

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.
- ▶ SAE1026 Honed barrel with 0.25" wall thickness on all bore sizes gives structural strength.
- ▶ K1045 chrome piston rod.
- ▶ 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 or HCS	****	***

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

HCS2018-100 = HCS Series - 2.0" Bore x 18" Stroke x 1.00" Rod

1.50" Bore x 0.875" Rod



1.5" Bore x 0.875 " Rod								
Order Code	Stroke		Closed Pin Centres		Open Pin Centres		Kg	List Each
HC1502-875	2"	51 mm	11.5"	292 mm	13.5"	343 mm	3.6	\$373.00
HC1503-875	3"	76 mm	12.5"	318 mm	15.5"	394 mm	3.9	\$380.00
HC1504-875	4"	102 mm	13.5"	343 mm	17.5"	445 mm	4.1	\$388.00
HC1506-875	6"	152 mm	15.5"	394 mm	21.5"	546 mm	4.6	\$403.00
HC1508-875	8"	203 mm	17.5"	445 mm	25.5"	648 mm	5.1	\$411.00
HC1510-875	10"	254 mm	19.5"	495 mm	29.5"	749 mm	5.7	\$422.00
HC1512-875	12"	305 mm	21.5"	546 mm	33.5"	851 mm	6.2	\$432.00
HC1514-875	14"	356 mm	23.5"	597 mm	37.5"	953 mm	6.7	\$447.00
HC1516-875	16"	406 mm	25.5"	648 mm	41.5"	1054 mm	7.2	\$462.00
HC1518-875	18"	457 mm	27.5"	699 mm	45.5"	1156 mm	7.7	\$476.00
HC1520-875	20"	508 mm	29.5"	749 mm	49.5"	1257 mm	8.3	\$486.00
HC1522-875	22"	559 mm	31.5"	800 mm	53.5"	1359 mm	8.8	\$554.00
HC1524-875	24"	610 mm	33.5"	851 mm	57.5"	1461 mm	9.3	\$575.00
HC1526-875	26"	660 mm	35.5"	902 mm	61.5"	1562 mm	9.8	\$597.00
HC1527-875	27"	686 mm	36.5"	927 mm	63.5"	1613 mm	10.1	\$612.00
HC1528-875	28"	711 mm	37.5"	953 mm	65.5"	1664 mm	10.3	\$616.00
HC1529-875	29"	737 mm	38.5"	978 mm	67.5"	1715 mm	10.6	\$633.00
HC1530-875	30"	762 mm	39.5"	1003 mm	69.5"	1765 mm	10.9	\$637.00
HC1532-875	32"	813 mm	41.5"	1054 mm	73.5"	1867 mm	11.4	\$657.00
HC1533-875	33"	838 mm	42.5"	1080 mm	75.5"	1918 mm	11.6	\$669.00
HC1534-875	34"	864 mm	43.5"	1105 mm	77.5"	1969 mm	11.9	\$677.00
HC1536-875	36"	914 mm	45.5"	1156 mm	81.5"	2070 mm	12.4	\$727.00
HC1538-875	38"	965 mm	47.5"	1207 mm	85.5"	2172 mm	12.9	\$750.00
HC1540-875	40"	1016 mm	49.5"	1257 mm	89.5"	2273 mm	13.5	\$771.00
HC1542-875	42"	1067 mm	51.5"	1308 mm	93.5"	2375 mm	14.0	\$794.00
HC1544-875	44"	1118 mm	53.5"	1359 mm	97.5"	2477 mm	14.5	\$817.00
HC1546-875	46"	1168 mm	55.5"	1410 mm	101.5"	2578 mm	15.0	\$839.00
HC1548-875	48"	1219 mm	57.5"	1461 mm	105.5"	2680 mm	15.5	\$860.00
For Strokes not listed and less than 48" use the next stroke size up.								
For Strokes above 48" add to HC1548-875 for every 1" or part thereof.								\$11.00
For Stop Tube add to cylinder price for every 1" or part thereof. Price includes Stop Tube, Barrel & Rod.								\$22.00

Note:

- Cylinders in black print are stocked. Cylinders in red print are not stocked and are available to order.
- Dimensions in mm have been rounded to whole numbers.
- Full dimensions are on [Page 1.12](#).
- Pricing Examples:

HC1519-875

Use HC1520-100 = \$486.00

HC1552-875

HC1548-875 (\$860.00) + (4" x \$11.00) = \$904.00

HC1536-875 + 4" Stop Tube

HC1536-875 (\$727.00) + (4" x \$22.00) = \$815.00

HCS2052-100 + 4" Stop Tube

HC1548-875 (\$860.00) + (4" x \$11.00) + (4" x \$22.00) = \$992.00

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2.00" Bore x 1.00" Rod: Closed Pin Centres = 9.5" (241 mm) + Stroke



