

Product Price List

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Distributed By:

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QUALITY PRODUCT & INDUSTRY KNOWLEDGE



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Hydraulic Cylinders

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Features



- ▶ Slimline construction - available from 1.5" to 5.0" bore sizes.
- ▶ Dual ports for flexibility of installation.
- ▶ **Hallite** seals for long life and suitable for both single and double acting operation.
- ▶ Screwed S.G. cast iron gland and one-piece piston for long life.
- ▶ Gland has spanner slots and piston retained with nyloc nut for ease of service.
- ▶ Honed barrel with 0.25" wall thickness on all bore sizes gives structural strength.
- ▶ K1045 cast steel rod clevis secured to piston rod by grub screw with nylon insert and LOCTITE[®] 243™.
- ▶ One-piece K1045 cast steel base end cap allows easy modification for special mounts.
- ▶ K1045 Zinc plated clevis pins with lynch pin for added security.
- ▶ 5.0" bore standard with 1.25" clevis pins.

Order Code

Series	Bore & Stroke	Rod Dia.
HC	****	***

Examples:

HC1512 - 875 = HC Series - 1.5" Bore x 12" Stroke x 0.875" Rod

HC4024 - 175 = HC Series - 4.0" Bore x 24" Stroke x 1.75" Rod



1.5" Bore x 0.875" Rod			
Order Code	Stroke	Kg	List Each
HC1502-875	2"	3.6	\$356.00
HC1503-875	3"	3.9	\$361.00
HC1504-875	4"	4.1	\$366.00
HC1506-875	6"	4.6	\$371.00
HC1508-875	8"	5.1	\$376.00
HC1510-875	10"	5.7	\$390.00
HC1512-875	12"	6.2	\$413.00
HC1514-875	14"	6.7	\$448.00
HC1516-875	16"	7.2	\$450.00
HC1518-875	18"	7.7	\$469.00
HC1520-875	20"	8.3	\$483.00
HC1524-875	24"	9.3	\$522.00
HC1530-875	30"	10.9	\$579.00
HC1536-875	36"	12.4	\$632.00
HC1548-875	48"	15.5	\$747.00

2.0" Bore x 1.25" Rod			
Order Code	Stroke	Kg	List Each
HC2002-125	2"	7.3	\$346.00
HC2004-125	4"	8.1	\$348.00
HC2006-125	6"	8.9	\$350.00
HC2008-125	8"	9.7	\$352.00
HC2010-125	10"	10.5	\$374.00
HC2012-125	12"	11.3	\$396.00
HC2014-125	14"	12.1	\$416.00
HC2016-125	16"	12.9	\$436.00
HC2018-125	18"	13.7	\$451.00
HC2020-125	20"	14.5	\$483.00
HC2022-125	22"	15.3	\$498.00
HC2024-125	24"	16.1	\$511.00
HC2026-125	26"	16.9	\$578.00
HC2028-125	28"	17.7	\$585.00
HC2030-125	30"	18.5	\$588.00
HC2036-125	36"	20.7	\$632.00
HC2042-125	42"	23.1	\$761.00
HC2048-125	48"	25.5	\$772.00

2.5" Bore x 1.50" Rod			
Order Code	Stroke	Kg	List Each
HC2504-150	4"	10.3	\$358.00
HC2506-150	6"	11.3	\$360.00
HC2508-150	8"	12.4	\$365.00
HC2510-150	10"	13.5	\$379.00
HC2512-150	12"	14.5	\$399.00
HC2514-150	14"	15.5	\$418.00
HC2516-150	16"	16.5	\$437.00
HC2518-150	18"	17.5	\$456.00
HC2520-150	20"	18.5	\$486.00
HC2522-150	22"	19.5	\$511.00
HC2524-150	24"	20.5	\$515.00
HC2526-150	26"	21.5	\$582.00
HC2528-150	28"	22.5	\$586.00
HC2530-150	30"	23.5	\$591.00
HC2536-150	36"	26.5	\$634.00
HC2542-150	42"	29.5	\$774.00
HC2548-150	48"	32.5	\$776.00

3.0" Bore x 1.50" Rod			
Order Code	Stroke	Kg	List Each
HC3004-150	4"	12.5	\$414.00
HC3006-150	6"	13.7	\$416.00
HC3008-150	8"	14.9	\$420.00
HC3010-150	10"	16.0	\$440.00
HC3012-150	12"	17.2	\$467.00
HC3014-150	14"	18.4	\$532.00
HC3016-150	16"	19.5	\$534.00
HC3018-150	18"	20.7	\$536.00
HC3020-150	20"	21.9	\$604.00
HC3022-150	22"	23.1	\$605.00
HC3024-150	24"	24.2	\$607.00
HC3026-150	26"	25.4	\$669.00
HC3028-150	28"	26.6	\$673.00
HC3030-150	30"	27.7	\$675.00
HC3036-150	36"	31.2	\$741.00
HC3042-150	42"	34.8	\$883.00
HC3048-150	48"	38.3	\$885.00

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3.5" Bore x 1.75" Rod			
Order Code	Stroke	Kg	List Each
HC3504-175	4"	15.9	\$536.00
HC3506-175	6"	17.2	\$539.00
HC3508-175	8"	18.6	\$542.00
HC3510-175	10"	20.0	\$574.00
HC3512-175	12"	21.4	\$608.00
HC3514-175	14"	22.8	\$646.00
HC3516-175	16"	24.1	\$680.00
HC3518-175	18"	25.5	\$715.00
HC3520-175	20"	26.9	\$755.00
HC3524-175	24"	29.7	\$824.00
HC3530-175	30"	33.8	\$933.00
HC3536-175	36"	37.9	\$1,041.00
HC3542-175	42"	42.1	\$1,148.00
HC3548-175	48"	46.2	\$1,251.00

4.0" Bore x 1.75" Rod			
Order Code	Stroke	Kg	List Each
HC4004-175	4"	18.8	\$627.00
HC4006-175	6"	20.3	\$630.00
HC4008-175	8"	21.8	\$636.00
HC4010-175	10"	23.3	\$678.00
HC4012-175	12"	24.8	\$722.00
HC4016-175	16"	27.8	\$803.00
HC4018-175	18"	29.3	\$847.00
HC4020-175	20"	30.8	\$891.00
HC4024-175	24"	33.8	\$973.00
HC4030-175	30"	38.3	\$1,102.00
HC4036-175	36"	42.8	\$1,230.00
HC4042-175	42"	47.3	\$1,355.00
HC4048-175	48"	51.8	\$1,477.00

4.0" Bore x 2.00" Rod			
Order Code	Stroke	Kg	List Each
HC4012-200	12"	26.0	\$788.00
HC4016-200	16"	29.4	\$822.00
HC4018-200	18"	31.1	\$932.00
HC4020-200	20"	32.8	\$981.00
HC4024-200	24"	36.2	\$1,074.00
HC4030-200	30"	41.3	\$1,212.00
HC4036-200	36"	46.4	\$1,350.00
HC4042-200	42"	51.5	\$1,488.00
HC4048-200	48"	56.6	\$1,623.00

5.0" Bore x 2.00" Rod			
Order Code	Stroke	Kg	List Each
HC5008-200	8"	30.3	\$824.00
HC5010-200	10"	32.2	\$885.00
HC5012-200	12"	34.1	\$919.00
HC5016-200	16"	37.9	\$1,004.00
HC5018-200	18"	39.8	\$1,045.00
HC5020-200	20"	41.7	\$1,135.00
HC5024-200	24"	45.5	\$1,194.00
HC5030-200	30"	51.2	\$1,273.00
HC5036-200	36"	56.9	\$1,421.00
HC5048-200	48"	68.3	\$1,658.00

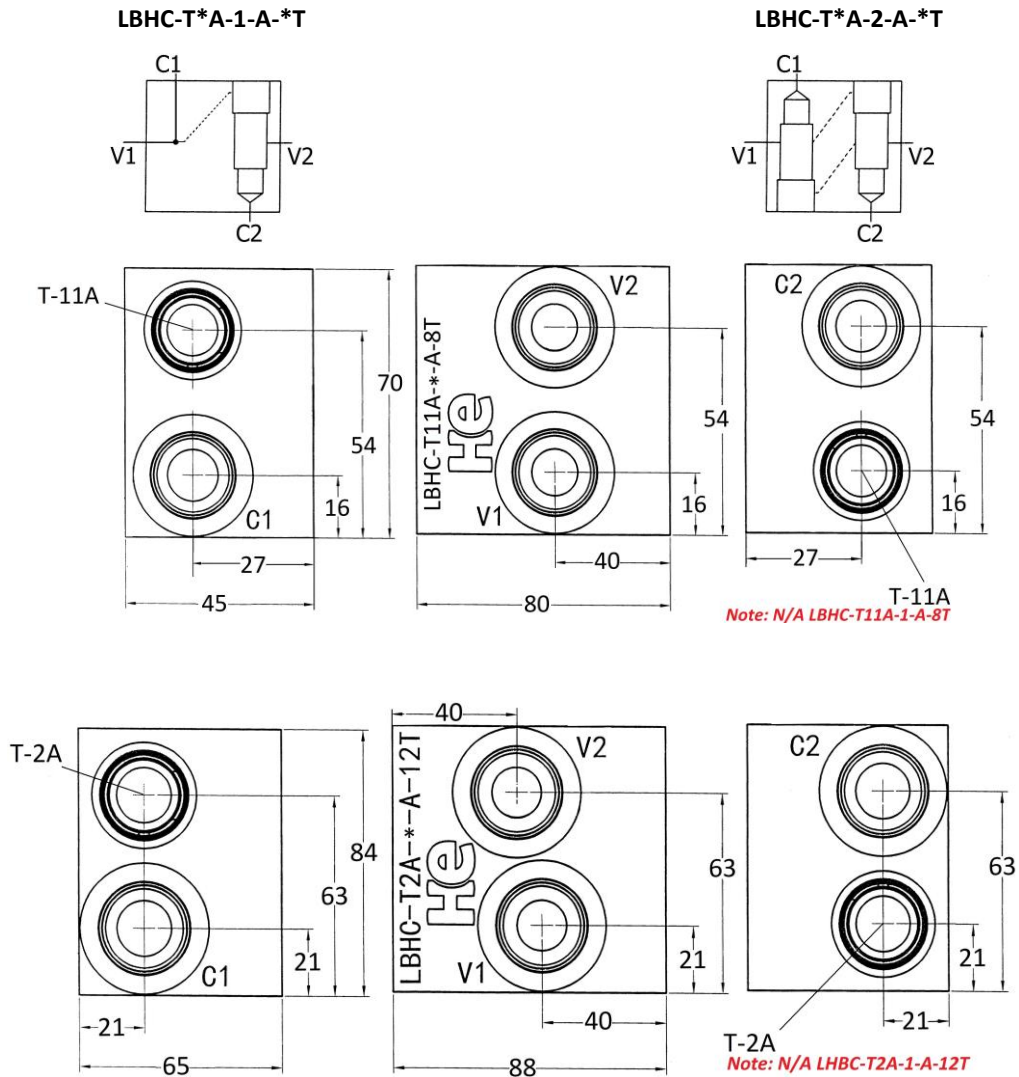
Cylinder Mount Counterbalance & Pilot Operated Check Valves



Order Code	Cavity	Ports	Material	Max. Pressure (bar)	List Each
LBHC-T11A-1-A-8T	T-11A x 1	3/4" UNO	Aluminium (6061T6)	210	\$135.00
LBHC-T11A-2-A-8T	T-11A x 2				\$148.00
LBHC-T2A-1-A-12T	T-2A x 1	1 1/16" UNO			\$182.00
LBHC-T2A-2-A-12T	T-2A x 2				\$204.00

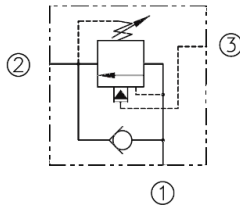
Note:

- LBHC-T*A-1-A-*T (single cavity body), load is held on port C2.
- Cartridge Information on [Page 1.06](#).



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Counterbalance Valves

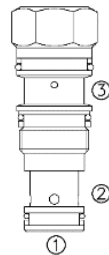
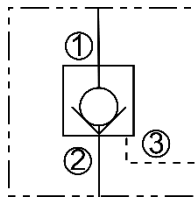


Order Code	Cavity	Max. Flow (L/min)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Adjustable Pressure (bar)	Factory Set (bar)	List Each
LCBCA-LAN	T-11A	60	3 : 1	0.3	70 - 280	210	\$125.00
LCBCA-LHN			3 : 1	1.7	70 - 280	210	\$125.00
LCBCA-LIN			3 : 1	1.7	25 - 105	70	\$125.00
LCBCH-LJN			10 : 1	1.7	140 - 350	210	\$135.00
LCBEA-LHN	T-2A	120	3 : 1	1.7	70 - 280	210	\$180.00

Note:

- Two check valve cracking pressures are available. Use the 1.7 bar check unless actuator cavitation is a concern. Generally, the 1.7 bar check spring is recommended for most applications as it is more robust and insensitive to rapid flow reversals. The 0.3 bar check spring should be used if there is a need to pull in make-up oil.
- Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.
- Additional information available on [Page 9.18](#).

Pilot Operated Check Valves



Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Pilot Piston Seal	Free Flow Cracking Pressure (bar)	List Each
LCKCB-XCN	T-11A	60	350	3 : 1	No	2.0	\$90.00
LCKCD-XCN					Yes		

Elbow Fittings



Order Code	Threads	HC Cylinder Bore	List Each
6807-08-06-NWO	3/4" UNO x 9/16" UNO	1.5" - 2.0"	\$28.00
6807-08-08-NWO	3/4" UNO x 3/4" UNO	2.5" - 5.0"	

Note:

- Elbow Fitting allows direct mounting of body to cylinder port. Not available for LBHC-T2A-*A-12T.
- Tube & fittings from body to the other cylinder port are not supplied.
- LBHC-T*A-1-A -*T (single cavity body), load is held on port C2.



Male Rod Clevis



Female Rod Clevis



Male Clevis Plate



Seal Kit



Breather Plug

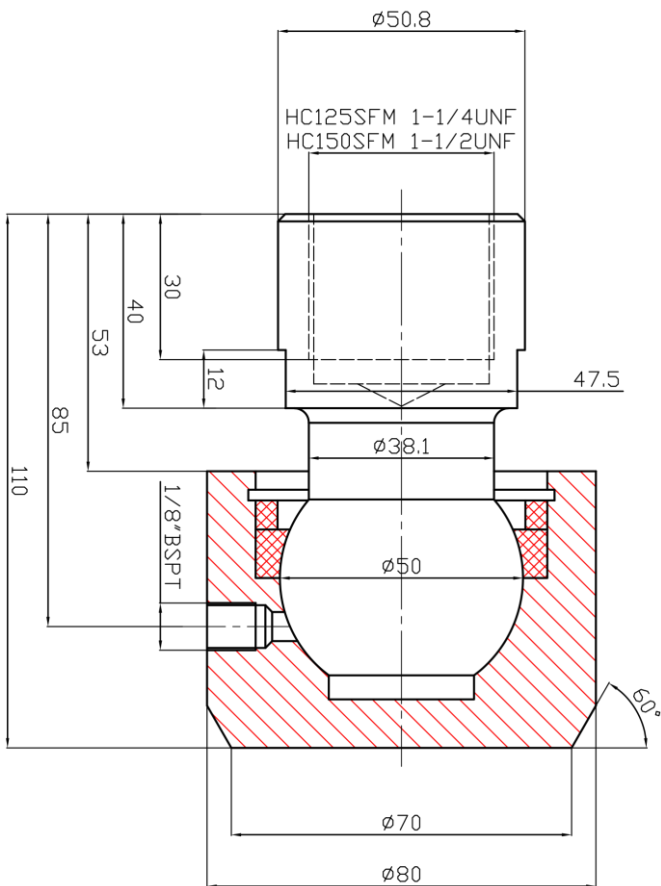


Pin & Clip for Female Clevis



Anti-Rotation Pin

Swivel Foot Mount



Swivel Foot Mount as supplied



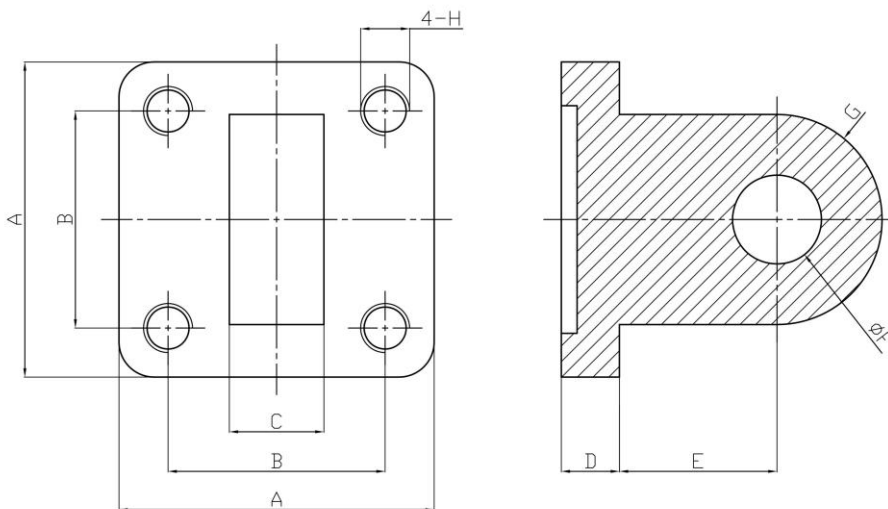
Swivel Foot Mount shown with customer supplied and fitted Foot Plate

Male Clevis Plate



Bore	Rod	Maximum Force	
		Maximum Extension Force kN bar	Maximum Retraction Force kN bar
1.5"	0.875"	23 207	15 207
2.0"	1.25"	42 207	25 207
2.5"	1.50"	65 207	42 207
3.0"	1.50"	94 207	71 207
3.5"	1.75"	128 207	96 207
4.0"	1.75"	168 207	135 207
4.0"	2.00"	168 207	126 207
5.0"	2.00"	262 207	170 160

Note: Check **Maximum Force & Pressure** on [Page 1.11](#). The lower Force of the two is applicable.



Order Code	A	B	C	D	E	F	G	H
HC075MCP	80	56	20	17	35	19.5	20	M12 x 1.75
HC100MCP	90	62	26	17	45	25.6	30	M14 x 2.00
HC125MCP	110	80	26	20	50	31.9	30	M16 x 2.00

Accessories & Spare Parts

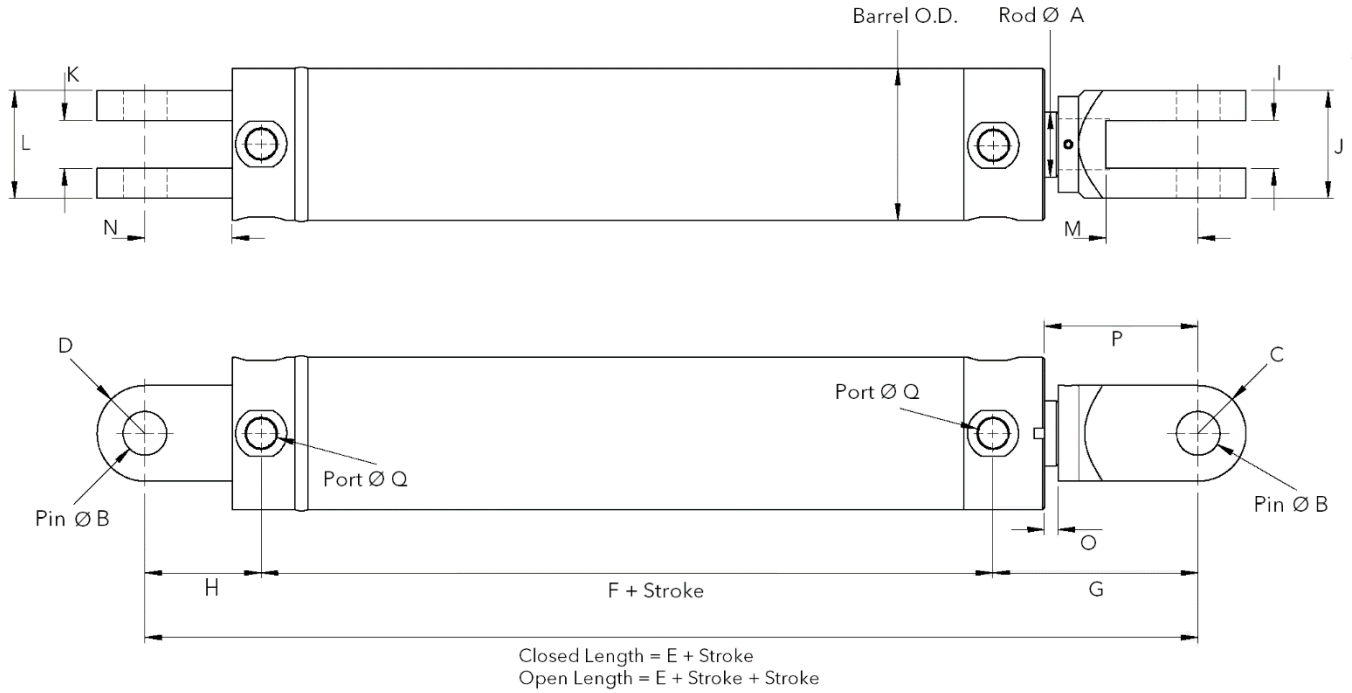
	Male Rod Clevis	Male Clevis Plate	Swivel Foot Mount	Breather Plug	Seal Kit
HC15XX-875	N/A	HC075MCP \$83.00	N/A	HC-BP-SAE6 \$26.00	HC15-875SK \$65.00
HC20XX-125	HC100-125BLOCK \$146.00	HC100MCP \$99.00	HC125SFM \$198.00	HC-BP-SAE6 \$26.00	HC20-125SK \$73.00
HC25XX-150	HC100-125BLOCK \$146.00	HC100MCP \$99.00	HC125SFM \$198.00	HC-BP-SAE8 \$30.00	HC25-150SK \$87.00
HC30XX-150	HC100-125BLOCK \$146.00	HC100MCP \$99.00	HC125SFM \$198.00	HC-BP-SAE8 \$30.00	HC30-150SK \$90.00
HC35XX-175	HC100-125BLOCK \$146.00	HC100MCP \$99.00	HC125SFM \$198.00	HC-BP-SAE8 \$30.00	HC35-175SK \$94.00
HC40XX-175	HC100-125BLOCK \$146.00	HC100MCP \$99.00	HC125SFM \$198.00	HC-BP-SAE8 \$30.00	HC40-175SK \$99.00
HC40XX-200	HC100-125BLOCK \$146.00	HC100MCP \$99.00	HC125SFM \$198.00	HC-BP-SAE8 \$30.00	HC40-200SK \$112.00
HC50XX-200	N/A	HC125MCP \$187.00	HC150SFM \$198.00	HC-BP-SAE8 \$30.00	HC50-200SK \$135.00

	Female Rod Clevis	Pin & Clip for Female Clevis	Clevis Pin Clip	Anti-Rotation Pin for Female Clevis
HC15XX-875	HC075-075CLEVIS \$44.00	HC075PIN \$15.00	HC100CLIP \$4.00	N/A
HC20XX-125	HC100-125CLEVIS \$49.00	HC100PIN \$19.00	HC100CLIP \$4.00	HC100PIN-ARGx65 \$43.00
HC25XX-150	HC100-125CLEVIS \$49.00	HC100PIN \$19.00	HC100CLIP \$4.00	HC100PIN-ARGx65 \$43.00
HC30XX-150	HC100-125CLEVIS \$49.00	HC100PIN \$19.00	HC100CLIP \$4.00	HC100PIN-ARGx65 \$43.00
HC35XX-175	HC100-125CLEVIS \$49.00	HC100PIN \$19.00	HC100CLIP \$4.00	HC100PIN-ARGx65 \$43.00
HC40XX-175	HC100-125CLEVIS \$49.00	HC100PIN \$19.00	HC100CLIP \$4.00	HC100PIN-ARGx65 \$43.00
HC40XX-200	HC100-125CLEVIS \$49.00	HC100PIN \$19.00	HC100CLIP \$4.00	HC100PIN-ARGx65 \$43.00
HC50XX-200	HC125-150CLEVIS \$59.00	HC125PIN \$25.00	HC125CLIP \$6.00	HC125PIN-ARGx70 \$50.00

Note:

- Swivel Foot Mount supplied with Grease Nipple. There is no Grub Screw & Plastic Insert. The parts are not assembled. Customer to supply and weld their own Foot Plate.
- Seal Kit supplied with Nyloc Nut.
- Female Rod Clevis supplied with Grub Screw & Plastic Insert.
- Male Rod Clevis supplied with Grub Screw, Plastic Insert & Grease Nipple. Dimensions are the same as P/N HC100-125CLEVIS. Refer to [Page 1.10](#).
- Male Clevis Plate not supplied with mounting screws. It is manufactured from Cast Steel and can be welded. Check Maximum Force. Refer to [Page 1.08](#).
- Anti-Rotation Pin supplied with Grease Nipple & Retaining Screw (M6x20). It is the customers responsibility to machine M6 thread for Retaining Screw.

Dimensions



Bore Ø	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"	5.0"
Rod Ø A	0.875"	1.25"	1.50"	1.50"	1.75"	1.75" or 2.00"	2.00"
Pin Ø B	0.75" 19.05	1.00" 25.4	1.00" 25.4	1.00" 25.4	1.00" 25.4	1.00" 25.4	1.25" 31.75
C	23	28	28	28	28	28	34
D	23	25	28	28	33	34	34
E ± 3 mm	9.50" 241	12.25" 311	12.25" 311	12.25" 311	12.25" 311	12.25" 311	12.25" 311
F	105	123	123	123	123	126	132
G	90	120	120	120	120	117	106
H	46	68	68	68	68	68	73
I	22	28	28	28	28	28	28
J	46	63	63	63	63	63	68
K	22	28	28	28	28	28	28
L	46	60	63	63	63	63	68
M	32	54	54	54	54	54	54
N	32	51	51	51	51	51	51
O	9	8	8	8	8	8	6
P	61	90	90	90	90	90	88
Port Ø Q	9/16" UNO	9/16" UNO	3/4" UNO	3/4" UNO	3/4" UNO	3/4" UNO	3/4" UNO
Barrel O.D.	2.0" 51	2.5" 64	3.0" 76	3.5" 89	4.0" 102	4.5" 114	5.5" 140
Rod Thread	3/4" UNF x 20 mm	1-1/4" UNF x 28 mm	1-1/4" UNF x 28 mm	1-1/4" UNF x 28 mm	1-1/4" UNF x 28 mm	1-1/4" UNF x 28 mm	1-1/2" UNF x 28 mm

Maximum Force & Pressure

The chart gives the maximum extension force at full stroke and exceeding these limits may result in rod buckling. The values are based on a safety factor of 2 with the cylinder operating vertical and fully guided. For horizontal or operating in an arc these values may have to be reduced.

Bore	Rod	Stroke	8"	10"	12"	16"	18"	20"	24"	30"	36"	42"	48"	Maximum Retraction Force kN bar
		Maximum Extension Force (Vertical & Guided) kN bar												
1.5"	0.875"	23	22	17	11	9	8	6	4	3	2	1	15	
		207	193	149	96	79	70	53	35	26	17	9	207	
2.0"	1.25"	42	42	38	25	21	17	13	9	7	5	4	25	
		207	207	187	123	104	84	64	44	34	25	20	207	
2.5"	1.50"	65	65	65	65	65	61	46	32	23	18	14	42	
		207	207	207	207	207	193	145	101	73	57	44	207	
3.0"	1.50"	94	94	94	85	71	61	46	32	23	18	14	71	
		207	207	207	186	156	134	101	70	50	39	31	207	
3.5"	1.75"	128	128	128	128	128	113	85	59	43	33	26	96	
		207	207	207	207	207	182	137	95	69	53	42	207	
4.0"	1.75"	168	168	168	157	132	113	85	59	43	33	26	135	
		207	207	207	194	163	139	105	73	53	41	32	207	
4.0"	2.00"	168	168	168	168	168	168	144	100	74	57	45	126	
		207	207	207	207	207	207	178	123	91	70	55	207	
5.0"	2.00"	262	262	262	262	225	192	144	100	74	57	45	220	
		207	207	207	207	178	152	114	79	58	45	35	207	

1 kN = 102 kgf = 225 lbf

1 bar = 14.5 psi

Cylinder Speed

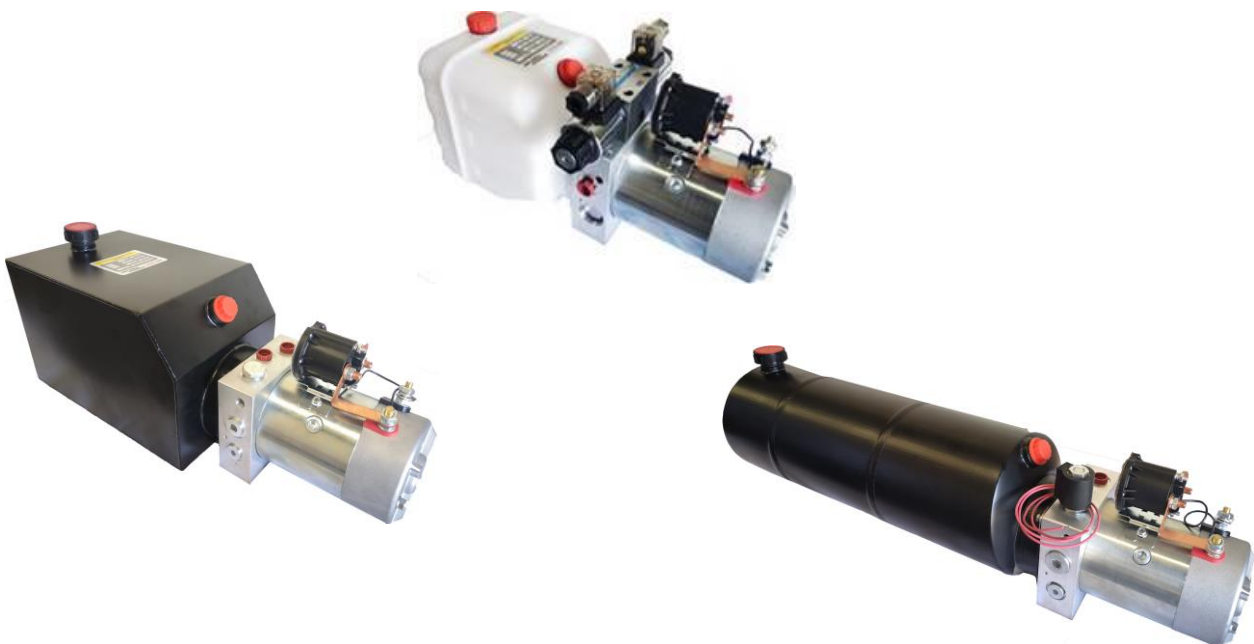
Maximum cylinder velocity is 1.0 m/sec.

Single Acting Applications

To assist in preventing the ingress of contamination we recommend at a minimum the installation of a breather plug into the air side cylinder port. Connecting a hose from the air side back to the reservoir can further increase cylinder life.

Hydraulic Power Units

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Features

- ▶ **AMETEK®**
PRESTOLITE MOTORS DC Motor range 1.6 kW (12V DC) & 2.2 kW (24V DC).
- ▶ Pump Displacements from 1.1 cc/rev to 3.2 cc/rev - 1.9 L/min to 9.5 L/min.
- ▶ Pressure to 210 bar (3000 psi) continuous, 275 bar (4000 psi) intermittent.
- ▶ Polyethylene and Steel Reservoirs - 4 to 15 litre capacity.
- ▶ Horizontal mount is standard, vertical mount optional (N/A RP15 reservoir).
- ▶ Standard Circuits - Pump, Motor, Reservoir - Single Acting - Double Acting.
- ▶ Numerous other circuits available including Bi-Rotational and custom designed to your specification.
- ▶ Full range of Handheld Cable and Wireless Remote Controls.

Order Code

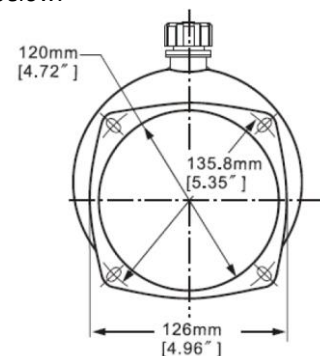
PU** - D** - **** - 20TG21H - ***** - **

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

- | | |
|--|--|
| <p>① Circuit No.
01, 03, 04, 05, 13, 42</p> <p>② DC Voltage
12, 24</p> <p>③ Reservoir
Steel (Cylindrical): LS04, LS06, LS08, LS10
Steel (Rectangular): MT06, MT08, MT12, MT15
Poly (Rectangular): RP04, RP06, RP08, RP10, RP12, RP15
WF: Weld Flange
XXXX: No Reservoir</p> <p>④ Nominal Motor Power
20T = 2 kW with Thermoswitch (4.5" Dia.) (Standard)</p> <p>⑤ Gear Pump Displacement
G11 = 1.1 cc/rev
G13 = 1.3 cc/rev
G16 = 1.6 cc/rev
G21 = 2.1 cc/rev (Standard)
G27 = 2.7 cc/rev
G32 = 3.2 cc/rev</p> | <p>⑥ Relief Valve
H = 103 - 220 bar (Standard)
(1500 - 3200 psi)
L = 34 - 138 bar
(500 - 2000 psi)</p> <p>⑦ Coil Connector (N/A Circuit 01, 04, 05)
D = DIN - Circuit 03, 42 (Option)
Circuit 13 (Standard)
W = Wire - Circuit 03, 42 (Standard)
Circuit 13 (N/A)</p> <p>⑧ Locking Manual Override (Circuit 03, 13, 42 only)
Omit = Not required
M = Circuit 03, 42 (Option)
Circuit 13 (Standard)</p> <p>⑨ Spool Type (Circuit 13 only)*</p> <p>⑩ Number of Valves (Circuit 13 only)*
1, 2, 3, 4</p> <p>⑪ Mounting Style (Circuit 13 only)
Omit for Qty. 1 Valve
L = Parallel to Motor
T = Right Angle to Motor</p> |
|--|--|

Note:

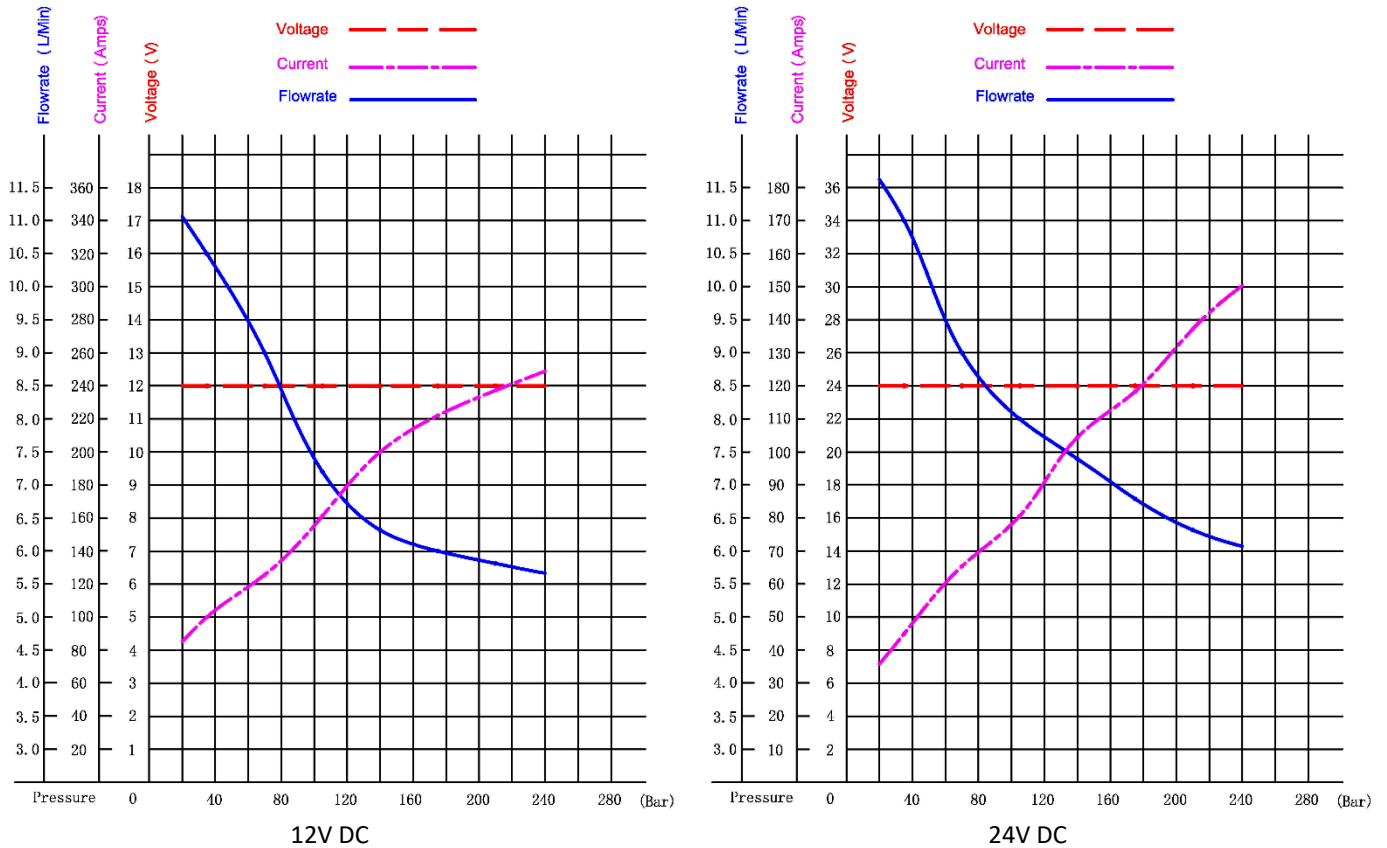
- *For Vertical Mount Power Units we recommend return oil is below the reservoir oil level. Order hardware separately from the table on [Page 2.08](#).*
- *Power Units ordered without a Reservoir are supplied without any pump suction hardware. Order separately from the table on [Page 2.10](#).*
- *If supplying your own reservoir, the flange dimensions must conform to the drawing below.*



Standard Power Unit Specifications

Voltage	Actual Motor Power	Pump	Nominal Flow @ 180 bar	Relief Valve (bar) (Factory Set 180)	Max. Pump Pressure (bar)		Ports 9/16" UNO (SAE 6)
					Continuous	Intermittent	
12V DC	1.6 kW	2.1 cc/rev	5.9 L/min	103 - 220 (Factory Set 180)	210	275	
24V DC	2.2 kW		6.7 L/min		210	275	

Testing conducted with 46 cSt oil @ 38°C and full voltage at the Electric Motor.



Oil Recommendation

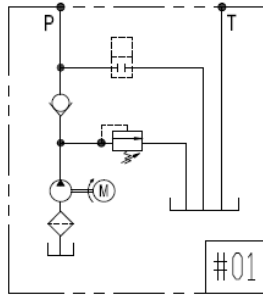
For normal operating conditions we recommend Mineral Based Hydraulic Oil with a viscosity of ISO 32 or 46 Centistokes (cSt).

As DC Power Units are used intermittently, the use of 68 cSt oil can cause pump cavitation, especially in the initial commissioning due to its high viscosity at low temperatures.

ATF is not recommended by the pump and valve manufacturers as it will reduce component life.

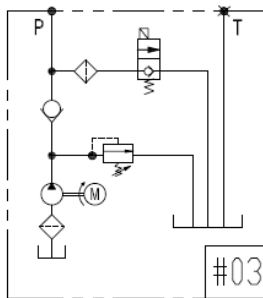


Pump, Motor, Reservoir (Circuit - 01)



Order Code	Reservoir	List Each
PU01-D**-XXXX-20TG21H	Add price from Page 2.06	\$1,017.00

Single Acting - Solenoid Control (Circuit - 03)



Order Code	Reservoir	List Each
PU03- D**-XXXX-20TG21H-W	Add price from Page 2.06	\$1,104.00

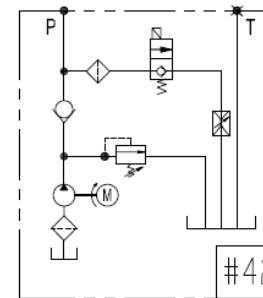
Note:

- DIN Connector Coil add \$13.00 (Includes Light Plug).
- Locking Manual Override add \$25.00.

Operation of Locking Manual Override Option:

- Normal Operation (Closed Position) push red button in and turn clockwise.
- To open the valve, push red button in, twist counterclockwise and release.

Single Acting - Solenoid Control with Flow Control (Circuit - 42)



Order Code	Reservoir	List Each
PU42- D**-XXXX-20TG21H-W	Add price from Page 2.06	\$1,148.00

Note:

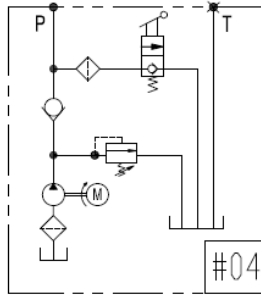
- DIN Connector Coil add \$13.00 (Includes Light Plug).
- Locking Manual Override add \$25.00.

Operation of Locking Manual Override Option:

- Normal Operation (Closed Position) push red button in and turn clockwise.
- To open the valve, push red button in, twist counterclockwise and release.

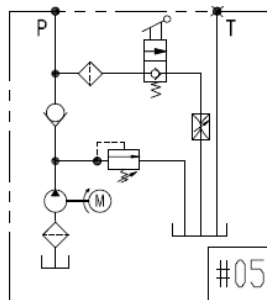
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Single Acting - Manual Control (Circuit - 04)



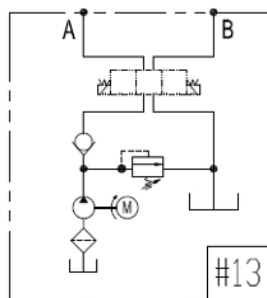
Order Code	Reservoir	List Each
PU04- D**-XXXX-20TG21H	Add price from Page 2.06	\$1,213.00

Single Acting - Manual Control with Flow Control (Circuit - 05)



Order Code	Reservoir	List Each
PU05- D**-XXXX-20TG21H	Add price from Page 2.06	\$1,257.00

Double Acting - Solenoid Control (Circuit - 13)



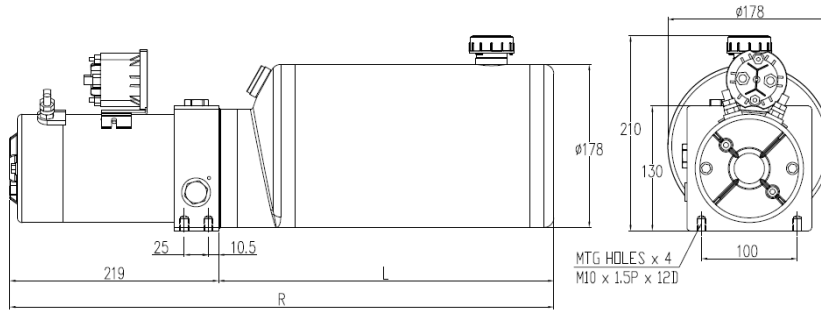
Order Code	Reservoir	List Each
PU13-D**-XXXX-20TG21H	Add price from Page 2.06	\$1,003.00

Note:

- Price does not include Solenoid Valve. Refer to [Page 2.07](#).
- Price does not include Modules. Refer to [Cetop Products](#) section.
- For 2 - 5 valves add the price of the Manifolds & Bolt Kit. Refer to [Page 2.07](#).
- We do not recommend single solenoid valves on DC Power Units. When de-energised they can shift quicker than the electric motor/pump takes to stop rotating and the actuator can reverse direction.

