacity (tons)	Model Number
Plunger	5	CEP05
	10	CEP10
	15	CEP15
	25	CEP25

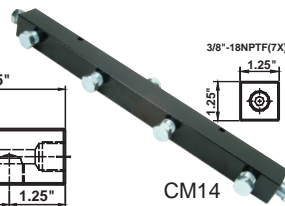
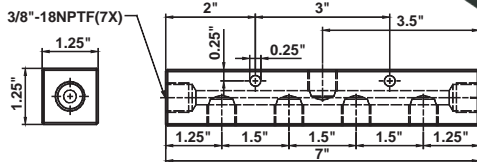
Clevis Type	For use with Cylinder Capacity (tons)	Model Number
Base	5	CEB05
	10	CEB10
	15	CEB15
	25	CEB25
Plunger & Base	9	CED09
	16	CED16
	HP1006 only	CP10*

* 2-pc set with an adapter

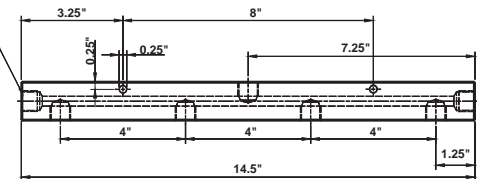
MANIFOLDS



CM7



CM14



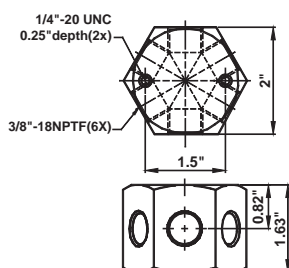
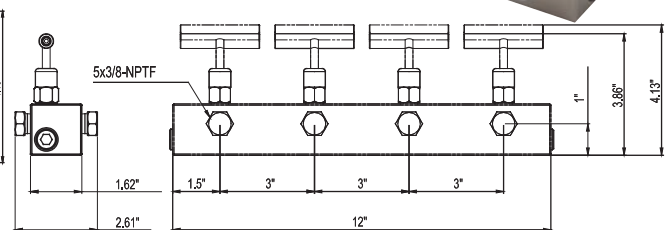
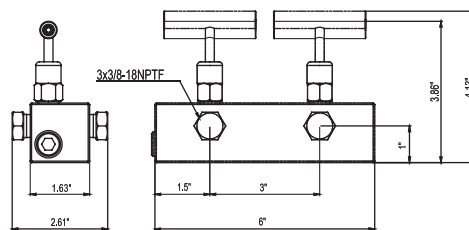
MFC2



MFC4



CMH6



Manifold Type	Model Number	Number of Ports	Port Size	Mounting Hole
6-Port Hexagon Manifold	CMH6	6	3/8"-18NPTF	1/4"-20UNC
7" Long Manifold	CM7	7	3/8"-18NPTF	1/4"-20UNC
14" Long Manifold	CM14	7	3/8"-18NPTF	1/4"-20UNC
Manifold with Two Needle Valves	MFC2	3	3/8"-18NPTF	4.4
Manifold with Four Needle Valves	MFC4	5	3/8"-18NPTF	10.1

BUILT TO LAST

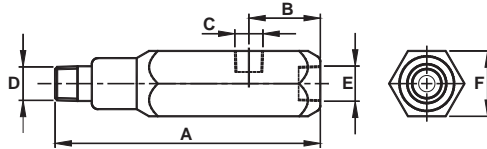


HYDRAULIC PRESSURE GAUGES



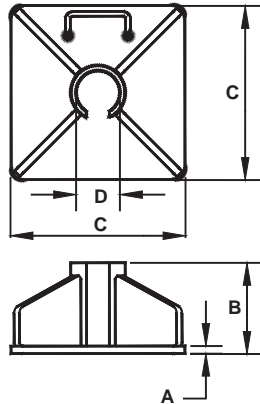
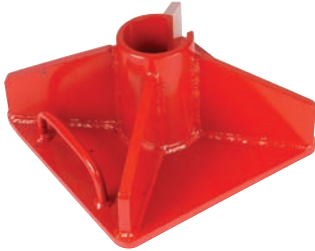
Gauge Type	Model Number	Face Diameter (in)	Thread (in)	Pressure Range		Graduation			
				(psi)	(bar)	Major Graduation (psi)	Minor Graduation (psi)	Major Graduation (bar)	Minor Graduation (bar)
Dry	GD2514	2.50	1/4"-18NPTF	0-10,000	0-700	1,000	200	100	10
	GD4014	4.00				2,000	100		
Wet	GW2514	2.50				1,000	200		
	GW4014	4.00				2,000	100		

GAUGE ADAPTER



Model Number	Dimensions (in)					
	A	B	C	D	E	F
CF3814	5.12	1.38	1/4"-18NPTF	3/8"-18NPTF	3/8"-18NPTF	1.25

BASES



For use with Cylinder Capacity (tons)	Model Number	Dimensions (in)			
		A	B	C	D
5	CB05	0.32	4.65	7.87	1.54
10	CB10	0.39	4.72	9.06	2.28
15	CB15	0.47	4.80	10.00	2.76
25	CB25	0.63	4.96	11.02	3.41

HYDRAULIC OIL

- Recommended for all BVA cylinders and pumps



Volume (gal)	Model Number	Viscosity Index (min)	Viscosity @ 100°F (S.U.S.)	Viscosity @ 210°F (S.U.S.)	ASTM Grade	Flash Point (°F)	Pour Point (°F)	API Gravity
1	F01	144	234	53	215	356	-49	30.8