2.0" Bore x 1.00" Rod								
Order Code	Stroke		Closed Pin Centres		Open Pin Centres		Kg	List Each
HCS2002-100	2"	51 mm	11.5"	292 mm	13.5"	343 mm	5.5	\$386.00
HCS2004-100	4"	102 mm	13.5"	343 mm	17.5"	445 mm	6.2	\$400.00
HCS2006-100	6"	152 mm	15.5"	394 mm	21.5"	546 mm	6.9	\$413.00
HCS2008-100	8"	203 mm	17.5"	445 mm	25.5"	648 mm	7.6	\$425.00
HCS2010-100	10"	254 mm	19.5"	495 mm	29.5"	749 mm	8.3	\$436.00
HCS2012-100	12"	305 mm	21.5"	546 mm	33.5"	851 mm	9.0	\$450.00
HCS2014-100	14"	356 mm	23.5"	597 mm	37.5"	953 mm	9.7	\$461.00
HCS2016-100	16"	406 mm	25.5"	648 mm	41.5"	1054 mm	10.4	\$472.00
HCS2018-100	18"	457 mm	27.5"	699 mm	45.5"	1156 mm	11.1	\$486.00
HCS2020-100	20"	508 mm	29.5"	749 mm	49.5"	1257 mm	11.8	\$499.00
HCS2022-100	22"	559 mm	31.5"	800 mm	53.5"	1359 mm	12.5	\$510.00
HCS2024-100	24"	610 mm	33.5"	851 mm	57.5"	1461 mm	13.2	\$521.00
HCS2026-100	26"	660 mm	35.5"	902 mm	61.5"	1562 mm	13.9	\$561.00
HCS2028-100	28"	711 mm	37.5"	953 mm	65.5"	1664 mm	14.6	\$575.00
HCS2030-100	30"	762 mm	39.5"	1003 mm	69.5"	1765 mm	15.3	\$589.00
HCS2032-100	32"	813 mm	41.5"	1054 mm	73.5"	1867 mm	16.0	\$599.00
HCS2034-100	34"	864 mm	43.5"	1105 mm	77.5"	1969 mm	16.7	\$610.00
HCS2036-100	36"	914 mm	45.5"	1156 mm	81.5"	2070 mm	17.4	\$621.00
HCS2038-100	38"	965 mm	47.5"	1207 mm	85.5"	2172 mm	18.1	\$668.00
HCS2040-100	40"	1016 mm	49.5"	1257 mm	89.5"	2273 mm	18.8	\$682.00
HCS2042-100	42"	1067 mm	51.5"	1308 mm	93.5"	2375 mm	19.5	\$697.00
HCS2044-100	44"	1118 mm	53.5"	1359 mm	97.5"	2477 mm	20.2	\$711.00
HCS2046-100	46"	1168 mm	55.5"	1410 mm	101.5"	2578 mm	20.9	\$725.00
HCS2048-100	48"	1219 mm	57.5"	1461 mm	105.5"	2680 mm	21.6	\$740.00
For Strokes not listed and less than 48" use the next stroke size up.								
For Strokes above 48" add to HCS2048-100 for every 1" or part thereof.								\$12.00
For Stop Tube add to cylinder price for every 1" or part thereof. Price includes Stop Tube, Barrel & Rod.								\$24.00

Note:

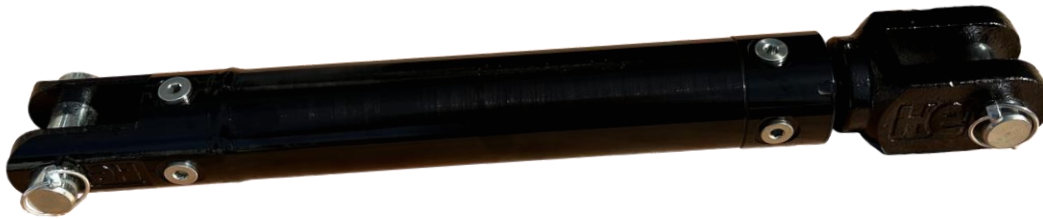
- Cylinders in black print are stocked. *Cylinders in red print are not stocked and are available to order.*
- Dimensions in mm have been rounded to whole numbers.
- Full dimensions are on [Page 1.12](#).
- Pricing Examples:

HCS2019-100
HCS2052-100
HCS2036-100 + 4" Stop Tube
HCS2052-100 + 4" Stop Tube

Use HCS2020-100 = \$499.00
HCS2048-100 (\$740.00) + (4" x \$12.00) = \$788.00
HCS2036-100 (\$621.00) + (4" x \$24.00) = \$717.00
HCS2050-100 (\$740.00) + (4" x \$12.00) + (4" x \$24.00) = \$884.00