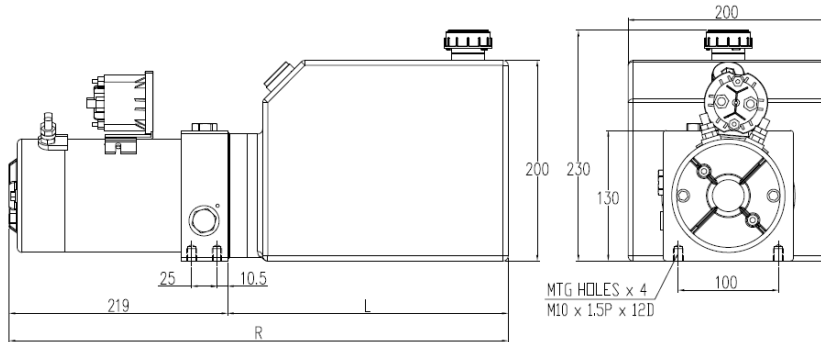
Reservoirs

LS Series - Steel



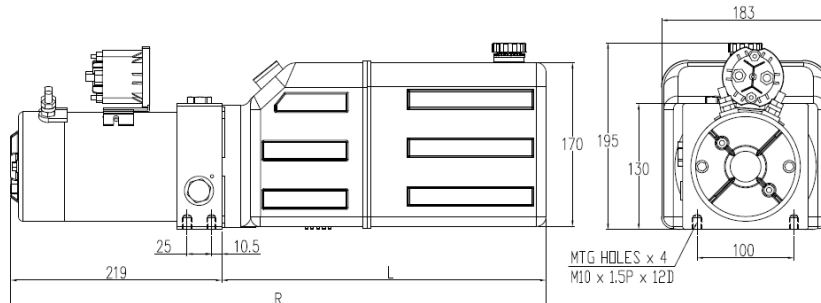
Order Code	Capacity (Litres)	L (mm)	R (mm)	List Each
LS04	04	270	489	\$80.00
LS06	06	350	569	\$93.00
LS08	08	440	659	\$98.00
LS10	10	540	759	\$112.00

MT Series - Steel



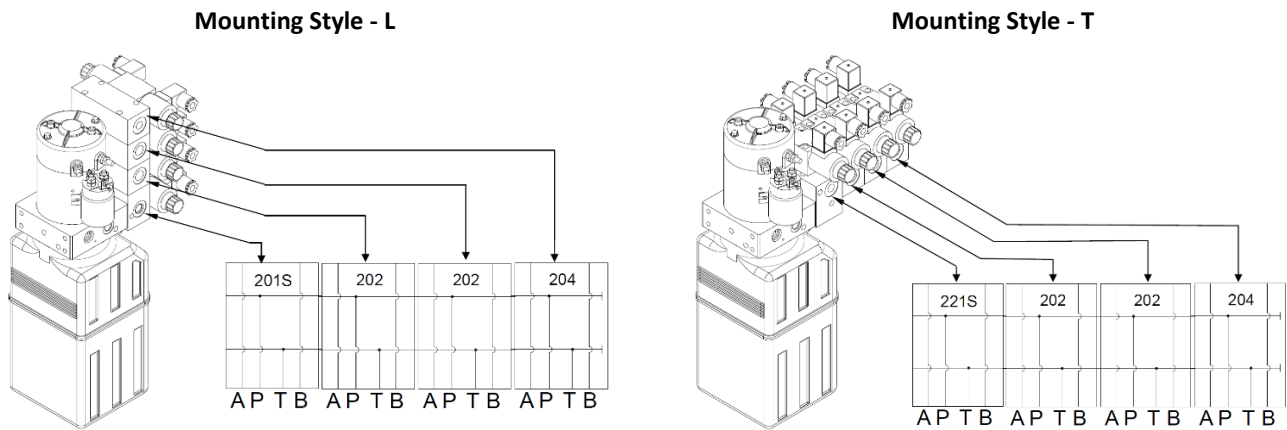
Order Code	Capacity (Litres)	L (mm)	R (mm)	List Each
MT06	06	200	419	\$97.00
MT08	08	280	499	\$105.00
MT10	10	340	559	\$112.00
MT12	12	400	619	\$119.00
MT15	15	510	729	\$125.00

RP Series - Polyethylene



Order Code	Capacity (Litres)	L (mm)	R (mm)	List Each
RP04	04	200	419	\$43.00
RP06	06	290	509	\$50.00
RP08	08	335	554	\$57.00
RP10	10	440	659	\$63.00
RP12	12	550	769	\$76.00
RP15 (Horizontal mounting only)	15	690	909	\$92.00

Double Acting - Mounting Styles



Double Acting - Manifolds & Bolt Kits

Order Code	Description	List Each
201S-SAE6	Manifold - L Style (includes O Rings & Bolt Kit for assembly to Central Manifold & Steel Plugs for A & B ports on Central Manifold)	\$180.00
221S-SAE6	Manifold - T Style (includes O Rings & Bolt Kit for assembly to Central Manifold & Steel Plugs for A & B ports on Central Manifold)	
202-SAE6	Manifold - Centre (includes O Rings)	\$110.00
203-SAE6	Manifold - PU13 - P & T Tapping (includes O Rings) – 40 mm thick	\$112.00
204-SAE6	Manifold - End (includes O Rings)	\$110.00
205-SAE6	Manifold - End with 9/16" UNO (SAE 6) P & T Ports (includes O Rings)	\$120.00
BKM6x50	Bolt Kit (for assembly of manifolds with 2 x DCV)	\$6.00
BKM6x100	Bolt Kit (for assembly of manifolds with 3 x DCV)	\$10.00
BKM6x150	Bolt Kit (for assembly of manifolds with 4 x DCV)	\$32.00
BKM6x200	Bolt Kit (for assembly of manifolds with 5 x DCV)	\$51.00

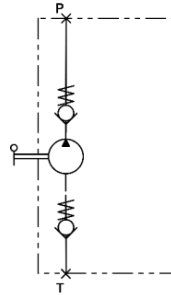
Standard Cetop Valves for Power Units

Basic Symbol	Transient Condition	Spool Code	Description of Spool Function	List Each
		3C2	Closed centre spool. Commonly Called a Cylinder spool. All ports blocked in the centre position and during crossover.	\$213.00
		3C3	Open centre spool. All ports connected in the centre position and during crossover. Minimises shock during crossover.	
		3C4	Commonly called a Motor spool. Pressure port blocked. Both A & B ports connected to tank.	
		3C6	Tandem centre spool with open crossover. During transition from centre to offset position, all ports are interconnected to minimise shock in the system.	

Note:

- Valves supplied with DIN Light Plugs & Bolt Kit (for valve only, not for valve with modules).
- Additional information on Cetop Valves, Modules and Bolt Kits in [Cetop Products](#) section.
- We do not recommend single solenoid valves on DC Power Units. When de-energised they can shift quicker than the electric motor/pump takes to stop rotating and the actuator can reverse direction.

Remote Mount Hand Pump & Vertical Mounting Hardware

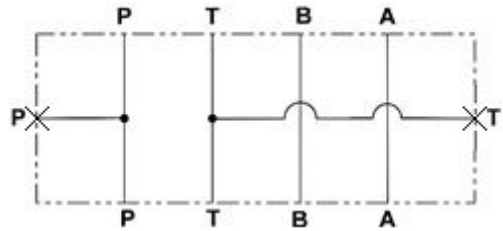


PRBC20EM

Order Code	Description	Displacement (cm ³)	Max. Pressure (bar)	Ports	Release Knob	List Each
PRBC-4104206	PRBC20EM	20	350	P = G 3/8 (Male) T = G 1/2 (Female)	No	\$418.00

Note:

- Displacement is per cycle. One cycle is extend and retract of the handle.
- All Hand Pumps are supplied with a Bellows over piston shaft and a Handle.
- PRBC Hand Pumps do not have a Relief Valve.



Order Code	Description	Ports	Thickness (mm)	List Each
203-SAE6	Manifold - PU13 - P & T Tapping	9/16" UNO (SAE 6)	40	\$112.00

Note:

- 203-SAE6 only required for PU13 with 1 valve. Bolt Kit Information on [Page 5.38](#).
- For PU13 with L or T manifold (2 or more valves) use P/N 205-SAE6 (Manifold - End with P & T Ports).
- For PU01, PU03, PU04, PU05 & PU42 connect Hand Pump to T port on Central Manifold.
- Additional Suction Hardware is to be ordered separately from the table below.
- For Vertical Mount Power Units we recommend return oil is below the reservoir oil level. Order hardware separately from the table below.



Order Code	Qty.	Description	List Each
STFT-3F-DN10	1	R 3/8 Female x Ø 10mm Barbed Fitting	\$4.00
STFT-3M-DN10	1	R 3/8 Male x Ø 10mm Barbed Fitting	\$4.00
STC-13	2	Hose Clamp for Ø 10 mm ID Hose	\$3.00
STT-10	As Required	Suction Hose - Ø 10 mm ID	(per metre) \$13.00

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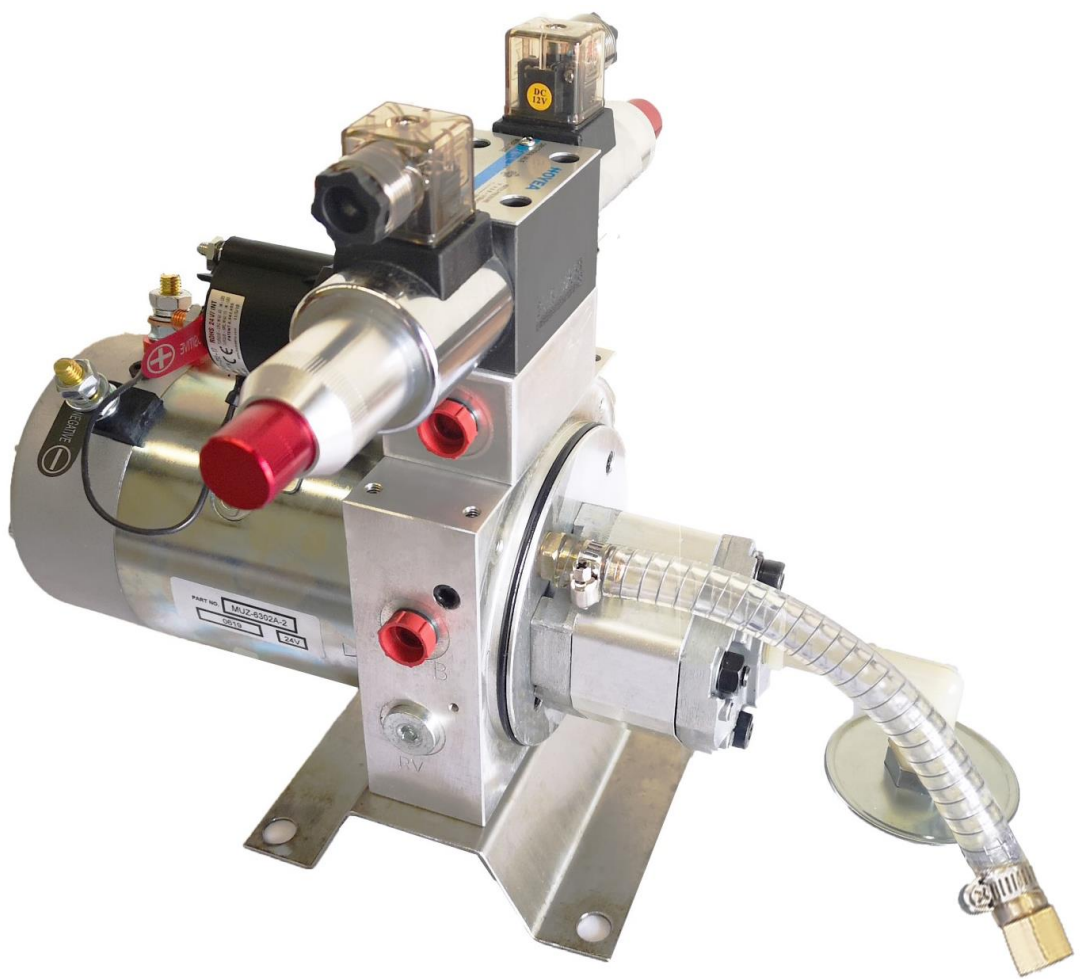


FW-3-***- *** -Z5L-N9-RBRC-50



FW-3-***- *** -Z5L-LMO-50

Cetop 3 (NG6) Valve Manual Override Options		
Order Code	Description	List Each
FW-3-DC-LMO-50	DC Locking Manual Override	\$31.00
FW-3-DC-CT-N9-50	DC Core Tube with N9 Manual Override – M5 Male Thread	\$37.00
FW-3-RC-50	Rubber Cap (no manual override) – use with FW-3-DC-CT-N9-50	\$5.00
FW-RB	Red Ball – use with FW-3-DC-CT-N9-50	\$6.00



Weld Flange



Order Code	Description	List Each
WF-HPU-130	Weld Flange 130 x 130 (Ø122 hole required)	\$44.00

Note: Weld Flange is supplied without any pump suction hardware. Order separately from the table below.

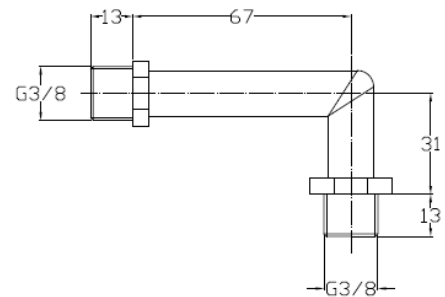
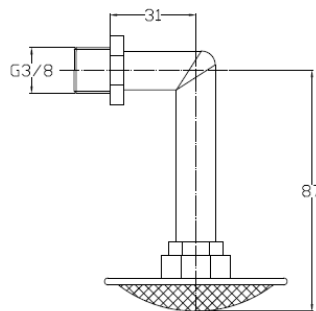
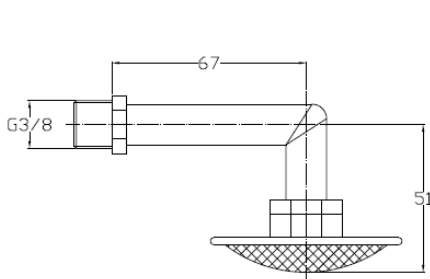
Order Code	Qty	Description	List Each
STPR-2	1	Suction Strainer - G 3/8 Female	\$10.00
AND			
STPR-1	1	Suction Pipe – R 3/8 Male x R 3/8 Male	\$6.00
OR			
STFT-3M-DN10	2	R 3/8 Male x Ø 10mm Barbed Fitting	\$4.00
STC-13	2	Hose Clamp for Ø 10 mm ID Hose	\$3.00
STT-10	As Required	Suction Hose - Ø 10 mm ID (Max. Length 400 mm)	(per metre) \$13.00



Complete Suction Pipe Assembly



Complete Suction Hose Assembly

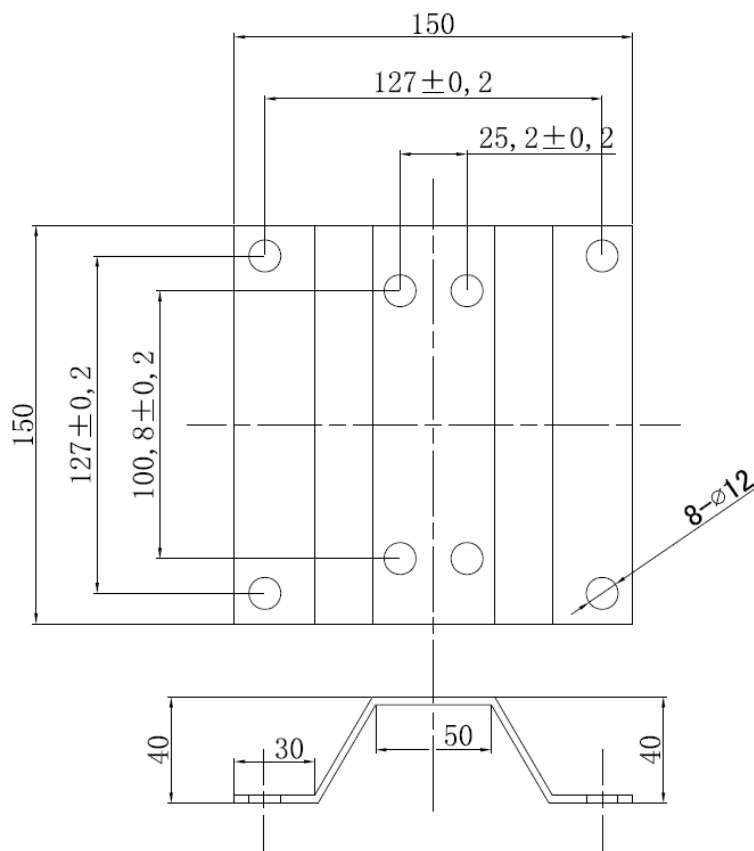


Complete Suction Pipe Assembly

Foot Bracket



Order Code	Description	List Each
FB-HPU130-M10	Foot Bracket 130 x 130 (Includes SHCS, Flat & Spring Washers to fit to HPU)	\$44.00



Cable Controllers - Single Acting



Order Code	Description	Cable Length	List Each
KCB21-03	Cable Controller - Single Acting without Cable Plug	3 m	\$61.00
KCB21C-03C	Cable Controller - Single Acting with Cable Plug		\$102.00
KCB21-06	Cable Controller - Single Acting without Cable Plug	6 m	\$77.00
KCB21C-06C	Cable Controller - Single Acting with Cable Plug		\$119.00
KCB-BK	KCB Bracket		\$29.00

Note: KCB-BK Bracket sold separately.

Cable Controllers - Double Acting



Order Code	Description	Cable Length	List Each
KCB22-03	Cable Controller - Double Acting without Cable Plug	3 m	\$73.00
KCB22C-03C	Cable Controller - Double Acting with Cable Plug		\$114.00
KCB22-06	Cable Controller - Double Acting without Cable Plug	6 m	\$90.00
KCB22C-06C	Cable Controller - Double Acting with Cable Plug		\$131.00
KCB42C-03C	Cable Controller - Double Acting with Cable Plug	3 m	\$158.00
KCB62C-03C	Cable Controller - Double Acting with Cable Plug		\$225.00
KCB82C-03C	Cable Controller - Double Acting with Cable Plug		\$291.00
KCB-BK	KCB Bracket		\$29.00

Note: KCB-BK Bracket sold separately. Not suitable for KCB82C-03C.

Wireless Control Kits



Order Code	Description	Voltage	Cable Length	List Each
WRB21C-03C-12V-2WRM2A	Wireless & Cable Control Kit - Single Acting with Cable Plug	12V DC	3 m	\$218.00
WRB21C-03C-24V-2WRM2A		24V DC		
WRB22C-03C-12V-2WRM2A	Wireless & Cable Control Kit - Double Acting with Cable Plug 1 x DCV (Double Solenoid)	12V DC		
WRB22C-03C-24V-2WRM2A		24V DC		
WRB-BK	WRB Bracket			\$20.00

- Note:**
- WRB Wireless Control Kit includes 1 x Receiver, 2 x Wireless Remotes (Handheld Transmitter) and 1 x WRB-BK Bracket.
 - Receiver has control buttons and can be removed from the bracket and used as a Cable Controller.
 - Receiver has a LED Light and can be removed from the bracket and used as a torch.
 - Wireless Remote range is up to 15 m, depending on operating conditions.



Order Code	Description	Voltage	Cable Length	List Each
TX21-02-12V-1WRM2B	Wireless Control Kit - Single Acting without Cable Plug	12V DC	2 m	\$339.00
TX21-02-24V-1WRM2B		24V DC		
TX22-02-12V-1WRM2B	Wireless Control Kit - Double Acting without Cable Plug 1 x DCV (Double Solenoid)	12V DC		
TX22-02-24V-1WRM2B		24V DC		\$339.00
TX42-02-12V-1WRM4B	Wireless Control Kit - Double Acting without Cable Plug 2 x DCV (Double Solenoid)	12V DC		
TX42-02-24V-1WRM4B		24V DC		\$484.00
TX62-02-12V-1WRM6B	Wireless Control Kit - Double Acting without Cable Plug 3 x DCV (Double Solenoid)	12V DC		
TX62-02-24V-1WRM6B		24V DC		\$630.00
TX82-02-12V-1WRM8B	Wireless Control Kit - Double Acting without Cable Plug 4 x DCV (Double Solenoid)	12V DC		
TX82-02-24V-1WRM8B		24V DC	\$775.00	

- Note:**
- TX Wireless Control Kit includes 1 x Receiver and 1 x Wireless Remote (Handheld Transmitter).
 - Receiver has no control buttons. It is fixed to the machine and a bracket is not required.
 - Wireless Remote range is up to 15 m, depending on operating conditions.

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Order Code	Description	Voltage	Cable Length	List Each
WRC21-01-1WRM2B	Wireless Control Kit - Single Acting without Cable Plug	12V / 24V DC	1 m	\$709.00
WRC22-01-1WRM2B	Wireless Control Kit - Double Acting without Cable Plug 1 x DCV (Double Solenoid)			\$709.00
WRC42-01-1WRM4B	Wireless Control Kit - Double Acting without Cable Plug 2 x DCV (Double Solenoid)			\$819.00
WRC62-01-1WRM6B	Wireless Control Kit - Double Acting without Cable Plug 3 x DCV (Double Solenoid)			\$929.00
WRC82-01-1WRM8B	Wireless Control Kit - Double Acting without Cable Plug 4 x DCV (Double Solenoid)			\$1,039.00

Note:

- WRC Wireless Control Kit includes 1 x Receiver and 1 x Wireless Remote (Handheld Transmitter).
- Receiver has no control buttons. It is fixed to the machine and a bracket is not required.
- Wireless Remote range is up to 30 m, depending on operating conditions.
- The user can pair up a replacement or an additional Wireless Remote.

WRC Wireless Remotes (Handheld Transmitter)



Order Code	Description	Suits	List Each
WRC-WRM2B	Wireless Remote 2 Button	WRC21-01-1WRM2B & WRC22-01-1WRM2B	\$225.00
WRC-WRM4B	Wireless Remote 4 Button	WRC42-01-1WRM4B	\$247.00
WRC-WRM6B	Wireless Remote 6 Button	WRC62-01-1WRM6B	\$269.00
WRC-WRM8B	Wireless Remote 8 Button	WRC82-01-1WRM8B	\$291.00

HPU Gear Pumps



Order Code	Displacement	Motor Dia.	Max. Pressure (bar)		Speed Max.	Speed Min.	List Each
			Continuous	Intermittent			
S026	0.26 cc/rev	3.15"	200	230	7000	1000	\$230.00
S038	0.38 cc/rev						
G110	1.10 cc/rev	4.5"	210	275	4000	500	
G130	1.30 cc/rev						
G160	1.60 cc/rev						
G210 (Standard)	2.10 cc/rev						
G270	2.70 cc/rev						
G320	3.20 cc/rev						

Gear Pump Mounting Bolt Kits

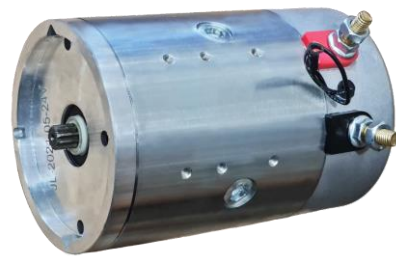


Gear Pump	Order Code	List Each
G110	BKG110-G130-G160	\$6.00
G130		
G160		
G210	BKG210	\$7.00
G270	BKG270	\$8.00
G320	BKG320	\$9.00

Electric Motors



Old Design



New Design

Order Code	Diameter	Voltage	Thermoswitch	Power	Protection	List Each
MUP-6303-2 (Old Design)	4.5"	12V DC	No	1.6 kW	IP54	\$412.00
MUP-6308A-2 (Old Design)			Yes			\$424.00
MUP-6308B-2 (New Design)						\$424.00
MUZ-6302-2 (Old Design)		24V DC	No	2.2 kW		\$412.00
MUZ-6302A-2 (Old Design)			Yes			\$424.00
MUZ-6302B-2 (New Design)						\$424.00
T0298	Copper Wiring Strap (suits silver metal relay)					\$6.00
T0300	Copper Wiring Strap (suits black plastic relay)					\$8.00

Note: If replacing **Old Design** with **New Design** the Drive Coupling must be replaced with P/N CP-18-55, refer to [Page 2.17](#) and the Copper Wiring Strap must be rebent.

Electric Motor Relays



Order Code	Motor Dia.	Description	List Each
684-1261-212-17	3.15" & 4.5"	Relay 12V DC	\$119.00
684-2461-212-17		Relay 24V DC	
T0298	Copper Wiring Strap (suits silver metal relay) 32 mm x 32 mm		\$6.00
T0300	Copper Wiring Strap (suits black plastic relay) 45 mm x 60 mm		\$8.00

Coils



Order Code	Voltage	Connector	List Each
D12D	12V DC	DIN (Light Plug included)	\$46.00
D12W		Wire	\$33.00
D24D	24V DC	DIN (Light Plug included)	\$46.00
D24W		Wire	\$33.00

Note: Coil must be installed with letters up, so they are closest to the Coil Retaining Nut.

HPU Accessories & Spare Parts



Order Code	Description	List Each	
AS-RP	PU Reservoir Retainer Kit	\$7.00	
CP-18-43	DC HPU Drive Coupling Tang / Tang (Old Design Electric Motor)	\$22.00	
CP-18-55	DC HPU Drive Coupling Spline / Tang (New Design Electric Motor)	\$28.00	
CVP08R	Check Valve Cartridge	\$27.00	
MV2L08M	Manual 2W2P Valve with Switch	\$182.00	
NVA08	Flow Control Valve	\$44.00	
OR-9.0x1.6-N90	O Ring - Circuit 13 Manifold	\$1.00	
OR-103.8x3.1-N80	O Ring - LS/MS/MT/RP Reservoir	\$4.00	
PLUG-C08-2-A	Cavity Plug - Alloy	\$25.00	
PLUG-SAE6-S	9/16" UNO - Steel Port Plug	\$4.00	
PLUG-SAE8-S	3/4" UNO - Steel Port Plug	\$5.00	
RVD08-H (Standard)	Relief Valve 103 - 220 bar (1500 - 3200 psi)	\$25.00	
RVD08-L	Relief Valve 34 - 138 bar (500 - 2000 psi)	\$25.00	
STC-13	Hose Clamp for Ø 10 mm ID Hose	\$3.00	
STFT-3F-DN10	R 3/8 Female x Ø 10mm Barbed Fitting	\$4.00	
STFT-3M-DN10	R 3/8 Male x Ø 10mm Barbed Fitting	\$4.00	
STT-10	Suction Hose - Ø 10 mm ID	(per metre) \$13.00	
STPR-1	Suction Pipe - R 3/8 Male x R 3/8 Male (Suits MT06, RP04, RP15)	\$6.00	
STPR-2	Suction Strainer - G 3/8 Female	\$10.00	
SVP08NC (Standard)	2W2P N.C. Cartridge	\$87.00	
SVP08NCM	2W2P N.C. Cartridge with Manual Override	\$112.00	
BE-HPU100	Breather Extension - 100mm	SUS304 3/4" NPT	\$18.00
BE-HPU150	Breather Extension - 150mm		\$24.00
BE-HPU200	Breather Extension - 200mm		\$30.00
T0110	Breather without Dipstick (Standard - RP Reservoirs)	\$10.00	
T0111	Reservoir Plug - DC PU	\$6.00	
T0112	Breather with Dipstick (Standard - LS & MT Reservoirs)	\$13.00	
T0298	Copper Wiring Strap (suits silver metal relay) 32 mm x 32 mm	\$6.00	
T0300	Copper Wiring Strap (suits black plastic relay) 45 mm x 60 mm	\$8.00	

Hand Pumps

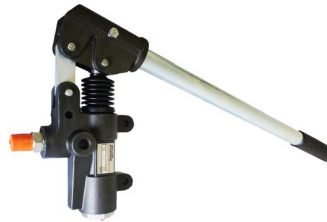
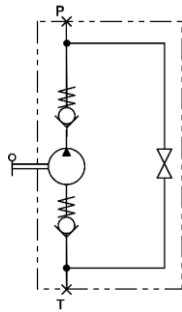
<i>Double Acting Function for Single Acting Cylinder – Tankless (Wall Mount)</i>	-----	3.02
<i>Double Acting Function for Single Acting Cylinder – Tank Mounting</i>	-----	3.03
<i>Double Acting Function for Double Acting Cylinder – Tank Mounting</i>	-----	3.03
<i>Steel Tanks</i>	-----	3.04
<i>Spare Parts</i>	-----	3.05



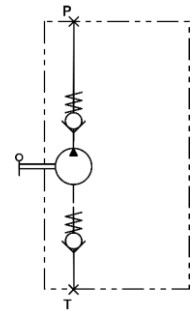
Double Acting Function for Single Acting Cylinder – Tankless (Wall Mount)



PRBC20M



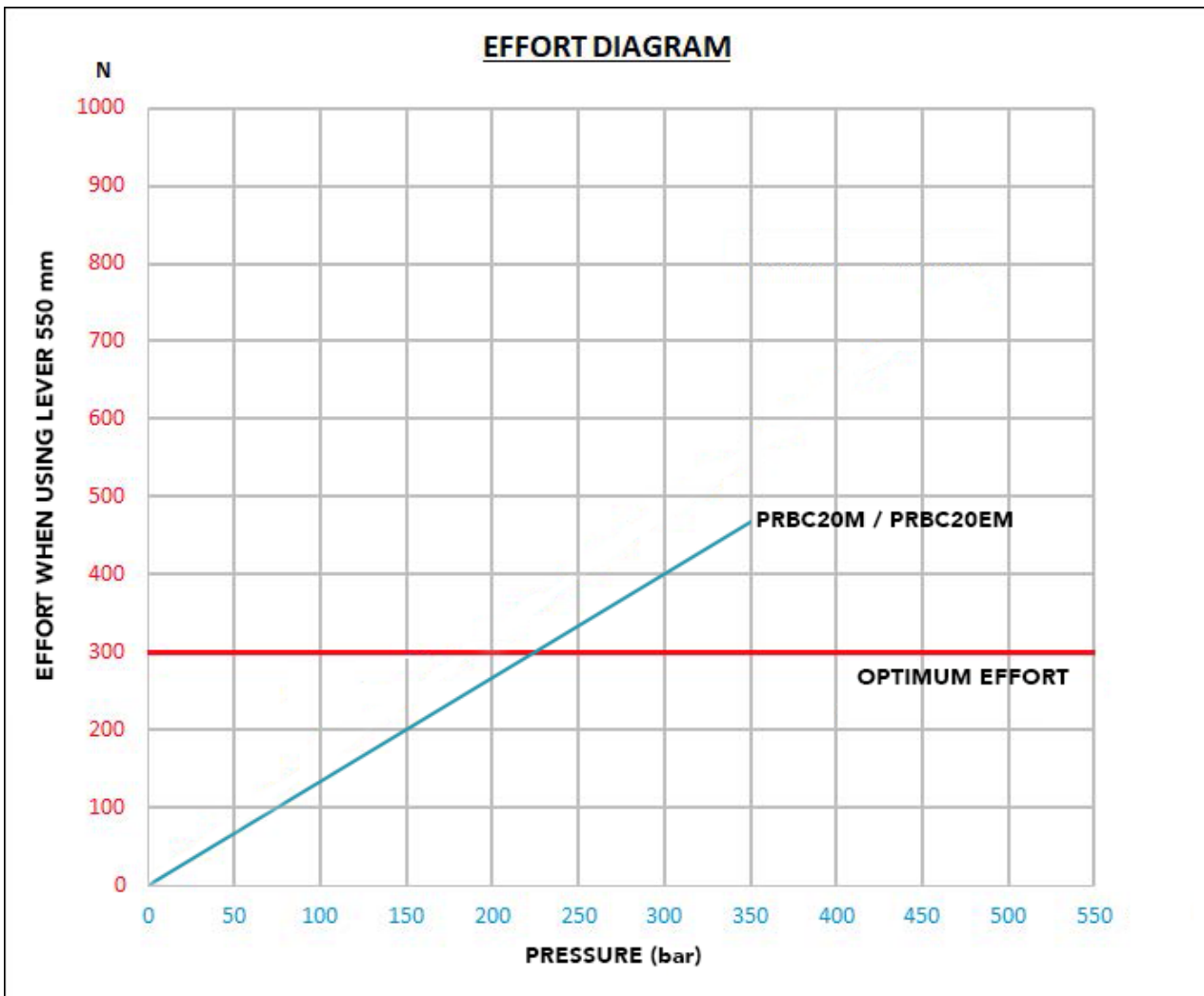
PRBC20EM



Order Code	Description	Displacement (cm ³)	Max. Pressure (bar)	Optimum Pressure (bar)	Ports	Release Knob	List Each
PRBC-4102883	PRBC20M	20	350	225	P = G 3/8 (Male)	Yes	\$467.00
PRBC-4104206	PRBC20EM				T = G 1/2 (Female)	No	\$418.00

Note:

- Displacement is per cycle. One cycle is extend and retract of the handle.
- All Hand Pumps are supplied with a Bellows over piston shaft and a Handle.
- PRBC Hand Pumps do not have a Relief Valve.



Double Acting Function for Single Acting Cylinder – Tank Mounting



Order Code	Description	Displacement (cm ³)	Max. Pressure (bar)	Optimum Pressure (bar)	Outlet Port	List Each
PRB-4092997	PRB12RM	12	380	220	G 3/8 (Male)	\$412.00
PRB-4092986	PRB25RM	25	350	120		\$412.00
PRB-4105075	PRB45RM	45	280	80		\$460.00

Double Acting Function for Double Acting Cylinder – Tank Mounting

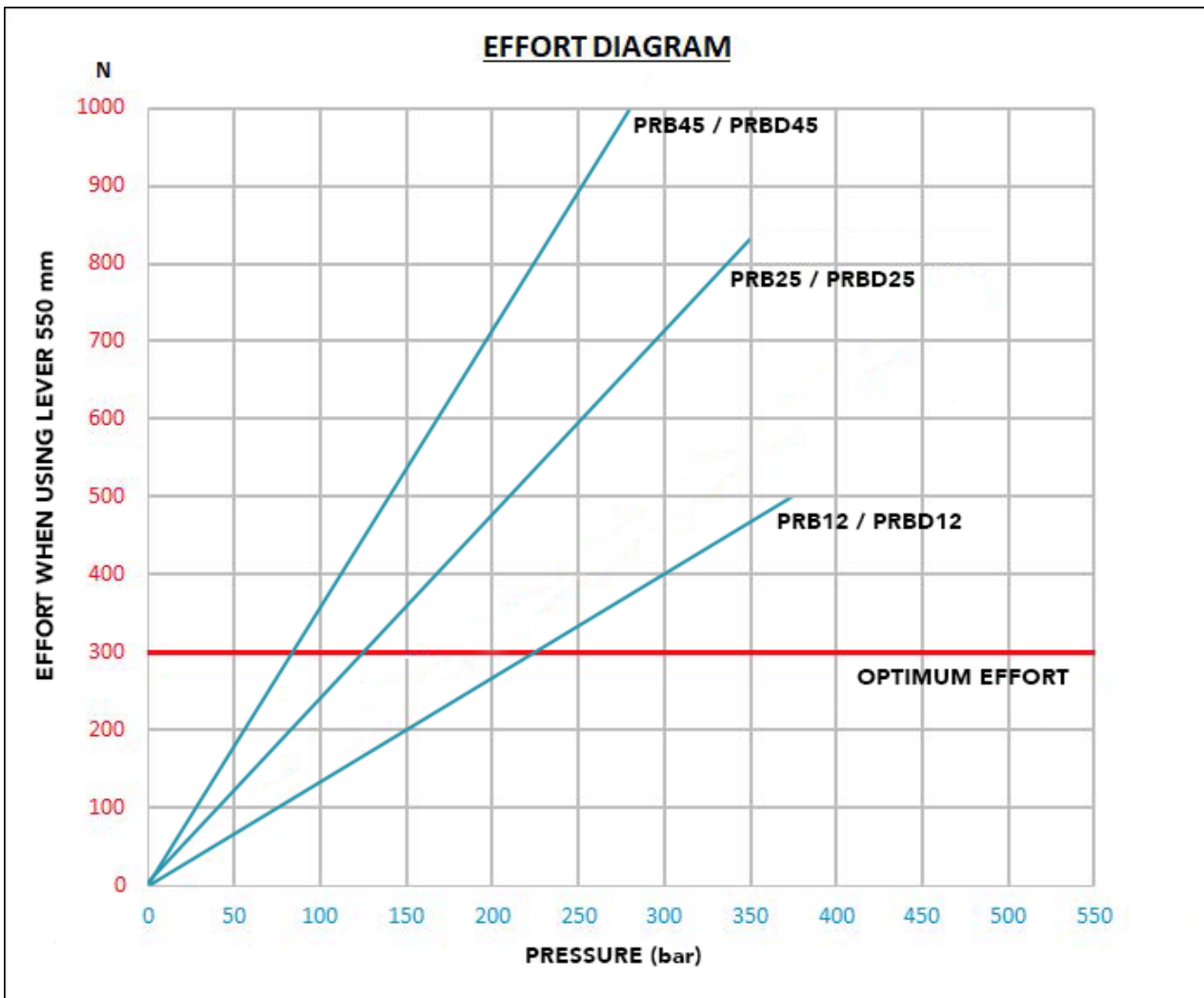


Order Code	Description	Displacement (cm ³)	Max. Pressure (bar)	Optimum Pressure (bar)	Outlet Ports	List Each
PRBD-4093000	PRBD12RM	12	380	220	G 3/8 (Male)	\$424.00
PRBD-4092990	PRBD25RM	25	350	120		\$424.00
PRBD-4105087	PRBD45RM	45	280	80		\$472.00

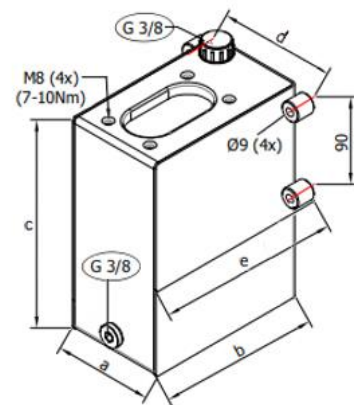
Note:

- Displacement is per cycle. One cycle is extend and retract of the handle.
- Relief Valve factory set to Max. Pressure.
- All Hand Pumps are supplied with an Adjustable Relief Valve, Bellows over piston shaft, Handle, Suction Filter, Suction Tube, Rubber Gasket, SHCS and Spring Washers for mounting to our tank or yours.
- Prices **do not** include a tank. They are sold separately. Refer to [Page 3.04](#).
- RP Tanks are supplied with the correct length suction tube.
Do not use the one supplied with the hand pump. Fit the serrated end of hose inside the suction strainer.
- When using RP Tanks hand pump can only be mounted with the handle horizontal.
- Hand Pumps can be mounted to your tank with the handle vertical. Ensure you use sealed nuts or thread sealant and take care not to kink and block the Suction Tube.

Continued Next Page



Steel Tanks



Order Code	Description	Usable Capacity	Dimensions					List Each
			a	b	c	d	e	
RP-4112720	RP1G	1 litre	100	170	120	120	173	\$92.00
RP-4112721	RP2G	2 litres			170			\$97.00
RP-4112745	RP3G	3 litres			220			\$104.00
RP-4112733	RP5G	5 litres	175	175	200	195	178	\$140.00
RP-4112734	RP7G	7 litres			290			\$170.00
RP-4112735	RP10G	10 litres			380			\$218.00

Note: Tanks are 2 mm thick steel, welded construction, painted RAL9005 black, supplied with Breather, Drain Plug, Suction Tube & Filter.

Spare Parts



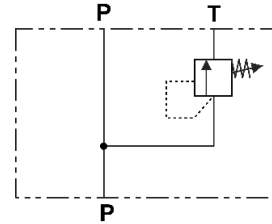
Order Code	Description	List Each
4093434	Handle PRB / PRBC / PRBD – 27 mm Ø x 550 mm	\$37.00
4093123	Relief Valve PRB**RM / PRBD**RM	\$73.00
4093934	Lowering Valve PRB12 / PRB25 / PRBC20	\$43.00
4105136	Lowering Valve PRB45	\$55.00
7569217	Breather Hand Pump RP* Tank - M22 x 1.5 (Suits Old Order Code)	\$7.00
4112003	Breather Hand Pump RP*G Tank – G 3/8 (Suits New Order Code)	
4109429	Suction Tube & Filter PRB / PRBD (Tube – 300 mm long. Suits RP10, Cut tube to length for other sizes)	\$11.00
4092941	PVC Bellows PRB / PRBC / PRBD	\$10.00
4110111	Seal Kit - PRB12R	\$25.00
4110114	Seal Kit - PRB25R	
4110115	Seal Kit - PRB45R	
4115864	Seal Kit - PRBC20	
4110112	Seal Kit - PRBD12R	
4107504	Seal Kit - PRBD25R	
4110116	Seal Kit - PRBD45R	

Line Mount Valves

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<i>Bi-Directional Pressure Relief Valves</i>	4.03
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<i>Single Pilot Operated Check Valves</i>	4.04
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<i>4 Port Dual Counterbalance Valves</i>	4.07
<i>Cylinder Mount Counterbalance & Pilot Operated Check Valves</i>	4.08
<i>Inline Check Valves</i>	4.10
<i>Shuttle Valves</i>	4.11
<i>Flow Divider / Combiner</i>	4.11
<i>Needle Valves</i>	4.12
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<i>Barrel Flow Control Valves</i>	4.15
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<i>2 Way Ball Valve Dimensions</i>	4.18
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<i>Manual Selector (Diverter) Valves</i>	4.25
<i>Quick Hitch Valves</i>	4.27
<i>Quick Hitch Valve Dimensions</i>	4.28



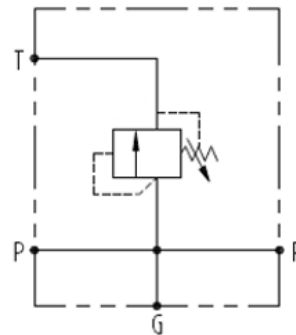
Pressure Relief Valves (Direct Acting Poppet) - Steel Body



Order Code	Ports Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
HDR-G1/4-210	G 1/4	25	70 - 210	200	315	\$145.00
HDR-G3/8-210	G 3/8	50				\$149.00
HDR-G1/2-210	G 1/2	80				\$156.00
HDR-G3/4-210	G 3/4	120				\$193.00
HDR-G1-210	G 1	220				\$233.00

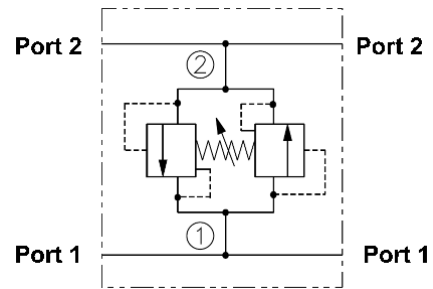
Order Code	Ports Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
HDR-G1/4-315	G 1/4	25	100 - 315	200	315	\$145.00
HDR-G3/8-315	G 3/8	50				\$149.00
HDR-G1/2-315	G 1/2	80				\$156.00
HDR-G3/4-315	G 3/4	120				\$193.00
HDR-G1-315	G 1	220				\$233.00

Pressure Relief Valve (Direct Acting) - Alloy Body



Order Code	Port Size	Gauge Port	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
MRDFA-LAN-S1	G 1	G 1/4	200	35 - 210	196.5	210	\$299.00

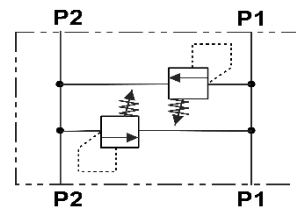
Bi-Directional Pressure Relief Valves (Direct Acting, Differential Area, Poppet) - Alloy Body



Order Code	Port Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
LBRV2-10-24/0138	N/A	60	14 - 168	138	240	\$267.00
LBRV2-10-30/0138			100 - 210			
LB10-2-A-4G4	G 1/2	N/A	N/A	N/A	210	\$150.00

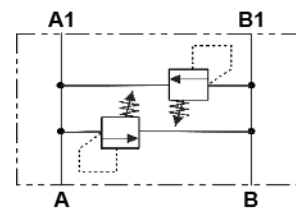
Note: Cartridge & Body are sold separately and not assembled.