PRESSURE SWITCH



- Automatically shuts off electric pump when predetermined system pressure is reached

CVS1

Model Number	Adjustable Pressure Range	Electrical Rating	Port Size	Weight (lbs)
CVS1	1,000~10,150 psi	15 amp @ 250V max	1/4"-18NPTF	1.32

PUMP MOUNTED MANIFOLD BLOCK

- Converts BVA pumps with pump mounted valves for use with remote mounted valves
- Comes with 4 pieces mounting screws



PW34M

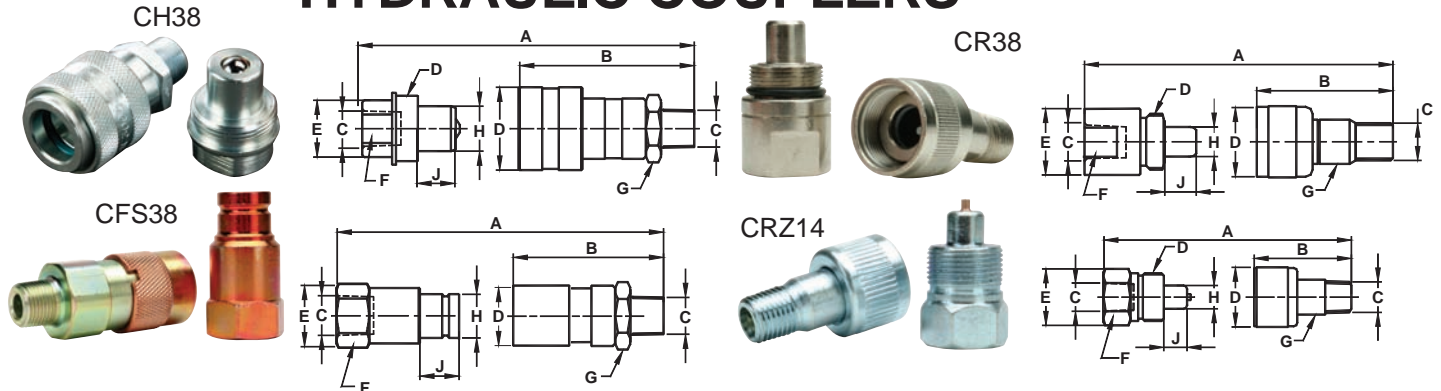
INDUSTRIAL HYDRAULIC EQUIPMENT

HYDRAULIC HOSE



Hose I.D. (in)	Model Number		Hose End Fittings	Operating Pressure (psi)	Hose Length (ft)	Hose Oil Capacity (in ³)
	Rubber	Thermo-Plastic				
1/4"	CS1414	-	1/4"-18NPTF	10,000	6	3.53
	CS3814	CT3814	3/8"-18NPTF	10,000	6	3.53
	CS3814A	-	3/8"-18NPTF	10,000	2	1.18
	CS3814B	CT3814B	3/8"-18NPTF	10,000	3	1.77
	CS3814C	CT3814C	3/8"-18NPTF	10,000	10	5.89
	CS3814D	CT3814D	3/8"-18NPTF	10,000	20	11.78
	-	CT3814E	3/8"-18NPTF	10,000	30	17.76
3/8"	CS1438	-	1/4"-18NPTF	10,000	6	8.08
	CS3838	CT3838	3/8"-18NPTF	10,000	6	7.95
	CS3838C	CT3838C	3/8"-18NPTF	10,000	10	13.25
	CS3838D	CT3838D	3/8"-18NPTF	10,000	20	26.51
	-	CT3838E	3/8"-18NPTF	10,000	30	39.76
	CS3838F	-	3/8"-18NPTF	10,000	50	66.25

HYDRAULIC COUPLERS



Coupler Type	Model Number			Dimensions (in)								
	Complete Set	Male Half	Female Half	A*	B	C	D	E	F	G	H	J
High-Flow Coupler	CH38**	CH38M	CH38F	3.35	2.84	3/8"-18NPTF	1-3/16"-16	1.10	0.94	1.00	0.75	0.63
Flush-Face Coupler	CFS38	CFS38M	CFS38F	4.36	2.85	3/8"-18NPTF	1.19	1.21	1.06	1.12	0.79	0.63
Regular-Flow Coupler	CR38**	CR38M	CR38F	3.15	2.20	3/8"-18NPTF	15/16"-20	1.04	0.94	0.73	0.50	0.53
Zinc Coupler	CRZ14	CRZ14M	CRZ14F	2.42	1.67	1/4"-18NPTF	13/16"-20	0.95	0.83	0.58	0.39	0.35

* Value A is total length when male and female couplers are connected. **Plastic Dust Cover, CDC38, sold separately

HOSE SETS



Hose I.D. (in)	Hose Model	Hose Length (ft)	Coupler			
			CH38M	CR38M	CRZ14M	
1/4"	Rubber	CS3814B	3	CS3814BM	CS3814BRM	-
		CS3814	6	CS3814M	-	CS3814QM
		CS3814C	10	CS3814CM	CS3814CRM	-
		CS3814D	20	CS3814DM	CR3814CRM	-
3/8"	Rubber	CS3838	6	CS3838M	-	-
		CS3838C	10	CS3838CM	-	-
		CS3838D	20	CS3838DM	-	-
		CS3838F	50	CS3838FM	-	-
1/4"	Thermo Plastic	CT3814	6	CT3814M	-	-
		CT3814C	10	CT3814CM	-	-

PLASTIC DUST COVER



- Works with CH38 and CR38 coupler
- Helps keep hydraulic oil clean for long equipment life.