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2.00" Bore x 1.25" Rod



2.0" Bore x 1.25" Rod								
Order Code	Stroke		Closed Pin Centres		Open Pin Centres		Kg	List Each
HC2002-125	2"	51 mm	14.25"	362 mm	16.25"	413 mm	7.3	\$402.00
HC2004-125	4"	102 mm	16.25"	413 mm	20.25"	514 mm	8.1	\$417.00
HC2006-125	6"	152 mm	18.25"	464 mm	24.25"	616 mm	8.9	\$432.00
HC2008-125	8"	203 mm	20.25"	514 mm	28.25"	718 mm	9.7	\$445.00
HC2010-125	10"	254 mm	22.25"	565 mm	32.25"	819 mm	10.5	\$458.00
HC2012-125	12"	305 mm	24.25"	616 mm	36.25"	921 mm	11.3	\$472.00
HC2014-125	14"	356 mm	26.25"	667 mm	40.25"	1022 mm	12.1	\$485.00
HC2016-125	16"	406 mm	28.25"	718 mm	44.25"	1124 mm	12.9	\$497.00
HC2018-125	18"	457 mm	30.25"	768 mm	48.25"	1226 mm	13.7	\$512.00
HC2020-125	20"	508 mm	32.25"	819 mm	52.25"	1327 mm	14.5	\$527.00
HC2022-125	22"	559 mm	34.25"	870 mm	56.25"	1429 mm	15.3	\$539.00
HC2024-125	24"	610 mm	36.25"	921 mm	60.25"	1530 mm	16.1	\$551.00
HC2026-125	26"	660 mm	38.25"	972 mm	64.25"	1632 mm	16.9	\$594.00
HC2028-125	28"	711 mm	40.25"	1022 mm	68.25"	1734 mm	17.7	\$610.00
HC2030-125	30"	762 mm	42.25"	1073 mm	72.25"	1835 mm	18.5	\$625.00
HC2032-125	32"	813 mm	44.25"	1124 mm	76.25"	1937 mm	19.3	\$637.00
HC2034-125	34"	864 mm	46.25"	1175 mm	80.25"	2038 mm	20.0	\$650.00
HC2036-125	36"	914 mm	48.25"	1226 mm	84.25"	2140 mm	20.7	\$662.00
HC2038-125	38"	965 mm	50.25"	1276 mm	88.25"	2242 mm	21.5	\$712.00
HC2040-125	40"	1016 mm	52.25"	1327 mm	92.25"	2343 mm	22.3	\$728.00
HC2042-125	42"	1067 mm	54.25"	1378 mm	96.25"	2445 mm	23.1	\$744.00
HC2044-125	44"	1118 mm	56.25"	1429 mm	100.25"	2546 mm	23.9	\$760.00
HC2046-125	46"	1168 mm	58.25"	1480 mm	104.25"	2648 mm	24.7	\$776.00
HC2048-125	48"	1219 mm	60.25"	1530 mm	108.25"	2750 mm	25.5	\$792.00
For Strokes not listed and less than 48" use the next stroke size up.								
For Strokes above 48" add to HC2048-125 for every 1" or part thereof.								\$13.00
For Stop Tube add to cylinder price for every 1" or part thereof. Price includes Stop Tube, Barrel & Rod.								\$26.00

Note:

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- Full dimensions are on [Page 1.12](#).

Pricing Examples:

HC2019-125	Use HC2020-125 = \$527.00
HC2052-125	HC2048-125 (\$792.00) + (4" x \$13.00) = \$844.00
HC2036-125 + 4" Stop Tube	HC2036-125 (\$662.00) + (4" x \$26.00) = \$766.00
HC2052-125 + 4" Stop Tube	HC2050-125 (\$792.00) + (4" x \$13.00) + (4" x \$26.00) = \$948.00