Cross Line Pressure Relief Valves (Direct Acting Poppet) - Steel Body



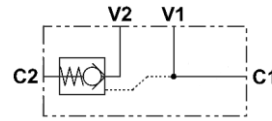
Order Code	Port Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
VAIL-G3/8-210	G 3/8	25	70 - 210	200	315	\$201.00
VAIL-G1/2-210	G 1/2	50				\$233.00
VAIL-G3/4-210	G 3/4	100				\$351.00
VAIL-G1-210	G 1	120				\$593.00

Order Code	Port Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
VAIL-G3/8-315	G 3/8	25	100 - 315	200	315	\$201.00
VAIL-G1/2-315	G 1/2	50				\$233.00
VAIL-G3/4-315	G 3/4	100				\$351.00
VAIL-G1-315	G 1	120				\$593.00



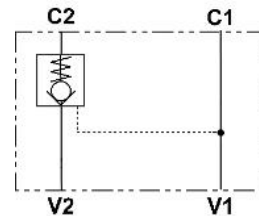
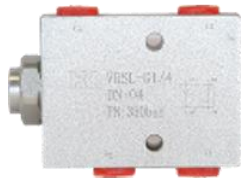
Order Code	Port Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
NHDR-G3/8-A250-B250	G 3/8	45	20 - 250	200	315	\$185.00
NHDR-G1/2-A250-B250	G 1/2	60				\$196.00

Single Pilot Operated Check Valves - Steel Body



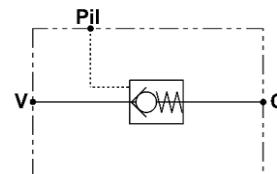
Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Length (mm)	List Each
VRSE-G1/4	G 1/4	20	350	4.5 : 1	3.5	116	\$85.00
VRSE-G3/8	G 3/8	50		4.0 : 1		139	\$90.00
VRSE-G1/2	G 1/2	80	300			173	\$95.00

Single Pilot Operated Check Valves - Steel Body



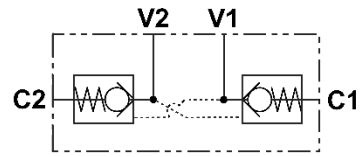
Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
VRSL-G1/4	G 1/4	20	350	7.1 : 1	3.5	\$121.00
VRSL-G3/8	G 3/8	30		4.0 : 1		\$134.00
VRSL-G1/2	G 1/2	50		3.2 : 1		\$146.00
VRSL-G3/4	G 3/4	100		4.0 : 1		\$170.00

Barrel Pilot Operated Check Valves - Steel Body



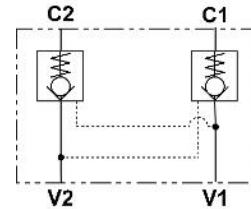
Order Code	Port Size	Pilot Port	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
VRPE-G1/4	G 1/4	G 1/4	25	350	3.6 : 1	3.5	\$92.00
VRPE-G3/8	G 3/8		40		3.2 : 1		\$97.00
VRPE-G1/2	G 1/2		60		2.8 : 1		\$119.00
VRPE-G3/4	G 3/4		100	3.2 : 1	\$218.00		
VRPE-G1	G 1		150	300	6.2 : 1		\$279.00

Double Pilot Operated Check Valves - Steel Body



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Length (mm)	List Each
VRDE-G1/4	G 1/4	20	350	4.5 : 1	3.5	116	\$109.00
VRDE-G3/8	G 3/8	50		4.0 : 1		139	\$114.00
VRDE-G1/2	G 1/2	80	300			173	\$119.00

Double Pilot Operated Check Valves - Steel Body



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
VRDL-G1/4	G 1/4	20	350	7.1 : 1	3.5	\$170.00
VRDL-G3/8	G 3/8	30				\$180.00
VRDL-G1/2	G 1/2	50		4.0 : 1		\$194.00
VRDL-G3/4	G 3/4	100				\$339.00

3 Port Single Counterbalance Valves - Steel Body



Order Code	Port Size	Pilot Port	Max. Flow (L/min)	Adjustable Pressure (bar)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
HOV3-G3/8-210	G 3/8	G 1/4	50	60 - 210	315	4.3 : 1	3.8	\$146.00
HOV3-G1/2-210	G 1/2		80					\$165.00
HOV3-G3/4-210	G 3/4		120			6.8 : 1	2.5	\$289.00

Note: Factory Set 200 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.

Order Code	Port Size	Pilot Port	Max. Flow (L/min)	Adjustable Pressure (bar)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
HOV3-G3/8-315	G 3/8	G 1/4	50	100 - 315	315	4.3 : 1	3.8	\$146.00
HOV3-G1/2-315	G 1/2		80					\$165.00
HOV3-G3/4-315	G 3/4		120			6.8 : 1	2.5	\$289.00

Note: Factory Set 200 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.

4 Port Single Counterbalance Valves - Steel Body



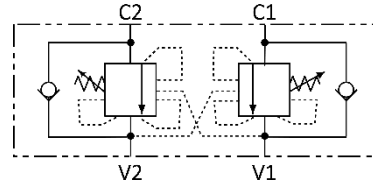
Order Code	Port Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
HOV4-G3/8-210	G 3/8	50	60 - 210	315	4.3 : 1	3.8	\$146.00
HOV4-G1/2-210	G 1/2	80					\$165.00
HOV4-G3/4-210	G 3/4	120			6.8 : 1	2.5	\$289.00

Note: Factory Set 200 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.

Order Code	Port Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
HOV4-G3/8-315	G 3/8	50	100 - 315	315	4.3 : 1	3.8	\$146.00
HOV4-G1/2-315	G 1/2	80					\$165.00
HOV4-G3/4-315	G 3/4	120			6.8 : 1	2.5	\$289.00

Note: Factory Set 200 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.

4 Port Dual Counterbalance Valves - Steel Body



Order Code	Port Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
HOW-G3/8-210	G 3/8	50	60 - 210	315	4.3 : 1	3.8	\$245.00
HOW-G1/2-210	G 1/2	80					\$290.00
HOW-G3/4-210	G 3/4	120			6.8 : 1	2.5	\$425.00

Note: Factory Set 200 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.

Order Code	Port Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
HOW-G3/8-315	G 3/8	50	100 - 315	315	4.3 : 1	3.8	\$245.00
HOW-G1/2-315	G 1/2	80					\$290.00
HOW-G3/4-315	G 3/4	120			6.8 : 1	2.5	\$425.00

Note: Factory Set 200 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.

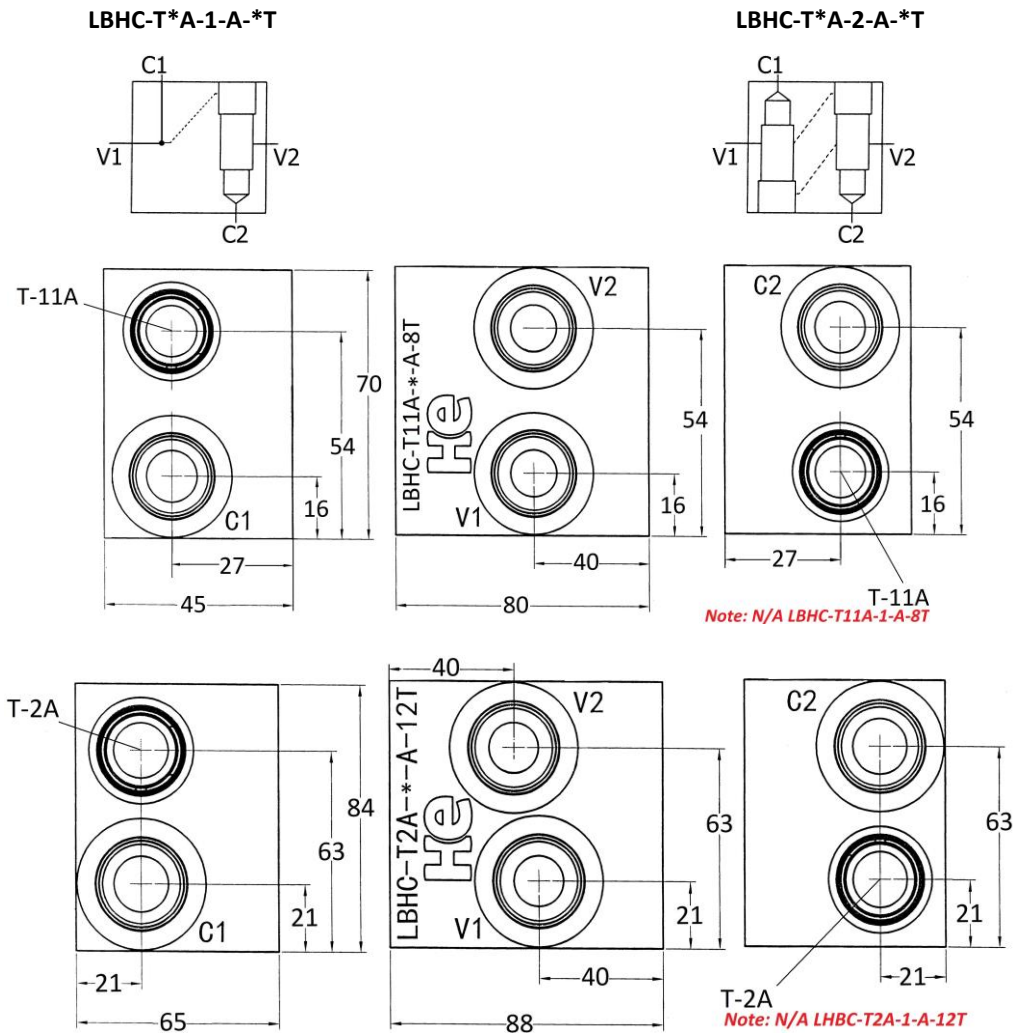
Cylinder Mount Counterbalance & Pilot Operated Check Valves



Order Code	Cavity	Ports	Material	Max. Pressure (bar)	List Each
LBHC-T11A-1-A-8T	T-11A x 1	3/4" UNO	Aluminium (6061T6)	210	\$135.00
LBHC-T11A-2-A-8T	T-11A x 2				\$148.00
LBHC-T2A-1-A-12T	T-2A x 1	1 1/16" UNO			\$182.00
LBHC-T2A-2-A-12T	T-2A x 2				\$204.00

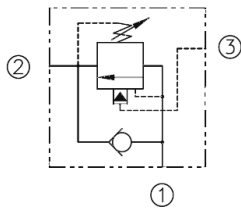
Note:

- LBHC-T*A-1-A -*T (single cavity body), load is held on port C2.
- Cartridge Information on [Page 4.09](#).



Continued Next Page

Counterbalance Valves

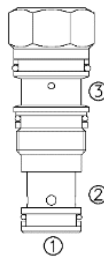
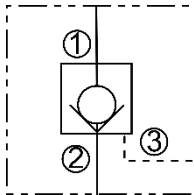


Order Code	Cavity	Max. Flow (L/min)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Adjustable Pressure (bar)	Factory Set (bar)	List Each
LCBCA-LAN	T-11A	60	3 : 1	0.3	70 - 280	210	\$125.00
LCBCA-LHN			3 : 1	1.7	70 - 280	210	\$125.00
LCBCA-LIN			3 : 1	1.7	25 - 105	70	\$125.00
LCBCH-LJN			10 : 1	1.7	140 - 350	210	\$135.00
LCBEA-LHN	T-2A	120	3 : 1	1.7	70 - 280	210	\$180.00

Note:

- Two check valve cracking pressures are available. Use the 1.7 bar check unless actuator cavitation is a concern. Generally, the 1.7 bar check spring is recommended for most applications as it is more robust and insensitive to rapid flow reversals. The 0.3 bar check spring should be used if there is a need to pull in make-up oil.
- Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.
- Additional information available on [Page 9.18](#).

Pilot Operated Check Valves



Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Pilot Piston Seal	Free Flow Cracking Pressure (bar)	List Each
LCKCB-XCN	T-11A	60	350	3 : 1	No	2.0	\$90.00
LCKCD-XCN					Yes		

Elbow Fittings



Order Code	Threads	HC Cylinder Bore	List Each
6807-08-06-NWO	3/4" UNO x 9/16" UNO	1.5" - 2.0"	\$28.00
6807-08-08-NWO	3/4" UNO x 3/4" UNO	2.5" - 5.0"	

Note:

- Elbow Fitting allows direct mounting of body to cylinder port. Not available for LBHC-T2A-*-A-12T.
- Tube & Fittings from body to the other cylinder port are not supplied.
- LBHC-T*A-1-A -*T (single cavity body), load is held on port C2.

Inline Check Valves (Poppet) - Steel Body (VUR Series being Superseded by DS Series)



Order Code	Port Size	Cracking Pressure (bar)	Max. Flow (L/min)	Max. Pressure (bar)	List Each
VUR-G3/4-0.5	G 3/4		110	400	\$46.00
VUR-G1 1/4-0.5	G 1 1/4		210	350	\$170.00
VUR-G1 1/2-0.5	G 1 1/2		320		\$203.00

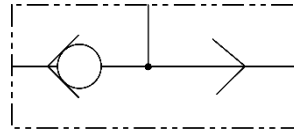
Order Code	Port Size	Cracking Pressure (bar)	Max. Flow (L/min)	Max. Pressure (bar)	List Each
VUR-G1/4-5.0	G 1/4	5.0	30	500	\$24.00
VUR-G3/8-5.0	G 3/8		45	350	\$27.00
VUR-G1 1/4-5.0	G 1 1/4		210		\$170.00
VUR-G1 1/2-5.0	G 1 1/2		320	\$203.00	



Order Code	Port Size	Cracking Pressure (bar)	Max. Flow (L/min)	Max. Pressure (bar)	List Each
DS-G1/4-0.5	G 1/4	0.5	15	315	\$28.00
DS-G3/8-0.5	G 3/8		30		\$32.00
DS-G1/2-0.5	G 1/2		40		\$36.00
DS-G3/4-0.5	G 3/4		120		\$46.00
DS-G1-0.5	G 1		200		\$70.00
DS-G1 1/4-0.5	G 1 1/4		300		\$170.00
DS-G1 1/2-0.5	G 1 1/2		400		\$203.00

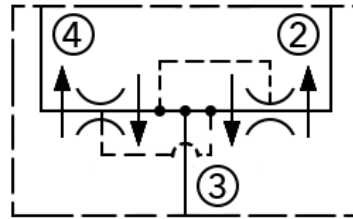
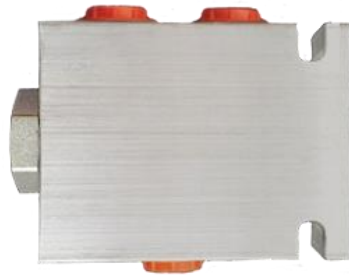
Order Code	Port Size	Cracking Pressure (bar)	Max. Flow (L/min)	Max. Pressure (bar)	List Each
DS-G1/4-5.0	G 1/4	5.0	15	315	\$28.00
DS-G3/8-5.0	G 3/8		30		\$32.00
DS-G1/2-5.0	G 1/2		40		\$36.00
DS-G3/4-5.0	G 3/4		120		\$46.00
DS-G1-5.0	G 1		200		\$70.00
DS-G1 1/4-5.0	G 1 1/4		300		\$170.00
DS-G1 1/2-5.0	G 1 1/2		400		\$203.00

Shuttle Valves - Steel Body



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	List Each
VUSF-G1/4	G 1/4	20	350	\$59.00
VUSF-G3/8	G 3/8	45		\$70.00
VUSF-G1/2	G 1/2	80		\$88.00
VUSF-G3/4	G 3/4	110		\$146.00

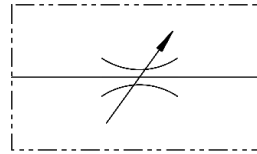
Flow Divider / Combiner - Alloy Body



Order Code	Port Size	Max. Inlet Flow at ③ (L/min)	Ratio	Max. Pressure (bar)	List Each
LFD-10-3.0	N/A	11.4	50 : 50	240	\$172.00
LFD-10-6.0		22.7			
LFD-10-12.0		45.4			
LFD-10-16.0		60.6			
LB10-4-A-3G/S	G 3/8	N/A	N/A	210	\$81.00
LB10-4-A-4G/S	G 1/2				

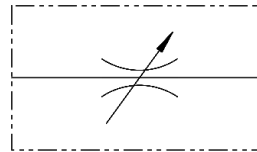
Note: Cartridge & Body are sold separately and not assembled.

Needle Valves



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Materials	List Each
NV-G1/8	G 1/8	14	315	Body: Steel - Phosphate surface Knob: Aluminium - Zinc plated	\$55.00
NV-G1/4	G 1/4	40			\$58.00
NV-G3/8	G 3/8	60			\$69.00
NV-G1/2	G 1/2	85			\$83.00
NV-G3/4	G 3/4	175			\$105.00
NV-G1	G 1	200			\$156.00
NV-G1 1/4	G 1 1/4	300			\$344.00
NV-G1 1/2	G 1 1/2	400			\$494.00

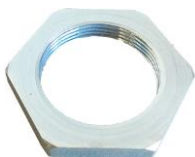
Note: Locking Grub Screw on Knob.



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Materials	List Each
STB-G1/4	G 1/4	12	400	Body: Steel - Cr3+ (White Zinc Plating) Knob: Aluminium (Clear Anodised)	\$58.00
STB-G3/8	G 3/8	30			\$69.00
STB-G1/2	G 1/2	50			\$83.00
STB-G3/4	G 3/4	85			\$105.00
STB-G1	G 1	150	320		\$156.00

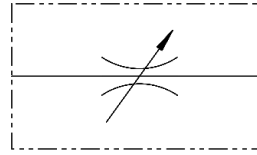
Note: Locking Grub Screw on Knob.

STB Series Panel Mount Nut



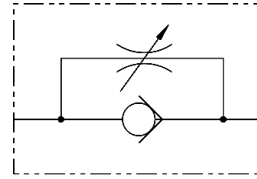
Order Code	Suits Valve	Material	List Each
STN-G1/4	STB-G1/4	Steel – Zinc Plated	\$8.00
STN-G3/8	STB-G3/8		\$9.00
STN-G1/2	STB-G1/2		\$10.00
STN-G3/4	STB-G3/4		\$11.00
STN-G1	STB-G1		\$13.00

Barrel Needle Valves



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	List Each
VBRF-G1/4	G 1/4	12	320	\$69.00
VBRF-G3/8	G 3/8	30		\$83.00
VBRF-G1/2	G 1/2	50		\$97.00
VBRF-G3/4	G 3/4	85	280	\$117.00
VBRF-G1	G 1	120	250	\$158.00

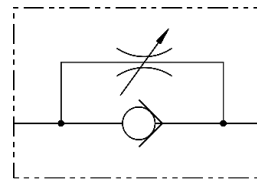
Flow Control Valves



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Materials	List Each
FC-G1/8	G 1/8	14	315	Body: Steel - Phosphate surface Knob: Aluminium - Zinc plated	\$59.00
FC-G1/4	G 1/4	40			\$61.00
FC-G3/8	G 3/8	60			\$72.00
FC-G1/2	G 1/2	85			\$88.00
FC-G3/4	G 3/4	175			\$110.00
FC-G1	G 1	200			\$230.00
FC-G1 1/4	G 1 1/4	300			\$373.00
FC-G1 1/2	G 1 1/2	400			\$556.00

Note:

- Locking Grub Screw on Knob.
- Free Flow Cracking Pressure 0.5 bar.

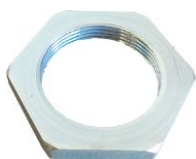


Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Materials	List Each
STU-G1/4	G 1/4	12	400	Body: Steel - Cr3+ (White Zinc Plating) Knob: Aluminium (Clear Anodised)	\$61.00
STU-G3/8	G 3/8	30			\$72.00
STU-G1/2	G 1/2	50			\$88.00
STU-G3/4	G 3/4	85			\$110.00
STU-G1	G 1	150	320		\$161.00

Note:

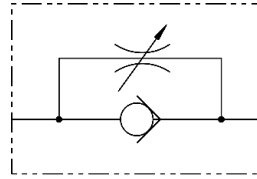
- Locking Grub Screw on Knob.
- Free Flow Cracking Pressure 0.5 bar.

STU Series Panel Mount Nut



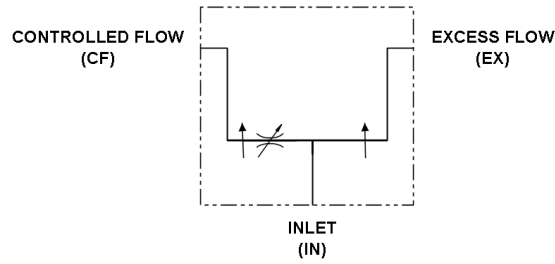
Order Code	Suits Valve	Material	List Each
STN-G1/4	STU-G1/4	Steel – Zinc Plated	\$8.00
STN-G3/8	STU-G3/8		\$9.00
STN-G1/2	STU-G1/2		\$10.00
STN-G3/4	STU-G3/4		\$11.00
STN-G1	STU-G1		\$13.00

Barrel Flow Control Valves



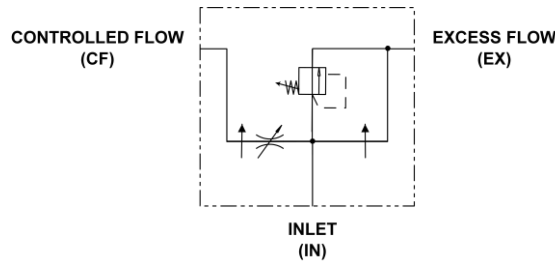
Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	List Each
VURF-G1/4	G 1/4	12	320	0.5	\$71.00
VURF-G3/8	G 3/8	30			\$85.00
VURF-G1/2	G 1/2	50			\$99.00
VURF-G3/4	G 3/4	85	280		\$119.00
VURF-G1	G 1	120	250		\$194.00

Priority Flow Control Valves



Order Code	Port Size	Max. Flow - IN & CF (L/min)	Max. Pressure (bar)	List Each
FC51-G3/8	G 3/8	30	207	\$242.00
FC51-G1/2	G 1/2	60		
FC51-G3/4	G 3/4	114		
FC51-G1	G 1	190		\$944.00
FC51-G1 1/4	G 1 1/4	340		

Priority Flow Control Valves with Relief



Order Code	Port Size	Max. Flow - IN & CF (L/min)	Preset Pressure (bar)	Adjustable Pressure (bar)	Max. Pressure (bar)	List Each
FCR51-G3/8	G 3/8	30	145	52 - 207	207	\$267.00
FCR51-G1/2	G 1/2	60				
FCR51-G3/4	G 3/4	114				

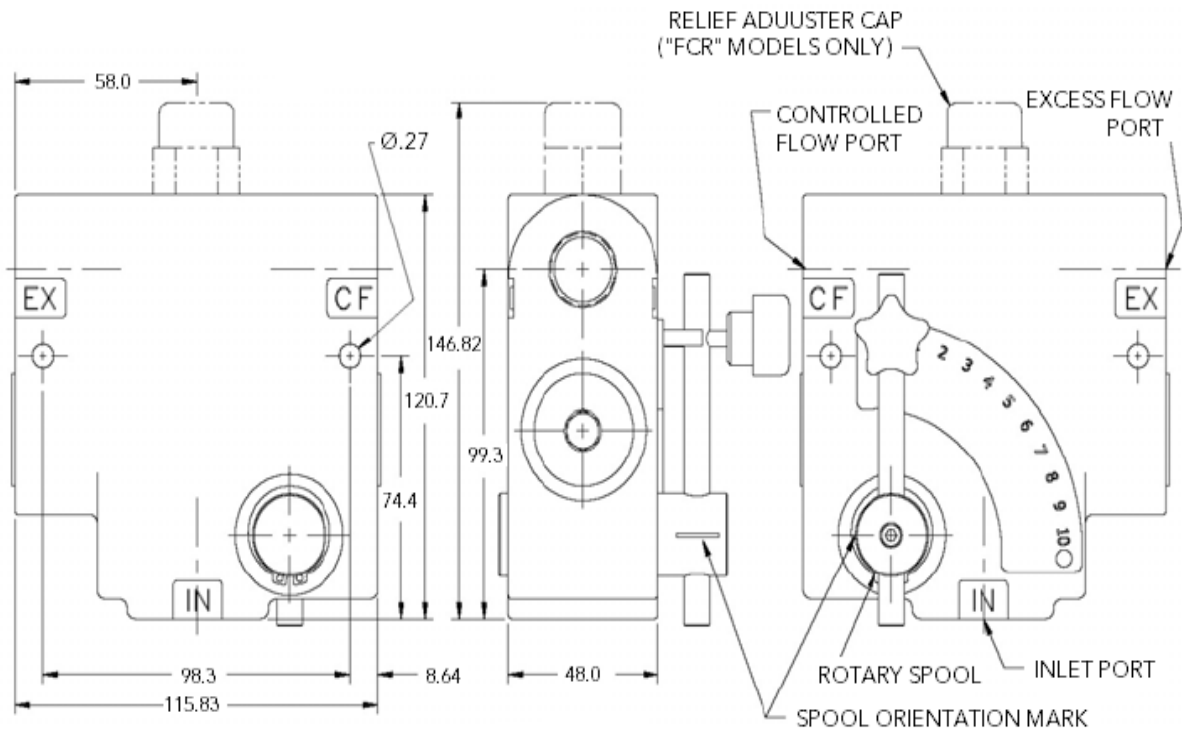
General Information

The Hoyea full range pressure compensating variable flow control is designed so that the orifice area varies as the lever is rotated. Fluid travels past the variable orifice, through the compensator spool and then out the controlled flow port. Therefore, the flow out of the CF port is proportional to the orifice area which can vary from closed to open. The sum of the controlled flow and the excess flow equals the inlet flow and as the controlled flow increases the excess flow decreases. Both outlet flows are pressure compensated with a spool that maintains a constant flow by adjusting for pressure. Hunting between the compensated pump and valve is dampened with a dashpot on the compensator spool. Therefore, the outlet flow is smooth and constant regardless of the pressure on the CF and EX port. External seals on the rotary spool prevent contamination from getting between the spool and the casting, thus preventing the spool from locking in one position.

The adjustable ball spring relief valve (FCR51 Models) allows pressure compensated flow up to the pressure relief setting. Once the pressure on the CF port increases above the relief setting the relief valve opens and diverts flow to the EX port while maintaining the pressure on the CF port. **Note: The EX port must be connected back to tank.**

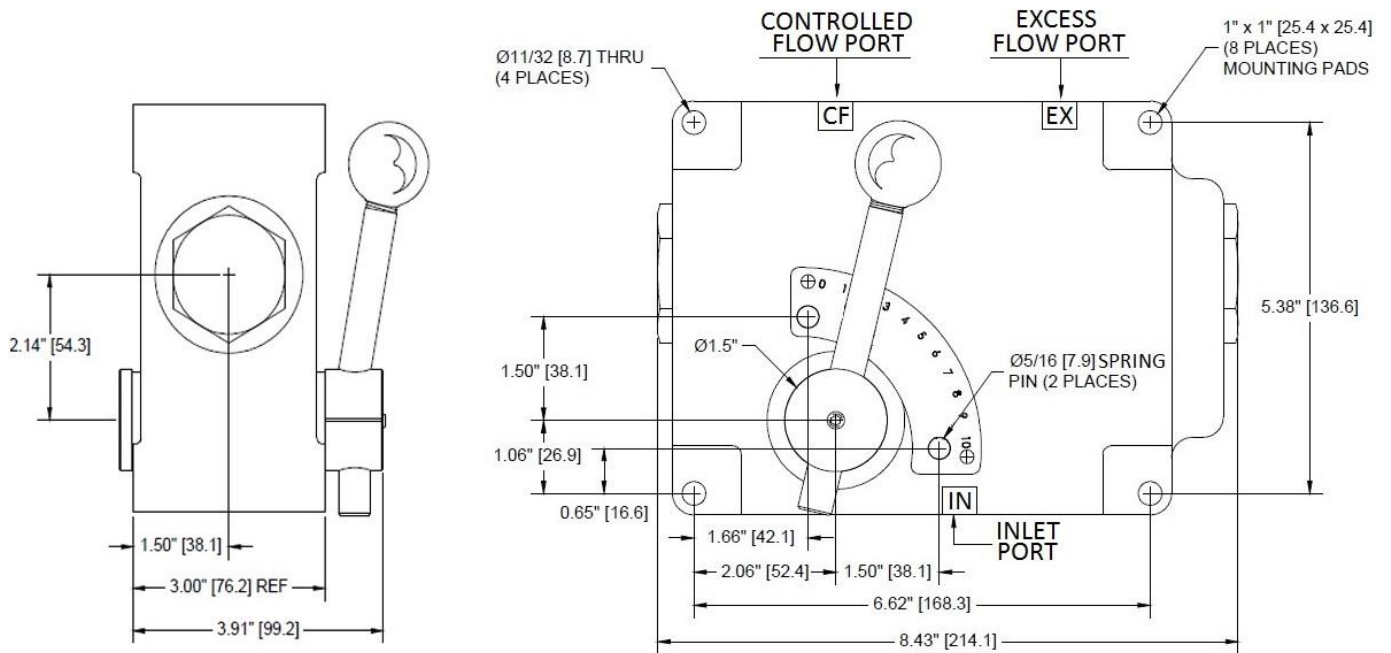
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FC(R)51-G3/8, G1/2 & G3/4



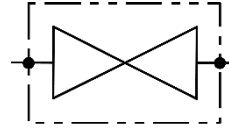
NOTE: ALL DIMENSIONS ARE FOR REFERENCE ONLY.

FC51-G1 & G1 1/4



NOTE: ALL DIMENSIONS ARE FOR REFERENCE ONLY

2 Way Steel Ball Valves



Order Code	Port Size	Nominal Dia. (DN)	Ball Hole Dia.	Max. Pressure (bar)	List Each
KHB-G1/8-04-11231-B	G 1/8	04	4	500	\$40.00
KHB-G1/4-06-11231-B-MH	G 1/4	06	6		\$42.00
KHB-G3/8-10-11231-B-MH	G 3/8	10	10		\$51.00
KHB-G1/2-13-11231-B-MH	G 1/2	13	13		\$54.00
KHB-G3/4-20-11231-B-MH	G 3/4	20	20	315	\$94.00
KHB-G1-25-11231-B-MH	G 1	25	25		\$124.00
KHB-G1 1/4-32-11231-B-MH	G 1 1/4	32	32		\$187.00
KHB-G1 1/2-40-11231-B-MH	G 1 1/2	40	40		\$242.00

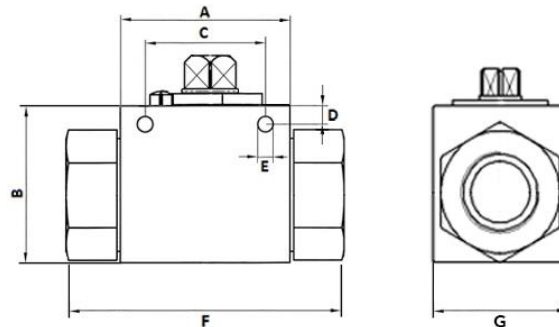
Note: Ball Seal material is POM, Valve Stem & Body Seal material is NBR.

2 Way SUS 316 Ball Valves

Order Code	Port Size	Nominal Dia. (DN)	Ball Hole Dia.	Max. Pressure (bar)	List Each
KHB-G1/4-06-33231	G 1/4	06	6	500	\$249.00
KHB-G3/8-10-33231	G 3/8	10	10		\$303.00
KHB-G1/2-13-33231	G 1/2	13	13		\$347.00

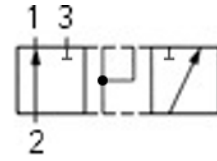
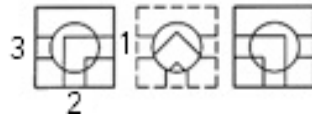
Note: Ball Seal material is POM, Valve Stem & Body Seal material is NBR.

2 Way Ball Valve Dimensions



Port Size	A	B	C	D	E	F	G
G 1/8	40	32	N/A	N/A	N/A	69	26
G 1/4	40	32	31.5	4.8	∅ 4.5	69	26
G 3/8	42	40	31.5	5.0	∅ 6.5	72	34
G 1/2	48	45	38.5	6.0	∅ 6.5	83	35
G 3/4	60	56	48.5	6.0	∅ 6.5	95	48
G 1	64	64	50.5	7.0	∅ 8.5	113	58
G 1 1/4	72	75	50.5	7.0	∅ 8.5	110	68
G 1 1/2	80	86	63.0	7.0	∅ 8.5	130	80

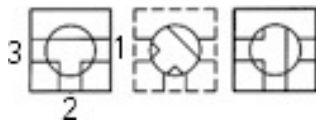
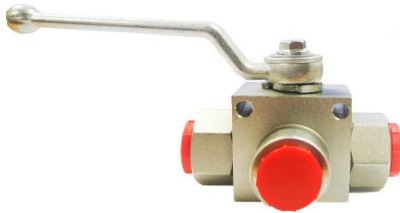
3 Way Steel Ball Valves (L – Type, Negative Overlap)



Order Code	Port Size	Nominal Dia. (DN)	Ball Hole Dia.	Max. Pressure (bar)	List Each
KHB3L-G1/8-04-11231-B	G 1/8	04	4	500	\$55.00
KHB3L-G1/4-06-11231-B-MH	G 1/4	06	6		\$58.00
KHB3L-G3/8-10-11231-B-MH	G 3/8	10	10		\$68.00
KHB3L-G1/2-13-11231-B-MH	G 1/2	13	12		\$74.00
KHB3L-G3/4-20-11231-B-MH	G 3/4	20	20	315	\$143.00
KHB3L-G1-25-11231-B-MH	G 1	25	25		\$160.00
KHB3L-G1 1/4-32-11231-B-MH	G 1 1/4	32	30		\$303.00
KHB3L-G1 1/2-40-11231-B-MH	G 1 1/2	40	36		\$376.00

Note: Ball Seal material is POM, Valve Stem & Body Seal material is NBR.

3 Way Steel Ball Valves (T – Type, Negative Overlap)



Order Code	Port Size	Nominal Dia. (DN)	Ball Hole Dia.	Max. Pressure (bar)	List Each
KHB3T-G1/8-04-11231-B	G 1/8	04	4	500	\$55.00
KHB3T-G1/4-06-11231-B-MH	G 1/4	06	6		\$58.00
KHB3T-G3/8-10-11231-B-MH	G 3/8	10	10		\$68.00
KHB3T-G1/2-13-11231-B-MH	G 1/2	13	12		\$74.00
KHB3T-G3/4-20-11231-B-MH	G 3/4	20	20	315	\$143.00
KHB3T-G1-25-11231-B-MH	G 1	25	25		\$160.00
KHB3T-G1 1/4-32-11231-B-MH	G 1 1/4	32	30		\$303.00
KHB3T-G1 1/2-40-11231-B-MH	G 1 1/2	40	36		\$376.00

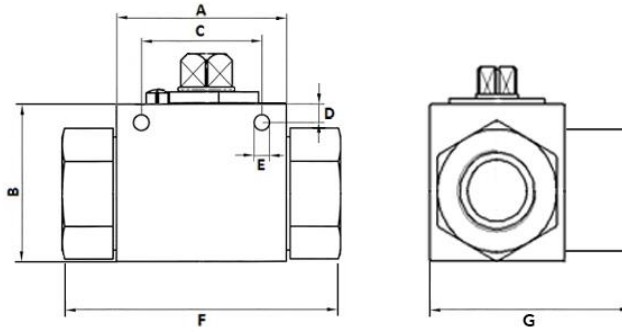
Note: Ball Seal material is POM, Valve Stem & Body Seal material is NBR.

Negative Overlap:

With a negative overlapping ball in the mid position (45°) flow will be directed simultaneously from Port 2 to 1 & 3. Blocking all ports by switching the ball in a middle position is not possible.

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3 Way Ball Valve Dimensions



Port Size	A	B	C	D	E	F	G
G 1/8	39	32	N/A	N/A	N/A	69	49
G 1/4	39	32	31.5	4.8	Ø 4.5	69	49
G 3/8	41	40	31.5	5.0	Ø 6.5	72	52
G 1/2	48	45	38.5	6.0	Ø 6.5	83	53
G 3/4	59	56	48.5	6.0	Ø 6.5	95	73
G 1	63	63	50.5	7.0	Ø 8.5	113	85
G 1 1/4	72	75	50.5	7.0	Ø 8.5	110	93
G 1 1/2	80	86	63.0	7.0	Ø 8.5	130	108

Ball Valve Handles



Order Code	Port Size	Handle Marking	Stem Size (mm)	Screw Thread Size	List Each
KHBH-7	G 1/8 (Old Design)	SW7	7	M4	\$9.00
	G 1/4 (Old Design)				
KHBH-9	G 1/8 (New Design)	SW9	9	M5 – Old Design M6 – New Design	\$11.00
	G 1/4 (New Design)				
	G 3/8				
KHBH-12	G 1/2	SW12	12		\$14.00
	G 3/4				
KHBH-14	G 1	SW14	14	M8	\$16.00
	G 1 1/4				
	G 1 1/2				

Note: Handle is marked as 2 way and includes one screw, one standard washer and two flow direction washers (3-Way L & 3-Way T). N/A - G 1/8 & G 1/4 Old Design. Supplied with one screw and one standard washer.

Ball Valve Order Code

KHB – G** - 13 - 1 1 2 3 1 - B - MH

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① **Series Code**

KHB = 2 Way
KHB3L = 3 Way L Configuration
KHB3T = 3 Way T Configuration

② **Port Connection**

G** = (BSPP Female) (Standard)
M** = (Metric Male)
N** = (NPT Female)
R** = (BSPT / PT Female)
U** = (UNO Female)
LR** = (24° Cone Connection - Light Series)
(DIN 2353 / ISO 8434-1)
SR** = (24° Cone Connection - Heavy Series)
(DIN 2353 / ISO 8434-1)

③ **Nominal Diameter**

④ **Valve Body Material**

1 = Steel
2 = SUS304
3 = SUS316

⑤ **Ball & Stem Material**

1 = Steel
2 = SUS304
3 = SUS316

⑥ **Ball Seal Material**

2 = POM (Delrin®, - 30 °C ≈ +100 °C) (Standard)
3 = PTFE (Teflon®, - 200 °C ≈ +200 °C)
4 = PEEK (Polyetheretherketone, - 40 °C ≈ +250°C)

⑦ **Valve Stem & Body Seals**

2 = PTFE (Teflon®, - 200 °C ≈ +200 °C)
3 = NBR (Nitrile, Buna-N, - 30 °C ≈ +100 °C) (Standard)
4 = FPM (FKM, Viton®, - 200 °C ≈ +200 °C)

⑧ **Handle Type**

1 = Zinc Casting Offset (Crank) (Standard)
2 = Zinc Casting Straight

⑨ **Surface Treatment**

Omit for Stainless Steel
B = Cr3+ (White Zinc Plating) (Standard)
H = Chemical (Electroless) Nickel
P = Phosphoric

⑩ **MH**

Mounting Holes (N/A G1/8 & Standard G 1/4 to G 1 1/2)

Solenoid Selector (Diverter) Valves



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Basic Symbol	Transient Condition	List Each
SV-3238-***-Z5L-50	G 3/8	50	210			\$257.00
SV-3212-***-Z5L-50	G 1/2	80	210			\$279.00
SV-6214-***-Z5L-50	G 1/4	25	250			\$258.00
SV-6238-***-Z5L-50	G 3/8	40	210			\$267.00
SV-6212-***-Z5L-50	G 1/2	60	210			\$303.00
SV-6234-***-Z5L-50	G 3/4 Drain G 1/4	100	210 (Drain Plugged) 315 (Drain Connected)			\$468.00

Note: Valves supplied with DIN Light Plug.



Max. Flow: 80 L/min		Max. Pressure: 210 bar		Ports Size: G 1/2	
Order Code	Description	Basic Symbol	Transient Condition	List Each	
SVV-4102266	SVV-G-12V			\$431.00	
SVV-4103561	SVV-G-24V				

Note:

- Valves supplied with DIN Light Plug.
- SVV Inlet Ports can be changed to Right Inlet by reversing Spool, End Plug & Solenoid.

Continued Next Page

SV Series Selector (Diverter) Valve Order Code

SV - *2 - *** - Z5L - ** - ***** - * - 50**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① **Selector Valve – Solenoid Operated**

② **Valve Type:**

32 = 3 port / 2 position

62 = 6 port / 2 position

③ **Port Size:**

14 = G 1/4

38 = G 3/8

12 = G 1/2

34 = G 3/4

④ **Coil Voltage:**

D12 = 12V DC

D24 = 24V DC

D36 = 36V DC (N/A SV-6234)

D48 = 48V DC (N/A SV-6234)

R110 = 110V AC (Rectifier in coil) (N/A SV-6234)

R220 = 220V AC (Rectifier in coil) (N/A SV-6234)

Note: SV-3212 requires coil ID machined from 31.0mm to 31.5mm for D36, D48, R110 & R220.