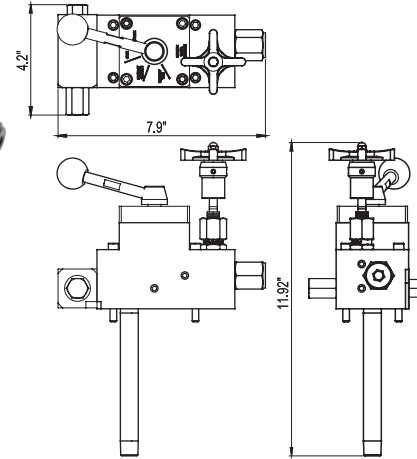
CDC38



BVA

HYDRAULICS

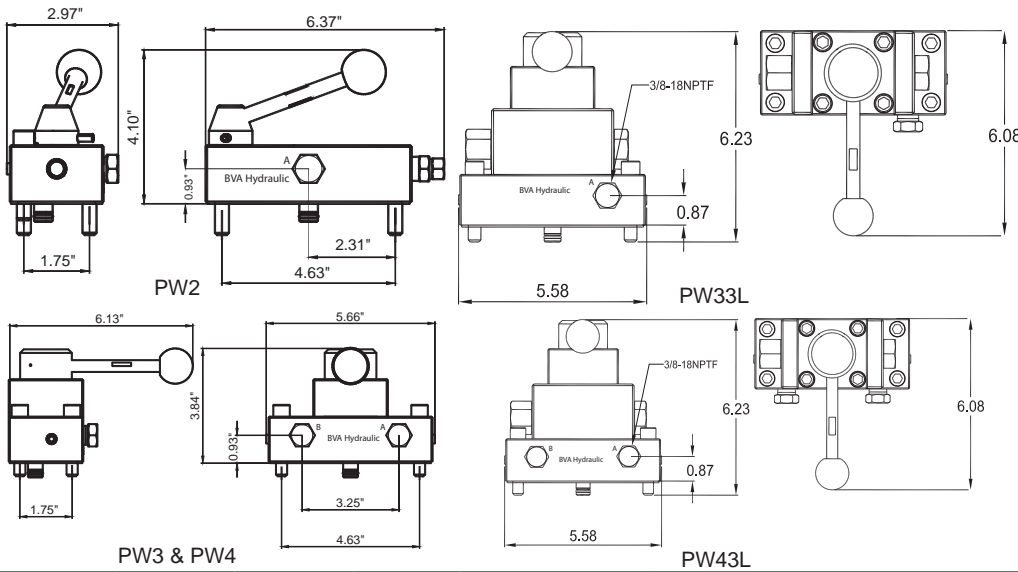
PRESSURE COMPENSATING FLOW CONTROL VALVE



- Primarily used in material compression and tensile testing such as soil, rock, concrete, asphalt, and others

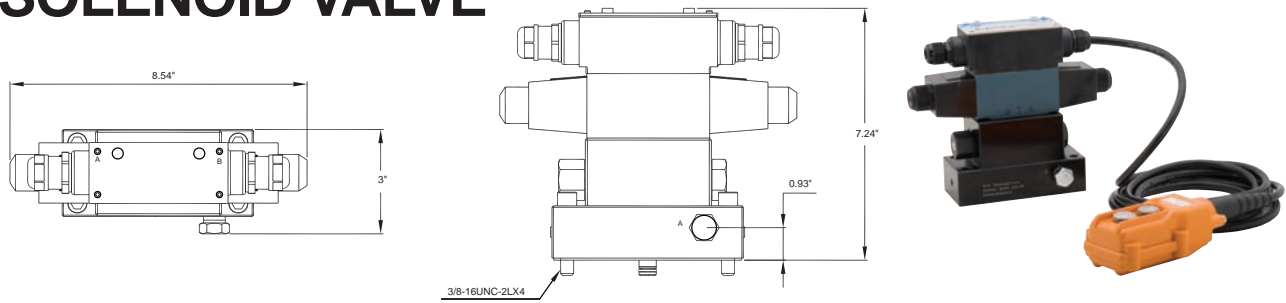
Model Number	Valve Operation	Valve Type	Use with Cylinder	Hydraulic Symbol	Weight (lbs)
PW34M	Manual	3-way 4-position, Tandem Center	Single Acting		8.71

PUMP MOUNTED VALVES



Valve Operation	Valve Type	Use with Cylinder	Model Number	Hydraulic Symbol	Schematic Flow path			Weight (lbs)
Manual	3-way, 2-position	Single Acting	PW2				-	4
	3-way, 3-position, Tandem Center	Single Acting	PW3					4
	4-way, 3-position, Tandem Center	Double Acting	PW4					3
	3-way, 3-position, Tandem Center Locking	Single Acting	PW33L					5.95
	4-way, 3-position, Tandem Center, Locking	Double Acting	PW43L					5.95

SOLENOID VALVE

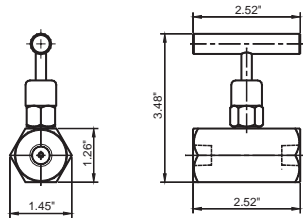


Use With Cylinder	Model Number	Valve Type	Valve Function	Hydraulic Symbol	Schematic Flow path			Weight (lbs)
Single Acting	PS33L	Solenoid 115VAC	Advance/ Hold/ Return					7.0
Double Acting	PS43L	Solenoid 115VAC	Advance/ Hold/ Return					7.0