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2.50" Bore x 1.50" Rod



2.5" Bore x 1.50" Rod								
Order Code	Stroke		Closed Pin Centres		Open Pin Centres		Kg	List Each
HC2504-150	4"	102 mm	16.25"	413 mm	20.25"	514 mm	10.3	\$397.00
HC2506-150	6"	152 mm	18.25"	464 mm	24.25"	616 mm	11.3	\$414.00
HC2508-150	8"	203 mm	20.25"	514 mm	28.25"	718 mm	12.4	\$432.00
HC2510-150	10"	254 mm	22.25"	565 mm	32.25"	819 mm	13.5	\$456.00
HC2512-150	12"	305 mm	24.25"	616 mm	36.25"	921 mm	14.5	\$472.00
HC2514-150	14"	356 mm	26.25"	667 mm	40.25"	1022 mm	15.5	\$489.00
HC2516-150	16"	406 mm	28.25"	718 mm	44.25"	1124 mm	16.5	\$508.00
HC2518-150	18"	457 mm	30.25"	768 mm	48.25"	1226 mm	17.5	\$525.00
HC2520-150	20"	508 mm	32.25"	819 mm	52.25"	1327 mm	18.5	\$542.00
HC2522-150	22"	559 mm	34.25"	870 mm	56.25"	1429 mm	19.5	\$558.00
HC2524-150	24"	610 mm	36.25"	921 mm	60.25"	1530 mm	20.5	\$575.00
HC2526-150	26"	660 mm	38.25"	972 mm	64.25"	1632 mm	21.5	\$641.00
HC2528-150	28"	711 mm	40.25"	1022 mm	68.25"	1734 mm	22.5	\$645.00
HC2530-150	30"	762 mm	42.25"	1073 mm	72.25"	1835 mm	23.5	\$651.00
HC2532-150	32"	813 mm	44.25"	1124 mm	76.25"	1937 mm	24.5	\$666.00
HC2534-150	34"	864 mm	46.25"	1175 mm	80.25"	2038 mm	25.5	\$682.00
HC2536-150	36"	914 mm	48.25"	1226 mm	84.25"	2140 mm	26.5	\$730.00
HC2538-150	38"	965 mm	50.25"	1276 mm	88.25"	2242 mm	27.5	\$784.00
HC2540-150	40"	1016 mm	52.25"	1327 mm	92.25"	2343 mm	28.5	\$839.00
HC2542-150	42"	1067 mm	54.25"	1378 mm	96.25"	2445 mm	29.5	\$891.00
HC2544-150	44"	1118 mm	56.25"	1429 mm	100.25"	2546 mm	30.5	\$900.00
HC2546-150	46"	1168 mm	58.25"	1480 mm	104.25"	2648 mm	31.5	\$908.00
HC2548-150	48"	1219 mm	60.25"	1530 mm	108.25"	2750 mm	32.5	\$933.00
HC2550-150	50"	1270 mm	62.25"	1581 mm	112.25"	2851 mm	33.5	\$955.00
For Strokes not listed and less than 50" use the next stroke size up.								
For Strokes above 50" add to HC2550-150 for every 1" or part thereof.								\$18.00
For Stop Tube add to cylinder price for every 1" or part thereof. Price includes Stop Tube, Barrel & Rod.								\$36.00

Note:

- Cylinders in black print are stocked. *Cylinders in red print are not stocked and are available to order.*
- Dimensions in mm have been rounded to whole numbers.
- Full dimensions are on [Page 1.12](#).
- Pricing Examples:

HC2519-150

Use HC2520-100 = \$542.00

HC2552-150

HC2550-150 (\$955.00) + (2" x \$18.00) = \$991.00

HC2536-150 + 4" Stop Tube

HC2536-150 (\$730.00) + (4" x \$36.00) = \$874.00

HC2552-150 + 4" Stop Tube

HC2550-150 (\$955.00) + (2" x \$18.00) + (4" x \$36.00) = \$1,135.00

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3.00" Bore x 1.50" Rod



3.0" Bore x 1.50" Rod								
Order Code	Stroke		Closed Pin Centres		Open Pin Centres		Kg	List Each
HC3004-150	4"	102 mm	16.25"	413 mm	20.25"	514 mm	12.5	\$450.00
HC3006-150	6"	152 mm	18.25"	464 mm	24.25"	616 mm	13.7	\$470.00
HC3008-150	8"	203 mm	20.25"	514 mm	28.25"	718 mm	14.9	\$491.00
HC3010-150	10"	254 mm	22.25"	565 mm	32.25"	819 mm	16.0	\$512.00
HC3012-150	12"	305 mm	24.25"	616 mm	36.25"	921 mm	17.2	\$528.00
HC3014-150	14"	356 mm	26.25"	667 mm	40.25"	1022 mm	18.4	\$548.00
HC3016-150	16"	406 mm	28.25"	718 mm	44.25"	1124 mm	19.5	\$569.00
HC3018-150	18"	457 mm	30.25"	768 mm	48.25"	1226 mm	20.7	\$660.00
HC3020-150	20"	508 mm	32.25"	819 mm	52.25"	1327 mm	21.9	\$681.00
HC3022-150	22"	559 mm	34.25"	870 mm	56.25"	1429 mm	23.1	\$701.00
HC3024-150	24"	610 mm	36.25"	921 mm	60.25"	1530 mm	24.2	\$722.00
HC3026-150	26"	660 mm	38.25"	972 mm	64.25"	1632 mm	25.4	\$742.00
HC3028-150	28"	711 mm	40.25"	1022 mm	68.25"	1734 mm	26.6	\$762.00
HC3030-150	30"	762 mm	42.25"	1073 mm	72.25"	1835 mm	27.7	\$782.00
HC3032-150	32"	813 mm	44.25"	1124 mm	76.25"	1937 mm	28.9	\$801.00
HC3034-150	34"	864 mm	46.25"	1175 mm	80.25"	2038 mm	30.1	\$825.00
HC3036-150	36"	914 mm	48.25"	1226 mm	84.25"	2140 mm	31.2	\$848.00
HC3038-150	38"	965 mm	50.25"	1276 mm	88.25"	2242 mm	32.4	\$869.00
HC3040-150	40"	1016 mm	52.25"	1327 mm	92.25"	2343 mm	33.6	\$891.00
HC3042-150	42"	1067 mm	54.25"	1378 mm	96.25"	2445 mm	34.8	\$916.00
HC3044-150	44"	1118 mm	56.25"	1429 mm	100.25"	2546 mm	35.9	\$942.00
HC3046-150	46"	1168 mm	58.25"	1480 mm	104.25"	2648 mm	37.1	\$961.00
HC3048-150	48"	1219 mm	60.25"	1530 mm	108.25"	2750 mm	38.3	\$990.00
For Strokes not listed and less than 48" use the next stroke size up.								
For Strokes above 48" add to HC3048-150 for every 1" or part thereof.								\$21.00
For Stop Tube add to cylinder price for every 1" or part thereof. Price includes Stop Tube, Barrel & Rod.								\$42.00