Purchaser to make this modification.

⑤ **Electrical Connector:**

Z5L = DIN Plug with Light (standard)

⑥ **Manual Override Option:**

Omit = Plain override on solenoid end only

(No override in non-solenoid end of valve)

LMO = Locking Manual Override

N9 = Extended Push Pin with M5 male thread (N/A SV-6234)

⑦ **N9 Options: (N/A SV-6234)**

Omit = M5 male thread only

RB = Red Ball

RC = Rubber Cap (SV-3238 & SV-6238 only)

⑧ **Seal Material:**

Omit = NBR (Standard)

V = FPM (Indent)

⑨ **Design Number**



SV-*238 coil shown with N9 plus RB & RC fitted

SV Series Coils, Accessories & Spare Parts



Coil



Locking Manual Override



Rubber Cap



Red Ball



Core Tube with N9

SV-*214 & SV-*238			
Order Code	Description	Coil Dimensions	List Each
FW-3-D12-Z5L-50	12V DC DIN Coil (DIN Light Plug included)	23 ID x 45 OD x 51 L	\$51.00
FW-3-D24-Z5L-50	24V DC DIN Coil (DIN Light Plug included)		
FW-3-D36-Z5L-50	36V DC DIN Coil (DIN Light Plug included)		
FW-3-D48-Z5L-50	48V DC DIN Coil (DIN Light Plug included)		
FW-3-R110-Z5L-50	110V AC Rectified DIN Coil (DIN Light Plug included)		
FW-3-R220-Z5L-50	220V AC Rectified DIN Coil (DIN Light Plug included)		
FW-3-DC-CT-50	DC Core Tube		\$31.00
FW-3-DC-CT-N9-50	DC Core Tube with N9 Manual Override – M5 Male Thread		\$37.00
FW-3-DC-LMO-50	DC Locking Manual Override		\$31.00
FW-3-DC-NUT-50	DC Coil / Core Tube Nut (M22 x 1.5)		\$5.00
FW-RB	Red Ball		\$6.00
FW-3-RC-50	Rubber Cap (no manual override) – use with FW-3-DC-CT-N9-50		\$5.00

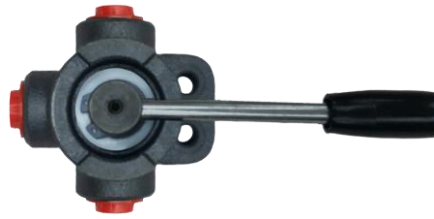
SV-*212			
Order Code	Description	Coil Dimensions	List Each
FW-5-D12-Z5L-50	12V DC DIN Coil (DIN Light Plug included)	31.0 ID x 63 OD x 75 L	\$80.00
FW-5-D24-Z5L-50	24V DC DIN Coil (DIN Light Plug included)		
FW-5-D36-Z5L-50	36V DC DIN Coil (DIN Light Plug included)		
FW-5-D48-Z5L-50	48V DC DIN Coil (DIN Light Plug included)		
FW-5-R110-Z5L-50	110V AC Rectified DIN Coil (DIN Light Plug included)		
FW-5-R220-Z5L-50	220V AC Rectified DIN Coil (DIN Light Plug included)		
FW-5-D12-Z5L-51	12V DC DIN Coil (DIN Light Plug included)	31.5 ID x 63 OD x 75 L	\$80.00
FW-5-D24-Z5L-51	24V DC DIN Coil (DIN Light Plug included)		
FW-5-DC-CT-50	DC Core Tube		\$49.00
FW-5-DC-CT-N9-50	DC Core Tube with N9 Manual Override - M5 Male Thread		\$73.00
FW-5-DC-LMO-50	DC Locking Manual Override		\$54.00
FW-5-DC-NUT-50	DC Coil / Core Tube Nut (M30 x 1.5)		\$7.00
FW-RB	Red Ball - use with FW-5-DC-CT-N9-50		\$6.00

DIN Plugs



Order Code	Voltage	Description	List Each
DLP-A110	110V AC	DIN Light Plug	\$13.00
DLP-A220	220V AC		
DLP-D12	12V DC		
DLP-D24	24V DC		
DLP-D36	36V DC		
DLP-D48	48V DC		

Manual Selector (Diverter) Valves



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Basic Symbol	List Each
RV-3-G3/8-A	G 3/8	60	315		\$80.00
RV-3-G1/2-A	G 1/2	90			\$101.00
RV-3-G3/4-A	G 3/4	120			\$128.00
RV-3-G1-A	G 1	200	250		\$170.00

Note: Closed Centre Crossover (Code B) are available as indent to customer order.



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Basic Symbol	List Each
RV-6-G3/8-A	G 3/8	60	315		\$165.00
RV-6-G1/2-A	G 1/2	90			\$207.00
RV-6-G3/4-A	G 3/4	120			\$262.00
RV-6-G1-A	G 1	200	250		\$347.00

Note: Closed Centre Crossover (Code B) are available as indent to customer order.



Order Code	Port Size	List Each
RV-6-G3/8-ASSY KIT	G 3/8	\$5.00
RV-6-G1/2- ASSY KIT	G 1/2	\$5.00
RV-6-G3/4- ASSY KIT	G 3/4	\$6.00
RV-6-G1- ASSY KIT	G 1	\$7.00

Note: RV-6-G**-A valve consists of 2 x RV-3-G**-A valves & 1 x RV-6-G**-ASSY KIT.

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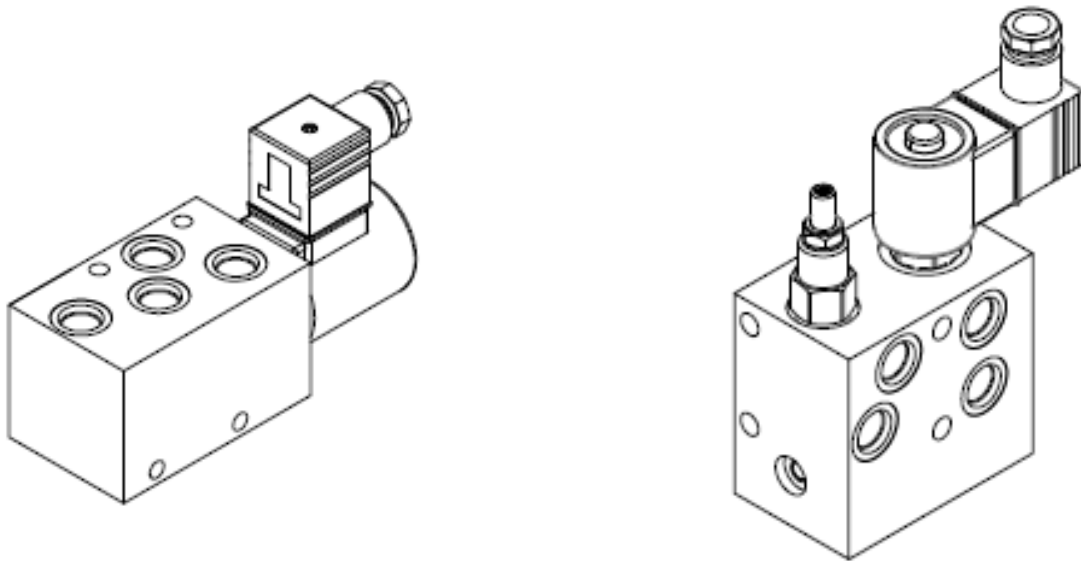


Max. Pressure: 315 bar						
Order Code	Description	Port Size	Max. Flow (L/min)	Basic Symbol	Transient Condition	List Each
DV60-4101034	DV60(R)-A11KZ1-G38	G 3/8	60			\$300.00
DV90-4113644	DV90-A11KZ1-G	G 1/2	90			\$388.00

Note:

- Closed Centre Crossover (Code B) are available as indent to customer order.
- DV60 Inlet Ports can be changed to Left Inlet by reversing Spool & Controls.
- DV90 Inlet Ports can be changed to Right Inlet by reversing Spool & Controls. Post April 2021 stock only.

Quick Hitch Valves - Steel Body



Order Code	Ports	Max. Flow (L/min)	Max. Inlet Pressure (bar)	Max. Outlet Pressure (bar)	Factory Set (bar)	Locking Manual Override	List Each
QHV-207-207-*H	G 1/4	11	207	207	N/A	No	\$297.00
QHV-207-207-*H-LMO						Yes	\$331.00
QHV-350-207-*H			350	207	172	No	\$672.00
QHV-350-207-*H-LMO						Yes	\$706.00
QHV-350-350-*H			350	350	N/A	No	\$483.00
QHV-350-350-*H-LMO						Yes	\$534.00

Note:

- * = Coil Voltage
1 = 12V DC
2 = 24V DC
- All components are supplied loose for customer assembly.
- Lubricate cartridge valve seals with oil or grease before assembly.
- Valves supplied with DIN Light Plug.
- Coil must be installed with letters up, so they are closest to the Coil Retaining Nut.
- QHV-350-350-*H comes standard with Non-Locking Manual Override.
For QHV-350-350-*H-LMO replace the standard Coil Retaining Nut with the special Coil Retaining Nut.

QHV-207-207-*H-LMO & QHV-350-207-*H-LMO (Locking Manual Override) Operation:

- Normal Operation, push red button in and turn clockwise.
- To override, push red button in, twist counterclockwise and release.

QHV-350-350-*H (Non-Locking Manual Override) operation:

- To override, push button in. This will shift the valve.
- To return to the de-energised position, release button.

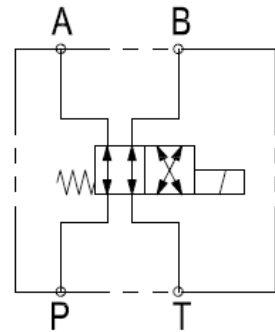
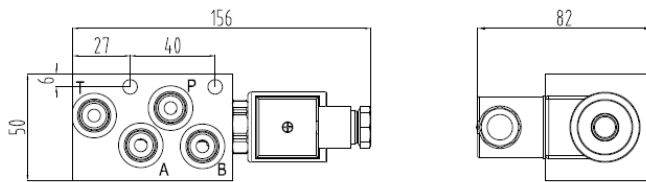
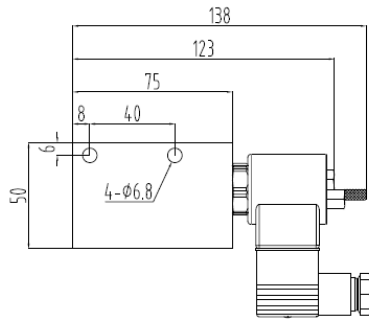
QHV-350-350-*H-LMO (Locking Manual Override) Operation:

- To override, screw the knob clockwise until it stops. This will shift the valve.
- To return to the de-energised position, screw the knob counterclockwise until it stops.

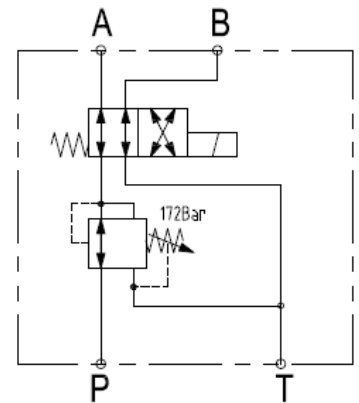
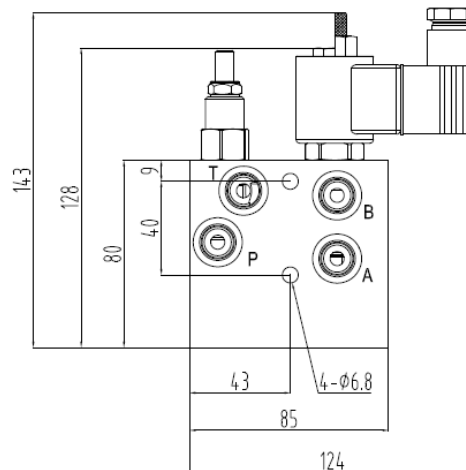
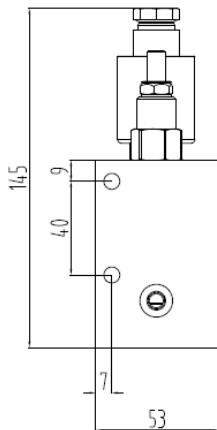
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Quick Hitch Valve Dimensions

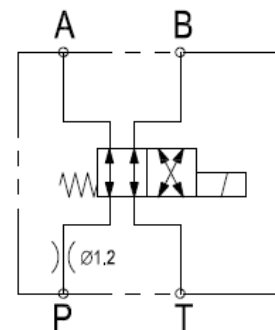
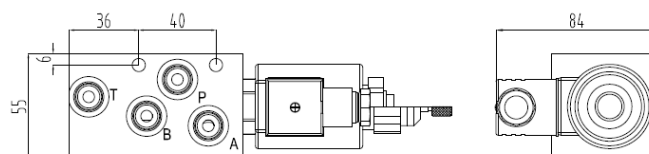
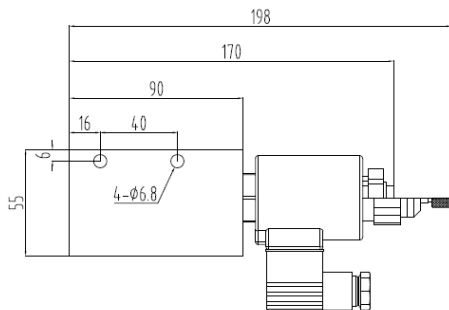
QHV-207-207-*H (-LMO)



QHV-350-207-*H (-LMO)



QHV-350-350-*H (-LMO)



Cetop Products

Directional Valves

<i>Specification</i>	5.02
<i>Order Code</i>	5.02
<i>Spool Description</i>	5.02
<i>FW Solenoid Stock Valves</i>	5.03
<i>FWS Solenoid / Lever Stock Valves</i>	5.04
<i>FW & FWS Spool Types & Spring Arrangements</i>	5.05
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Modules

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<i>Check Valves</i>	5.12
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Subplates, Manifolds & Bolt Kits

<i>Cetop 3 (NG6) Subplates</i>	5.26
<i>Cetop 3 (NG6) Manifolds</i>	5.29
<i>Cetop 5 (NG10) Subplates</i>	5.32
<i>Cetop 5 (NG10) Manifolds</i>	5.34
<i>Bolt Kits – M5</i>	5.37
<i>Bolt Kits – M6</i>	5.38



Directional Valves

Specification

Valve Size		Cetop 3		Cetop 5	
Working Pressure (bar)	Ports P, A, B	350		315	
	Port T	100		100	
Max Flow (depends on spool)	L/min	80		120	
Fluid Temp (°C)	- 20 ~ +70				
Working Voltage	DC	12	24	36	48
	AC	110V/50Hz		220 V/50Hz	
Max. Switch Frequency (T/h)	15000 (DC)		7200 (AC)		
Protection: IP65					



Order Code

F* - * - * - *** - *** - *** - **** - * - 50**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

- ① **Control Type**
FW = Solenoid
FS = Lever
FWS = Solenoid / Lever
- ② **Valve Size:**
3 = Cetop 3 (NG6)
5 = Cetop 5 (NG10)
- ③ **Spool Type & Spring Arrangement**
- ④ **Coil Voltage:**
D12 = 12V DC
D24 = 24V DC
D36 = 36V DC
D48 = 48V DC
R110 = 110V AC (Rectifier in coil)
R220 = 220V AC (Rectifier in coil)
- ⑤ **Electrical Connector:**
Z5L = DIN Plug with Light (standard)
Z6 = Wire Box Type (indent)
K40 = Deutsch Connector (Indent)
- ⑥ **Manual Override Option:**
Omit = Plain override(s) on solenoid end(s) only
(No override on non-solenoid end of single solenoid valves)
LMO = Locking Manual Override
N9 = Extended Push Pin with M5 male thread
- ⑦ **N9 Options:**
Omit = M5 male thread only
RB = Red Ball
RC = Rubber Cap (Cetop 3 only)
- ⑧ **Seal Material:**
Omit = NBR (Standard)
V = FPM (Indent)
- ⑨ **Design Number**

Spool Description

Basic Symbol	Transient Condition	Spool Code	Description of Spool Function
		3C2	Closed centre spool. Commonly Called a Cylinder spool. All ports blocked in the centre position and during crossover.
		3C3	Open centre spool. All ports connected in the centre position and during crossover. Minimises shock during crossover.
		3C4	Commonly called a Motor spool. Pressure port blocked. Both A & B ports connected to tank.
		3C6	Tandem centre spool with open crossover. During transition from centre to offset position, all ports are interconnected to minimise shock in the system.

FW Solenoid Stock Valves



FW-3-***-*** -Z5L-50

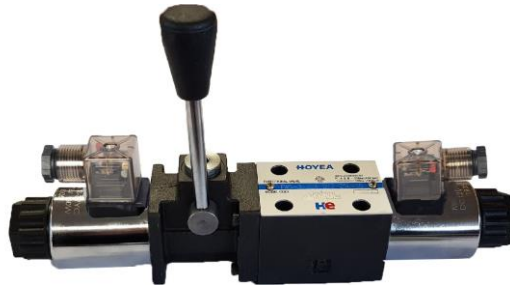


FW-3-***-*** -Z5L-LMO-50

Order Code	Basic Symbol A B b b a P T	Transient Condition A B b a P T	List Each
FW-3-2B2- *** -Z5L-50			\$176.00
FW-5-2B2- *** -Z5L-50			\$249.00
FW-3-2B3- *** -Z5L-50			\$176.00
FW-5-2B3- *** -Z5L-50			\$249.00
Order Code	Basic Symbol A B b b 0 P T	Transient Condition A B b 0 P T	List Each
FW-3-2B3B- *** -Z5L-50			\$176.00
FW-5-2B3B- *** -Z5L-50			\$249.00
FW-3-2B4B- *** -Z5L-50			\$176.00
FW-5-2B4B- *** -Z5L-50			\$249.00
FW-3-2B6B- *** -Z5L-50			\$176.00
FW-5-2B6B- *** -Z5L-50			\$249.00
Order Code	Basic Symbol A B a b b a P T	Transient Condition A B b a P T	List Each
FW-3-2D2- *** -Z5L-50			\$213.00
FW-5-2D2- *** -Z5L-50			\$315.00
FW-3-2D3- *** -Z5L-50			\$213.00
FW-5-2D3- *** -Z5L-50			\$315.00
Order Code	Basic Symbol A B a b 0 a P T	Transient Condition A B b 0 a P T	List Each
FW-3-3C2- *** -Z5L-50			\$213.00
FW-5-3C2- *** -Z5L-50			\$315.00
FW-3-3C3- *** -Z5L-50			\$213.00
FW-5-3C3- *** -Z5L-50			\$315.00
FW-3-3C4- *** -Z5L-50			\$213.00
FW-5-3C4- *** -Z5L-50			\$315.00
FW-3-3C6- *** -Z5L-50			\$213.00
FW-5-3C6- *** -Z5L-50			\$315.00
FW-3-3C2- *** -Z5L-N9-RBRC-50			\$237.00

Note: Valves supplied with DIN Light Plug(s) & Bolt Kit (for valve only, not for valve with modules).

FWS Solenoid / Lever Stock Valves



Order Code	Basic Symbol A B b a P T	Transient Condition A B b a P T	List Each
FWS-3-2B2- *** -Z5L-50			\$326.00
FWS-3-2B3- *** -Z5L-50			
Order Code	Basic Symbol A B b 0 P T	Transient Condition A B b 0 P T	List Each
FWS-3-2B3B- *** -Z5L-50			\$326.00
Order Code	Basic Symbol A B b 0 a P T	Transient Condition A B b 0 a P T	List Each
FWS-3-3C2- *** -Z5L-50			\$375.00
FWS-3-3C3- *** -Z5L-50			
FWS-3-3C4- *** -Z5L-50			
FWS-3-3C6- *** -Z5L-50			

Note:

- Valves supplied with DIN Light Plug(s) & Bolt Kit (for valve only, not for valve with modules).
- FWS-5-***-***-Z5L-50 available as indent to customer order.

FW & FWS Spool Types & Spring Arrangements

3C2		2B2B		2B2BL	
3C3		2B3B		2B3BL	
3C4		2B4B		2B4BL	
3C5		2B5B		2B5BL	
3C6		2B6B		2B6BL	
3C7		2B7B		2B7BL	
3C9		2B9B		2B9BL	
3C10		2B10B		2B10BL	
3C11		2B11B		2B11BL	
3C12		2B12B		2B12BL	
3C25		2B25B		2B25BL	
3C29		2B29B		2B29BL	

2B2	
2B3	
2B8	

2B2L	
2B3L	
2B8L	

With detent

	2D2
	2D3
	2D8

No spring return and no mechanical positioning

	2N2
	2N3
	2N8

Note: *D* (No spring return mechanical positioning) solenoid directional control valve should be installed horizontally.

Solenoids Identified to U.S. Standards



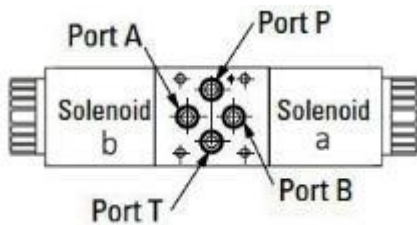
Hoyea **Spool Types & Spring Arrangements** relate to solenoid identity “a” and/or “b” according to NFPA/ANSI (U.S.) standards. Energising solenoid “a” gives flow P to A, energising solenoid “b” gives flow P to B except for the spools below, see **Note**. European Standard is reversed, energising solenoid “a” gives flow P to B, energising solenoid “b” gives flow P to A, see below. The valve spool function schematics apply to both NFPA/ANSI (U.S.) and European valves, they are not reversed.

Note: Oil flow is in the opposite direction for the spools below.

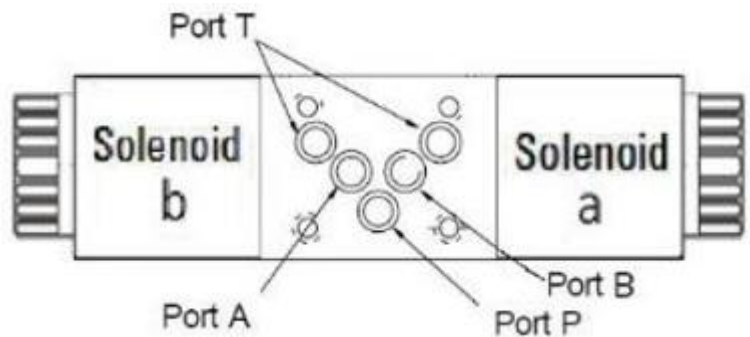
Energising solenoid “a” gives flow P to B, energising solenoid “b” gives flow P to A.

European Standard is reversed, energising solenoid “a” gives flow P to A, energising solenoid “b” gives flow P to B.

- 3C5
- 3C6
- 3C25
- 2B5B
- 2B5BL
- 2B6B
- 2B6BL
- 2B25B
- 2B25BL



Cetop 3 (NG6)



Cetop 5 (NG10)

	NFPA/ANSI (U.S.) Standard	European Standard
Double solenoid valves, two position, detented		
Double solenoid valves, spring centered		
Single solenoid valves, solenoid at port A end		
Single solenoid valves, solenoid at port B end		

T = Transient Condition

FS Lever Stock Valves

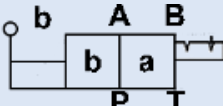
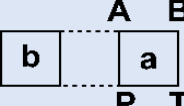




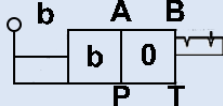
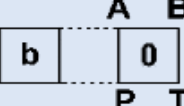





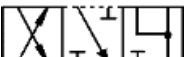
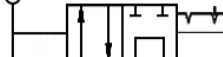

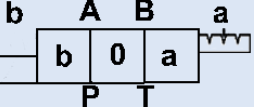
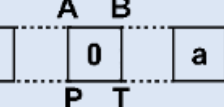
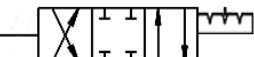
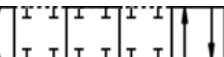
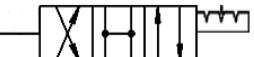

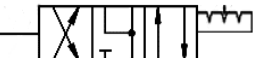
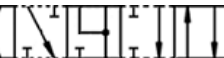
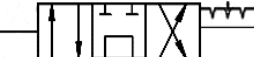



Order Code	Basic Symbol A B b a P T	Transient Condition A B b a P T	List Each
FS-3-2B2-50			\$228.00
FS-3-2B3-50			
Order Code	Basic Symbol A B b 0 P T	Transient Condition A B b 0 P T	List Each
FS-3-2B2B-50			\$228.00
FS-3-2B3B-50			
FS-3-2B4B-50			
FS-3-2B6B-50			
Order Code	Basic Symbol A B b 0 a P T	Transient Condition A B b 0 a P T	List Each
FS-3-3C2-50			\$228.00
FS-3-3C3-50			
FS-3-3C4-50			
FS-3-3C6-50			

Note:

- Valves supplied with Bolt Kit (for valve only, not for valve with modules).
- FS-5-***-50 available as indent to customer order.

Continued Next Page

Order Code	Basic Symbol 	Transient Condition 	List Each
FS-3-2B2-OF-50			\$238.00
FS-3-2B3-OF-50			
Order Code	Basic Symbol 	Transient Condition 	List Each
FS-3-2B2B-OF-50			\$238.00
FS-3-2B3B-OF-50			
FS-3-2B4B-OF-50			
FS-3-2B6B-OF-50			
Order Code	Basic Symbol 	Transient Condition 	List Each
FS-3-3C2-OF-50			\$238.00
FS-3-3C3-OF-50			
FS-3-3C4-OF-50			
FS-3-3C6-OF-50			

Note:

- Valves supplied with Bolt Kit (for valve only, not for valve with modules).
- FS-5-***-OF-50 available as indent to customer order.

Coils, Accessories & Spare Parts



Coil



Locking Manual Override



FS & FWS Handle



Rubber Cap



Red Ball



Core Tube with N9

Cetop 3 (NG6)			
Order Code	Description	Coil Dimensions	List Each
FW-3-D12-Z5L-50	12V DC DIN Coil (DIN Light Plug included)	23 ID x 45 OD x 51 L	\$51.00
FW-3-D24-Z5L-50	24V DC DIN Coil (DIN Light Plug included)		
FW-3-D36-Z5L-50	36V DC DIN Coil (DIN Light Plug included)		
FW-3-D48-Z5L-50	48V DC DIN Coil (DIN Light Plug included)		
FW-3-R110-Z5L-50	110V AC Rectified DIN Coil (DIN Light Plug included)		
FW-3-R220-Z5L-50	220V AC Rectified DIN Coil (DIN Light Plug included)		
FW-3-DC-CT-50	DC Core Tube		\$31.00
FW-3-DC-CT-N9-50	DC Core Tube with N9 Manual Override – M5 Male Thread		\$37.00
FW-3-DC-LMO-50	DC Locking Manual Override		\$31.00
FW-3-DC-NUT-50	DC Coil / Core Tube Nut (M22 x 1.5)		\$5.00
FW-3-EP-50	End Plug		\$13.00
FW-RB	Red Ball		\$6.00
FW-3-RC-50	Rubber Cap (no manual override) - use with FW-3-DC-CT-N9-50		\$5.00
FS-3-HM	Handle & Screw		\$17.00
FWS-3-HM	Handle		\$17.00

Cetop 5 (NG 10)			
Order Code	Description	Coil Dimensions	List Each
FW-5-D12-Z5L-50	12V DC DIN Coil (DIN Light Plug included)	31.0 ID x 63 OD x 75 L	\$80.00
FW-5-D24-Z5L-50	24V DC DIN Coil (DIN Light Plug included)		
FW-5-D36-Z5L-50	36V DC DIN Coil (DIN Light Plug included)		
FW-5-D48-Z5L-50	48V DC DIN Coil (DIN Light Plug included)		
FW-5-R110-Z5L-50	110V AC Rectified DIN Coil (DIN Light Plug included)		
FW-5-R220-Z5L-50	220V AC Rectified DIN Coil (DIN Light Plug included)		
FW-5-D12-Z5L-51	12V DC DIN Coil (DIN Light Plug included)	31.5 ID x 63 OD x 75 L	\$80.00
FW-5-D24-Z5L-51	24V DC DIN Coil (DIN Light Plug included)		
FW-5-DC-CT-50	DC Core Tube		\$49.00
FW-5-DC-CT-N9-50	DC Core Tube with N9 Manual Override - M5 Male Thread		\$73.00
FW-5-DC-LMO-50	DC Locking Manual Override		\$54.00
FW-5-DC-NUT-50	DC Coil / Core Tube Nut (M30 x 1.5)		\$7.00
FW-5-EP-50	End Plug		\$19.00
FW-RB	Red Ball - use with FW-5-DC-CT-N9-50		\$6.00

DIN Plugs



Order Code	Voltage	Description	List Each
DLP-A110	110V AC	DIN Light Plug	\$13.00
DLP-A220	220V AC		
DLP-D12	12V DC		
DLP-D24	24V DC		
DLP-D36	36V DC		
DLP-D48	48V DC		

Modules

Mounting Information

With modular valves circuits are easily built by stacking them between the directional control valve and the subplate or manifold. No piping is required which saves and reduces the time and work required to build the circuit. This saves money and there are no hose or pipework connections to leak. The circuit can be easily changed by adding or removing modules as required.

The selection of modular valves, to suit a particular function or hydraulic circuit are made in the same way as conventional valves, taking into account the flow and pressure of each valve to be used.

Note:

- Maximum flow and pressure of stack is limited to lowest flow or pressure of a module or the directional valve.
- The minimum pressure setting for DY Pressure Relief Valve and DYJ Pressure Reducing Valve is dependent on the flow, the lower the flow the lower the possible pressure setting. It also depends on the tank line back pressure and this should include the value of the T-line pressure drop characteristics of the valves stacked to the base plate side of the modular valve.

When installing a number of modular valves together the order in which they are stacked can affect their performance. The following information is intended as a guide only. As every hydraulic system is unique it is the user's responsibility to determine what is appropriate for the application.

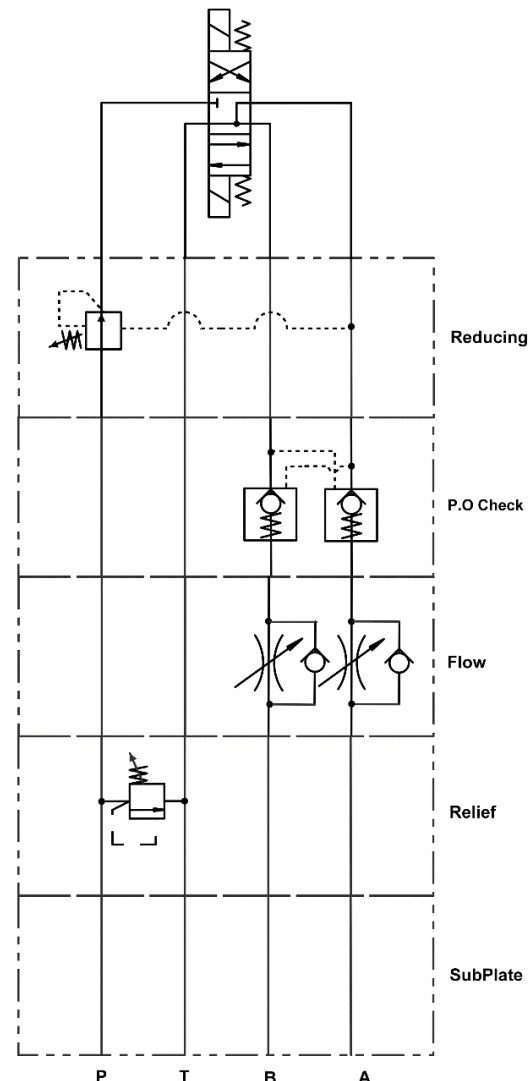
General Rules

Function in P or T Line:

- Relief valves generally should be stacked closest to the subplate or manifold.
- Reducing valves should be stacked between the relief and directional control valve.
- Direct check valves should be stacked closest to the directional control valve.

Function in A & B Lines:

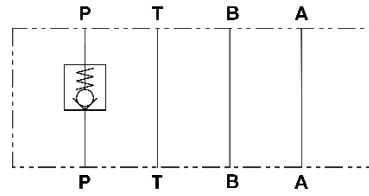
- When using a pilot operated check valve module use a meter-out flow control module stacked closest to the subplate or manifold. This prevents back pressure on the pilot operated check valve outlet which increases the pilot pressure required to open the valve and this can cause check valve chatter.
- When using a line mounted pilot operated check valve use a meter-in flow control module.
- When using a counterbalance valve module use a meter-out flow control module stacked closest to the subplate or manifold. This improves system stability by reducing the metering required by the counterbalance valve.
- When using a line mounted counterbalance valve use a meter-in flow control module.



Check Valves



(Port P)

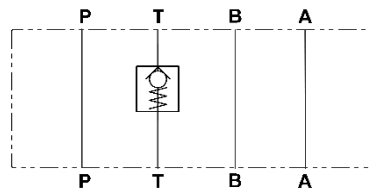


Cetop 3 (NG06)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DA-3-P-0.5-70	40	315	0.5	40	\$117.00
DA-3-P-4.0-70			4.0		

Cetop 5 (NG10)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DA-5-P-0.5-70	100	315	0.5	55	\$206.00
DA-5-P-4.0-70			4.0		



(Port T)



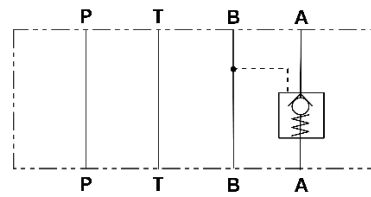
Cetop 3 (NG06)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DA-3-T-0.5-70	40	315	0.5	40	\$117.00
DA-3-T-4.0-70			4.0		

Cetop 5 (NG10)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DA-5-T-0.5-70	100	315	0.5	55	\$206.00
DA-5-T-4.0-70			4.0		

Pilot Operated Check Valves



(Port A)

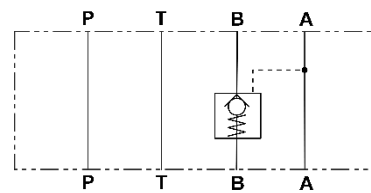


Cetop 3 (NG6)						
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DAY-3-A-4.0-50	60	315	2.9 : 1	4.0	40	\$158.00

Cetop 5 (NG10)						
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DAY-5-A-4.0-50	100	315	10.7 : 1	4.0	50	\$182.00



(Port B)

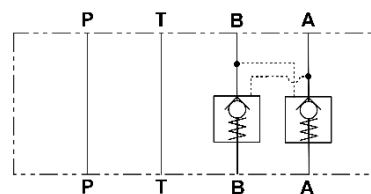


Cetop 3 (NG6)						
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DAY-3-B-4.0-50	60	315	2.9 : 1	4.0	40	\$158.00

Cetop 5 (NG10)						
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DAY-5-B-4.0-50	100	315	10.7 : 1	4.0	50	\$182.00



(Port A & B)



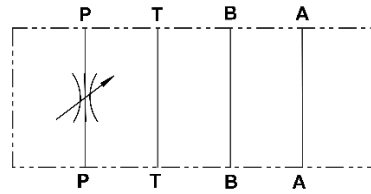
Cetop 3 (NG6)						
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DAY-3-W-4.0-50	60	315	2.9 : 1	4.0	40	\$170.00

Cetop 5 (NG10)						
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DAY-5-W-4.0-50	100	315	10.7 : 1	4.0	50	\$196.00

Needle Valves



(Port P)



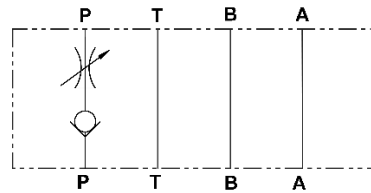
Cetop 3 (NG6)				
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Thickness (mm)	List Each
DL-3-P-70	30	315	40	\$158.00

Cetop 5 (NG10)				
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Thickness (mm)	List Each
DL-5-P-70	50	315	55	\$220.00

Needle & Check Valve



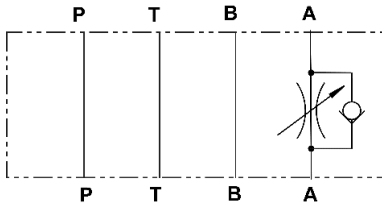
(Port P)



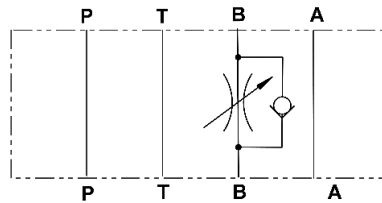
Cetop 3 (NG6)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DAL-3-P-70	30	315	0.5	40	\$194.00

Flow Control Valves

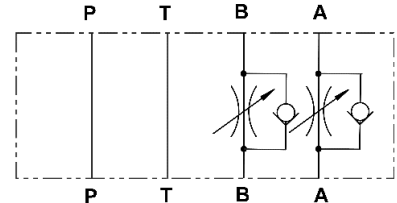
(Meter IN)



A Pipeline



B Pipeline

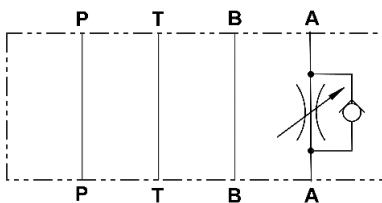


W Pipeline

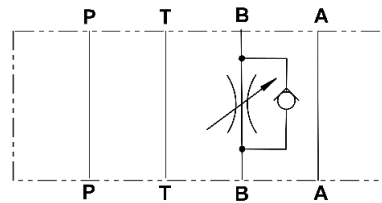
Cetop 3 (NG06)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DLA-3-A-MI-70	30	315	0.5	40	\$158.00
DLA-3-B-MI-70					
DLA-3-W-MI-70					\$170.00

Cetop 5 (NG10)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DLA-5-A-MI-70	50	315	0.5	55	\$194.00
DLA-5-B-MI-70					
DLA-5-W-MI-70					\$208.00

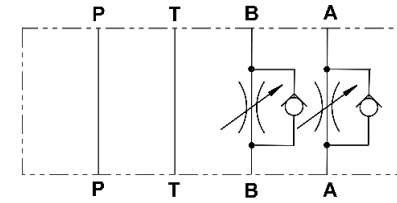
(Meter OUT)



A Pipeline



B Pipeline

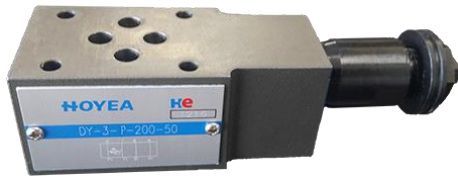


W Pipeline

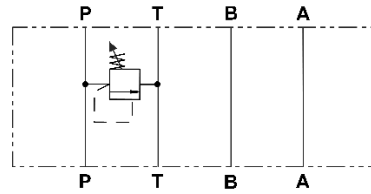
Cetop 3 (NG06)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DLA-3-A-MO-70	30	315	0.5	40	\$158.00
DLA-3-B-MO-70					
DLA-3-W-MO-70					\$170.00

Cetop 5 (NG10)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DLA-5-A-MO-70	50	315	0.5	55	\$194.00
DLA-5-B-MO-70					
DLA-5-W-MO-70					\$208.00

Pressure Relief Valves (Pilot Operated)



(Port P → T)



Cetop 3 (NG6)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-3-P-50-50	35	50	315	40	\$189.00
DY-3-P-100-50		100			
DY-3-P-200-50		200			
DY-3-P-315-50		315			

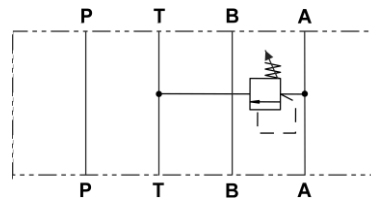
Cetop 5 (NG10)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-5-P-70-70	70	70	315	55	\$218.00
DY-5-P-140-70		140			
DY-5-P-210-70		210			
DY-5-P-315-70		315			

Note: After factory testing Adjustable Pressure is set at minimum which is approximately 8 bar, it is dependent on the tank line back pressure.

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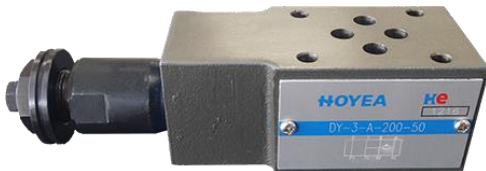


(Port A → T)

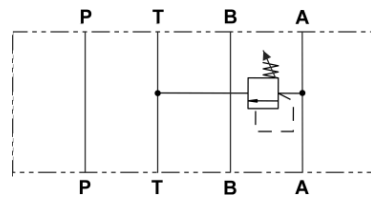


Cetop 3 (NG6) (Being Superseded by 50 Design)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-3-A-315-70	35	315	315	40	\$176.00

Note: After factory testing Adjustable Pressure is set at minimum which is approximately 8 bar, it is dependent on the tank line back pressure.



(Port A → T)



Cetop 3 (NG6) (50 Design)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-3-A-50-50	35	50	315	40	\$189.00
DY-3-A-100-50		100			
DY-3-A-200-50		200			
DY-3-A-315-50		315			

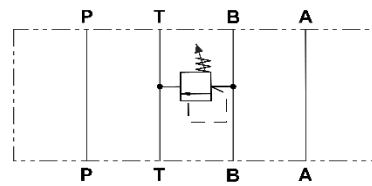
Cetop 5 (NG10)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-5-A-70-70	70	70	315	55	\$218.00
DY-5-A-140-70		140			
DY-5-A-210-70		210			
DY-5-A-315-70		315			

Note: After factory testing Adjustable Pressure is set at minimum which is approximately 8 bar, it is dependent on the tank line back pressure.

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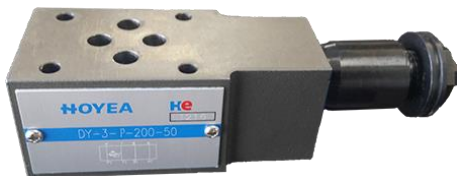


(Port B → T)

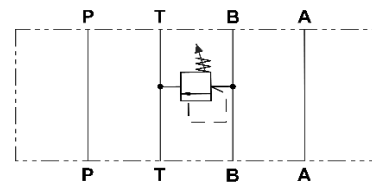


Cetop 3 (NG6) (Being Superseded by 50 Design)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-3-B-210-70	35	210	315	40	\$176.00
DY-3-B-315-70		315			

Note: After factory testing Adjustable Pressure is set at minimum which is approximately 8 bar, it is dependent on the tank line back pressure.



(Port B → T)



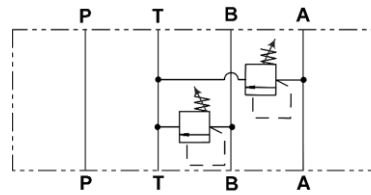
Cetop 3 (NG6) (50 Design)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-3-B-50-50	35	50	315	40	\$189.00
DY-3-B-100-50		100			
DY-3-B-200-50		200			
DY-3-B-315-50		315			

Cetop 5 (NG10)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-5-B-70-70	70	70	315	55	\$218.00
DY-5-B-140-70		140			
DY-5-B-210-70		210			
DY-5-B-315-70		315			

Note: After factory testing Adjustable Pressure is set at minimum which is approximately 8 bar, it is dependent on the tank line back pressure.