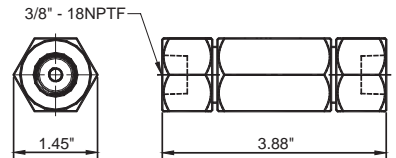
FLOW CONTROL VALVES



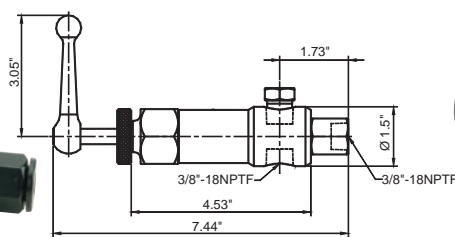
CVN1 & CVN3



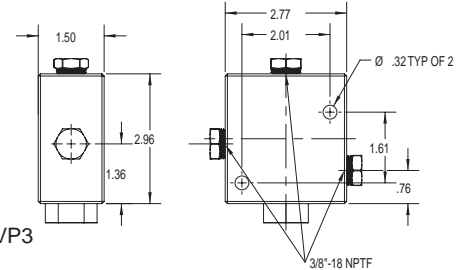
CVC3



CVR3



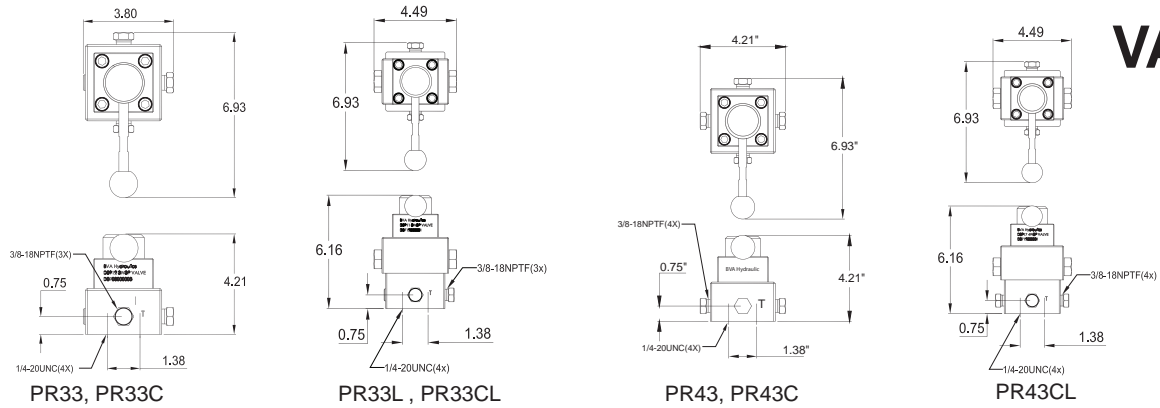
CVP3



Valve Type	Model Number	Ports	Application	Hydraulic Symbol
Needle Valve	CVN1	1/4"-18NPTF	Controls cylinder speed and acts as temporary shut-off valve for load holding	
	CVN3	3/8"-18NPTF		
Check Valve	CVC3	3/8"-18NPTF	Allows flow in one direction only	
Pilot Operated Check Valve	CVP3	3/8"-18NPTF	Mounted in line to a cylinder and will hold pressure in the cylinder in the event of pressure loss in the system. Most often used on double-acting cylinders with pilot port receiving pressure from a tee off of the cylinder retracting line. Pilot pressure ratio 15% or 6.5:1	
Pressure Relief Valve	CVR3	3/8"-18NPTF	Controls pressure developed by the pump in hydraulic loop. By-pass occurs when pre-set pressure is reached. Turns clockwise to increase pressure, counter clockwise to decrease	



REMOTE MOUNTED DIRECTIONAL CONTROL VALVES



Valve Operation	Valve Type	Use With Cylinder	Model Number	Hydraulic Symbol	Schematic Flow path			Weight (lbs)
Manual	3-way, 3 position, Tandem center	Single Acting	PR33					3.53
	3-way, 3 position, Closed center		PR33C					3.53
	3-way, 3 position, Tandem center, Locking		PR33L					5.73
	3-way, 3 position, Closed center, Locking		PR33CL					5.73
	4-Way, 3 position, Tandem center	Double Acting	PR43					3.53
	4-Way, 3 position, Tandem center, Locking		PR43L					5.73
	4-Way, 3 position, Closed center		PR43C					3.53
	4-way, 3 position, Tandem, Closed center, Locking		PR43CL					5.73