Note:

- Cylinders in black print are stocked. Cylinders in red print are not stocked and are available to order.
- Dimensions in mm have been rounded to whole numbers.
- Full dimensions are on [Page 1.12](#).
- Pricing Examples:

HC3019-150

Use HC3020-150 = \$681.00

HC3052-150

HC3048-150 (\$990.00) + (4" x \$21.00) = \$1,074.00

HC3036-150 + 4" Stop Tube

HC3036-150 (\$848.00) + (4" x \$42.00) = \$1,016.00

HC3052-150 + 4" Stop Tube

HC3048-150 (\$990.00) + (4" x \$21.00) + (4" x \$42.00) = \$1,242.00

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3.50" Bore x 1.75" Rod



3.5" Bore x 1.75" Rod								
Order Code	Stroke		Closed Pin Centres		Open Pin Centres		Kg	List Each
HC3504-175	4"	102 mm	16.25"	413 mm	20.25"	514 mm	15.9	\$553.00
HC3506-175	6"	152 mm	18.25"	464 mm	24.25"	616 mm	17.2	\$579.00
HC3508-175	8"	203 mm	20.25"	514 mm	28.25"	718 mm	18.6	\$607.00
HC3510-175	10"	254 mm	22.25"	565 mm	32.25"	819 mm	20.0	\$635.00
HC3512-175	12"	305 mm	24.25"	616 mm	36.25"	921 mm	21.4	\$657.00
HC3514-175	14"	356 mm	26.25"	667 mm	40.25"	1022 mm	22.8	\$678.00
HC3516-175	16"	406 mm	28.25"	718 mm	44.25"	1124 mm	24.1	\$746.00
HC3518-175	18"	457 mm	30.25"	768 mm	48.25"	1226 mm	25.5	\$766.00
HC3520-175	20"	508 mm	32.25"	819 mm	52.25"	1327 mm	26.9	\$797.00
HC3522-175	22"	559 mm	34.25"	870 mm	56.25"	1429 mm	28.3	\$865.00
HC3524-175	24"	610 mm	36.25"	921 mm	60.25"	1530 mm	29.7	\$897.00
HC3526-175	26"	660 mm	38.25"	972 mm	64.25"	1632 mm	31.0	\$928.00
HC3528-175	28"	711 mm	40.25"	1022 mm	68.25"	1734 mm	32.4	\$950.00
HC3530-175	30"	762 mm	42.25"	1073 mm	72.25"	1835 mm	33.8	\$1,027.00
HC3532-175	32"	813 mm	44.25"	1124 mm	76.25"	1937 mm	35.2	\$1,067.00
HC3534-175	34"	864 mm	46.25"	1175 mm	80.25"	2038 mm	35.6	\$1,107.00
HC3536-175	36"	914 mm	48.25"	1226 mm	84.25"	2140 mm	37.9	\$1,146.00
HC3538-175	38"	965 mm	50.25"	1276 mm	88.25"	2242 mm	39.3	\$1,185.00
HC3540-175	40"	1016 mm	52.25"	1327 mm	92.25"	2343 mm	40.7	\$1,226.00
HC3542-175	42"	1067 mm	54.25"	1378 mm	96.25"	2445 mm	42.1	\$1,263.00
HC3544-175	44"	1118 mm	56.25"	1429 mm	100.25"	2546 mm	43.4	\$1,302.00
HC3546-175	46"	1168 mm	58.25"	1480 mm	104.25"	2648 mm	44.8	\$1,340.00
HC3548-175	48"	1219 mm	60.25"	1530 mm	108.25"	2750 mm	46.2	\$1,377.00
For Strokes not listed and less than 48" use the next stroke size up.								
For Strokes above 48" add to HC3548-175 for every 1" part thereof.								\$29.00
For Stop Tube add to cylinder price for every 1" or part thereof. Price includes Stop Tube, Barrel & Rod.								\$58.00

Note:

- Cylinders in black print are stocked. *Cylinders in red print are not stocked and are available to order.*
- Dimensions in mm have been rounded to whole numbers.
- Full dimensions are on [Page 1.12](#).
- Pricing Examples:
 HC3519-175 Use HC3520-175 = \$797.00
 HC3552-175 HC3548-175 (\$1,377.00) + (4" x \$29.00) = \$1,493.00
 HC3536-175 + 4" Stop Tube HC3536-175 (\$1,146.00) + (4" x \$58.00) = \$1,378.00
 HC3552-175 + 4" Stop Tube HC3548-175 (\$1,377.00) + (4" x \$29.00) + (4" x \$58.00) = \$1,725.00