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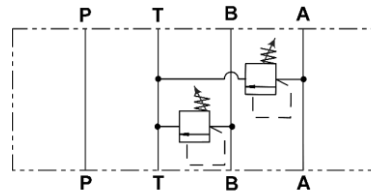
(Port A → T & B → T)



Cetop 3 (NG6) (Being Superseded by 50 Design)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-3-W-140-70	35	140	315	40	\$201.00
DY-3-W-315-70		315			

Note: After factory testing Adjustable Pressure is set at minimum which is approximately 8 bar, it is dependent on the tank line back pressure.

(Port A → T & B → T)



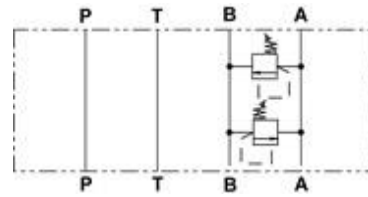
Cetop 3 (NG6) (50 Design)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-3-C-50-50	35	50	315	40	\$225.00
DY-3-C-100-50		100			
DY-3-C-200-50		200			
DY-3-C-315-50		315			

Cetop 5 (NG10)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-5-W-70-70	70	70	315	55	\$267.00
DY-5-W-140-70		140			
DY-5-W-210-70		210			
DY-5-W-315-70		315			

Note: After factory testing Adjustable Pressure is set at minimum which is approximately 8 bar, it is dependent on the tank line back pressure.

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(Port A → B & B → A)

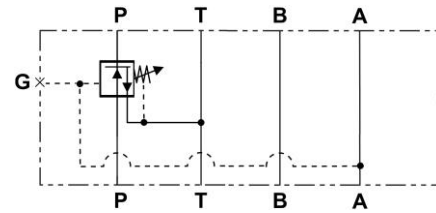


Cetop 3 (NG6)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-3-D-50-50	35	50	315	40	\$225.00
DY-3-D-100-50		100			
DY-3-D-200-50		200			
DY-3-D-315-50		315			

Note: After factory testing Adjustable Pressure is set at minimum which is approximately 8 bar, it is dependent on the tank line back pressure.

Pressure Reducing Valves

(Port A)

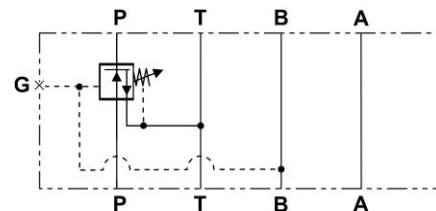


Cetop 3 (NG6)						
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	G	List Each
DYJ-3-A-70-70	35	70	315	40	1/4" BSPT	\$164.00
DYJ-3-A-140-70		140				
DYJ-3-A-210-70		210				

Cetop 5 (NG10)						
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	G	List Each
DYJ-5-A-70-70	70	70	315	55	1/4" BSPT	\$237.00
DYJ-5-A-140-70		140				
DYJ-5-A-210-70		210				

Note: After factory testing Adjustable Pressure is set at minimum which is approximately 8 bar, it is dependent on the tank line back pressure.

(Port B)



Cetop 3 (NG6)						
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	G	List Each
DYJ-3-B-70-70	35	70	315	40	1/4" BSPT	\$164.00
DYJ-3-B-140-70		140				
DYJ-3-B-210-70		210				

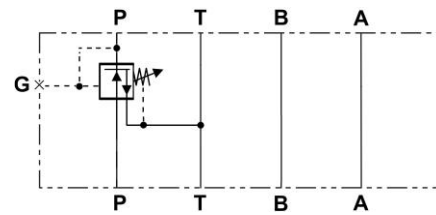
Cetop 5 (NG10)						
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	G	List Each
DYJ-5-B-70-70	70	70	315	55	1/4" BSPT	\$237.00
DYJ-5-B-140-70		140				
DYJ-5-B-210-70		210				

Note: After factory testing Adjustable Pressure is set at minimum which is approximately 8 bar, it is dependent on the tank line back pressure.

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(Port P)

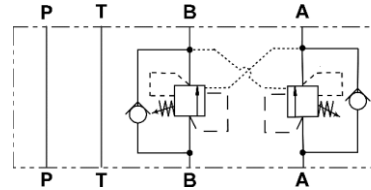


Cetop 3 (NG6)						
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	G	List Each
DYJ-3-P-70-70	35	70	315	40	1/4" BSPT	\$164.00
DYJ-3-P-140-70		140				
DYJ-3-P-210-70		210				

Cetop 5 (NG10)						
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	G	List Each
DYJ-5-P-70-70	70	70	315	55	1/4" BSPT	\$237.00
DYJ-5-P-140-70		140				
DYJ-5-P-210-70		210				

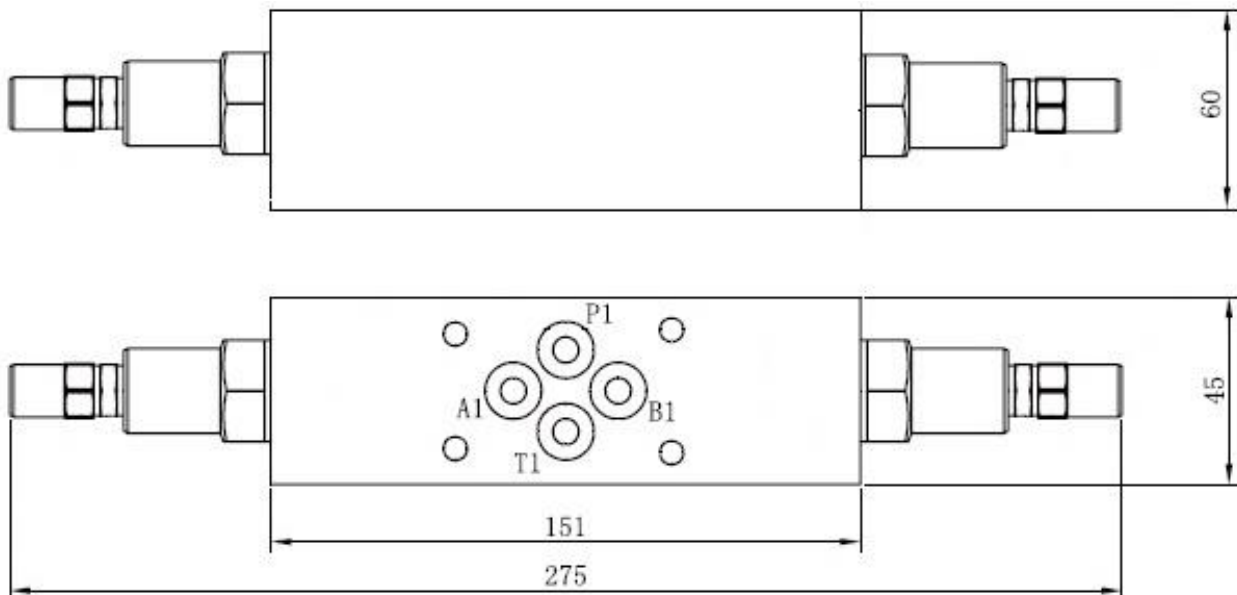
Note: After factory testing Adjustable Pressure is set at minimum which is approximately 8 bar, it is dependent on the tank line back pressure.

Counterbalance Valves



Cetop 3 (NG6) (Being Superseded by MCBS Series)							
Order Code	Max. Flow (L/min)	Adjustable Pressure (bar)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
OCBW-3-43-210	45	60 - 210	350	4.3 : 1	3.8	60	\$385.00
OCBW-3-43-350		100 - 350					

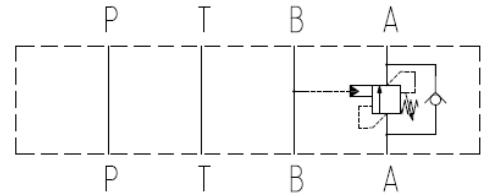
Note: Factory Set 200 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.



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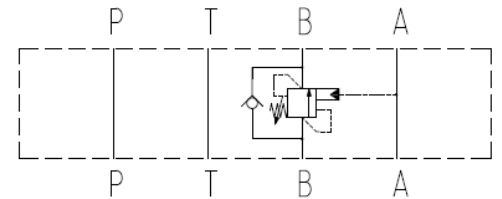
MCBS-3-A-G-LH-10

(Port A)



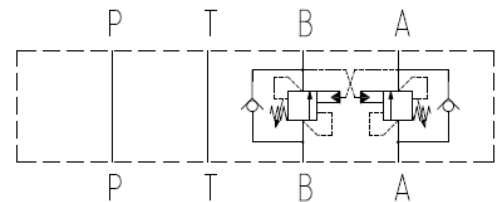
MCBS-3-B-G-LH-10

(Port B)



MCBS-3-W-G-LH-10

(Port A & B)

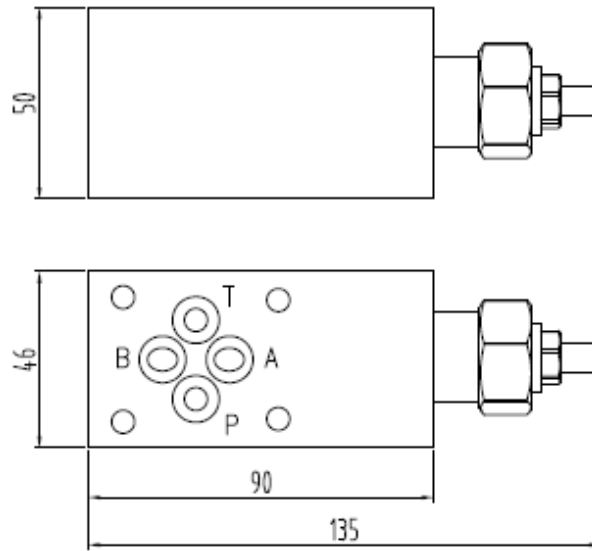


Cetop 3 (NG6)							
Order Code	Max. Flow (L/min)	Adjustable Pressure (bar)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
MCBS-3-A-G-LH-10	60	70 - 280	350	4.2 : 1	6	50	\$306.00
MCBS-3-B-G-LH-10							
MCBS-3-W-G-LH-10							\$385.00

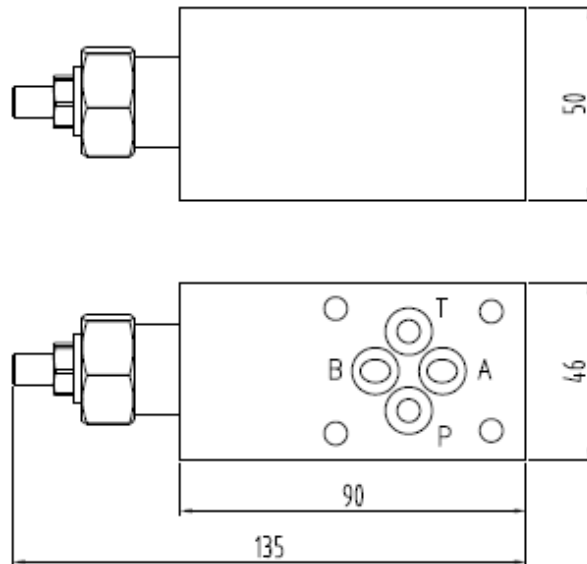
Note: Factory Set 180 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.

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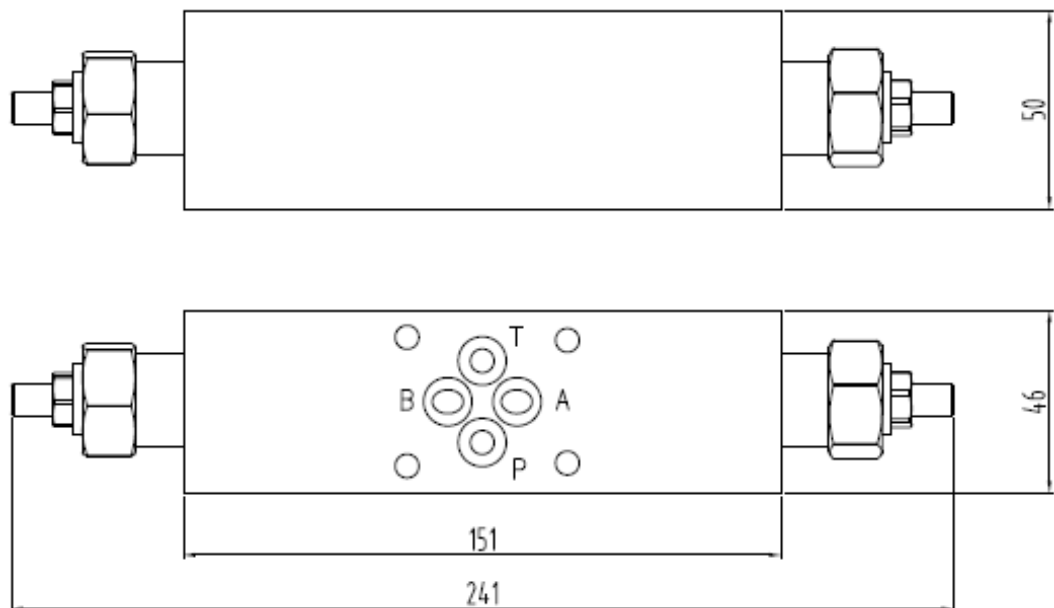
MCBS-3-A-G-LH-10



MCBS-3-B-G-LH-10

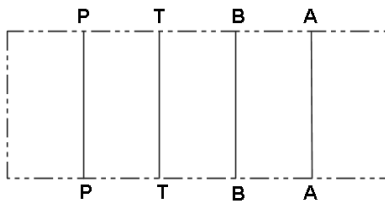


MCBS-3-W-G-LH-10

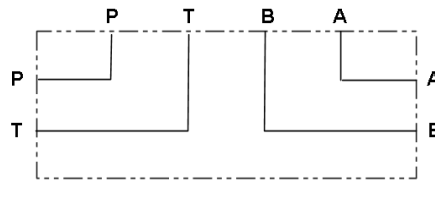


Subplates, Manifolds & Bolt Kits

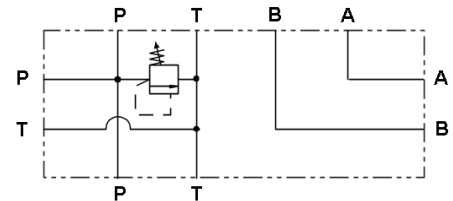
Cetop 3 (NG6) Subplates



Bottom Port



Side & Lateral Port



Dual P & T Port with Relief Cavity

Cetop 3 (NG6)					
Order Code	Port Position	Material	Max. Pressure (bar)	Port Size	List Each
SP-3-BP-A	Bottom Port	Alloy (Clear Anodised)	210	G 3/8	\$70.00
SP-3-SP-A	Side Port			G 3/8	\$70.00
SP-3-RV-A	Dual P & T Port with Relief Cavity			G 3/8	\$162.00
SP-3-BP-S	Bottom Port	Steel (Nickel Plated)	350	G 3/8	\$70.00
SP-3-LP-S-G1/4	Lateral Port			G 1/4	\$148.00
SP-3-LP-S-G3/8	Lateral Port			G 3/8	\$148.00
SP-3-SP-S	Side Port			G 3/8	\$70.00
SP-3-RV-S	Dual P & T Port with Relief Cavity			G 3/8	\$162.00

Note:

- SP-3-RV-* not supplied with Pressure Relief Valve Cartridge or Cavity Plug. They are sold separately.
- Relief Valve cavity is C10-2 (P in nose & T out the side).
- Unused P port can be fitted with a Test Fitting.
- SP-3-LP-S-G*/* has G 1/8 port on all 4 working ports for installation of a Test Fitting.

Pressure Relief Valve Cartridge & Cavity Plug

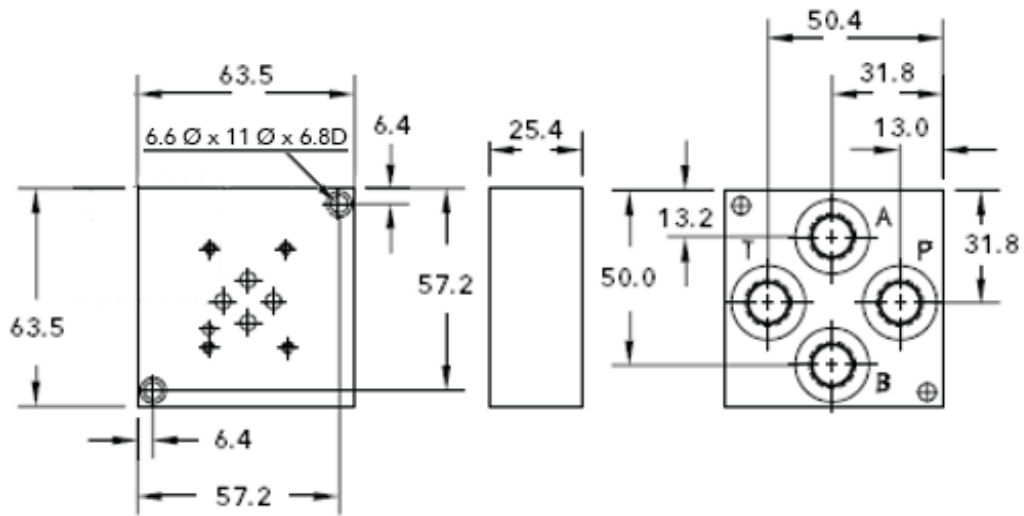
Order Code	Max. Flow (L/min)	Adjustable Pressure (bar)	Preset Pressure (bar)	Max. Pressure (bar)	List Each
LPSRV2-10-8	120	7 - 55	47	420	\$95.00
LPSRV2-10-20		35 - 140	48		
LPSRV2-10-40		70 - 280	88		
LPSRV2-10-60		140 - 420	140		
PLUG-C10-2-S	Cavity Plug - Steel				\$31.00

Test Fitting & Port Plug

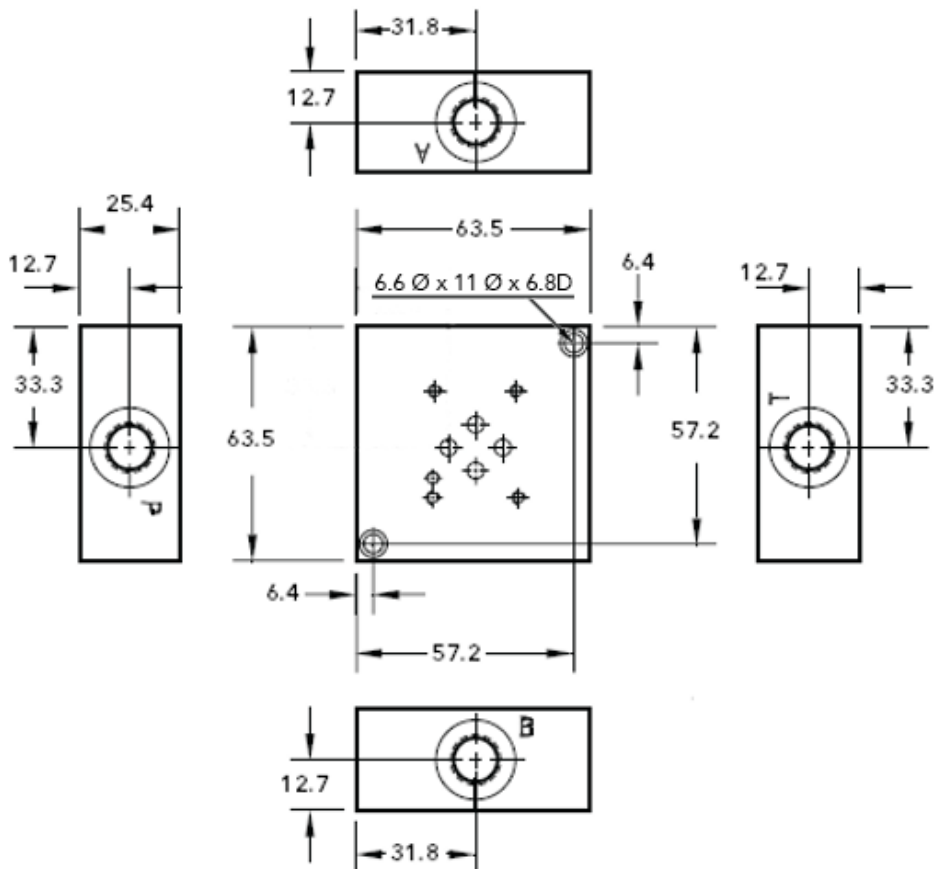
Order Code	Thread	Valve Sealing Type	List Each
PT-06-B	G 1/8 - Dowty Seal	Ball	\$22.00
PT-06-C	G 1/8 - Encapsulated Seal	Poppet	
PT-08-B	G 3/8 - Dowty Seal	Ball	
PT-08-C	G 3/8 - Encapsulated Seal	Poppet	
PLUG-G3/8-S	G 3/8 - Steel Port Plug		\$6.00

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Bottom Port

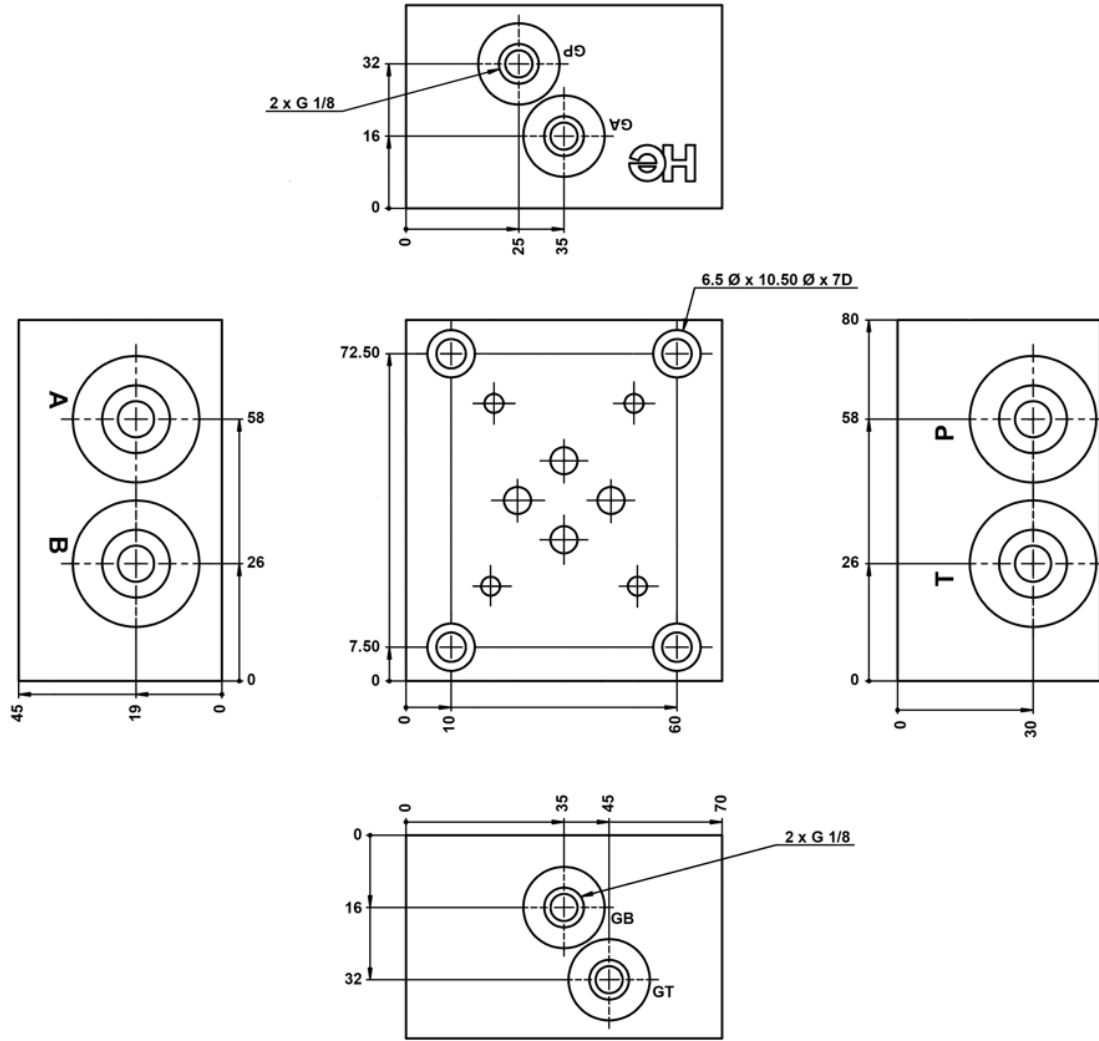


Side Port

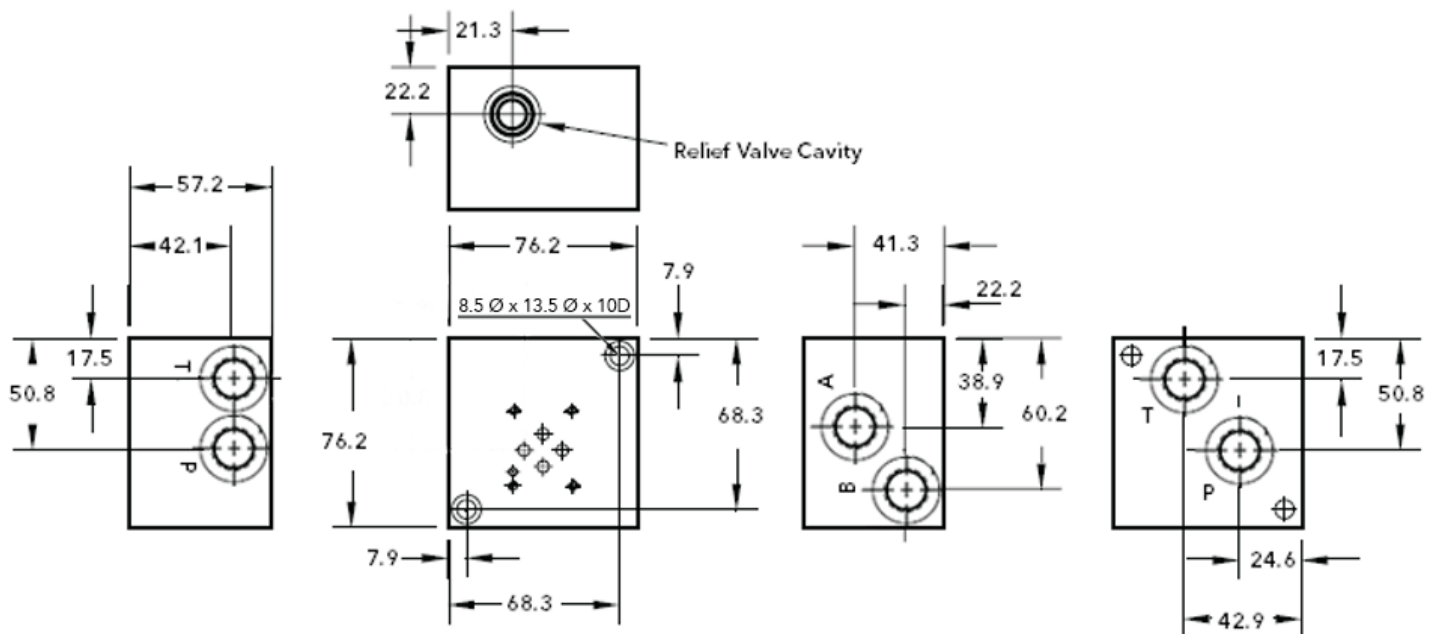


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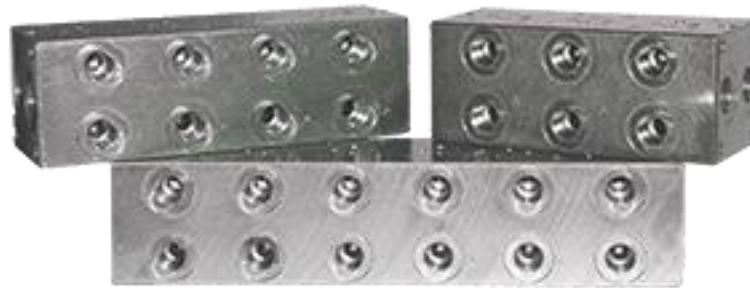
Lateral Port



Dual P & T Port with Relief Cavity



Cetop 3 (NG6) Manifolds



Cetop 3 (NG6) Parallel - Alloy					
Order Code	Stations	Material	Max. Pressure (bar)	Ports	List Each
MB-3-P1-A	1	Alloy (Clear Anodised)	210	P & T = G 1/2 A & B = G 3/8 Gauge = G 1/4	\$144.00
MB-3-P2-A	2				\$234.00
MB-3-P3-A	3				\$293.00
MB-3-P4-A	4				\$365.00
MB-3-P5-A	5				\$432.00
MB-3-P6-A	6				\$504.00
MB-3-P7-A	7				\$567.00
203-SAE6	P & T Tapping – Alloy (40 mm Thick)			9/16" UNO (SAE 6)	\$112.00
SP-3-CP-S	Cover (Blanking) Plate - Steel (19 mm Thick - Bolts not included) (Use BKM5x25)				\$44.00
MB-3-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$15.00

Cetop 3 (NG6) Parallel - Steel					
Order Code	Stations	Material	Max. Pressure (bar)	Ports	List Each
MB-3-P1-S	1	Steel (Nickel Plated)	350	P & T = G 1/2 A & B = G 3/8 Gauge = G 1/4	\$135.00
MB-3-P2-S	2				\$196.00
MB-3-P3-S	3				\$261.00
MB-3-P4-S	4				\$315.00
MB-3-P5-S	5				\$392.00
MB-3-P6-S	6				\$441.00
MB-3-P7-S	7				\$518.00
203-SAE6	P & T Tapping – Alloy (40 mm Thick)		210	9/16" UNO (SAE 6)	\$112.00
SP-3-CP-S	Cover (Blanking) Plate - Steel (19 mm Thick - Bolts not included) (Use BKM5x25)				\$44.00
MB-3-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$15.00

Cetop 3 (NG6) Series - Alloy					
Order Code	Stations	Material	Max. Pressure (bar)	Ports	List Each
MB-3-S2-A	2	Alloy (Clear Anodised)	210	P & T = G 1/2 A & B = G 3/8 Gauge = G 1/4	\$239.00
MB-3-S3-A	3				\$297.00
MB-3-S4-A	4				\$369.00
203-SAE6	P & T Tapping – Alloy (40 mm Thick)			9/16" UNO (SAE 6)	\$112.00
MB-3-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$15.00

Note:

- MB-3 not supplied with Pressure Relief Valve Cartridge or Cavity Plug, Test Fitting or Gauge Port Plug. They are sold separately.
- Relief Valve cavity = C10-2 (P in nose & T out the side).

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Pressure Relief Valve Cartridge & Cavity Plug

Order Code	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
LPSRV2-10-8	120	7 - 55	47	420	\$95.00
LPSRV2-10-20		35 - 140	48		
LPSRV2-10-40		70 - 280	88		
LPSRV2-10-60		140 - 420	140		
PLUG-C10-2-S	Cavity Plug - Steel				\$31.00

Note: Pressure Relief Valve Cartridge or Cavity Plug cannot be used with Solenoid Unloading Valve.

Solenoid Unloading Valve

Order Code	Description	Max. Flow (L/min)	Max. Pressure (bar)	List Each
LSV2-10-2NOS	2/2 N.O. Cartridge	22.7	207	\$121.00
LC2-10-C-1H	Coil DIN 12V DC without Plug	N/A	N/A	\$41.00
LC2-10-C-2H	Coil DIN 24V DC without Plug			\$41.00
LC2-10-C-3H	Coil DIN 110V AC without Plug			\$48.00
LC2-10-C-4H	Coil DIN 220V AC without Plug			\$48.00
C01010001-N	DIN Light Plug DC			\$13.00
C01010004-N	DIN Light Plug AC			\$13.00
LSV6-10-2NOSP	2/2 N.O. Cartridge	70	350	\$312.00
LSV6-10-2NOSP-M	2/2 N.O. Cartridge with O'ride			\$346.00
LC3-10-C-1H	Coil DIN 12V DC without Plug	N/A	N/A	\$41.00
LC3-10-C-2H	Coil DIN 24V DC without Plug			\$41.00
LC3-10-C-3H	Coil DIN 110V AC without Plug			\$46.00
LC3-10-C-4H	Coil DIN 220V AC without Plug			\$46.00
C01010001-N	DIN Light Plug DC			\$13.00
C01010004-N	DIN Light Plug AC			\$13.00

Note:

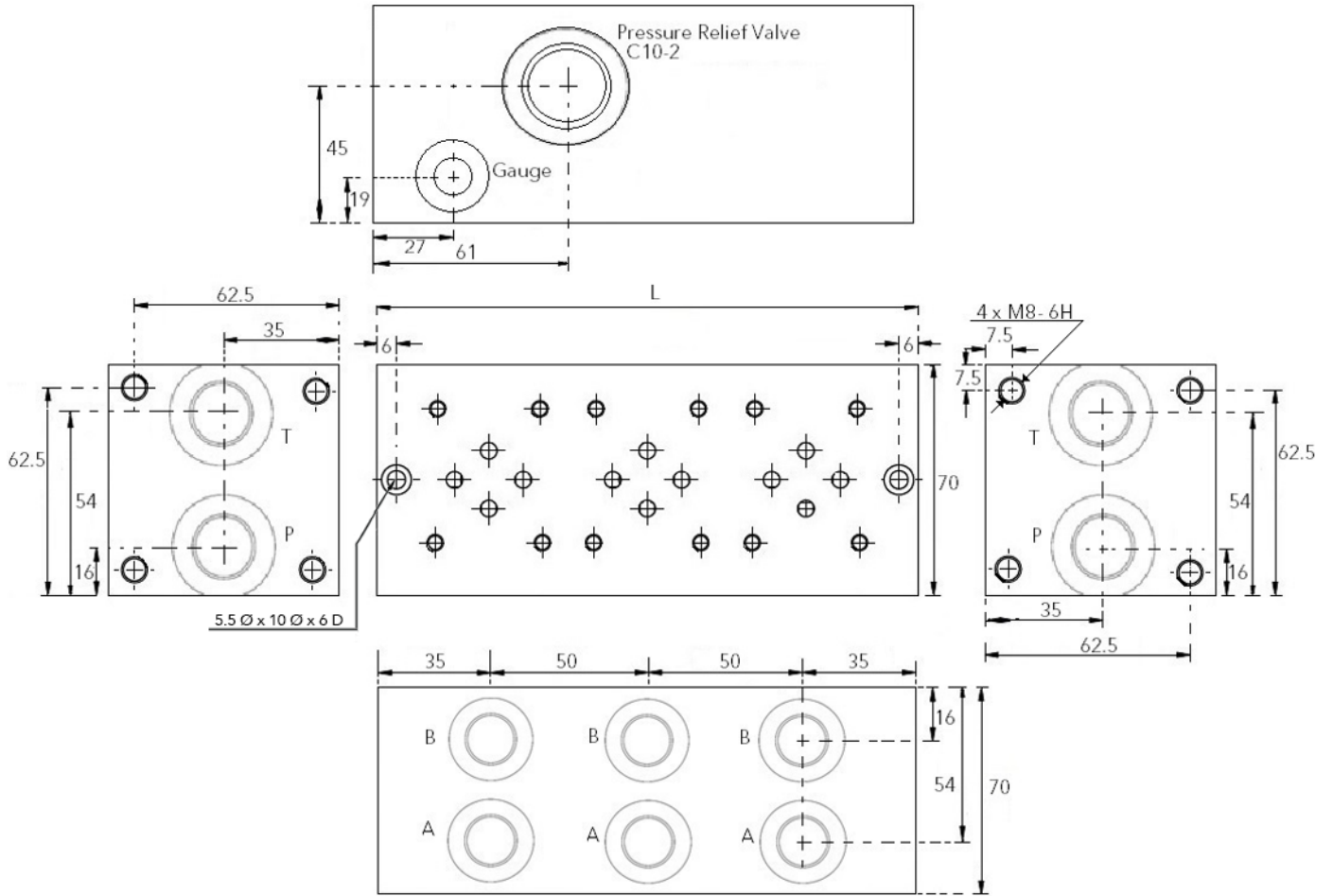
- Solenoid Unloading Valve cannot be used with Pressure Relief Valve Cartridge or Cavity Plug.
- Additional Cartridge information available on [Page 9.06](#) & Coil installation information is on [Page 9.12](#).

Test Fitting & Port Plugs

Order Code	Thread	Valve Sealing Type	List Each
PT-07-B	G 1/4 - Dowty Seal	Ball	\$22.00
PT-07-C	G 1/4 - Encapsulated Seal	Poppet	
PLUG-G1/4-S	G 1/4 - Steel Port Plug		\$5.00
PLUG-G3/8-S	G 3/8 - Steel Port Plug		\$6.00
PLUG-G1/2-S	G 1/2 - Steel Port Plug		\$7.00

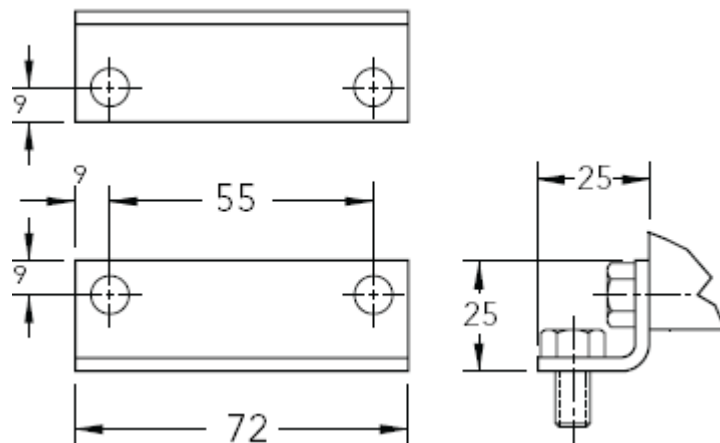
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MB-3 Parallel & Series

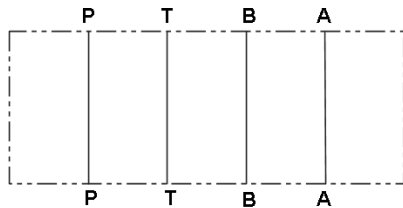


Station	Dim. L	Ports
1	94	P & T = G 1/2
2	120	
3	170	
4	220	A & B = G 3/8
5	270	Gauge = G 1/4
6	320	
7	370	

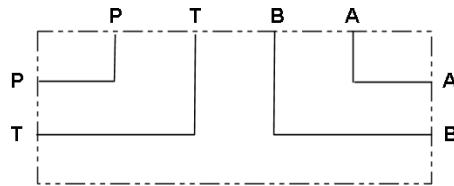
MB-3-MBK



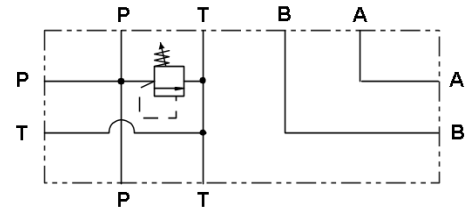
Cetop 5 (NG10) Subplates



Bottom Port



Side Port



Dual P & T with Relief Cavity

Cetop 5 (NG10)					
Order Code	Port Position	Material	Max. Pressure (bar)	Port Size	List Each
SP-5-BP-A	Bottom Port	Alloy (Clear Anodised)	210	G 1/2	\$127.00
SP-5-SP-A	Side Port				\$127.00
SP-5-RV-A	Dual P & T Port with Relief Cavity				\$284.00
SP-5-BP-S	Bottom Port	Steel (Nickel Plated)	350		\$127.00
SP-5-SP-S	Side Port				\$127.00
SP-5-RV-S	Dual P & T Port with Relief Cavity				\$284.00

Note:

- SP-5-RV-* not supplied with Pressure Relief Valve Cartridge or Cavity Plug. They are sold separately.
- Relief Valve cavity is C10-2 (P in nose & T out the side).
- Unused P port can be fitted with a Test Fitting.