PR33


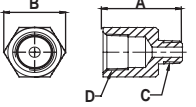

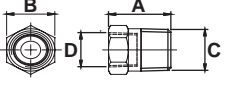

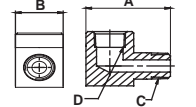

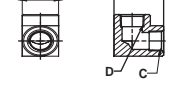

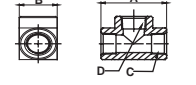

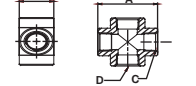

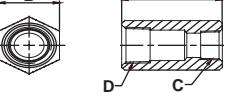

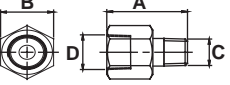

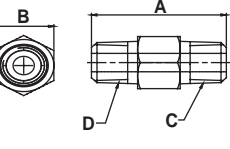


PR43C



PR43L

FITTINGS

Fitting Type	Model Number	Dimension					
		A (in)	B (in)	C	D		
Adaptor							
	Adaptor 1/2"-14 Female 3/8"-18 Male - NPTF	FT108	1.69	1.14	Female 1/2"-14NPTF	Male 3/8"-18NPTF	
	Adaptor 1/2"-14 Female 1/4"-18 Male - NPTF	FT118	1.69	1.14	Male 1/4"-18NPTF	Female 1/2"-14NPTF	
Bushings							
	Bushing	CB1438	0.87	0.67	Male 3/8"-18NPTF	Female 1/4"-18NPTF	
	Bushing	CB1412	1.10	0.87	Male 1/2"-18NPTF	Female 1/4"-18NPTF	
Connectors							
	2 way 90° Connector Street Elbow, 3/8" to 3/8"-NPTF	FT101	1.81	1.02	Female 3/8"-18NPTF	Male 3/8"-18NPTF	
	2 way 90° Connector Elbow, 3/8" to 3/8" - NPTF	FT107	1.40	1.02	Female 3/8"-18NPTF	Female 3/8"-18NPTF	
	3 Way Connector 3/8" to 3/8" - NPTF	FT106	1.77	1.02	Female 3/8"-18NPTF	Female 3/8"-18NPTF	
	4 Way Connector Cross, 3/8" to 3/8" - NPTF	FT105	1.77	1.02	Female 3/8"-18NPTF	Female 3/8"-18NPTF	
Couplings							
	Coupling Reducing Connector, 3/8" to 1/4"-NPTF	FT102	1.18	1.02	Female 1/4"-18NPTF	Female 3/8"-18NPTF	
	Coupling Reducing Connector, 1/2" to 3/8" - NPTF	FT112	1.89	1.14	Female 1/2"-14NPTF	Female 3/8"-18NPTF	
	Coupling 3/8" to 3/8" - NPTF	FT103	1.18	1.02	Female 3/8"-18NPTF	Female 3/8"-18NPTF	
Fitting							
	Fitting	CA3814	1.38	0.91	Male 1/4"-18NPTF	Female 3/8"-18NPTF	
Male Connectors							
	Male Connector Hex Nipple, 1/4" to 1/4" - NPTF	FT104	1.50	0.67	Male 1/4"-18NPTF	Male 1/4"-18NPTF	
	Male Connector Hex Nipple, 3/8" to 3/8" - NPTF	FT114	1.50	0.75	Male 3/8"-18NPTF	Male 3/8"-18NPTF	
	Male Connector Hex Nipple, 1/4" to 3/8" - NPTF	FT124	1.45	0.75	Male 1/4"-18NPTF	Male 3/8"-14NPTF	



BVA
HYDRAULICS

BVA CROSS REFERENCE CHART

Ton	BVA	ENERPAC	Power Team	Simplex	Ton	BVA	ENERPAC	Power Team	Simplex	Ton	BVA	ENERPAC	Power Team	Simplex
Single Acting Cylinders					Threaded Cylinders					Hollow Hole Cylinders				
5	H0500	RC-50	-	R50	10	HT1006	-	C106CBT	-	12	HC1201T	RCH-120	RH120	RC120
	H0501	RC-51	C51C	R51		HT1010	-	C1010CBT	-		HC1202T	RCH-121	RH121	RC121
	H0503	RC-53	C53C	R53	Aluminum Cylinders						HC1202XT	RCH-1211	RH121T	RC1211
	H0505	RC-55	C55C	R55	30	HU3002	RAC-302	RA302	-		HC1203XT	RCH-123	RH123	RC123
	H0507	RC-57	C57C	R57		HU3004	RAC-304	RA304	-		20	HC2002T	RCH-202	RH202
	H0509	RC-59	C59C	R59	HU3006	RAC-306	RA306	RAS306B	HC2006T			RCH-206	RH206	RC206
10	H1001	RC-101	C101C	R101	50	HU5002	RAC-502	RA552	RAS502A	30	HC3002T	RCH-302	RH302	RC302
	H1002	RC-102	C102C	R102		HU5004	RAC-504	RA554	-		HC3006T	RCH-306	RH306	RC306
	H1004	RC-104	C104C	R104		HU5006	RAC-506	RA556	RAS508A	60	HC6003T	RCH-603	RH603	RC603
	H1006	RC-106	C106C	R106		HU5010	RAC-5010	RA5510	-		HC6006T	RCH-606	RH606	RC606
	H1008	RC-108	C108C	R108	75	HU7504	-	-	-	100	HC10003T	RCH-1003	RH1003	RC1003
	H1010	RC-1010	C1010C	R1010		HU7506	-	-	-		Lock Nut Cylinders			
	H1012	RC-1012	C1012C	R1012	100	HU10002	RAC-1002	RA1002	RAS1002A	55	HLN5502	CLL-502	R552L	RLN502
	H1014	RC-1014	C1014C	R1014		HU10006	RAC-1006	RA1006	RAS1008A		HLN5504	CLL-504	-	-
H1501	RC-151	C151C	-	HU10010		RAC-10010	-	-	HLN5506		CLL-506	R556L	RLN506	
15	H1502	RC-152	C152C	R152	Low Profile Cylinders						HLN5508	CLL-508	-	-
	H1504	RC-154	C154C	R154	10	HL1001	RCS-101	RSS101	RLS101		HLN5510	CLL-5010	R5510L	RLN5010
	H1506	RC-156	C156C	R156	20	HL2002	RCS-201	RSS202	RLS201		100	HLN10002	CLL-1002	R1002L
	H1508	RC-158	C158C	-	30	HL3002	RCS-302	RSS302	RLS302	HLN10004		CLL-1004	-	-
	H1510	RC-1510	C1510C	R1510	50	HL5002	RCS-502	RSS502	RLS502	HLN10006	CLL-1006	R1006L	RLN1006	
	H1512	RC-1512	C1512C	-	100	HL10002	RCS-1002	RSS1002	RLS1002	HLN10008	CLL-1008	-	-	
	H1514	RC-1514	C1514C	R1514	Flat Body Cylinders					HLN10010	CLL-10010	R10010L	RLN10010	
	25	H2501	RC-251	C251C	R251	5	HF0503	RSM-50	RLS50	-	HLN10012	CLL-10012	-	-
H2502		RC-252	C252C	R252	HF0503B kit		-	-	-	Double Acting Cylinders				
H2504		RC-254	C254C	R254	10	HF1005	RSM-100	RLS100	RFS10	10	HD1010	RR-1010	RD1010	RDA1010
H2506		RC-256	C256C	R256		HF1005B kit	-	-	-		HD1012	RR-1012	-	-
H2508		RC-258	C258C	R258	20	HF2005	RSM-200	RLS200	RFS20	30	HD3008	RR-308	-	RDA308
H2510		RC-2510	C2510C	R2510		HF2005B kit	-	-	-		HD3014	RR-3014	RD2514	RDA3014
H2512		RC-2512	C2512C	R2512	30	HF3005	RSM-300	RLS300	RFS30	55	HD5506	RR-506	RD556	RDA556
H2514		RC-2514	C2514C	R2514		HF3005B kit	-	-	-		HD5513	RR-5013	RD5513	RDA5512
30	H3008	RC-308	-	R308	50	HF5006	RSM-500	RLS500S	RFS50	HD5520	RR-5020	RD5518	RDA5523	
	55	H5502	RC-502	C552C	R552	75	HF7506	RSM-750	RLS750S	RFS75	75	HD7506	RR-756	-
H5504		RC-504	C554C	R554	100	HF10006	RSM-1000	RLS1000S	RFS100	HD7513		RR-7513	-	-
H5506		RC-506	C556C	R556	150	HF15006	RSM-1500	RLS1500S	RFS150	100	HD10006	RR-1006	RD1006	RDA1006
H5513		RC-5013	C5513C	R5513		Pull Cylinders					HD10013	RR-10013	RD10013	RDA10012
75	H7506	RC-756	C756C	R756	2	HP0205	BRC-25	RP25	RP25					
	H7513	RC-7513	C7513C	R7513	5	HP0505	BRC-46	RP55	RP55					
100	H10006	RC-1006	C1006C	R1006	10	HP1006	BRC-106	-	-					
	H10010	RC-10010	C10010C	R10010										