Continued Next Page

4.00" Bore x 1.75" Rod



4.0" Bore x 1.75" Rod								
Order Code	Stroke		Closed Pin Centres		Open Pin Centres		Kg	List Each
HC4004-175	4"	102 mm	16.25"	413 mm	20.25"	514 mm	18.8	\$685.00
HC4006-175	6"	152 mm	18.25"	464 mm	24.25"	616 mm	20.3	\$719.00
HC4008-175	8"	203 mm	20.25"	514 mm	28.25"	718 mm	21.8	\$746.00
HC4010-175	10"	254 mm	22.25"	565 mm	32.25"	819 mm	23.3	\$779.00
HC4012-175	12"	305 mm	24.25"	616 mm	36.25"	921 mm	24.8	\$812.00
HC4014-175	14"	356 mm	26.25"	667 mm	40.25"	1022 mm	26.3	\$844.00
HC4016-175	16"	406 mm	28.25"	718 mm	44.25"	1124 mm	27.8	\$876.00
HC4018-175	18"	457 mm	30.25"	768 mm	48.25"	1226 mm	29.3	\$907.00
HC4020-175	20"	508 mm	32.25"	819 mm	52.25"	1327 mm	30.8	\$942.00
HC4022-175	22"	559 mm	34.25"	870 mm	56.25"	1429 mm	32.3	\$972.00
HC4024-175	24"	610 mm	36.25"	921 mm	60.25"	1530 mm	33.8	\$1,071.00
HC4026-175	26"	660 mm	38.25"	972 mm	64.25"	1632 mm	35.3	\$1,119.00
HC4028-175	28"	711 mm	40.25"	1022 mm	68.25"	1734 mm	36.8	\$1,168.00
HC4030-175	30"	762 mm	42.25"	1073 mm	72.25"	1835 mm	38.3	\$1,213.00
HC4032-175	32"	813 mm	44.25"	1124 mm	76.25"	1937 mm	39.8	\$1,261.00
HC4034-175	34"	864 mm	46.25"	1175 mm	80.25"	2038 mm	41.3	\$1,307.00
HC4036-175	36"	914 mm	48.25"	1226 mm	84.25"	2140 mm	42.8	\$1,353.00
HC4038-175	38"	965 mm	50.25"	1276 mm	88.25"	2242 mm	44.3	\$1,400.00
HC4040-175	40"	1016 mm	52.25"	1327 mm	92.25"	2343 mm	45.8	\$1,448.00
HC4042-175	42"	1067 mm	54.25"	1378 mm	96.25"	2445 mm	47.3	\$1,491.00
HC4044-175	44"	1118 mm	56.25"	1429 mm	100.25"	2546 mm	48.8	\$1,535.00
HC4046-175	46"	1168 mm	58.25"	1480 mm	104.25"	2648 mm	50.3	\$1,581.00
HC4048-175	48"	1219 mm	60.25"	1530 mm	108.25"	2750 mm	51.8	\$1,625.00
For Strokes not listed and less than 48" use the next stroke size up.								
For Strokes above 48" add to HC4048-175 for every 1" or part thereof.								\$32.00
For Stop Tube add to cylinder price for every 1" or part thereof. Price includes Stop Tube, Barrel & Rod.								\$64.00

Note:

- Cylinders in black print are stocked. Cylinders in red print are not stocked and are available to order.
- Dimensions in mm have been rounded to whole numbers.
- Full dimensions are on [Page 1.12](#).
- Pricing Examples:

HC4019-175	Use HC4020-175 = \$942.00
HC4052-175	HC4048-175 (\$1,625.00) + (4" x \$32.00) = \$1,753.00
HC4036-175 + 4" Stop Tube	HC4036-175 (\$1,353.00) + (4" x \$64.00) = \$1,609.00
HC4052-175 + 4" Stop Tube	HC4048-175 (\$1,625.00) + (4" x \$32.00) + (4" x \$64.00) = \$2,009.00
- Can be converted to Ø 1.25" Pin by the customer. Parts required (1 pcs Female Clevis & 2 pcs Clevis) on [Page 1.19](#).