Pressure Relief Valve Cartridge & Cavity Plug

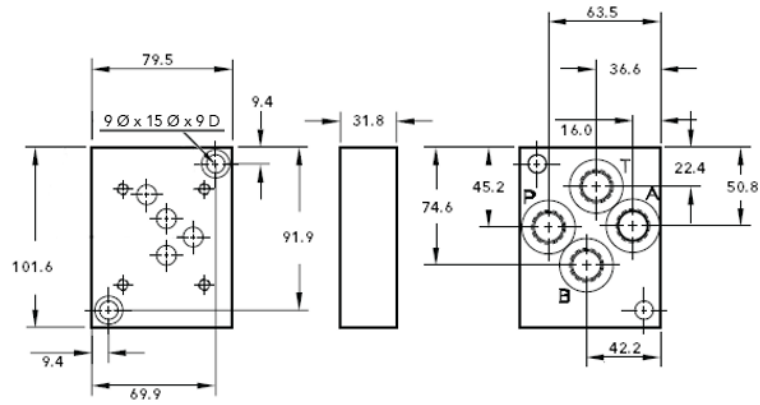
Order Code	Max. Flow (L/min)	Adjustable Pressure (bar)	Preset Pressure (bar)	Max. Pressure (bar)	List Each
LPSRV2-10-8	120	7 - 55	47	420	\$95.00
LPSRV2-10-20		35 - 140	48		
LPSRV2-10-40		70 - 280	88		
LPSRV2-10-60		140 - 420	140		
PLUG-C10-2-S	Cavity Plug - Steel				\$31.00

Test Fitting & Port Plug

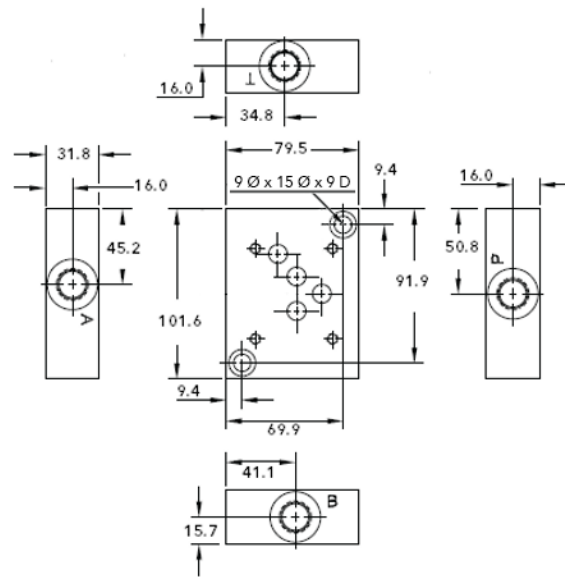
Order Code	Thread	Valve Sealing Type	List Each
PT-09-B	G 1/2 - Dowty Seal	Ball	\$26.00
PT-09-C	G 1/2 - Encapsulated Seal	Poppet	
PLUG-G1/2-S	G 1/2 - Steel Port Plug		\$7.00

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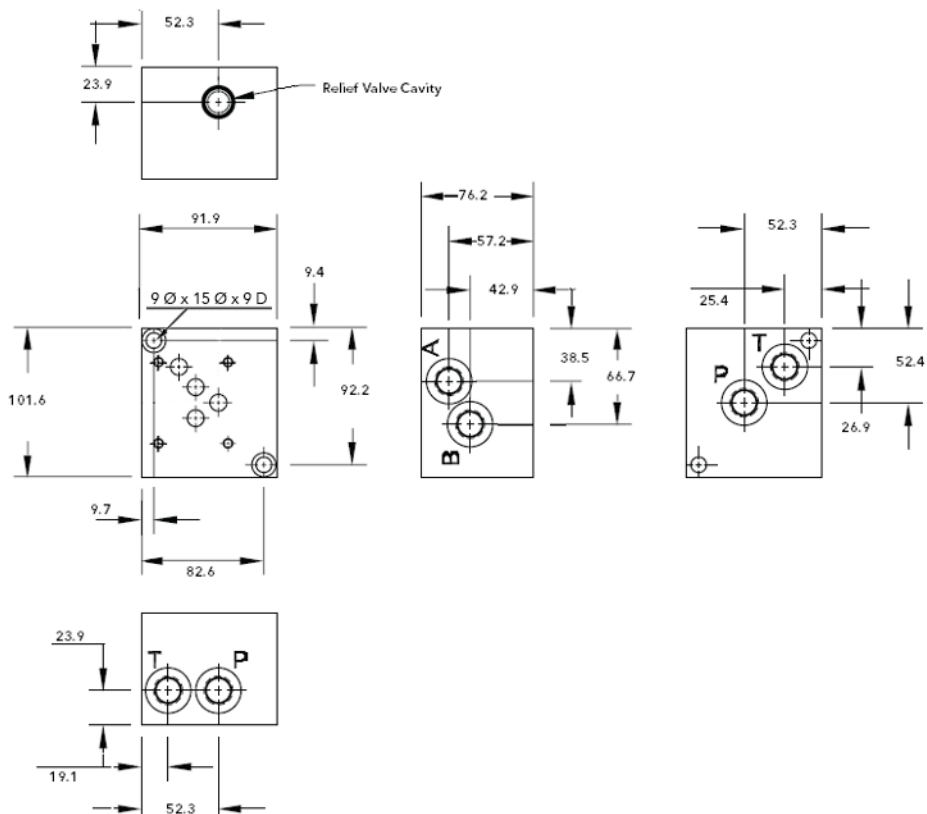
Bottom Port



Side Port



Dual P & T Port with Relief Cavity



Cetop 5 (NG10) Manifolds



Cetop 5 (NG10) Parallel - Alloy					
Order Code	Stations	Material	Max. Pressure (bar)	Ports	List Each
MB-5-P1-A	1	Alloy (Clear Anodised)	210	P & T = G 3/4 A & B = G 1/2 Gauge = G 1/4	\$240.00
MB-5-P2-A	2				\$408.00
MB-5-P3-A	3				\$536.00
MB-5-P4-A	4				\$680.00
MB-5-P5-A	5				\$856.00
MB-5-P6-A	6				\$1,016.00
SP-5-CP-S	Cover (Blanking) Plate - Steel (19 mm Thick - Bolts not included) (Use BKM6x30)				\$72.00
MB-5-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$20.00

Cetop 5 (NG10) Parallel - Steel					
Order Code	Stations	Material	Max. Pressure (bar)	Ports	List Each
MB-5-P1-S	1	Steel (Nickel Plated)	350	P & T = G 3/4 A & B = G 1/2 Gauge = G 1/4	\$224.00
MB-5-P2-S	2				\$396.00
MB-5-P3-S	3				\$488.00
MB-5-P4-S	4				\$612.00
MB-5-P5-S	5				\$720.00
MB-5-P6-S	6				\$848.00
SP-5-CP-S	Cover (Blanking) Plate - Steel (19 mm Thick - Bolts not included) (Use BKM6x30)				\$72.00
MB-5-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$20.00

Cetop 5 (NG10) Series - Alloy					
Order Code	Stations	Material	Max. Pressure (bar)	Ports	List Each
MB-5-S2-A	2	Alloy (Clear Anodised)	210	P & T = G 3/4 A & B = G 1/2 Gauge = G 1/4	\$440.00
MB-5-S3-A	3				\$564.00
MB-5-S4-A	4				\$712.00
MB-5-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$20.00

Note:

- MB-5 not supplied with Pressure Relief Valve Cartridge or Cavity Plug, Test Fitting or Gauge Port Plug. They are sold separately.
- Relief Valve cavity = C10-2 (P in nose & T out the side).
- MB-5-S*-A have only 1 x P & T Ports. Refer to drawing on [Page 5.36](#).

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Pressure Relief Valve Cartridge & Cavity Plug

Order Code	Max. Flow (L/min)	Adjustable Pressure (bar)	Preset Pressure (bar)	Max. Pressure (bar)	List Each
LPSRV2-10-8	120	7 - 55	47	420	\$95.00
LPSRV2-10-20		35 - 140	48		
LPSRV2-10-40		70 - 280	88		
LPSRV2-10-60		140 - 420	140		
PLUG-C10-2-S	Cavity Plug - Steel				\$31.00

Note: Pressure Relief Valve Cartridge or Cavity Plug cannot be used with Solenoid Unloading Valve.

Solenoid Unloading Valve

Order Code	Description	Max. Flow (L/min)	Max. Pressure (bar)	List Each
LSV6-10-2NOSP	2/2 N.O. Cartridge	70	350	\$312.00
LSV6-10-2NOSP-M	2/2 N.O. Cartridge with O'ride			\$346.00
LC3-10-C-1H	Coil DIN 12V DC without Plug	N/A	N/A	\$41.00
LC3-10-C-2H	Coil DIN 24V DC without Plug			\$41.00
LC3-10-C-3H	Coil DIN 110V AC without Plug			\$46.00
LC3-10-C-4H	Coil DIN 220V AC without Plug			\$46.00
C01010001-N	DIN Light Plug DC			\$13.00
C01010004-N	DIN Light Plug AC			\$13.00

Note:

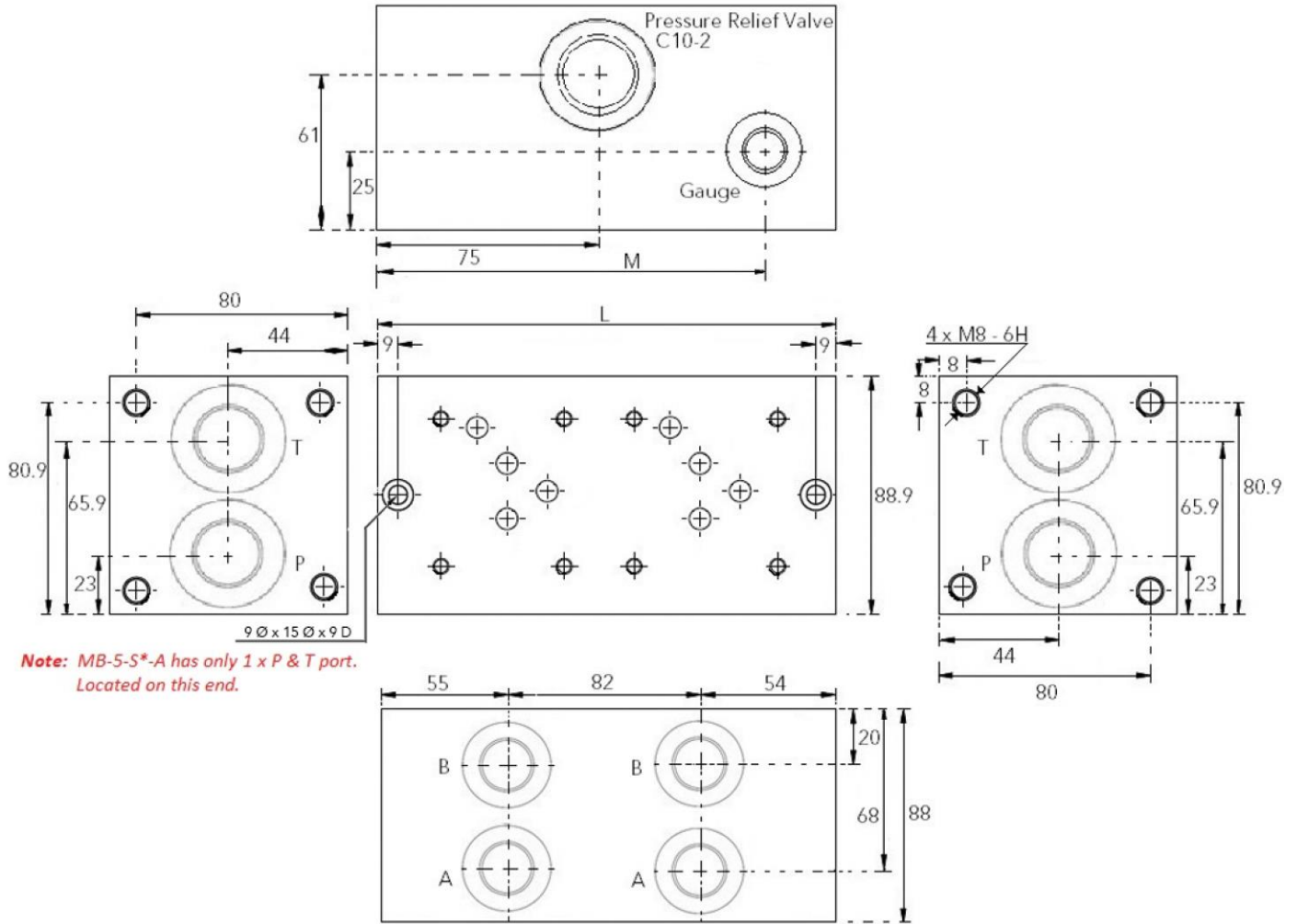
- Solenoid Unloading Valve cannot be used with Pressure Relief Valve Cartridge or Cavity Plug.
- Additional Cartridge information available on [Page 9.06](#) & Coil installation information is on [Page 9.12](#).

Test Fitting & Port Plugs

Order Code	Thread	Valve Sealing Type	List Each
PT-07-B	G 1/4 - Dowty Seal	Ball	\$22.00
PT-07-C	G 1/4 - Encapsulated Seal	Poppet	
PLUG-G1/4-S	G 1/4 - Steel Port Plug		\$5.00
PLUG-G1/2-S	G 1/2 - Steel Port Plug		\$7.00
PLUG-G3/4-S	G 3/4 - Steel Port Plug		\$9.00

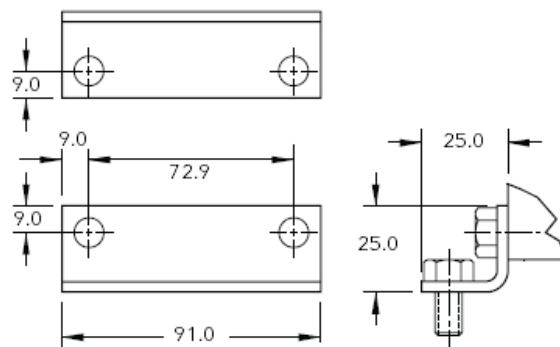
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MB-5 Parallel & Series



Station	Dim. L	Dim. M	Ports
1	110	72	P & T = G 3/4
2	191	153	
3	273	235	A & B = G 1/2
4	355	317	
5	437	399	Gauge = G 1/4
6	519	481	

MB-5-MBK



Bolt Kits – M5



Cetop 3 (NG6)		
FW & FWS valve only bolt length = 45 mm (including Thread Engagement)		
FS valve only bolt length = 50 mm (including Thread Engagement)		
All modules & 203-SAE 6 Tapping Plate = 40 mm except OCBW-3 = 60mm & MCBS = 50 mm		
SP-3-CP-S = 19 mm (Use BKM5x25)		
Order Code	Length (mm)	List Each
BKM5x25	25	\$4.00
BKM5x30	30	\$5.00
BKM5x45	45	\$6.00
BKM5x85	85	\$7.00
BKM5x90	90	\$11.00
BKM5x95	95	\$13.00
BKM5x100	100	\$14.00
BKM5x105	105	\$14.00
BKM5x110	110	\$17.00
BKM5x125	125	\$19.00
BKM5x130	130	\$24.00
BKM5x135	135	\$25.00
BKM5x140	140	\$26.00
BKM5x145	145	\$26.00
BKM5x150	150	\$31.00
BKM5x165	165	\$37.00
BKM5x170	170	\$52.00
BKM5x175	175	\$53.00
BKM5x180	180	\$54.00
BKM5x185	185	\$57.00
BKM5x205	205	\$68.00
BKM5x225	225	\$82.00

Note: All bolt kits consist of 4 x SHCS.

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Bolt Kits – M6

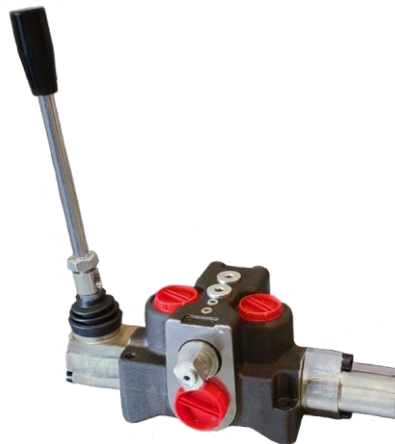


Cetop 5 (NG10)		
Valve only bolt length = 40 mm (including Thread Engagement)		
All modules = 55 mm except DAY-5 = 50 mm		
SP-5-CP-S = 19 mm (Use BKM6x30)		
Order Code	Length (mm)	List Each
BKM6x30	30	\$4.00
BKM6x40	40	\$5.00
BKM6x50	50	\$6.00
BKM6x60	60	\$7.00
BKM6x90	90	\$8.00
BKM6x95	95	\$9.00
BKM6x100	100	\$10.00
BKM6x110	110	\$11.00
BKM6x145	145	\$31.00
BKM6x150	150	\$32.00
BKM6x160	160	\$37.00
BKM6x200	200	\$51.00
BKM6x205	205	\$63.00
BKM6x255	255	\$104.00
BKM6x260	260	\$116.00

Note: All bolt kits consist of 4 x SHCS.

Mobile Valves

<i>P40 Monoblock Valves</i>	-----	6.02
<i>Z50 Monoblock Valves (Metering Spools)</i>	-----	6.03
<i>Z50 Monoblock Valves (Solenoid Control)</i>	-----	6.04
<i>P40 & Z50 Accessories & Spare Parts</i>	-----	6.05
<i>P80 Monoblock Valves</i>	-----	6.07
<i>P80 Accessories & Spare Parts</i>	-----	6.08
<i>P120 Monoblock Valves</i>	-----	6.09
<i>P120 Accessories & Spare Parts</i>	-----	6.10
<i>P81 Log Splitter Valve</i>	-----	6.11
<i>P70LS Monoblock Valve with Pressure Compensated By-Pass Flow Control</i>	-----	6.13



P40 Monoblock Valves



Nominal Flow: 40 L/min (See manufacturers catalogue)		1 - 7 Spools		Common Load Hold Check on P Port	
Adjustable Pressure: 50 - 250 bar		Preset: 180 bar			
Max. Port Pressures: P - 250 bar		A & B - 300 bar		T - 50 bar	
Ports: P - G 1/2		A & B - G 3/8		T - G 1/2	
Order Code	Description	Spools	Spool/Operator	List Each	
P40-1000005	P40-A1-GKZ1-11	1	D/A Cylinder / Spring Centred	\$211.00	
P40-1000006	P40-B1-GKZ1-11		S/A Cylinder / Spring Centred P → A, Lever Box Position 2 / Spool IN	\$241.00	
P40-1000004	P40-C1-GKZ1-11		S/A Cylinder / Spring Centred P → B, Lever Box Position 1 / Spool OUT	\$211.00	
P40-1006168	P40-D1-GKZ1-11		D/A Motor / Spring Centred		
P40-4109482	P40-A1-GKZ1-C-11		D/A Cylinder / Spring Centred + Plug C	\$227.00	
P40-1006171	P40-D8-GKZ1-11		D/A Motor / 3 Position Detent	\$260.00	
P40-1000257	O2P40-1A1A1-GKZ1-11		2	D/A Cylinder / Spring Centred	\$316.00
P40-1000276	O2P40-1A1K16-GKZ1-11 <i>(Being Superseded by 02Z50-1A1K16-GKZ1-11)</i>	Spool 1 - D/A Cylinder / Spring Centred Spool 2 - 4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool OUT		\$473.00	
P40-4104468	O2P40-1K16A1-GKZ1-11 <i>(Being Superseded by 02Z50-1K16A1-GKZ1-11)</i>	Spool 1 - 4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool OUT Spool 2 - D/A Cylinder / Spring Centred			
P40-1000274	O2P40-1K16K16-GKZ1-11 <i>(Being Superseded by 02Z50-1K16K16-GKZ1-11)</i>	Spool 1 & 2 - 4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool OUT		\$630.00	
P40-1000290	O3P40-1A1A1A1-GKZ1-11	3	D/A Cylinder / Spring Centred	\$432.00	
P40-1000306	O4P40-1A1A1A1A1-GKZ1-11	4	D/A Cylinder / Spring Centred	\$569.00	
P40-1006273	O4P40-1D1D1D1D1-GKZ1-11		D/A Motor / Spring Centred		
P40-1000336	O5P40-1A1A1A1A1A1-GKZ1-11	5	D/A Cylinder / Spring Centred	\$702.00	
P40-1001956	O6P40-1A1A1A1A1A1A1-GKZ1-11	6	D/A Cylinder / Spring Centred	\$854.00	
P40-1001965	O7P40-1A1A1A1A1A1A1A1-GKZ1-11	7	D/A Cylinder / Spring Centred	\$1,120.00	

B Spool add \$30.00 per spool for O2P40 to O7P40

4 Position Float (K16) add \$157.00 per spool for O3P40 to O7P40.

Note:

- Valves cannot be converted from left inlet to right inlet. A different spool is required.
- P40 single spool valves have 1 x P & 1 x T port which are on the side.
All other valves have 2 x P & 2 x T ports, side and top.
- **K16 spool/control requires modification to the valve body.**
Contact [Hydraulic Equipment](#) for details if doing this conversion.

Continued Next Page

Options: (indent to customer order)

- Remote cable control with single lever or 2 axis Joystick.
- Individual load hold check on all ports, available up to 4 spools.
- A & B port reliefs.
- Electrohydraulic control up to 4 spools.

Z50 Monoblock Valves (Metering Spools)



Nominal Flow: 40 L/min (See manufacturers catalogue)		1 - 2 Spools		Common Load Hold Check on P Port	
Adjustable Pressure: 50 - 250 bar		Preset: 180 bar			
Max. Port Pressures: P - 250 bar		A & B - 300 bar		T - 50 bar	
Ports: P - G 1/2		A & B - G 3/8		T - G 1/2	
Order Code	Description	Spools	Spool/Operator	List Each	
Z50-4112514	Z50-K16-GKZ1-11	1	4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool OUT	\$378.00	
Z50-4121108	Z50R-L12-GKZ1-11 (Right Hand Inlet)		4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool IN		
Z50-4106244	02Z50-1A1K16-GKZ1-11	2	Spool 1 - D/A Cylinder / Spring Centred Spool 2 - 4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool OUT	\$494.00	
Z50-4108908	02Z50-1K16A1-GKZ1-11		Spool 1 - 4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool OUT Spool 2 - D/A Cylinder / Spring Centred		
Z50-4114846	02Z50-1K16K16-GKZ1-11		Spool 1 & 2 - 4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool OUT		\$651.00

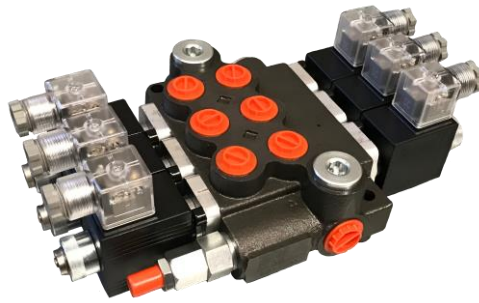
Note:

- Valves cannot be converted from left inlet to right inlet. A different spool is required.
- Z50 single spool valves have 1 x P & 1 x T port which are on the side.
- All other valves have 2 x P & 2 x T ports, side and top.

Options: (indent to customer order)

- Remote cable control with single lever or 2 axis Joystick.
- Individual load hold check on all ports, available up to 4 spools.
- A & B port reliefs.
- Electrohydraulic control up to 4 spools.
- Available up to 7 spools.
- Solenoid/Manual control up to 7 spools.

Z50 Monoblock Valves (Solenoid Control)



Nominal Flow: 50 L/min (See manufacturers catalogue)		3 Spools		Common Load Hold Check on P Port	
Adjustable Pressure: 50 - 250 bar		Preset: 180 bar			
Max. Port Pressures: P - 250 bar		A & B - 300 bar		T - 50 bar	
Ports: P - G 1/2		A & B - G 3/8		T - G 1/2	
Order Code	Description	Spools	Spool/Operator	Voltage	List Each
Z50-4108300	03Z50-AAD-ES3-12VDC-G	3	Spool 1 & 2 - D/A Cylinder / Spring Centred Spool 3 - D/A Motor / Spring Centred	12V DC	\$1,473.00

Note:

- Z50 single spool valves have 1 x P & 1 x T port which are on the side.
- All other valves have 2 x P & 2 x T ports, side and top.
- DIN Plugs are sold separately.

Options: (indent to customer order)

- Individual load hold check on all ports, available up to 4 spools.
- A & B port reliefs.
- Available up to 7 spools.
- Solenoid/Manual control up to 7 spools.

DIN Plugs



Order Code	Voltage	Description	List Each
C01010001-N	DC	DIN Light Plug	\$13.00

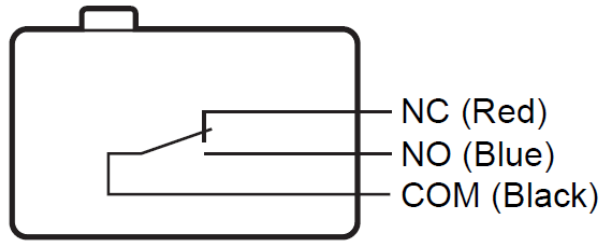
P40 & Z50 Accessories & Spare Parts

Order Code	Description	List Each
4093148	Plug C - Closed Centre - P40 / Z50	\$16.00
4093146	Plug C2 - HPCO - P40 / Z50 - G 1/2 Port	\$24.00
4098828	Plug SVP (Relief) - P40 / Z50 / P80	\$26.00
4093162	Spool Control 1 - P40 / Z50 - 3 Position Spring Centred	\$37.00
4093172	Spool Control 2 - P40 / Z50 - 3 Position, Spring Centred / Detent Detent P → B, Lever Box Pos. 1 / Spool OUT	\$57.00
4093173	Spool Control 3 - P40 / Z50 - 3 Position, Spring Centred / Detent Detent P → A, Lever Box Pos. 2 / Spool IN	
4093174	Spool Control 4 - P40 / Z50 - 2 Position, Spring Centred, 0 & 2 P → A, Lever Box Pos. 2 / Spool IN	\$37.00
4093175	Spool Control 5 - P40 / Z50 - 2 Position, Spring Centred, 0 & 1 P → B, Lever Box Pos. 1 / Spool OUT	
4093160	Spool Control 8 - P40 / Z50 - 3 Position Detent	\$49.00
4093161	Spool Control 9 - P40 / Z50 - 2 Position Detent, 0 & 1 Detent P → B, Lever Box Position 1 / Spool OUT	
4093163	Spool Control 10 - P40 / Z50 - 2 Position Detent, 0 & 2 Detent P → A, Lever Box Pos. 2 / Spool IN	
4093171	Spool Control 16 - P40 - 4 Position Float Spring Centred / Detent on Float. Detent - Lever Box Position 3 / Spool OUT	\$146.00
4107917	P40 / Z50 Spool / Control A1 & D1 Microswitch Bracket Assembly (1 per spool) (Microswitch not included)	\$35.00
4111919	P40 / Z50 Spool / Control B1 Microswitch Bracket Assembly (1 per spool) (Microswitch not included)	
4111920	P40 / Z50 Spool / Control C1 Microswitch Bracket Assembly (1 per spool) (Microswitch not included)	
4114236	P40 / Z50 Spool / Control K16 Microswitch Bracket Assembly (1 per spool) (Microswitch not included)	\$39.00
673614	Microswitch - IP67, SPDT, 250V AC, 30V DC (1 per spool) <i>Wiring details on Page 6.06.</i>	\$50.00
4103491	Pneumatic Control - P40 / Z50 (1 per spool)	\$191.00
4093702	Hydraulic Control - P40 / Z50 (1 per spool)	\$158.00
4093440	Joystick Assembly - P40 / Z50 (2 Spool, X & Y Axis - J+1 & J+3)	\$242.00
4093048	Lever - P80 / PC70 / PC100 / Joystick (180 mm L - M10 x 1.5)	\$10.00
4093561	PVC Boot - Joystick P40 / Z50 / P80 / PC70 / PC100	\$25.00
4093120	Relief Valve - P40 / Z50 / P80	\$109.00
1000169	PVC Boot - Lever Box P40 / Z50 / P80 / PC70 / PC100 (Standard)	\$6.00
4109045	Rubber Boot - Lever Box P40 / Z50 / P80 / PC70 / PC100	\$14.00
4093131	Lever - P40 / Z50 (165 mm L - M8 x 1.25)	\$10.00
4093217	Lever Box - P40 / Z50 - KZ (Lever Box, PVC Boot, SHCS) (Standard)	\$52.00
4093213	Lever Box Assembly - P40 / Z50 - KZ1 (Lever, Lever Box, PVC Boot, SHCS) (Standard)	\$62.00
4093101	Seal Kit - P40 / Z50	\$31.00
4093095	Seal Kit - 02P40 / Z50	\$41.00
4093096	Seal Kit - 03P40 / Z50	\$51.00
4093097	Seal Kit - 04P40 / Z50	\$61.00
4093098	Seal Kit - 05P40 / Z50	\$72.00
4093099	Seal Kit - 06P40 / Z50	\$82.00
4103815	Seal Kit - 07P40 / Z50	\$93.00
4110375	Seal Kit - Pneumatic Control P40 / Z50 / P80 / PC70 / PC100	\$25.00
4110440	Seal Kit - Hydraulic Control P40 / Z50 / P80 / PC70 / PC100	\$37.00

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1000043	Spool A - P40 - D/A Cylinder	\$82.00
4107957	Spool B - P40 - S/A Cylinder, P → A	\$112.00
1000044	Spool C - P40 - S/A Cylinder, P → B	\$82.00
1000045	Spool D - P40 - D/A Motor	\$82.00
4099399	Spool K - P40 - 4 Position Float	\$147.00

Microswitch Wiring Details



P80 Monoblock Valves



Nominal Flow: 80 L/min <i>(See manufacturers catalogue)</i>		1 - 6 Spools	Individual Load Hold Check on All Ports		
Adjustable Pressure: 50 - 250 bar		Preset: 180 bar			
Max. Port Pressures:		P - 250 bar	A & B - 300 bar T - 50 bar		
Ports:		P - G 1/2	A & B - G 1/2 T - G 3/4		
Order Code	Description	Spools	Spool/Operator	List Each	
P80-1000830	P80-A1-GKZ1-11	1	D/A Cylinder / Spring Centred	\$327.00	
P80-1000831	P80-B1-GKZ1-11		S/A Cylinder / Spring Centred P → A, Lever Box Position 2 / Spool IN		
P80-1000832	P80-C1-GKZ1-11		S/A Cylinder / Spring Centred P → B, Lever Box Position 1 / Spool OUT		
P80-4090608	P80-D1-GKZ1-11		D/A Motor / Spring Centred		
P80-1005959	P80-D8-GKZ1-11		D/A Motor / 3 Position Detent		\$376.00
P80-1000835	P80-L12-GKZ1-11		4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool IN		\$417.00
P80-1000999	2P80-1A1A1-GKZ1-11	2	D/A Cylinder / Spring Centred	\$484.00	
P80-1001024	3P80-1A1A1A1-GKZ1-11	3	D/A Cylinder / Spring Centred	\$663.00	
P80-4119700	4P80-1A1A1A1A1-GKZe1-11	4	D/A Cylinder / Spring Centred MRV Preset & Lockwired at 193 bar	\$869.00	
P80-4119701	4P80-1A1A1A1A1-GKZe1-P-11		D/A Cylinder / Spring Centred plus Pneumatic Control MRV Preset & Lockwired at 193 bar	\$1,633.00	
P80-4115863	4P80-1A1A1A1A1-GKZ1-EH24-11		D/A Cylinder / Spring Centred plus Electrohydraulic Control - 24V DC MRV Preset & Lockwired at 193 bar	\$4,498.00	
P80-1001134	5P80-1A1A1A1A1A1-GKZ1-11	5	D/A Cylinder / Spring Centred	\$999.00	
P80-1001139	6P80-1A1A1A1A1A1A1-GKZ1-11	6	D/A Cylinder / Spring Centred	\$1,209.00	

4 Position Float (L12) add \$90.00 per spool for 2P80 to 6P80.

Note:

- Valves cannot be converted from left inlet to right inlet. A different spool is required.
- P80 single spool valves have 1 x P & 1 x T port which are on the side.
All other valves have 2 x P & 2 x T ports, side and top.
- Electrohydraulic Control - 12V DC available via conversion.
- Electrohydraulic Control - DIN Plugs are sold separately. Refer to [Page 6.04](#).

Options: (indent to customer order)

- Remote cable control with single lever or 2 axis Joystick.
- Metering spool versions available up to 6 spools.

P80 Accessories & Spare Parts

Order Code	Description	List Each
4093138	Plug C - Closed Centre - P80	\$16.00
4093057	Plug C2 - HPCO - P80 - G 3/4 Port	\$24.00
4098828	Plug SVP (Relief) - P40 / Z50 / P80	\$26.00
4093150	Spool Control 1 - P80 / PC70 / PC100 - 3 Position Spring Centred	\$37.00
4093153	Spool Control 2 - P80 / PC70 / PC100 - 3 Position, Spring Centred / Detent Detent P → B, Lever Box Position 1 / Spool OUT	\$57.00
4093154	Spool Control 3 - P80 / PC70 / PC100 - 3 Position, Spring Centred / Detent Detent P → A, Lever Box Position 2 / Spool IN	
4093816	Spool Control 4 - P80 / PC70 / PC100 - 2 Position, Spring Centred, 0 & 2 P → A, Lever Box Position 2 / Spool IN	\$37.00
4099054	Spool Control 5 - P80 / PC70 / PC100 - 2 Position, Spring Centred, 0 & 1 P → B, Lever Box Position 1 / Spool OUT	
4093156	Spool Control 8 - P80 / PC70 / PC100 - 3 Position Detent	\$49.00
4093157	Spool Control 9 - P80 / PC70 / PC100 - 2 Position Detent, 0 & 1 Detent P → B, Lever Box Position 1 / Spool OUT	
4093151	Spool Control 10 - P80 / PC70 / PC100 - 2 Position Detent, 0 & 2 Detent P → A, Lever Box Position 2 / Spool IN	
4111921	P80 Spool / Control A1 & D1 Microswitch Bracket Assembly (1 per spool) (Microswitch not included)	\$35.00
4111922	P80 Spool / Control B1 Microswitch Bracket Assembly (1 per spool) (Microswitch not included)	
4111923	P80 Spool / Control C1 Microswitch Bracket Assembly (1 per spool) (Microswitch not included)	
673614	Microswitch - IP67, SPDT, 250V AC, 30V DC (1 per spool) <i>Wiring details on Page 6.06.</i>	\$50.00
4103492	Pneumatic Control - P80 / PC70 / PC100 (1 per spool)	\$191.00
4093696	Hydraulic Control - P80 / PC70 / PC100 (1 per spool)	\$158.00
4093443	Joystick Assembly - P80 / PC70 / PC100 (2 Spool, X & Y Axis - J+1 & J+3)	\$242.00
4093561	PVC Boot - Joystick P40 / Z50 / P80 / PC70 / PC100	\$25.00
4093120	Relief Valve - P40 / Z50 / P80	\$109.00
1000169	PVC Boot - Lever Box P40 / Z50 / P80 / PC70 / PC100 (Standard)	\$6.00
4109045	Rubber Boot - Lever Box P40 / Z50 / P80 / PC70 / PC100	\$14.00
4093048	Lever - P80 / PC70 / PC100 / Joystick (180 mm L - M10 x 1.5)	\$10.00
4093211	Lever Box - P80 / PC70 - KZ (Lever Box, PVC Boot, SHCS) (Standard)	\$52.00
4093132	Lever Box Assembly - P80 / PC70 - KZ1 (Lever, Lever Box, PVC Boot, SHCS) (Standard)	\$62.00
4119600	Lever Box - P80 / PC70 - KZe (Lever Box with SUS Hinge Pin, Rubber Boot, SHCS)	\$64.00
4093102	Seal Kit - P80	\$31.00
4093093	Seal Kit - 2P80	\$57.00
4093100	Seal Kit - 3P80	\$72.00
4093091	Seal Kit - 4P80	\$86.00
4093092	Seal Kit - 5P80	\$102.00
4093094	Seal Kit - 6P80	\$118.00
4110375	Seal Kit - Pneumatic Control P40 / Z50 / P80 / PC70 / PC100	\$25.00
4110440	Seal Kit - Hydraulic Control P40 / Z50 / P80 / PC70 / PC100	\$37.00
1000853	Spool A - P80 - D/A Cylinder	\$90.00
1000854	Spool B - P80 - S/A Cylinder, P → A	
1000855	Spool C - P80 - S/A Cylinder, P → B	
1000856	Spool D - P80 - D/A Motor	

P120 Monoblock Valves



Nominal Flow: 120 L/min (See manufacturers catalogue)		1 - 4 Spools	Common Load Hold Check on P Port	
Adjustable Pressure: 50 - 250 bar		Preset: 180 bar		
Max. Port Pressures:		P - 250 bar	A & B - 300 bar	
Ports:		P - G 1	A & B - G 1	
		T - 50 bar	T - G 1	
Order Code	Description	Spools	Spool/Operator	List Each
P120-1002920	P120-A1-GKZ1-11	1	D/A Cylinder / Spring Centred	\$693.00
P120-4101803	P120-B1-GKZ1-11		S/A Cylinder / Spring Centred P → A, Lever Box Position 2 / Spool IN	
P120-4105727	P120-C1-GKZ1-11		S/A Cylinder / Spring Centred P → B, Lever Box Position 1 / Spool OUT	
P120-4092968	P120-D1-GKZ1-11		D/A Motor / Spring Centred	
P120-4101163	P120-D8-GKZ1-11		D/A Motor / 3 Position Detent	
P120-4092562	02P120-1A1A1-GKZ1-11	2	D/A Cylinder / Spring Centred	\$967.00
P120-4092566	03P120-1A1A1A1-GKZ1-11	3	D/A Cylinder / Spring Centred	\$1,282.00
P120-4096785	04P120-1A1A1A1A1-GKZ1-11	4	D/A Cylinder / Spring Centred	\$1,609.00

Note:

- Valves cannot be converted from left inlet to right inlet. A different spool is required.
- All P120 spool valves have 2 x P & 2 x T ports, side and top.

Options: (indent to customer order)

- Electrohydraulic control up to 4 spools.
- 4 Position Float with Spring Centred/Detent control.

P120 Accessories & Spare Parts

Order Code	Description	List Each
4093139	Plug C - Closed Centre - P120	\$19.00
4093144	Plug C2 – HPCO - P120 - G 1 Port	\$27.00
4110139	Plug SVP (Relief) - P120	\$26.00
4099875	Spool Control 1 - P120 - 3 Position Spring Centred	\$41.00
4100011	Spool Control 2 - P120 - 3 Position, Spring Centred / Detent Detent P → B, Lever Box Position 1 / Spool OUT	\$74.00
4100012	Spool Control 3 - P120 - 3 Position, Spring Centred / Detent Detent P → A, Lever Box Position 2 / Spool IN	
4100060	Spool Control 4 - P120 - 2 Position, Spring Centred, 0 & 2 P → A, Lever Box Position 2 / Spool IN	\$41.00
4103771	Spool Control 5 - P120 - 2 Position, Spring Centred, 0 & 1 P → B, Lever Box Position 1 / Spool OUT	
4093158	Spool Control 8 - P120 - 3 Position Detent	\$61.00
4103772	Spool Control 9 - P120 - 2 Position Detent, 0 & 1 Detent P → B, Lever Box Position 1 / Spool OUT	
4100732	Spool Control 10 - P120 - 2 Position Detent, 0 & 2 Detent P → A, Lever Box Position 2 / Spool IN	
4098867	Pneumatic Control - P120 (1 per spool)	\$211.00
4103880	Hydraulic Control - P120 (1 per spool)	
4109057	Relief Valve - P120	\$146.00
1002968	PVC Boot - P120 (Standard)	\$8.00
4098498	Lever - P120 (290 mm L - M12 x 1.75)	\$14.00
4102378	Lever Box - P120 - KZ (Lever Box, PVC Boot, SHCS) (Standard)	\$60.00
4093772	Lever Box Assembly - P120 - KZ1 (Lever, Lever Box, PVC Boot, SHCS) (Standard)	\$74.00
4093773	Seal Kit - P120	\$35.00
4103779	Seal Kit - 02P120	\$60.00
4103781	Seal Kit - 03P120	\$76.00
4103783	Seal Kit - 04P120	\$94.00
4110393	Seal Kit - Pneumatic Control P120	\$25.00
4110441	Seal Kit - Hydraulic Control P120	\$37.00
1002927	Spool A - P120 - D/A Cylinder	\$110.00
4093354	Spool B - P120 - S/A Cylinder, P → A	
4100010	Spool C - P120 - S/A Cylinder, P → B	
4092942	Spool D - P120 - D/A Motor	

P81 Log Splitter Valve



Nominal Inlet Flow: P81-A2-G = 80 L/min				
P81-Rs-G = 16 L/min				
Main Relief Valve Adjustable Pressure:		50 - 250 bar	Preset: 150 bar	
Pressure Release Detent Adjustable Pressure:		70 – 140 bar	Preset: 70 bar	
Max. Port Pressures:	P - 250 bar	A & B - 300 bar	T - 10 bar	
Port Size:	P - G 3/4	A & B - G 1/2	T - G 3/4	
Order Code	Description	Spools	Spool/Operator	List Each
P81-4091319	P81-A2-G	1	Cylinder – 3 Position Spring Centred/Pressure Released Detent Connect B Port to Rod End of Cylinder.	\$316.00
P81-4108766	P81-Rs-G		Cylinder with 4 th Position Re-Gen Spring Centred/Pressure Released Detent Connect A Port to Rod End of Cylinder. The B Port hose needs to be larger due to high Re-Gen flows.	\$460.00

Note:

- Valves cannot be converted from left inlet to right inlet.
- P81 valves have 1 x P & 1 x T port which are on the side.

Description

The P81 is an on/off monoblock directional control valve designed for a log splitter. It is spring centred in one direction and has a pressure release detent in the other direction which automatically kicks back to neutral when the cylinder reaches the end of its stroke.

Warning: The pressure release detent must only be used on splitting blade retraction.

The P81-A2-G is designed for a two stage (hi-low) pump.

The P81-Rs-G is designed for a single stage pump and features a regenerative function to extend the cylinder at high speed. When extra force is required the user manually shifts from high-speed mode to high force mode and a “soft stop” differentiates between the two modes.

Pressure Released Detent

On P81-A2-G it is Spool “OUT” (Handle “IN”) position. **Connect B Port to Rod End of Cylinder.**

On P81-Rs-G it is Spool “IN” (Handle “OUT”) position. **Connect A Port to Rod End of Cylinder.**

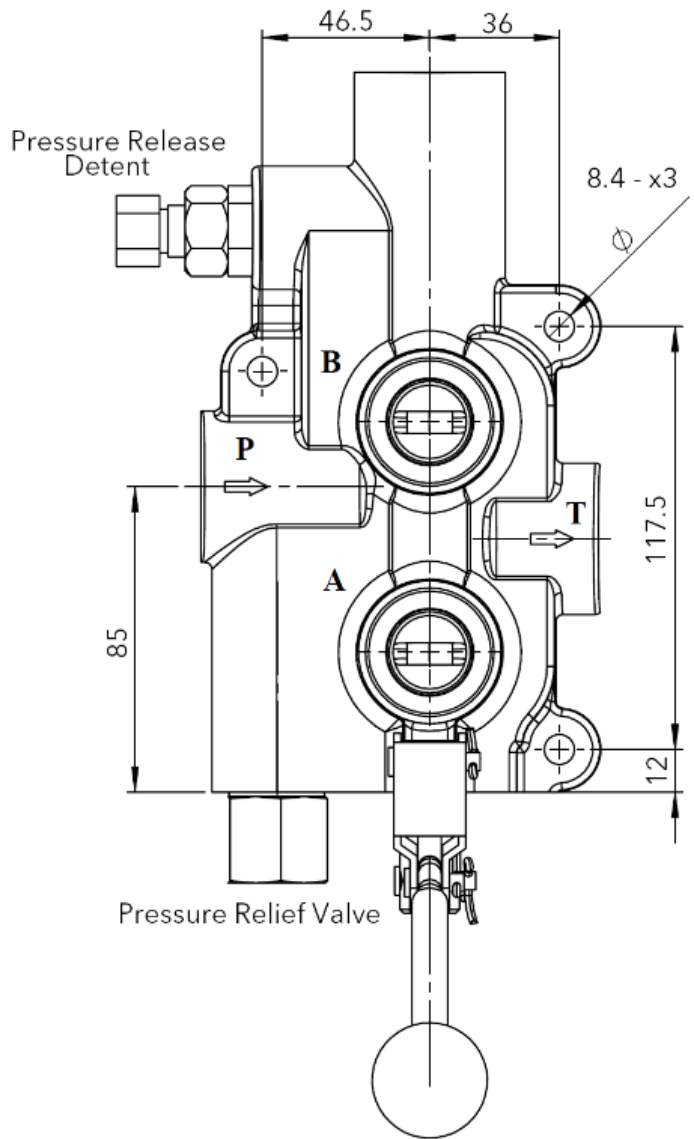
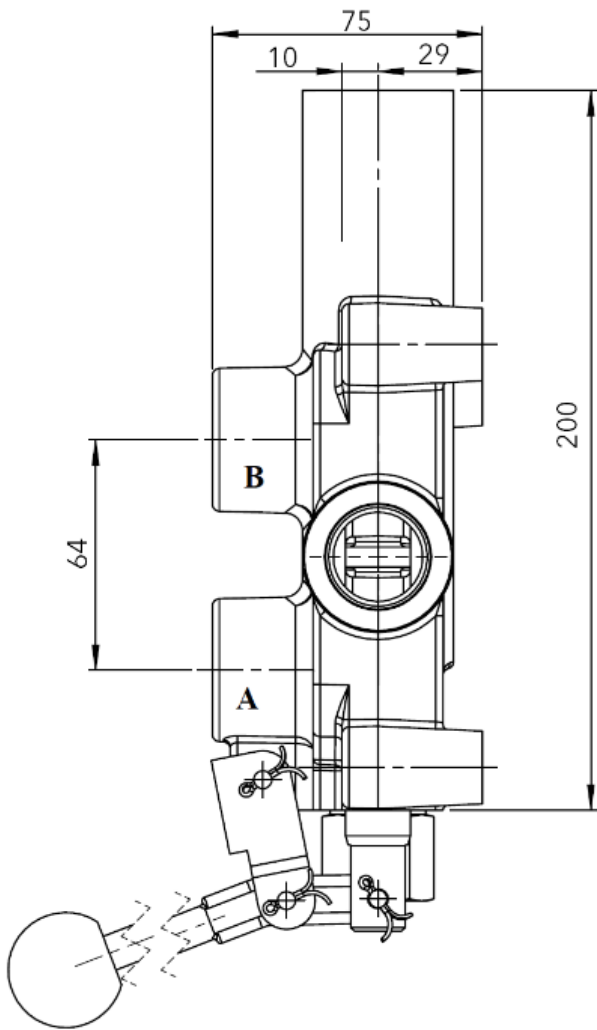
The B Port hose needs to be larger due to high Re-Gen flows.