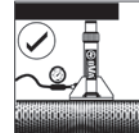
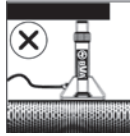
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 Simplex® is registered to Templeton, Kenly & Co., Inc.

SAFETY INSTRUCTIONS

SAFETY FIRST!

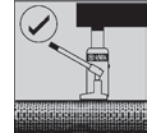
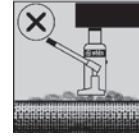
- Study, understand, and follow all instructions before operating this device.
- Do not exceed rated capacity. Use only on hard, level surfaces.
- Immediately after lifting, support the load with appropriate means.
- Failure to heed these markings may result in personal injury and/or property damage

General

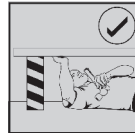


▲ Do not override the factory setting of relief valves. Always use a gauge to check system pressure.

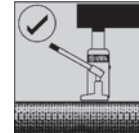
Jacks



▲ Provide a level and solid support for the entire jack base area.



▲ Never place any part of your body under the load. Ensure the load is on a solid support before venturing under.

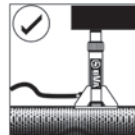
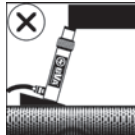


▲ The entire jack saddle must be in contact with load. Movement of the load must be in the same direction as jack plunger.

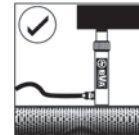
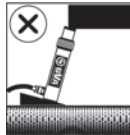


▲ Remove the jack handle when it is not being used.

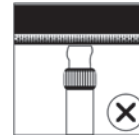
Cylinders



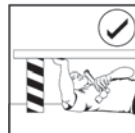
▲ Provide a solid support for the entire cylinder base area. Use cylinder base attachment for more stability.



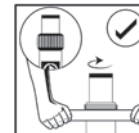
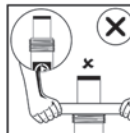
▲ The entire cylinder saddle must be in contact with the load. Movement of the cylinder must be parallel with the movement of the load.



▲ Do not use cylinder without saddle. This will cause plunger to "mushroom". Saddles distribute load evenly on the plunger.



▲ As with jacks, never place any part of your body under the load. Load must be on cribbing before venturing under.

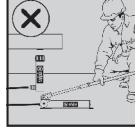


▲ Always protect cylinder threads for use with attachments.



▲ Keep hydraulic equipment away from open fire and temperatures above 150°F (65°C).

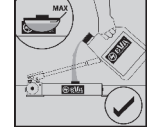
Pumps



▲ Do not use handle extender. Hand pumps should be easy to operate when used correctly.



▲ Close release valve finger tight. Using force will damage the valve.

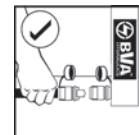
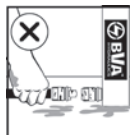


▲ Fill pump only to recommended level. Fill only when connected cylinder is fully retracted.