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4.00" Bore x 2.00" Rod



4.0" Bore x 2.00" Rod								
Order Code	Stroke		Closed Pin Centres		Open Pin Centres		Kg	List Each
HC4004-200	4"	102 mm	16.25"	413 mm	20.25"	514 mm	19.2	\$691.00
HC4006-200	6"	152 mm	18.25"	464 mm	24.25"	616 mm	20.9	\$722.00
HC4008-200	8"	203 mm	20.25"	514 mm	28.25"	718 mm	22.6	\$758.00
HC4010-200	10"	254 mm	22.25"	565 mm	32.25"	819 mm	24.3	\$791.00
HC4012-200	12"	305 mm	24.25"	616 mm	36.25"	921 mm	26.0	\$823.00
HC4014-200	14"	356 mm	26.25"	667 mm	40.25"	1022 mm	27.7	\$854.00
HC4016-200	16"	406 mm	28.25"	718 mm	44.25"	1124 mm	29.4	\$888.00
HC4018-200	18"	457 mm	30.25"	768 mm	48.25"	1226 mm	31.1	\$977.00
HC4020-200	20"	508 mm	32.25"	819 mm	52.25"	1327 mm	32.8	\$1,007.00
HC4022-200	22"	559 mm	34.25"	870 mm	56.25"	1429 mm	34.5	\$1,046.00
HC4024-200	24"	610 mm	36.25"	921 mm	60.25"	1530 mm	36.2	\$1,142.00
HC4026-200	26"	660 mm	38.25"	972 mm	64.25"	1632 mm	37.9	\$1,171.00
HC4028-200	28"	711 mm	40.25"	1022 mm	68.25"	1734 mm	39.6	\$1,215.00
HC4030-200	30"	762 mm	42.25"	1073 mm	72.25"	1835 mm	41.3	\$1,259.00
HC4032-200	32"	813 mm	44.25"	1124 mm	76.25"	1937 mm	43.0	\$1,290.00
HC4034-200	34"	864 mm	46.25"	1175 mm	80.25"	2038 mm	44.7	\$1,333.00
HC4036-200	36"	914 mm	48.25"	1226 mm	84.25"	2140 mm	46.4	\$1,381.00
HC4038-200	38"	965 mm	50.25"	1276 mm	88.25"	2242 mm	48.1	\$1,414.00
HC4040-200	40"	1016 mm	52.25"	1327 mm	92.25"	2343 mm	49.8	\$1,586.00
HC4042-200	42"	1067 mm	54.25"	1378 mm	96.25"	2445 mm	51.5	\$1,637.00
HC4044-200	44"	1118 mm	56.25"	1429 mm	100.25"	2546 mm	53.2	\$1,688.00
HC4046-200	46"	1168 mm	58.25"	1480 mm	104.25"	2648 mm	54.9	\$1,738.00
HC4048-200	48"	1219 mm	60.25"	1530 mm	108.25"	2750 mm	56.6	\$1,786.00
For Strokes not listed and less than 48" use the next stroke size up.								
For Strokes above 48" add to HC4048-200 for every 1" or part thereof.								\$36.00
For Stop Tube add to cylinder price for every 1" or part thereof. Price includes Stop Tube, Barrel & Rod.								\$72.00

Note:

- Cylinders in black print are stocked. *Cylinders in red print are not stocked and are available to order.*
- Dimensions in mm have been rounded to whole numbers.
- Full dimensions are on [Page 1.12](#).
- Pricing Examples:

HC4019-200	Use HC4020-200 = \$1,007.00
HC4052-200	HC4048-200 (\$1,786.00) + (4" x \$36.00) = \$1,930.00
HC4036-200 + 4" Stop Tube	HC4036-200 (\$1,381.00) + (4" x \$72.00) = \$1,669.00
HC4052-200 + 4" Stop Tube	HC4048-200 (\$1,786.00) + (4" x \$36.00) + (4" x \$72.00) = \$2,218.00
- Can be converted to Ø 1.25" Pin by the customer. Parts required (1 pcs Female Clevis & 2 pcs Clevis) on [Page 1.19](#).*