Warning: The pressure release detent must only be used on splitting blade retraction.

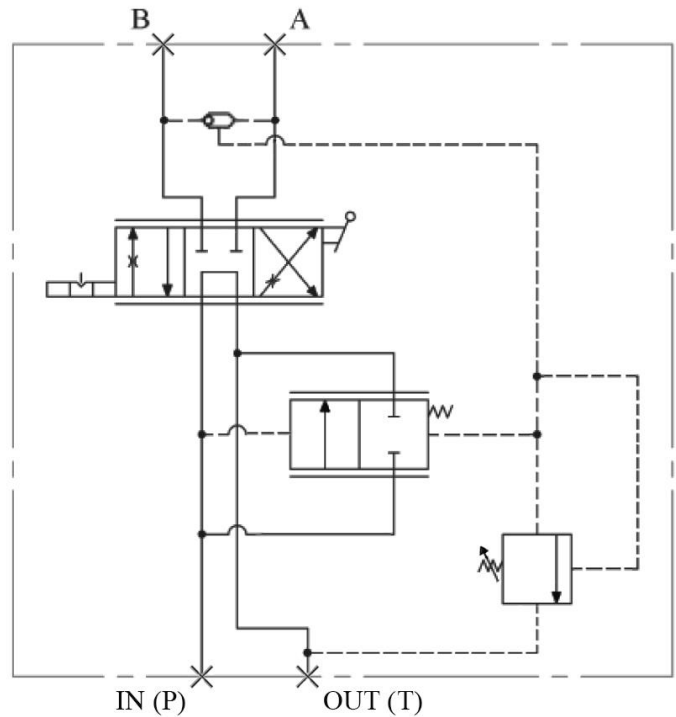
The detent release pressure is adjustable by first loosening the locking nut. Turning the adjusting screw clockwise will increase the detent release pressure and counterclockwise will decrease the pressure.

Note: If the detent release pressure is adjusted too high the spool will not centre; if the pressure is too low the detent will not hold.

Continued Next Page



P70LS Monoblock Valve with Pressure Compensated By-Pass Flow Control



Max. Inlet Flow: 70 L/min		1 Spool Only	No Common Load Hold Check on P Port	
Adjustable Pressure: 50 - 207 bar		Preset: 180 bar		
Max. Port Pressures: IN (P) - 210 bar		A & B - 210 bar	OUT (T) - 25 bar	
Ports: IN (P) - 1 1/16" UNO		A & B - 7/8" UNO	OUT (T) - 1 1/16" UNO	
Order Code	Description	Max. Controlled Flow L/min	Spool / Friction Detent	List Each
P70LS-4114384	P70LS-120-TM6-4-G-F1	22		\$583.00
P70LS-4114383	P70LS-120-TM12-4-G-F1	45		
P70LS-4114390	P70LS-120-TM18-4-G-F1	68		
P70LS-4114389	P70LS-120-OM6-4-G-F1	22		
P70LS-4114386	P70LS-120-OM12-4-G-F1	45		
P70LS-4114385	P70LS-120-OM18-4-G-F1	68		

The P70LS series is a 4 port, 3 position, directional control valve with a pressure compensated by-pass flow control valve and an adjustable pilot operated pressure relief valve all in one compact package. The manual lever allows the user to meter the flow out of either work port and is directly proportional to the movement of the lever. Flow out of the work port is constant regardless of load changes and allows smooth and constant movement of a cylinder or motor. The Friction Detent holds the spool so it does not move when the lever is released and a detent groove indicates the neutral position.

Note: P70LS valves are open By-Pass and do not have HPCO capability, the T port must be connected back to tank.

Pressure Gauges & Test Box

<i>Description</i>	7.02
<i>63 mm Bottom Entry</i>	7.03
<i>63 mm Rear Entry - Flange Mount</i>	7.03
<i>63 mm Rear Entry - Clamp Mount</i>	7.04
<i>100 mm Bottom Entry</i>	7.05
<i>100 mm Rear Entry - Flange Mount</i>	7.05
<i>Special Gauges</i>	7.06
<i>Accessories & Spare Parts</i>	7.06
<i>Test Box</i>	7.06



Description

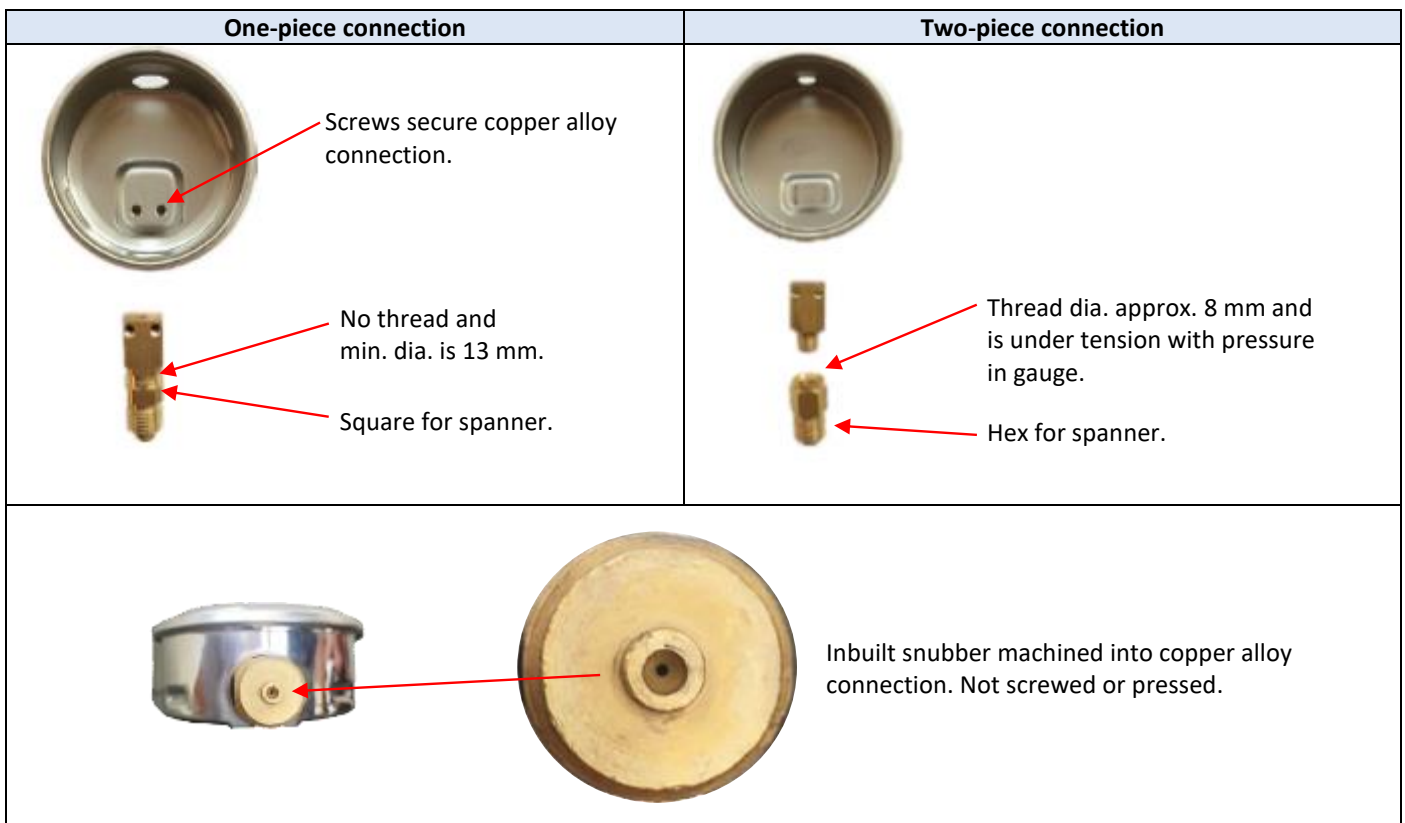
Our high-quality liquid-filled gauges feature a polished 304 stainless steel case for protection in harsh environments. Glycerine oil filled with inbuilt snubber for adverse service conditions where pulsating and vibration exists. Suitable for liquid or non-combustible gaseous media (not Oxygen).

Main Features:

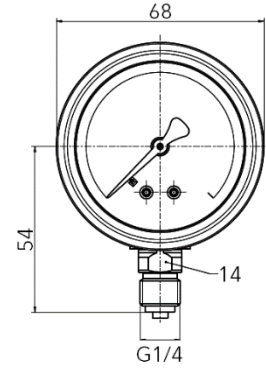
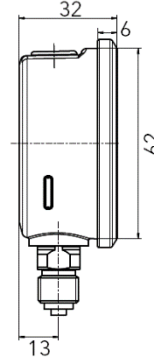
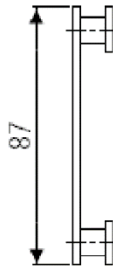
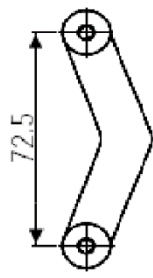
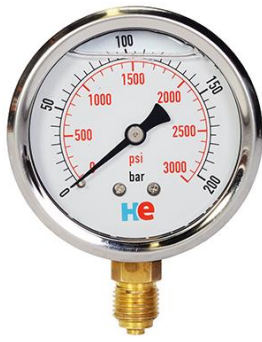
- Dual scale dial in bar/psi.
- Glycerine Oil Filled.
- Polished 304 stainless steel case with vent plug.
- Phosphor bronze bourdon tube.
- Polycarbonate window.
- Black Aluminium pointer.
- One-piece copper alloy connection.
- Inbuilt snubber machined into copper alloy connection. Not screwed or pressed.
- Ambient Temperature Range: +5 °C ~+60 °C.
- Accuracy $\pm 2.5\%$ of full scale
- Fluid service: mineral oil, water-glycol, alcohol, water-oil emulsions, air, etc. (not Oxygen).
- Manual vent option available. Refer to Accessories & Parts section below.
- Can be customised with your logo and part number - MOQ apply

One Piece Connection Advantage:

Why choose one-piece connection gauges? Because they are stronger. The pictures below show the difference and how to identify them.



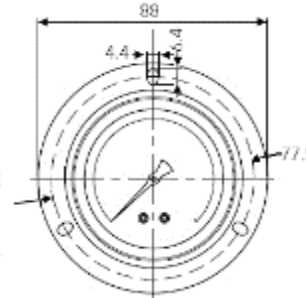
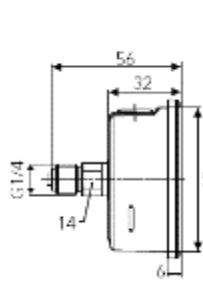
63 mm Bottom Entry - G 1/4 Connection



Note: PG63-C clamp can be fitted to convert to panel mount.
Not supplied with gauge, order separately.

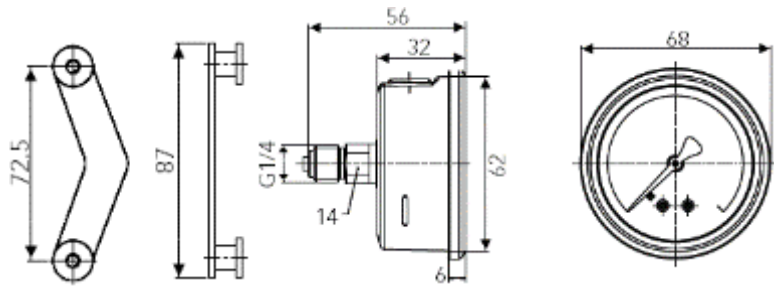
Order Code	Dial Range	List Each
PG63-070-B	0-70 bar/0-1000 psi	\$49.00
PG63-140-B	0-140 bar/0-2000 psi	
PG63-200-B	0-200 bar/0-3000 psi	
PG63-280-B	0-280 bar/0-4000 psi	
PG63-350-B	0-350 bar/0-5000 psi	
PG63-400-B	0-400 bar/0-6000 psi	
PG63-550-B	0-550 bar/0-8000 psi	
PG63-700-B	0-700 bar/0-10000 psi	

63 mm Rear Entry - Flange Mount - G 1/4 Connection



Order Code	Dial Range	List Each
PG63-070-RF	0-70 bar/0-1000 psi	\$57.00
PG63-140-RF	0-140 bar/0-2000 psi	
PG63-200-RF	0-200 bar/0-3000 psi	
PG63-280-RF	0-280 bar/0-4000 psi	
PG63-350-RF	0-350 bar/0-5000 psi	
PG63-400-RF	0-400 bar/0-6000 psi	
PG63-550-RF	0-550 bar/0-8000 psi	
PG63-700-RF	0-700 bar/0-10000 psi	

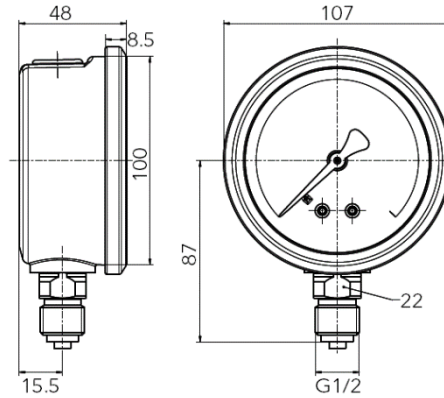
63 mm Rear Entry - Clamp Mount - G 1/4 Connection



Note: PG63-C clamp is supplied with gauge.

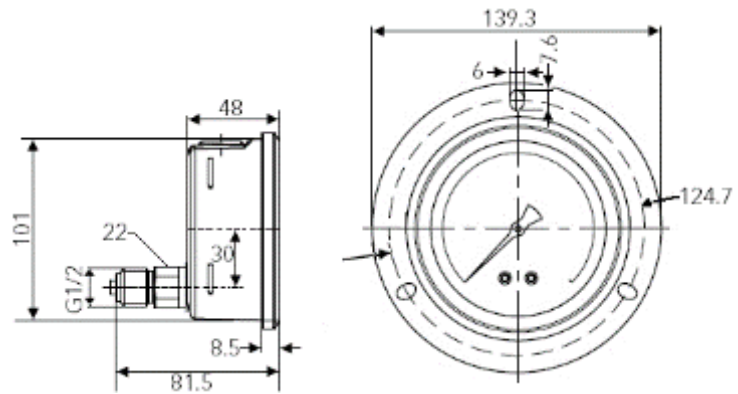
Order Code	Dial Range	List Each
PG63-070-RC	0-70 bar/0-1000 psi	\$57.00
PG63-140-RC	0-140 bar/0-2000 psi	
PG63-200-RC	0-200 bar/0-3000 psi	
PG63-280-RC	0-280 bar/0-4000 psi	
PG63-350-RC	0-350 bar/0-5000 psi	
PG63-400-RC	0-400 bar/0-6000 psi	
PG63-550-RC	0-550 bar/0-8000 psi	
PG63-700-RC	0-700 bar/0-10000 psi	

100 mm Bottom Entry - G 1/2 Connection



Order Code	Dial Range	List Each
PG100-070-B	0-70 bar/0-1000 psi	\$114.00
PG100-140-B	0-140 bar/0-2000 psi	
PG100-200-B	0-200 bar/0-3000 psi	
PG100-280-B	0-280 bar/0-4000 psi	
PG100-350-B	0-350 bar/0-5000 psi	
PG100-400-B	0-400 bar/0-6000 psi	
PG100-550-B	0-550 bar/0-8000 psi	
PG100-700-B	0-700 bar/0-10000 psi	

100 mm Rear Entry - Flange Mount - G 1/2 Connection



Order Code	Dial Range	List Each
PG100-070-RF	0-70 bar/0-1000 psi	\$125.00
PG100-140-RF	0-140 bar/0-2000 psi	
PG100-200-RF	0-200 bar/0-3000 psi	
PG100-280-RF	0-280 bar/0-4000 psi	
PG100-350-RF	0-350 bar/0-5000 psi	
PG100-400-RF	0-400 bar/0-6000 psi	
PG100-550-RF	0-550 bar/0-8000 psi	
PG100-700-RF	0-700 bar/0-10000 psi	

Special Gauges



Order Code	Diameter	Dial Range	Connection	Liquid	List Each
PG100-0001	100 mm	0-800 kPa / 0-115 psi	3/8" BSPT - Bottom Entry (2-piece connection)	Silicone	\$73.00

Note: Ambient Temperature Range: - 10 °C ~ + 60 °C.

Accessories & Spare Parts



PG63-C



PG63-F



PG63-MV



PG100-MV



PG63-RP



PG100-RP

Order Code	Description	List Each
PG63-C	63 mm Clamp (can be fitted to PG63-***-B)	\$8.00
PG63-F	63 mm Flange	
PG63-MV	63 mm Manual Vent Plug	
PG63-RP	63 mm Rubber Protector	
PG100-MV	100 mm Manual Vent Plug	\$15.00
PG100-RP	100 mm Rubber Protector	

Test Box



These robust moulded plastic boxes protect and makes carrying your test equipment easy. They can hold:

- 3 x 63 mm Pressure Gauges (bottom entry without Manual Vent)
- 6 x Test Points.
- 6 x Test Hoses (depends on length)

Note: All these items are sold separately

Order Code	Description	List Each
BDTK-B	Test Kit Box (Black)	\$49.00
BDTK-G	Test Kit Box (Green)	

Test Hoses, Fittings & Test Box

Test Points - Series 20 (M16 x 2)	8.02
Adaptors - Series 20 (M16 x 2)	8.02
Bulkhead - Series 20 (M16 x 2)	8.03
Test Box	8.03
Test Hose - M16 x 2 Female - M16 x 2 Female	8.04
Test Hose - M16 x 2 Female - 1/4" BSPP Gauge	8.04
Test Hose - M16 x 2 Female - 1/2" BSPP Gauge	8.04



Test Points - Series 20 (M16 x 2)

Specifications:

Max. Working Pressure : 630 bar
 Material : Carbon Steel
 Seal Material : NBR (Buna-N)
 Temp Range : -20 °C ~ +100°C



Order Code	Thread	Cross Sectional View	Valve Sealing Type	List Each	
PT-06-B	G 1/8 Dowty Seal	<p>Ball Type</p>	Ball	\$22.00	
PT-06-C	G 1/8 Encapsulated Seal		Poppet		
PT-07-B	G 1/4 Dowty Seal		Ball		
PT-07-C	G 1/4 Encapsulated Seal		Poppet		
PT-08-B	G 3/8 Dowty Seal		Ball		
PT-08-C	G 3/8 Encapsulated Seal		Poppet		
PT-09-B	G 1/2 Dowty Seal		Ball		\$26.00
PT-09-C	G 1/2 Encapsulated Seal		Poppet		
PT-21-C	G 3/4 Encapsulated Seal		Ball		\$37.00
PT-10	7/16" UNO	<p>Poppet Type</p>	Poppet	\$22.00	
PT-11	1/2" UNO				
PT-12	9/16" UNO				
PT-34	3/4" UNO				
PT-15	1/8" BSPT				
PT-16	1/4" BSPT				
PT-17	3/8" BSPT				

Adaptors - Series 20 (M16 x 2) (No Valve Sealing)



Order Code	Thread	Cross Sectional View	List Each
PTA-01	1/4" BSPP Gauge x Series 20 Male		\$29.00
PTA-02	1/2" BSPP Gauge x Series 20 Male		\$32.00
PTA-03	1/4" BSPP Gauge x Series 20 Female		\$31.00
PTA-04	1/2" BSPP Gauge x Series 20 Female		\$35.00
PTA-05	Test Hose Connector Series 20 Male x Series 20 Male		\$28.00
Replacement O Rings for Adaptors - Series 20 & Test Hose Ends			
OR-4.2x1.9-N70	Suits PTA-01, PTA-03 & P300 Test Hose End		\$2.00
OR-6.2x1.9-N70	Suits PTA-02, PTA-04 & P400 Test Hose End		\$4.00

Bulkhead - Series 20 (M16 x 2)



Order Code	Thread	Valve Sealing Type	Cross Sectional View	List Each
PTG-01	7/16" JIC Male	Ball		\$44.00
PTG-02	1/2" JIC Male			\$50.00
PTG-03	9/16" JIC Male			\$55.00

Test Box



These robust moulded plastic boxes protect and makes carrying your test equipment easy. They can hold:

- 3 x 63 mm Pressure Gauges (bottom entry without Manual Vent)
- 6 x Test Points.
- 6 x Test Hoses (depends on length)

Note: All these items are sold separately

Order Code	Description	List Each
BDTK-B	Test Kit Box (Black)	\$49.00
BDTK-G	Test Kit Box (Green)	

Test Hoses - Series 20



M16 x 2 Female - M16 x 2 Female



M16 x 2 Female - 1/2" BSPP Gauge

Note: Spanner Flats on M16 x 2 connection to make removal easier.

M16 x 2 Female - M16 x 2 Female

Order Code	Length	List Each
HF-H0200-1-H0200-1-2-P63-500	500 mm	\$33.00
HF-H0200-1-H0200-1-2-P63-1000	1000 mm	\$38.00
HF-H0200-1-H0200-1-2-P63-1500	1500 mm	\$43.00
HF-H0200-1-H0200-1-2-P63-2000	2000 mm	\$48.00
HF-H0200-1-H0200-1-2-P63-2500	2500 mm	\$52.00
HF-H0200-1-H0200-1-2-P63-3000	3000 mm	\$58.00
HF-H0200-1-H0200-1-2-P63-7000	7000 mm	\$96.00
HF-H0200-1-H0200-1-2-P63-8000	8000 mm	\$106.00

M16 x 2 Female - 1/4" BSPP Gauge

Order Code	Length	List Each
HF-H0200-1-P0300-2-P63-500	500 mm	\$32.00
HF-H0200-1-P0300-2-P63-1000	1000 mm	\$37.00
HF-H0200-1-P0300-2-P63-1500	1500 mm	\$41.00
HF-H0200-1-P0300-2-P63-2000	2000 mm	\$47.00
HF-H0200-1-P0300-2-P63-2500	2500 mm	\$51.00
HF-H0200-1-P0300-2-P63-3000	3000 mm	\$57.00

M16 x 2 Female - 1/2" BSPP Gauge

Order Code	Length	List Each
HF-H0200-1-P0400-2-P63-500	500 mm	\$38.00
HF-H0200-1-P0400-2-P63-1000	1000 mm	\$43.00
HF-H0200-1-P0400-2-P63-1500	1500 mm	\$48.00
HF-H0200-1-P0400-2-P63-2000	2000 mm	\$52.00
HF-H0200-1-P0400-2-P63-2500	2500 mm	\$58.00
HF-H0200-1-P0400-2-P63-3000	3000 mm	\$62.00
HF-H0200-1-P0400-2-P63-7000	7000 mm	\$101.00
HF-H0200-1-P0400-2-P63-7800	7800 mm	\$108.00

DN2-630 Test Hose Technical Information

ID = 2 mm

OD = 5 mm

Min. Bending Radius = 20 mm

Max. Operating Pressure = 630 bar

Min. Burst Pressure = 1800 bar

Temp. Range = - 40 °C ~+100 °C

Cartridge Valves

Common Cavity Cartridges

2 Way / 2 Position Normally Closed Valves	9.02
2 Way / 2 Position Normally Open Valves	9.05
2 Way / 2 Position Locking Manual Overrides	9.07
3 Way / 2 Position Valves	9.07
4 Way / 2 Position Valves	9.09
4 Way / 3 Position Valves	9.10
Coils	9.12
DIN Plugs	9.12
Coil Dimensions	9.13
Pressure Relief Valves	9.14
Bi-Directional Relief Valves	9.14
Pilot Operated Check Valves	9.14
Flow Divider / Combiner	9.15

Common Cavity Bodies

2 Way Bodies	9.16
3 Way Bodies	9.17
4 Way Bodies	9.17

SUN Cavity Cartridges

Counterbalance Valves	9.18
Pilot Operated Check Valves	9.18
Mechanically Operated Back-to-Back (Cylinder Phasing) Check Valves	9.19

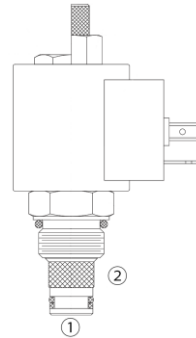
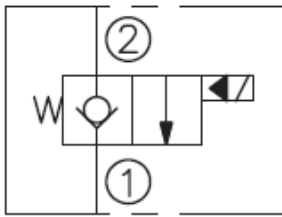
SUN Cavity Bodies

3 Way Bodies	9.20
Cylinder Mount Counterbalance & Pilot Operated Check Valves	9.21
Custom Built Manifolds & Bodies	9.24



Common Cavity Cartridges

2 Way / 2 Position Normally Closed Poppet



	① → ②	② → ①
De-Energised	Flow	Blocked
Energised	Restricted	Flow

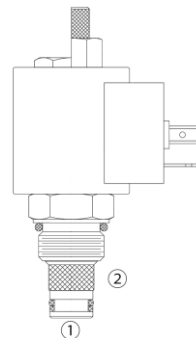
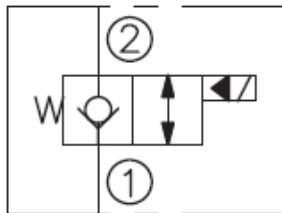
Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-08-2NCP	08-2 (3/4-16 UNF-2B)	30.2	207	No	LC2-08-C-*H	\$87.00
LSV2-08-2NCP-M				Yes		\$129.00
LSV2-10-2NCP	10-2 (7/8-14 UNF-2B)	60.6		No	LC2-10-C-*H	\$95.00
LSV2-10-2NCP-M				Yes		\$136.00
LSV2-12-2NCP	12-2 (1 1/16-12 UNF-2B)	113.6		No		\$159.00
LSV2-12-2NCP-M				Yes		\$201.00

Note: Coil & DIN Plug are sold separately.

Operation of Locking Manual Override Option:

- Normal Operation (Closed Position) push red button in and turn clockwise.
- To open the valve, push red button in, twist counterclockwise and release.

2 Way / 2 Position Normally Closed Poppet



	① → ②	② → ①
De-Energised	Flow	Blocked
Energised	Flow	Flow

Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-08-2NCRP	08-2 (3/4-16 UNF-2B)	22.8	207	No	LC2-08-C-*H	\$97.00
LSV2-08-2NCRP-M				Yes		\$137.00
LSV2-10-2NCRP	10-2 (7/8-14 UNF-2B)	56.8		No	LC2-10-C-*H	\$110.00
LSV2-10-2NCRP-M				Yes		\$150.00
LSV2-12-2NCRP	12-2 (1 1/16-12 UNF-2B)	113.6		No		\$170.00
LSV2-12-2NCRP-M				Yes		\$209.00

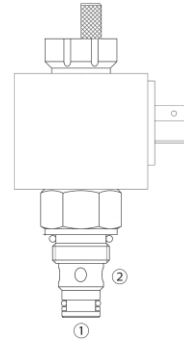
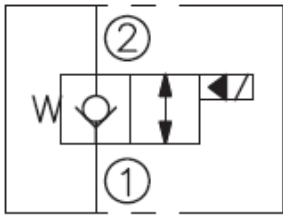
Note: Coil & DIN Plug are sold separately.

Operation of Locking Manual Override Option:

- Normal Operation (Closed Position) push red button in and turn clockwise.
- To open the valve, push red button in, twist counterclockwise and release.

Continued Next Page

2 Way / 2 Position Normally Closed Poppet



	① → ②	② → ①
De-Energised	Flow	Blocked
Energised	Flow	Flow

Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV6-08-2NCRP	08-2 (3/4-16 UNF-2B)	50.0	350	No	LC6-08-S-*H	\$170.00
LSV6-08-2NCRP-M				Yes		\$211.00
LSV6-10-2NCRP	10-2 (7/8-14 UNF-2B)	70.0		No		\$194.00
LSV6-10-2NCRP-M				Yes		\$234.00

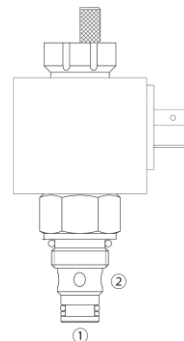
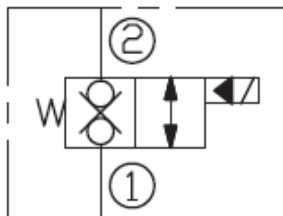
Note:

- Coil & DIN Plug are sold separately.
- The O Ring supplied with the valve is installed between the Coil & Coil Retaining Nut.

Operation of Locking Manual Override Option:

- Normal Operation (Closed Position) push red button in and turn clockwise.
- To open the valve, push red button in, twist counterclockwise and release.

2 Way / 2 Position Normally Closed Poppet



	① → ②	② → ①
De-Energised	Blocked	Blocked
Energised	Flow	Flow

Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV6-08-2NCSP	08-2 (3/4-16 UNF-2B)	40.0	350	No	LC6-08-S-*H	\$223.00
LSV6-08-2NCSP-M				Yes		\$262.00
LSV6-10-2NCSP	10-2 (7/8-14 UNF-2B)	70.0		No		\$249.00
LSV6-10-2NCSP-M				Yes		\$289.00
LSV6-12-2NCSP	12-2 (1 1/16-12 UNF-2B)	150.0	No	\$263.00		
LSV6-12-2NCSP-M			Yes	\$303.00		

Note:

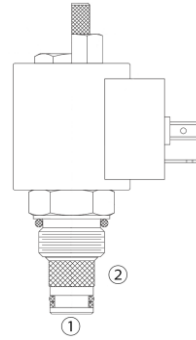
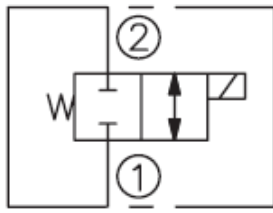
- Coil & DIN Plug are sold separately.
- The O Ring supplied with the valve is installed between the Coil & Coil Retaining Nut.

Operation of Locking Manual Override Option:

- Normal Operation (Closed Position) push red button in and turn clockwise.
- To open the valve, push red button in, twist counterclockwise and release.

Continued Next Page

2 Way / 2 Position Normally Closed Spool



	① → ②	② → ①
De-Energised	Blocked	Blocked
Energised	Flow	Flow

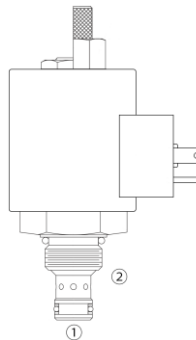
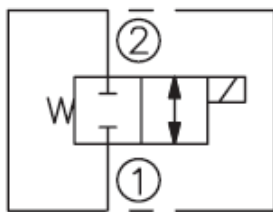
Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-08-2NCS	08-2 (3/4-16 UNF-2B)	16.7	207	No	LC2-08-C-*H	\$88.00
LSV2-08-2NCS-M				Yes		\$131.00
LSV2-10-2NCS	10-2 (7/8-14 UNF-2B)	37.9		No	LC2-10-C-*H	\$99.00
LSV2-10-2NCS-M				Yes		\$138.00

Note: Coil & DIN Plug are sold separately.

Operation of Locking Manual Override Option:

- Normal Operation (Closed Position) push red button in and turn clockwise.
- To open the valve, push red button in, twist counterclockwise and release.

2 Way / 2 Position Normally Closed Spool



	① → ②	② → ①
De-Energised	Blocked	Blocked
Energised	Flow	Flow

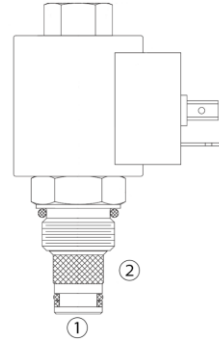
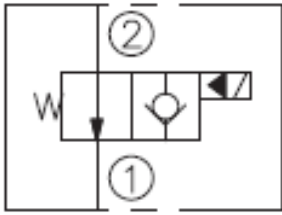
Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV5-08-2NCS	08-2 (3/4-16 UNF-2B)	18.9	315	No	LC2-10-C-*H	\$140.00
LSV5-08-2NCS-M				Yes		\$185.00

Note: Coil & DIN Plug are sold separately.

Operation of Locking Manual Override Option:

- Normal Operation (Closed Position) push red button in and turn clockwise.
- To open the valve, push red button in, twist counterclockwise and release.

2 Way / 2 Position Normally Open Poppet



	① → ②	② → ①
De-Energised	Restricted	Flow
Energised	Flow	Blocked

Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-08-2NOP	08-2 (3/4-16 UNF-2B)	37.9	207	No	LC2-08-C-*H	\$102.00
LSV2-08-2NOP-M				Yes		\$126.00
LSV2-10-2NOP	10-2 (7/8-14 UNF-2B)	68.1		No	LC2-10-C-*H	\$130.00
LSV2-10-2NOP-M				Yes		\$154.00
LSV2-12-2NOP	12-2 (1 1/16-12 UNF-2B)	113.6		No		\$195.00
LSV2-12-2NOP-M				Yes		\$219.00

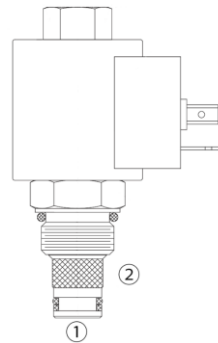
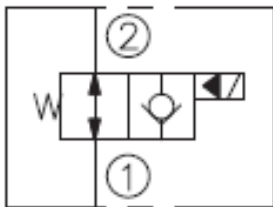
Locking Manual Override details on [Page 9.07](#).

Note: Coil & DIN Plug are sold separately.

Operation of Manual Override Option:

- To override, push button in. This will close the valve.
- To return to normal valve function (normally open), release button.

2 Way / 2 Position Normally Open Poppet



	① → ②	② → ①
De-Energised	Flow	Flow
Energised	Flow	Blocked

Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-08-2NORP	08-2 (3/4-16 UNF-2B)	28.4	207	No	LC2-08-C-*H	\$116.00
LSV2-08-2NORP-M				Yes		\$140.00
LSV2-10-2NORP	10-2 (7/8-14 UNF-2B)	68.1		No	LC2-10-C-*H	\$146.00
LSV2-10-2NORP-M				Yes		\$171.00
LSV2-12-2NORP	12-2 (1 1/16-12 UNF-2B)	113.6		No		\$211.00
LSV2-12-2NORP-M				Yes		\$235.00

Locking Manual Override details on [Page 9.07](#).

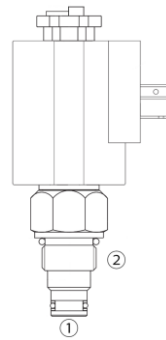
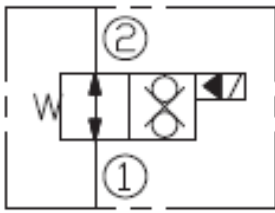
Note: Coil & DIN Plug are sold separately.

Operation of Manual Override Option:

- To override, push button in. This will close the valve.
- To return to normal valve function (normally open), release button.

Continued Next Page

2 Way / 2 Position Normally Open Poppet



	① → ②	② → ①
De-Energised	Flow	Flow
Energised	Blocked	Blocked

Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV6-08-2NOSP	08-2 (3/4-16 UNF-2B)	50.0	350	No	LC3-10-C-*H	\$262.00
LSV6-08-2NOSP-M				Yes		\$297.00
LSV6-10-2NOSP	10-2 (7/8-14 UNF-2B)	70.0		No		\$312.00
LSV6-10-2NOSP-M				Yes		\$346.00
LSV6-12-2NOSP	12-2 (1 1/16-12 UNF-2B)	150.0		No		\$327.00
LSV6-12-2NOSP-M				Yes		\$363.00

Locking Manual Override details on [Page 9.07](#).

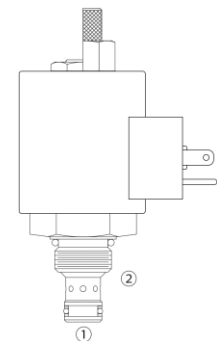
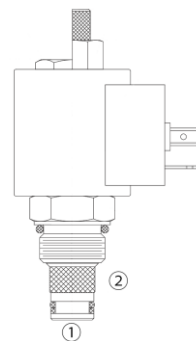
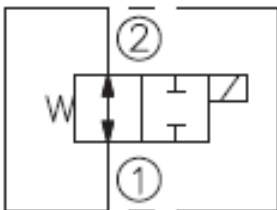
Note:

- Coil & DIN Plug are sold separately.
- The O Ring supplied with the valve is installed between the Coil & Coil Retaining Nut.

Operation of Manual Override Option:

- To override, push button in. This will close the valve.
- To return to normal valve function (normally open), release button.

2 Way / 2 Position Normally Open Spool



	① → ②	② → ①
De-Energised	Flow	Flow
Energised	Blocked	Blocked

LSV2

LSV5

Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-08-2NOS	08-2 (3/4-16 UNF-2B)	11.4	207	No	LC2-08-C-*H	\$95.00
LSV2-08-2NOS-M				Yes		\$139.00
LSV2-10-2NOS	10-2 (7/8-14 UNF-2B)	22.7		No	LC2-10-C-*H	\$121.00

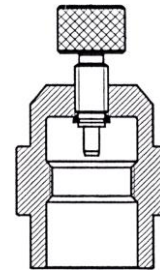
Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV5-08-2NOS	08-2 (3/4-16 UNF-2B)	11.4	315	No	LC2-10-C-*H	\$148.00
LSV5-08-2NOS-M				Yes		\$193.00

Note: Coil & DIN Plug are sold separately.

Operation of Locking Manual Override Option:

- Normal Operation (Open Position) push red button in and turn clockwise.
- To close the valve, push red button in, twist counterclockwise and release.

2 Way / 2 Position Locking Manual Overrides



2 Way / 2 Position Cartridge	Order Code	Price
LSV2-08-2NOP-M	L282NOPM-107	\$51.00
LSV2-10-2NOP-M	L2102NOPM-105	
LSV2-12-2NOP-M	L2102NOPM-105	
LSV2-08-2NORP-M	L282NOPM-107	
LSV2-10-2NORP-M	L2102NOPM-105	
LSV2-12-2NORP-M	L2102NOPM-105	
LSV6-08-2NOSP-M	LSV-08M-3-L-104	
LSV6-10-2NOSP-M	LSV-08M-3-L-104	
LSV6-12-2NOSP-M	LSV-08M-3-L-104	

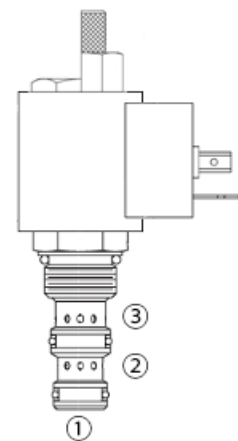
Note: Replace the standard Coil Retaining Nut with the special Coil Retaining Nut.

Locking Manual Override Operation:

- To override, screw the knob clockwise until it stops. This will shift the valve.
- To return to the de-energised position, screw the knob counterclockwise until it stops.

3 Way / 2 Position Valves

Basic Symbol	Transient Condition
	<p style="text-align: center;">LSV2-08-3</p>
	<p style="text-align: center;">LSV2-10-3</p>



Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-08-3	08-3 (3/4-16 UNF-2B)	11.4	207	No	LC2-08-C-*H	\$104.00
LSV2-08-3-M				Yes		\$135.00
LSV2-10-3	10-3 (7/8-14 UNF-2B)	22.7		No	LC2-10-C-*H	\$128.00
LSV2-10-3-M				Yes		\$158.00

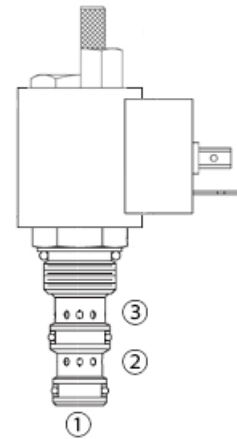
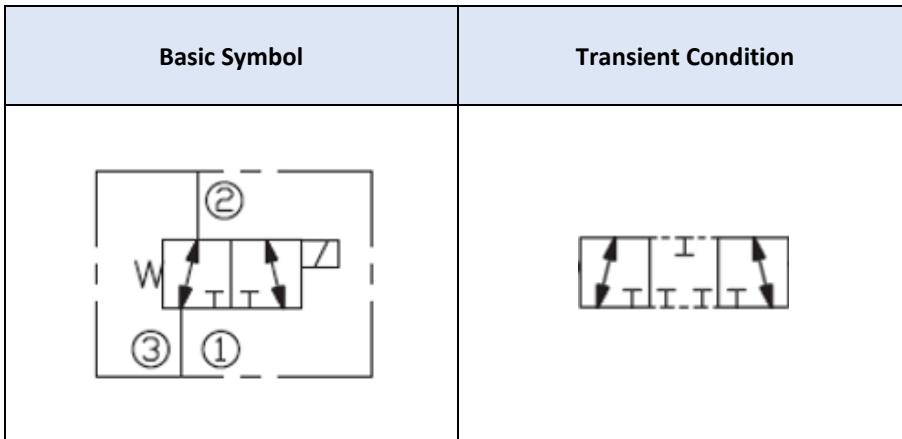
Note: Coil & DIN Plug are sold separately.

Operation of Locking Manual Override Option:

- Normal Operation, push red button in and turn clockwise.
- To override, push red button in, twist counterclockwise and release.