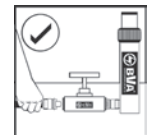
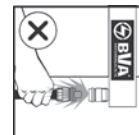
Hoses and Couplers



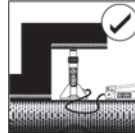
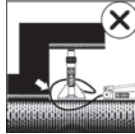
▲ Use only genuine BVA hydraulic oil. The wrong fluid can destroy your seals and pump and will render your warranty null and void.



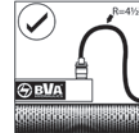
▲ Clean both coupler parts before connecting. Use dust caps when coupler parts are not connected.



▲ Detach cylinder only when fully retracted or use shut-off valves or safety valves to lock-in cylinder pressure.



▲ Keep hoses away from the areas beneath loads.



▲ Do not kink hoses bending radius should be at least 4 1/2". Do not drive over or drop heavy objects on the hoses.



▲ Don't lift hydraulic equipment by the hoses.

BVA	ENERPAC	Power Team	Simplex
Hand Pumps			
P601S	P-39	P12	P41
P1201S	P-391	P55	-
P350	P-142	-	-
P1000	P-392	P59	P60
P2001	P-80	P157	P140 P82
P2301	P-80	P159	P82
P4301	P-801	P157	P230
P8701	P-462	P460	P461
P2301M	P-84	P157D	P230D
P8701M	P-464	P460D	P461D
P240L	P-18	-	-
Air Pumps			
PA600	PA-133	PA9	-
PA600H	-	PA9H	-
PA1500	-	PA6	PA91
PA1500L	PARG-1102N	PA6R	PA91-R
PA1500M	-	PA6DM	PA91D
PA2000	PATG-1102N	-	-
PA3801	PATG-1105N	PA6	PA91-1 PA95-1
PA3801L	-	-	PA91-1R
PARD1701	-	PA172	-
PARD1703	-	PA174	-

To view complete cross over list go to www.bvahydraulics.com

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Key to measurements	
Weight:	Other measurements:
1 pound (lb.) = 0.4536 kg	1 in = 25.4 mm
1 kg = 2.205 lbs	1mm = 0.039 in
1 ton (short, US) = 2000 lbs	1 in² = 6.452 cm²
1 ton (metric) = 2205 lbs	1 cm² = 0.155 in²
Volume:	Pressure:
1 in³ = 16.387 cm³	1 psi (lb/in²) = 0.69 bar
1 cm³ = 0.061 in³	1 bar = 14.5 psi
1 liter = 61.02 in³	1 kPa = 0.145 psi
1 gal (US, liquid) = 3.785 liter	Temperature:
	0°F = (0°C x 1.8) + 32
	0°C = (0°F - 32) ÷ 1.8

Cylinder Plunger Speed

$$\text{Formula } V = A / Q$$

$$\text{Cylinder Plunger Speed (sec/in)} = \frac{\text{Cylinder Effective Area (in}^2\text{)}}{\text{Oil Output Flow Rate (in}^3\text{/min)}} \times \frac{60 \text{ (sec)}}{1 \text{ (min)}}$$

Force

$$\text{Formula } F = P \times A$$

$$\text{Force (lbs)} = \text{Hydraulic Working Pressure (lb/in}^2\text{)} \times \text{Cylinder Effective Area (in}^2\text{)}$$

Cylinder Oil Capacity

$$\text{Oil Capacity (in}^3\text{)} = \text{Cylinder Effective Area (in}^2\text{)} \times \text{Cylinder Stroke (in)}$$

Cylinder Effective Area

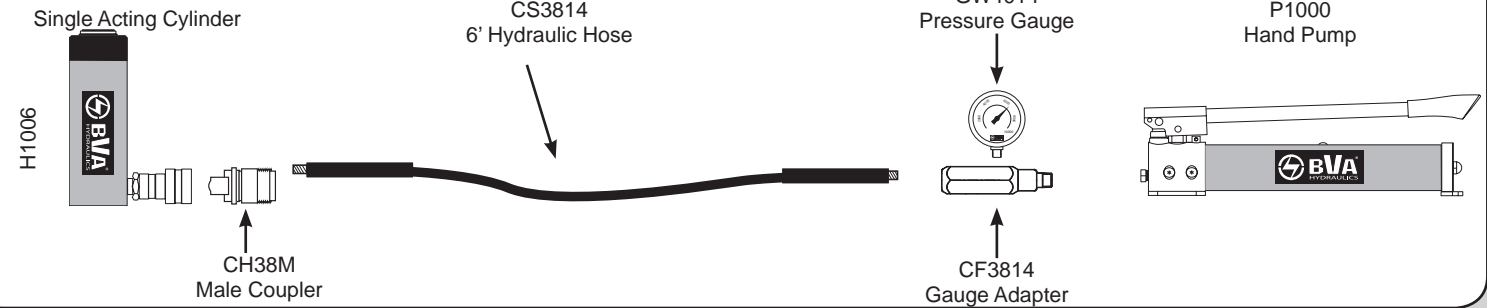
$$\text{Cylinder Effective Area} = \frac{\pi}{4} \times (\text{Cylinder Bore Diameter})^2$$

where, $\pi = 3.14159$

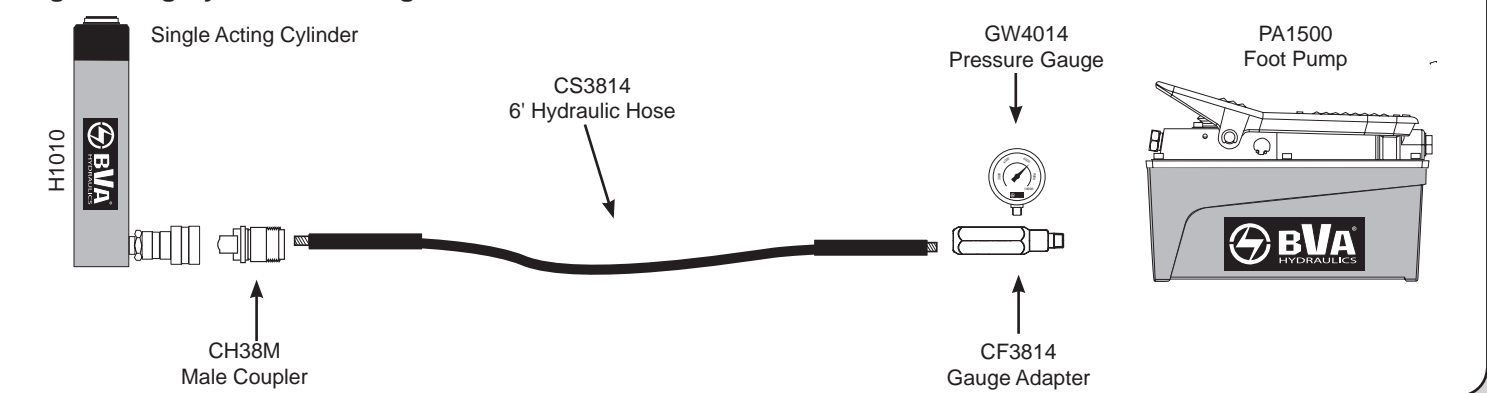


BASIC SYSTEM SET-UPS

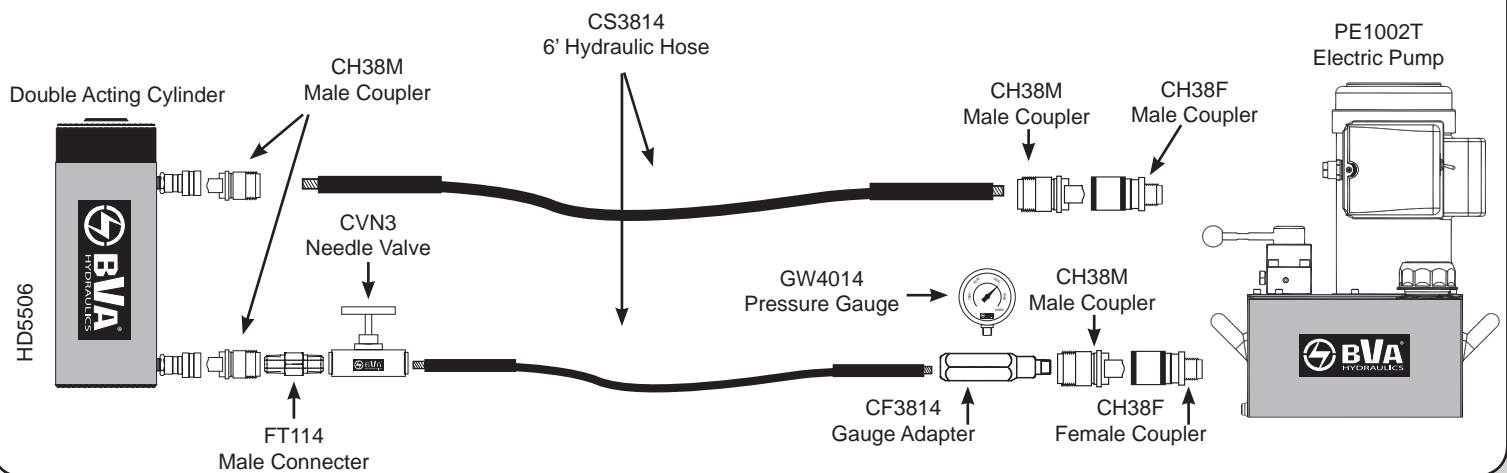
Single Push Application



Single Acting Cylinder with longer strokes



Double Acting Cylinder Set-up



BVA Lifetime Warranty

BVA products are warranted to be free of defects in materials and workmanship. Any BVA product that does not conform to specification will be repaired or credited (at BVA's option) at BVA's expense for the life of the product. Simply contact BVA for disposition of this warranty.

This warranty does not cover ordinary wear and tear, abuse, misuse, alteration, or use of improper fluids or maintenance as determined by BVA and its authorized service dealers. All electric motors, gas engines, batteries and other parts or materials sold with or part of BVA products but that are separately warranted by another manufacturer are covered by that manufacturer's warranty and not the BVA Lifetime Warranty. **BVA shall not be liable for consequential or incidental damage or loss whatsoever.**

Repair Parts available

CONFIDENCE BUILT ON QUALITY

- **ISO 9001**

BVA products are manufactured through an International Quality Assurance System, ISO 9001 which involves consistent observation of administration, management, manufacturing, and production control. Under this system, the related operations are monitored on all aspects of the production of BVA products from the purchase order, the assembly line, to shipping the order from the distribution center.

BVA Products comply with the following industry standards

- **ASME B30.1**

The cylinders comply with load testing requirements and / or the safety factor for material yield strength, while still functioning properly and without oil leakage.
(Except HPD and HLN series)

- **ANSI B40.1**

Under ANSI standards, BVA pressure gauges meet criteria for grade A

- **SAE 100**

BVA hydraulic hoses comply with the Material Handling Institute's specification of minimum life cycles and minimum burst pressure rating.



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