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3 Way / 2 Position Valves

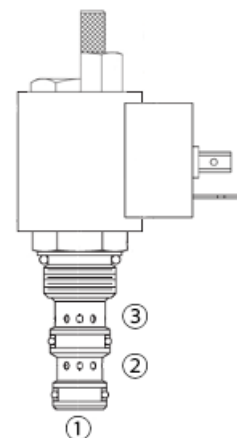
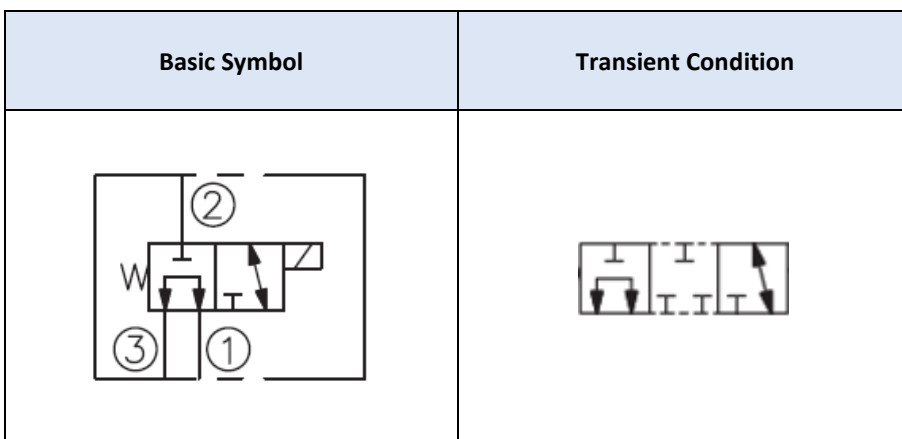


Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-08-3A	08-3 (3/4-16 UNF-2B)	11.4	207	No	LC2-08-C-*H	\$104.00
LSV2-08-3A-M				Yes		\$135.00

Note: Coil & DIN Plug are sold separately.

Operation of Locking Manual Override Option:

- Normal Operation, push red button in and turn clockwise.
- To override, push red button in, twist counterclockwise and release.



Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-08-3C	08-3 (3/4-16 UNF-2B)	11.4	207	No	LC2-08-C-*H	\$104.00
LSV2-08-3C-M				Yes		\$135.00

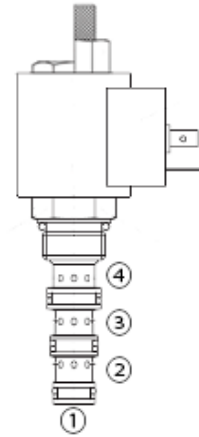
Note: Coil & DIN Plug are sold separately.

Operation of Locking Manual Override Option:

- Normal Operation, push red button in and turn clockwise.
- To override, push red button in, twist counterclockwise and release.

4 Way / 2 Position Valves

Basic Symbol	Transient Condition



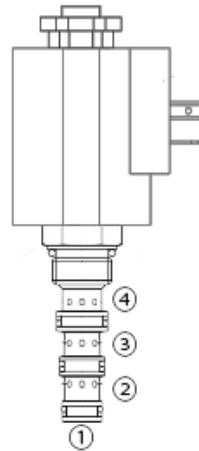
Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-08-4CO	08-4 (3/4-16 UNF-2B)	11.4	207	No	LC2-08-C-*H	\$137.00
LSV2-08-4CO-M				Yes		\$165.00
LSV2-10-4CO	10-4 (7/8-14 UNF-2B)	22.7		No	LC2-10-C-*H	\$161.00
LSV2-10-4CO-M				Yes		\$190.00

Note: Coil & DIN Plug are sold separately.

Operation of Locking Manual Override Option:

- Normal Operation, push red button in and turn clockwise.
- To override, push red button in, twist counterclockwise and release.

Basic Symbol	Transient Condition



Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-M20-4RCO-M	HYDAC 08140	20.0	350	Yes	LC3-10-C-*H	\$238.00
L2102NOPM-105	Locking Manual Override					\$51.00

Note:

- Coil & DIN Plug are sold separately.
- Locking Manual Override is loose supplied, replace the standard Coil Retaining Nut with the special Coil Retaining Nut.

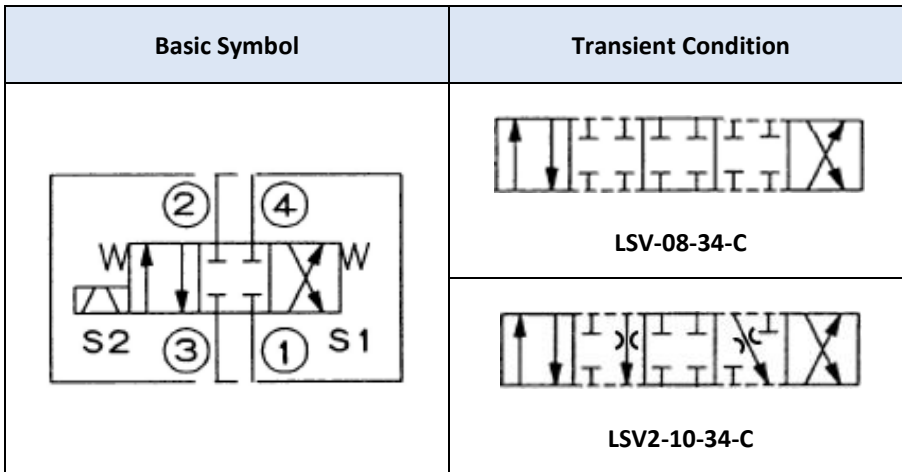
Operation of Manual Override:

- To override, push button in. This will shift the valve.
- To return to the de-energised position, release button.

Operation of Locking Manual Override:

- To override, screw the knob clockwise until it stops. This will shift the valve.
- To return to the de-energised position, screw the knob counterclockwise until it stops.

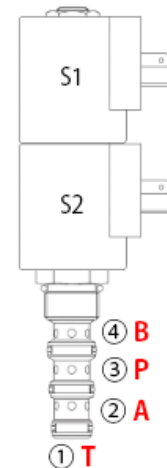
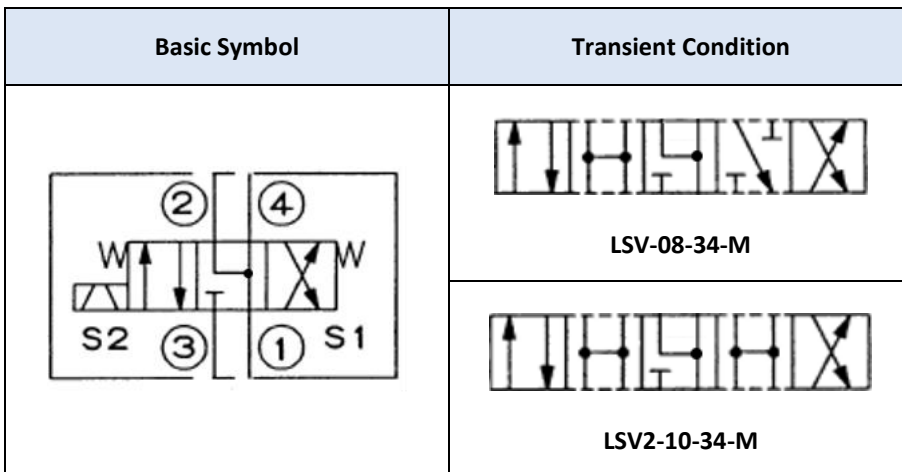
4 Way / 3 Position Valves



Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil (2 per valve)	List Each
LSV-08-34-C	08-4 (3/4-16 UNF-2B)	13.3	207	N/A	LC2-08-C-*H	\$228.00
LSV2-10-34-C	10-4 (7/8-14 UNF-2B)	22.7			LC2-10-C-*H	\$244.00

Note:

- Coils & DIN Plugs are sold separately. Two each required per valve.
- Flat Washer supplied with valve is installed between coils.

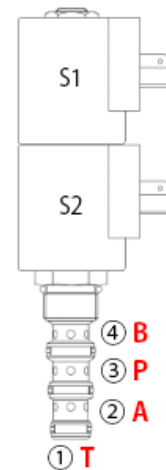
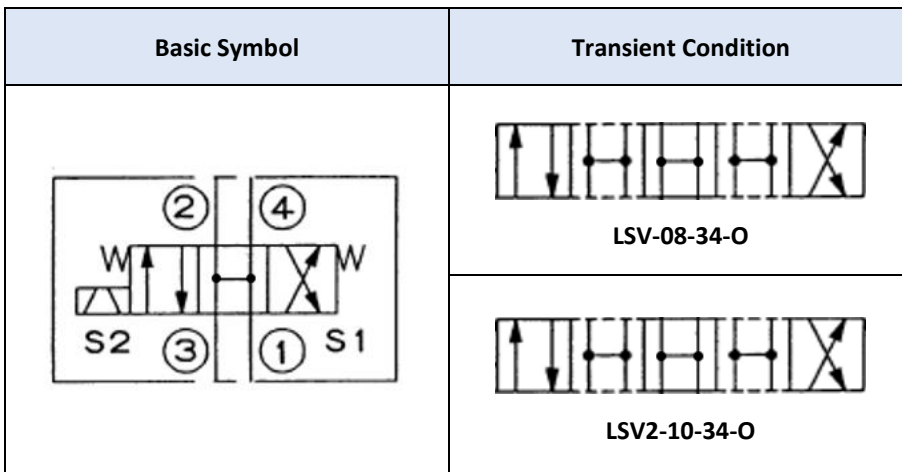


Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil (2 per valve)	List Each
LSV-08-34-M	08-4 (3/4-16 UNF-2B)	13.3	207	N/A	LC2-08-C-*H	\$228.00
LSV2-10-34-M	10-4 (7/8-14 UNF-2B)	22.7			LC2-10-C-*H	\$244.00

Note:

- Coils & DIN Plugs are sold separately. Two each required per valve.
- Flat Washer supplied with valve is installed between coils.

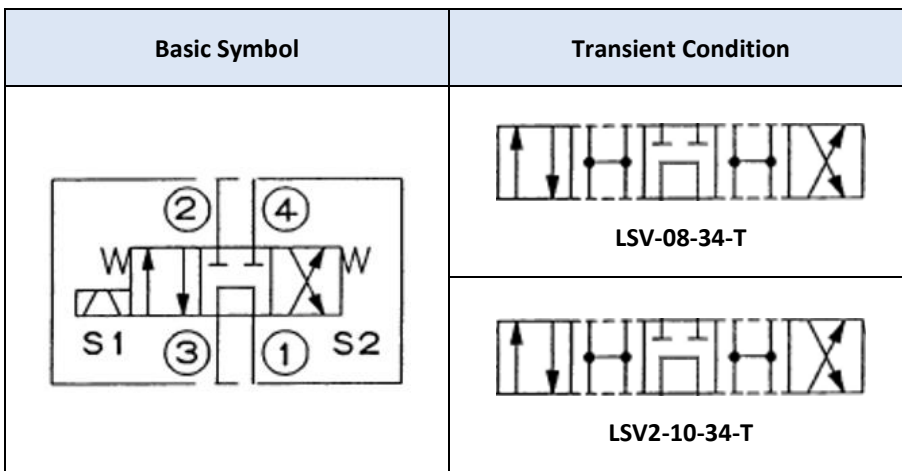
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Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil (2 per valve)	List Each
LSV-08-34-O	08-4 (3/4-16 UNF-2B)	11.4	207	N/A	LC2-08-C-*H	\$228.00
LSV2-10-34-O	10-4 (7/8-14 UNF-2B)	22.7			LC2-10-C-*H	\$244.00

Note:

- Coils & DIN Plugs are sold separately. Two each required per valve.
- Flat Washer supplied with valve is installed between coils.



Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil (2 per valve)	List Each
LSV-08-34-T	08-4 (3/4-16 UNF-2B)	11.4	207	N/A	LC2-08-C-*H	\$228.00
LSV2-10-34-T	10-4 (7/8-14 UNF-2B)	18.9			LC2-10-C-*H	\$244.00

Note:

- Coils & DIN Plugs are sold separately. Two each required per valve.
- Flat Washer supplied with valve is installed between coils.

Coils



Order Code	Voltage	Coil Connector	List Each
LC2-08-C-1H	12V DC	DIN	\$32.00
LC2-08-C-2H	24V DC		
LC2-08-C-3H	110V AC		\$37.00
LC2-08-C-4H	220V AC		
LC2-10-C-1H	12V DC		\$41.00
LC2-10-C-2H	24V DC		
LC2-10-C-3H	110V AC		\$48.00
LC2-10-C-4H	220V AC		
LC3-10-C-1H	12V DC		\$41.00
LC3-10-C-2H	24V DC		
LC3-10-C-3H	110V AC		\$46.00
LC3-10-C-4H	220V AC		
LC6-08-S-1H	12V DC		\$41.00
LC6-08-S-2H	24V DC		
LC6-08-S-3H	110V AC		\$46.00
LC6-08-S-4H	220V AC		

Note:

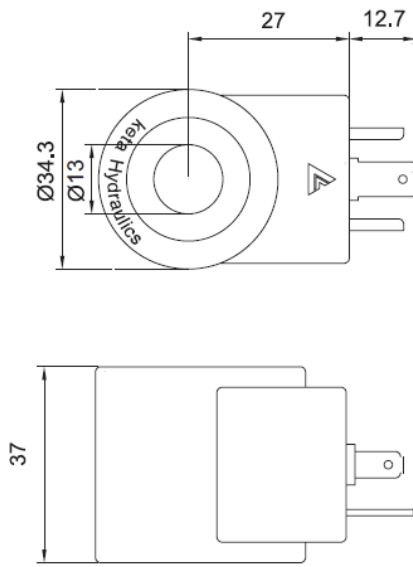
- Coil must be installed with letters up, so they are closest to the Coil Retaining Nut.
- On LSV6 valves the O Ring supplied with the valve is installed between the Coil & Coil Retaining Nut.
- On 4/3 valves the Flat Washer supplied with the valve is installed between coils.
- Din Plugs are sold separately.

DIN Plugs

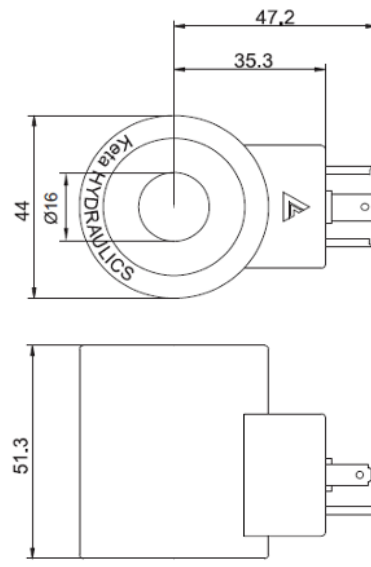


Order Code	Voltage	Description	List Each
C01010001-N	DC	DIN Light Plug	\$13.00
C01010004-N	AC	DIN Light Plug	

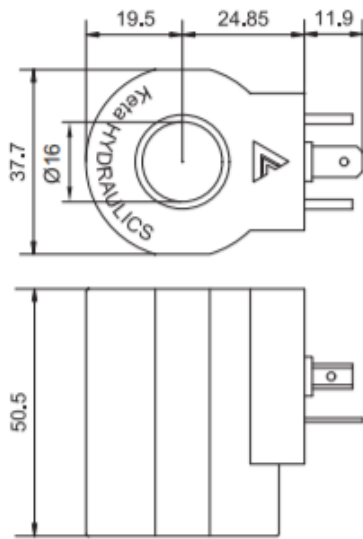
Coil Dimensions



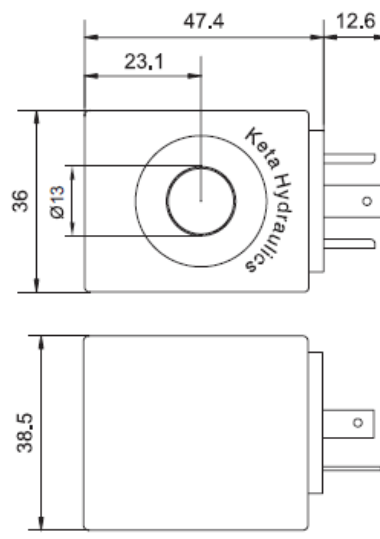
LC2-08-C-*H



LC2-10-C-*H

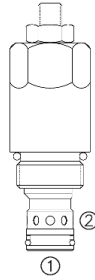
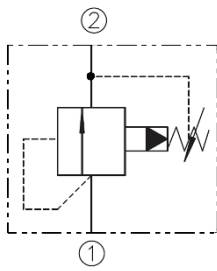


LC3-10-C-*H



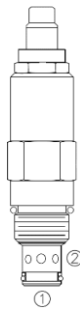
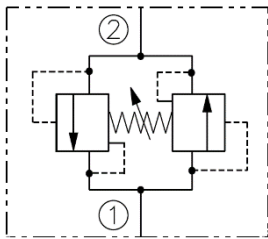
LC6-08-S-*H

Pressure Relief Valves (Pilot Operated, Two Stage, Spool)



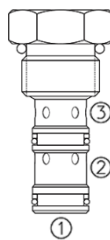
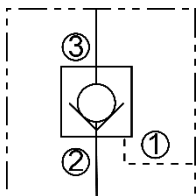
Order Code	Cavity	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
LPSRV2-08-15	08-2 (3/4-16 UNF-2B)	37.8	3.5 - 103	31	350	\$91.00
LPSRV2-10-8	10-2 (7/8-14 UNF-2B)	113.6	7 - 55	47	420	\$95.00
LPSRV2-10-20			35 - 140	48		
LPSRV2-10-40			70 - 280	88		
LPSRV2-10-60			140 - 420	140		

Bi-Directional Relief Valves (Direct Acting, Differential Area, Poppet)



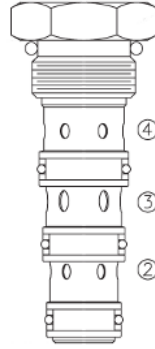
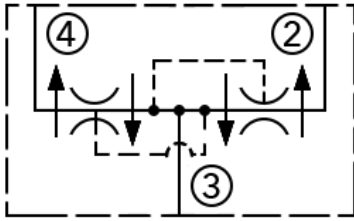
Order Code	Cavity	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
LBRV2-10-24/0138	10-2 (7/8-14 UNF-2B)	60	14 - 168	138	240	\$267.00
LBRV2-10-30/0138			100 - 210			

Pilot Operated Check Valves



Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
LPC-10-N-1.7	10-3 (7/8-14 UNF-2B)	22.7	250	3.5 : 1	1.7	\$72.00

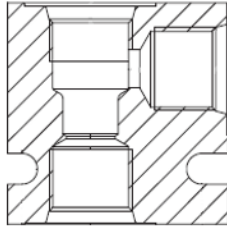
Flow Divider / Combiner



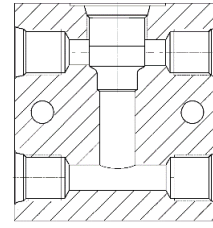
Order Code	Cavity	Max. Inlet Flow at (3) (L/min)	Ratio	Max. Pressure (bar)	List Each
LFD-10-3.0	10-4 (7/8-14 UNF-2B) (Use Body P/N LB10-4-A-*G/S)	11.4	50 : 50	240	\$172.00
LFD-10-6.0		22.7			
LFD-10-12.0		45.4			
LFD-10-16.0		60.6			

Common Cavity Bodies

2 Way Aluminium (6061T6)



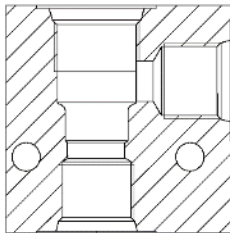
LB-2-A-****



LB10-2-A-4G4

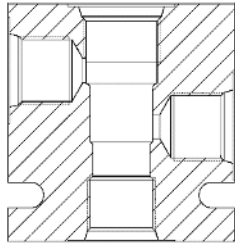
Order Code	Cavity	Port Size	Max. Pressure (bar)	List Each
LB08-2-A-2G	08-2 (3/4-16 UNF-2B)	G 1/4	210	\$39.00
LB08-2-A-3G		G 3/8		
LB10-2-A-4G	10-2 (7/8-14 UNF-2B)	G 1/2		\$44.00
LB10-2-A-8T		3/4" UNO		\$150.00
LB10-2-A-4G4		G 1/2		
LB12-2-A-6G	12-2 (1 1/16-12 UNF-2B)	G 3/4		\$73.00
LB12-2-A-8G		G 1		

2 Way Steel (Black Oxide)



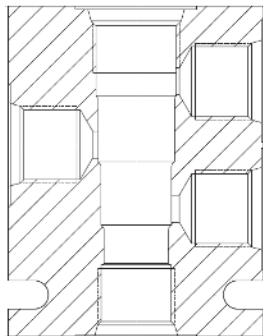
Order Code	Cavity	Port Size	Max. Pressure (bar)	List Each
LB08-2-S-3G	08-2 (3/4-16 UNF-2B)	G 3/8	350	\$59.00
LB10-2-S-4G				10-2 (7/8-14 UNF-2B)
LB12-2-S-6G	12-2 (1 1/16-12 UNF-2B)	G 3/4		
LB12-2-S-8G		G 1		

3 Way Aluminium (6061T6)

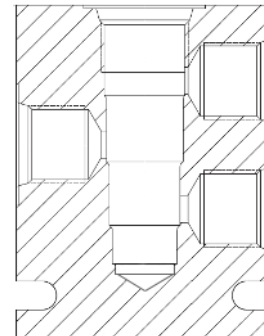


Order Code	Cavity	Port Size	Max. Pressure (bar)	List Each
LB08-3-A-2G	08-3 (3/4-16 UNF-2B)	G 1/4	210	\$58.00
LB08-3-A-3G		G 3/8		
LB10-3-A-3G	10-3 (7/8-14 UNF-2B)	G 3/8		\$59.00
LB10-3-A-4G		G 1/2		

4 Way Aluminium (6061T6)



LB**-4-A-*G

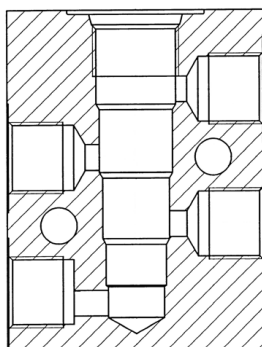


LB10-4-A-*G/S

Order Code	Cavity	Port Size	Max. Pressure (bar)	List Each
LB08-4-A-2G	08-4 (3/4-16 UNF-2B)	G 1/4	210	\$73.00
LB08-4-A-3G		G 3/8		
LB10-4-A-3G	10-4 (7/8-14 UNF-2B)	G 3/8		\$81.00
LB10-4-A-3G/S		G 3/8		
LB10-4-A-4G		G 1/2		
LB10-4-A-4G/S		G 1/2		

Note: LB10-4-A-*G/S is 3 port body for use with LFD-10-*0 Flow Divider.

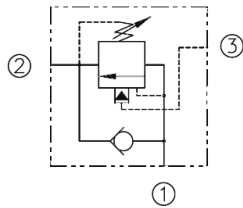
4 Way Steel (Black Oxide)



Order Code	Cavity	Port Size	Max. Pressure (bar)	List Each
LB08140-S-3G	HYDAC 08140	G 3/8	350	\$179.00

SUN Cavity Cartridges

Counterbalance Valves



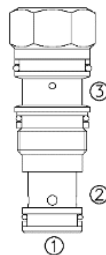
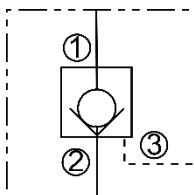
Order Code	Cavity	Max. Flow (L/min)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Adjustable Pressure (bar)	Factory Set (bar)	List Each
LCBCA-LAN	T-11A	60	3 : 1	0.3	70 - 280	210	\$125.00
LCBCA-LHN			3 : 1	1.7	70 - 280	210	\$125.00
LCBCA-LIN			3 : 1	1.7	25 - 105	70	\$125.00
LCBCH-LJN			10 : 1	1.7	140 - 350	210	\$135.00
LCBEA-LHN	T-2A	120	3 : 1	1.7	70 - 280	210	\$180.00

Note:

- Two check valve cracking pressures are available. Use the 1.7 bar check unless actuator cavitation is a concern. Generally, the 1.7 bar check spring is recommended for most applications as it is more robust and insensitive to rapid flow reversals. The 0.3 bar check spring should be used if there is a need to pull in make-up oil.
- Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.

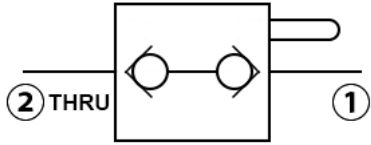
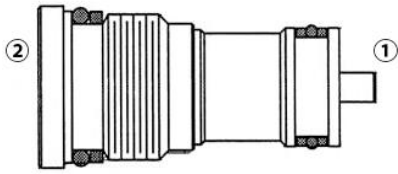
Maximum Recommended Load Induced Pressure at Maximum Setting (bar)	
LCBCA	215
LCBCH	270
LCBEA	215

Pilot Operated Check Valves

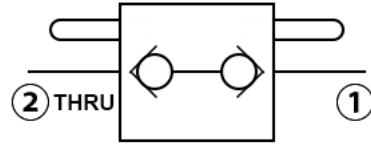
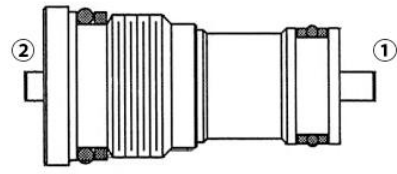


Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Pilot Piston Seal	Free Flow Cracking Pressure (bar)	List Each
LCKBB-XCN	T-163A	30	350	3 : 1	No	2.0	\$80.00
LCKCB-XCN	T-11A	60			No		\$90.00
LCKCD-XCN					Yes		\$90.00

Mechanically Operated Back-to-Back (Cylinder Phasing) Check Valves



LCDAP-MCN

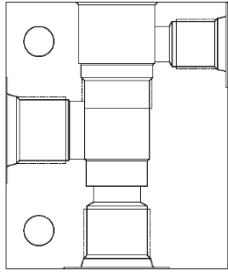


LCDAQ-MCN

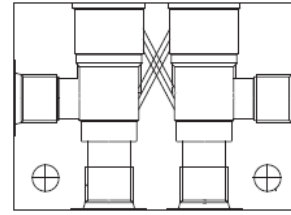
Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Function	List Each
LCDAP-MCN	T-162DP	4.7	350	2.0	Single	\$124.00
LCDAQ-MCN					Double	\$142.00

SUN Cavity Bodies

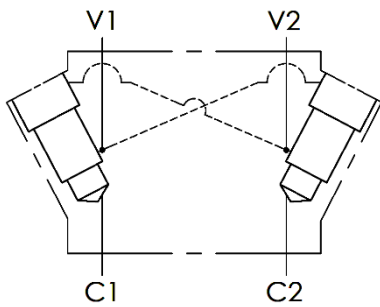
3 Way Bodies



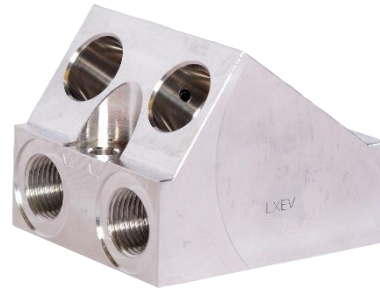
LECV / LBCW



LYEV / LYAW



LXEV



LXEV

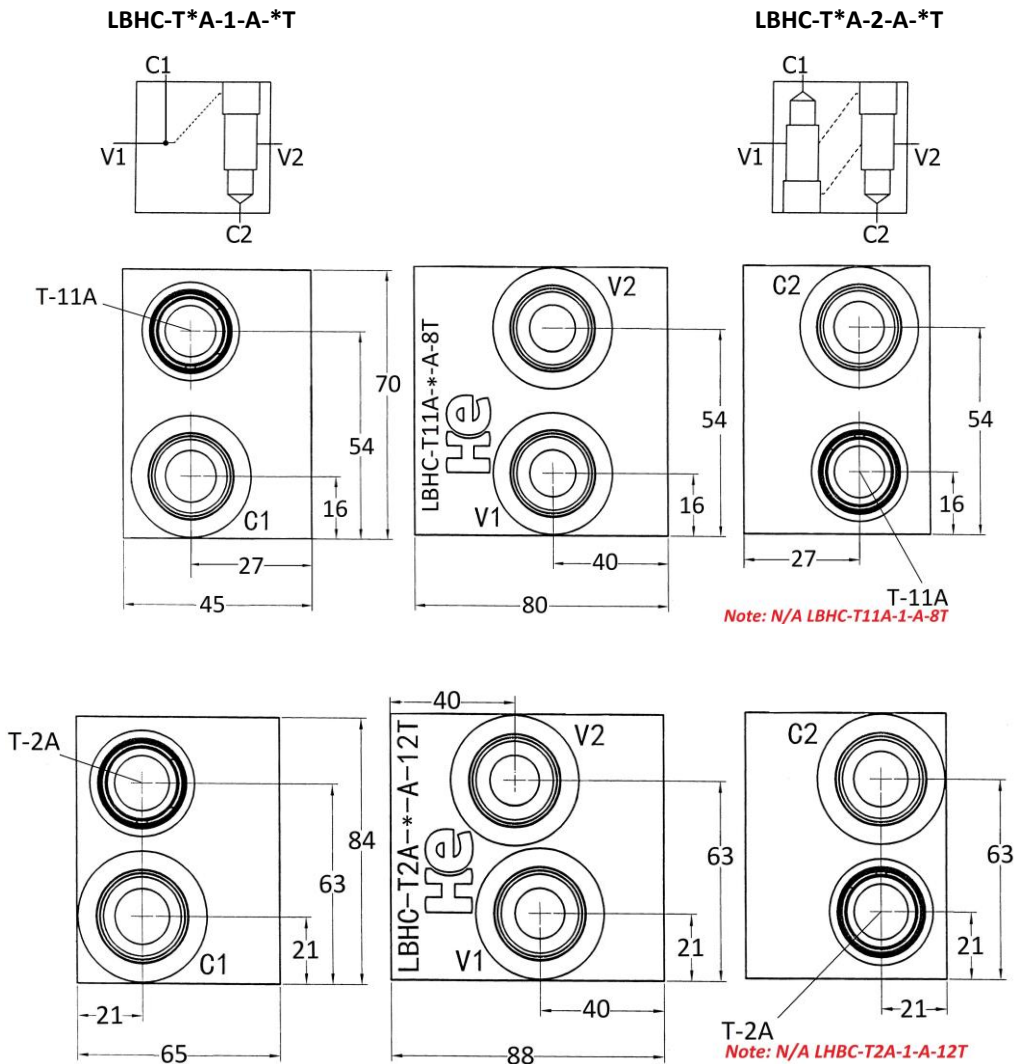
Order Code	Description	Cavity	Body Material	Port Size	Pilot Port	Max. Pressure (bar)	List Each
LECV	3 Port Body	T-11A x1	Aluminium (6061T6)	G 1/2	G 1/4	210	\$69.00
LBCW		T-2A x1		G 3/4			\$95.00
LXEV	4 Port Body	T-11A x 2		G 1/2	N/A		\$213.00
LYEV		T-11A x 2		G 1/2			\$128.00
LYAW		T-2A x 2		G 3/4			\$171.00

Cylinder Mount Counterbalance & Pilot Operated Check Valves



Order Code	Cavity	Ports	Material	Max. Pressure (bar)	List Each
LBHC-T11A-1-A-8T	T-11A x 1	3/4" UNO	Aluminium (6061T6)	210	\$135.00
LBHC-T11A-2-A-8T	T-11A x 2				\$148.00
LBHC-T2A-1-A-12T	T-2A x 1	1 1/16" UNO			\$182.00
LBHC-T2A-2-A-12T	T-2A x 2				\$204.00

Note: LBHC-T*A-1-A-*T (single cavity body), load is held on port C2.



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Elbow Fittings

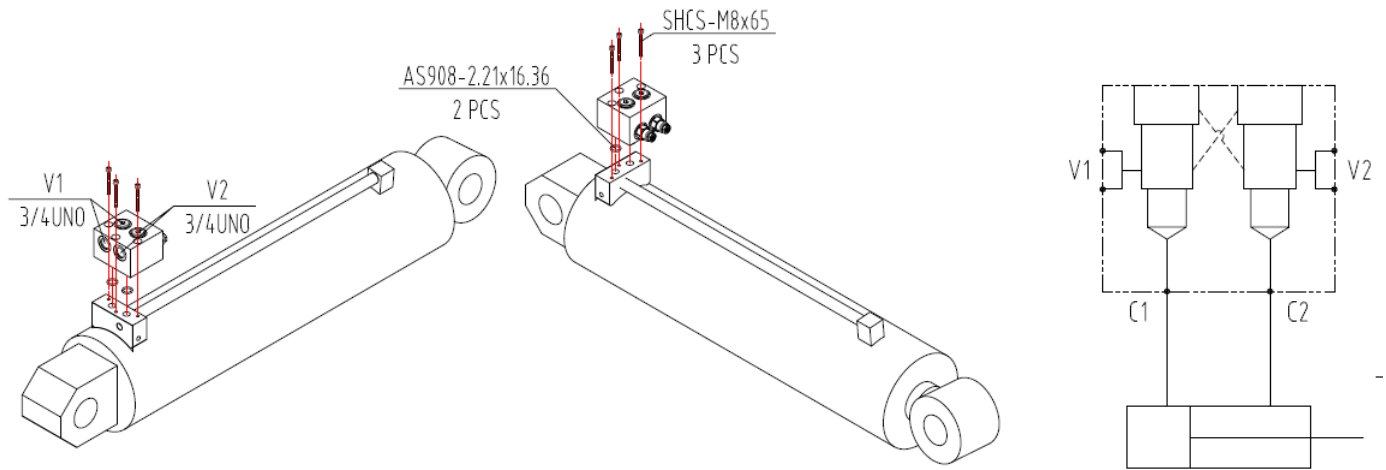


Order Code	Threads	HC Cylinder Bore	List Each
6807-08-06-NWO	3/4" UNO x 9/16" UNO	1.5" - 2.0"	\$28.00
6807-08-08-NWO	3/4" UNO x 3/4" UNO	2.5" - 5.0"	

Note:

- Elbow Fitting allows direct mounting of body to cylinder port. Not available for LBHC-T2A-*A-12T.
- Tube & Fittings from body to the other cylinder port are not supplied.
- LBHC-T*A-1-A -*T (single cavity body), load is held on port C2.

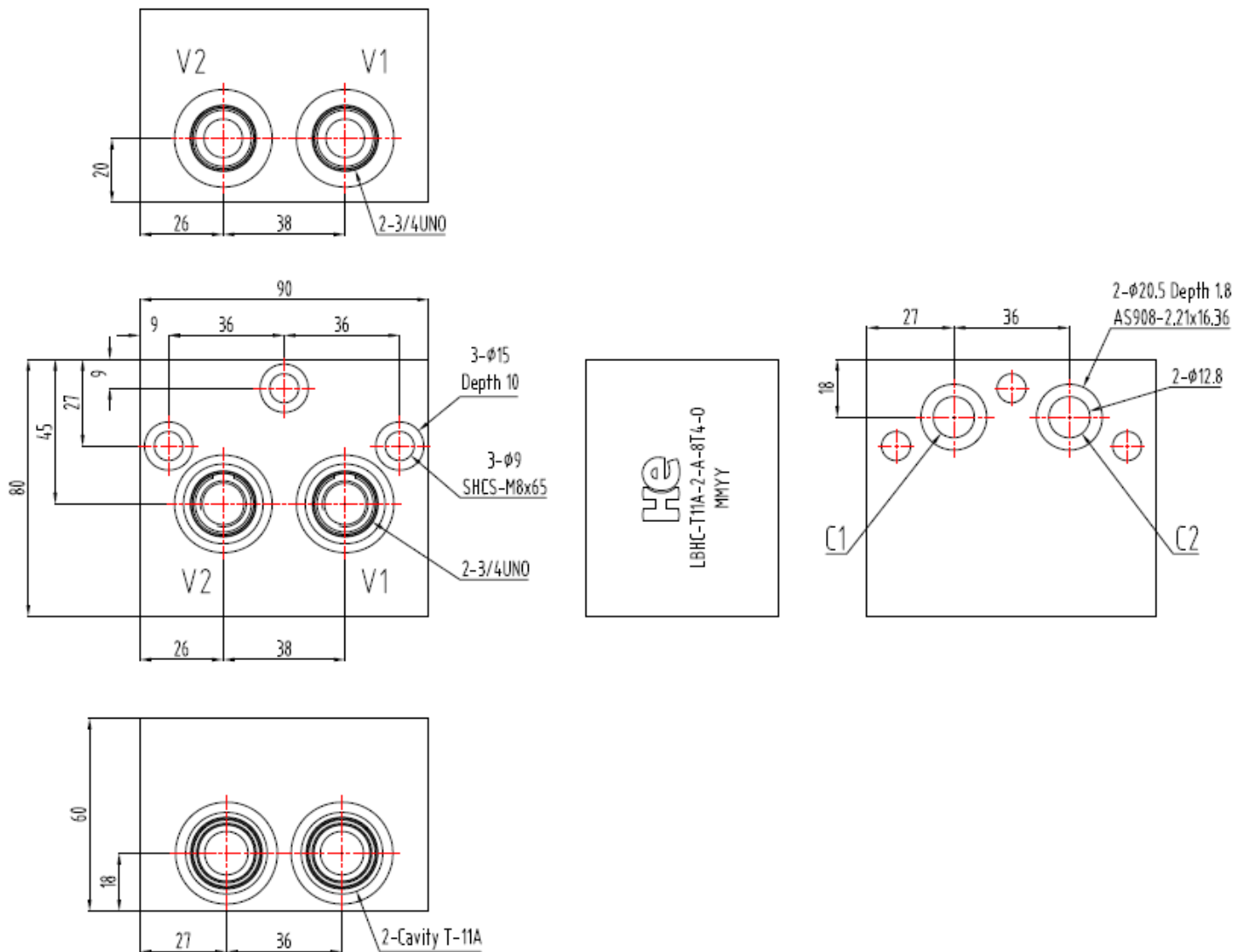
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Order Code	Cavity	Ports	Material	Max. Pressure (bar)	List Each
LBHC-T11A-2-A-8T4-O	T-11A x 2	3/4" UNO	Aluminium (6061T6)	210	\$229.00

Note:

- Body supplied with 2 pcs O ring, 3 pcs SHCS & 2 pcs SAE 8 Steel Port Plug.
- The subplate that is welded to the cylinder is not included.



Custom Built Manifolds & Bodies



Keta Hydraulics can design and manufacture custom-built manifolds and bodies of any size. Manufactured from either Aluminium (6061T6) or Steel this is an economical way to assemble a hydraulic circuit in a compact package with minimal pipework.

Steel Port Plugs

SAE (UNO)	-----	10.02
G (BSPP)	-----	10.02



SAE (UNO) Plugs



Order Code	Description	List Each
PLUG-SAE6-S	9/16" UNO - Steel Port Plug	\$4.00
PLUG-SAE8-S	3/4" UNO - Steel Port Plug	\$5.00

G (BSPP) Plugs



Order Code	Description	List Each
PLUG-G1/4-S	G 1/4 - Steel Port Plug	\$5.00
PLUG-G3/8-S	G 3/8 - Steel Port Plug	\$6.00
PLUG-G1/2-S	G 1/2 - Steel Port Plug	\$7.00
PLUG-G3/4-S	G 3/4 - Steel Port Plug	\$9.00
PLUG-G1-S	G 1 - Steel Port Plug	\$13.00



General Conditions of Sale

The following General Conditions of Sale are general in application in respect of offers to sell, quotations, contracts and other commercial transactions for the supply of goods or services by Hydraulic Equipment Pty. Ltd. (ABN 39 162 005 594) hereinafter referred to as Hydraulic Equipment. These General Conditions of Sale shall be coexistent with, and be read in conjunction with, any Special Conditions of Sale except where the latter specifically vary or override these General Conditions.

1. **Validity.** Unless otherwise stated this offer is subject to withdrawal or change at any time until the Purchaser's order has been received and accepted by Hydraulic Equipment.
2. **Prices.** All prices in our Product Price List are in Australian dollars and subject to change without notice. These prices do not include Goods and Services Tax (GST) or any other taxes that may be applicable.
3. **Delivery.** Hydraulic Equipment does not accept any responsibility for deliveries that are not within the time stated. This includes any transport company acting on behalf of Hydraulic Equipment.
4. **Freight and Insurance.** Unless otherwise agreed in writing between the parties the cost of freight and insurance of the goods is the sole responsibility of the Purchaser. The goods shall be at the purchasers risk from the moment of delivery ex Hydraulic Equipment.
5. **Payment Terms.** Unless otherwise agreed in writing between the parties, payment for the goods shall be made in full before despatch or at time of pick up. Cheques must be cleared before despatch or pickup.

Credit facilities will only be extended to the Purchaser by Hydraulic Equipment upon completion of our Account Application form and suitable credit references. If credit facilities are provided payment for the goods shall be made **by the end of the month following the month of the invoice date.** Hydraulic Equipment reserves the right to suspend or withdraw credit facilities should Payment Terms not be met.

6. **Title.** Property in the goods supplied by Hydraulic Equipment to the purchaser will not pass to the purchaser until such time as the goods have been paid in full. Until such time as the goods have been paid in full, the purchaser shall store the goods in such a manner as to show clearly that they are the property of Hydraulic Equipment. Until such time as the goods have been paid for in full, the purchaser is at liberty to sell the goods but does so as an agent for Hydraulic Equipment and shall account to Hydraulic Equipment for the proceeds thereof. Hydraulic Equipment and the purchaser agree that provisions of this condition shall continue to apply notwithstanding any arrangement between the parties under which Hydraulic Equipment may grant the purchaser credit.
7. **Return of Goods for Credit.** No claim will be recognised unless made within seven (7) days of the delivery date. Goods will be accepted for credit only by prior agreement or to the extent that they were wrongly or over supplied. Returned goods shall be delivered to Hydraulic Equipment free of charge, in good order and condition, unused and in the original packaging, accompanied by a despatch note stating the original invoice number, date of supply and reason for return. Except where goods have been wrongly or over supplied, a charge as determined by Hydraulic Equipment will be made for handling costs. Goods made to special order cannot be returned or credited unless they are not to specification or otherwise not in accordance with any expressed or implied terms of contract.
8. **Limited Warranty Policy.** Hydraulic Equipment warrants the goods for twelve (12) months from date of purchase. Warranty covers faulty materials and manufacturing defects only. Warranty is not covered if the goods are dismantled or repaired by any person other than an employee of Hydraulic Equipment unless prior written permission is given. Hydraulic Equipment will not warrant goods that are altered, modified or used outside the manufacturers or Hydraulic Equipment specifications. A bent or broken piston rod in a hydraulic cylinder is not covered under warranty. Goods used within or near marine environments or other environments which may be considered overly exposed, overly harsh or extreme by Hydraulic Equipment will not be covered for any warranty claims for rust or corrosion damage of any description.

The liability of Hydraulic Equipment under this or any other warranty is limited to repair or replacement of any goods at the option of Hydraulic Equipment if found to be defective after the goods have been returned to our works for assessment of claim. Any parts used to repair the goods or any goods replaced under the terms of this warranty shall only carry the unexpired portion of the applicable warranty and any such parts or goods replaced will become the property of Hydraulic Equipment. This warranty does not in any way obligate Hydraulic Equipment to bear any cost of freight, packing, removal or installation of any such goods, travelling expenses, consequential losses or damages including but not limited to personal injury or property of the Purchaser or any others, machine down time, losses of profits and or income or any other charges of a similar nature for goods involved in warranty claims.

This is the only warranty extended to the Purchaser by Hydraulic Equipment and there are no other warranties whether expressed or implied either orally or in writing which extend from hereof.