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5.00" Bore x 2.00" Rod



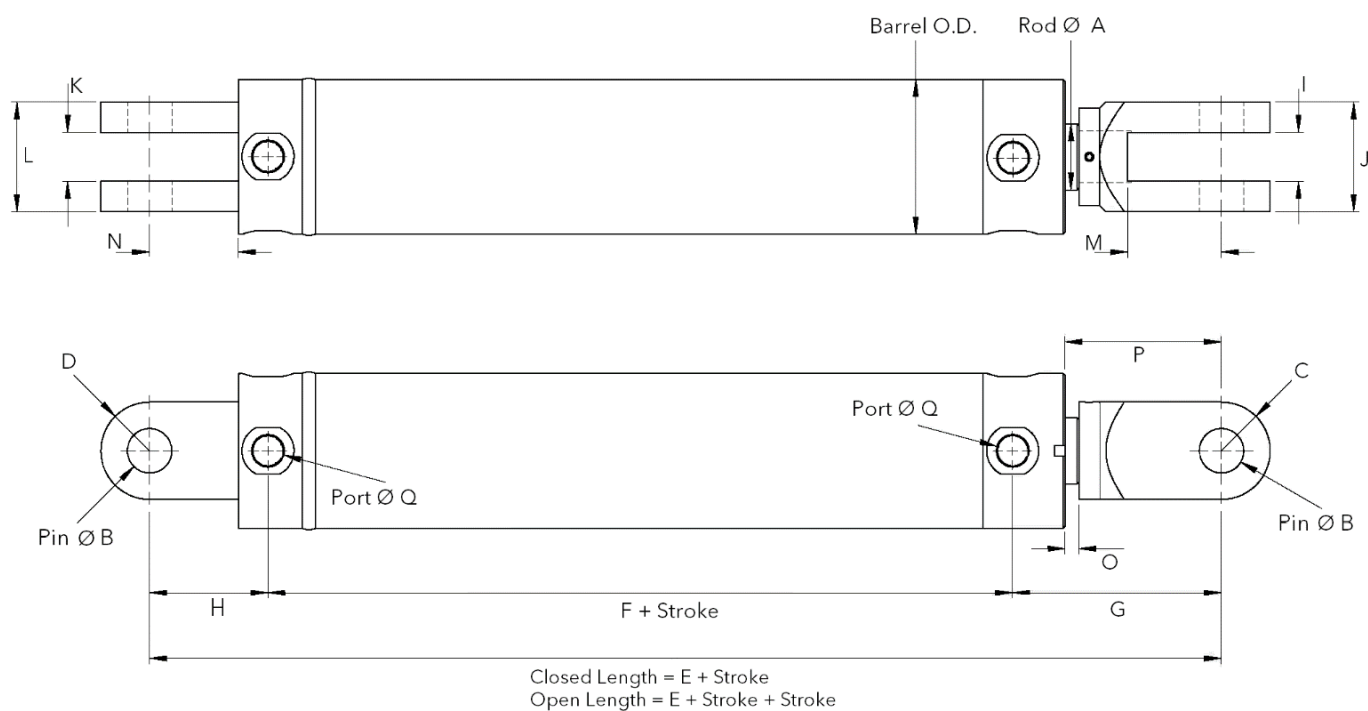
5.0" Bore x 2.00" Rod								
Order Code	Stroke		Closed Pin Centres		Open Pin Centres		Kg	List Each
HC5004-200	4"	102 mm	16.25"	413 mm	20.25"	514 mm	26.5	\$985.00
HC5006-200	6"	152 mm	18.25"	464 mm	24.25"	616 mm	28.4	\$1,024.00
HC5008-200	8"	203 mm	20.25"	514 mm	28.25"	718 mm	30.3	\$1,063.00
HC5010-200	10"	254 mm	22.25"	565 mm	32.25"	819 mm	32.2	\$1,101.00
HC5012-200	12"	305 mm	24.25"	616 mm	36.25"	921 mm	34.1	\$1,203.00
HC5014-200	14"	356 mm	26.25"	667 mm	40.25"	1022 mm	36.0	\$1,242.00
HC5016-200	16"	406 mm	28.25"	718 mm	44.25"	1124 mm	37.9	\$1,286.00
HC5018-200	18"	457 mm	30.25"	768 mm	48.25"	1226 mm	39.8	\$1,331.00
HC5020-200	20"	508 mm	32.25"	819 mm	52.25"	1327 mm	41.7	\$1,374.00
HC5022-200	22"	559 mm	34.25"	870 mm	56.25"	1429 mm	43.6	\$1,416.00
HC5024-200	24"	610 mm	36.25"	921 mm	60.25"	1530 mm	45.5	\$1,457.00
HC5026-200	26"	660 mm	38.25"	972 mm	64.25"	1632 mm	47.4	\$1,505.00
HC5028-200	28"	711 mm	40.25"	1022 mm	68.25"	1734 mm	49.3	\$1,553.00
HC5030-200	30"	762 mm	42.25"	1073 mm	72.25"	1835 mm	51.2	\$1,606.00
HC5032-200	32"	813 mm	44.25"	1124 mm	76.25"	1937 mm	53.1	\$1,659.00
HC5034-200	34"	864 mm	46.25"	1175 mm	80.25"	2038 mm	55.0	\$1,711.00
HC5036-200	36"	914 mm	48.25"	1226 mm	84.25"	2140 mm	56.9	\$1,764.00
HC5038-200	38"	965 mm	50.25"	1276 mm	88.25"	2242 mm	58.8	\$1,817.00
HC5040-200	40"	1016 mm	52.25"	1327 mm	92.25"	2343 mm	60.7	\$1,870.00
HC5042-200	42"	1067 mm	54.25"	1378 mm	96.25"	2445 mm	62.6	\$1,923.00
HC5044-200	44"	1118 mm	56.25"	1429 mm	100.25"	2546 mm	64.5	\$1,970.00
HC5046-200	46"	1168 mm	58.25"	1480 mm	104.25"	2648 mm	66.4	\$2,023.00
HC5048-200	48"	1219 mm	60.25"	1530 mm	108.25"	2750 mm	68.3	\$2,075.00
For Strokes not listed and less than 48" use the next stroke size up.								
For Strokes above 48" add to HC5048-200 for every 1" or part thereof.								\$40.00
For Stop Tube add to cylinder price for every 1" or part thereof. Price includes Stop Tube, Barrel & Rod.								\$80.00

Note:

- Cylinders in black print are stocked. *Cylinders in red print are not stocked and are available to order.*
- Dimensions in mm have been rounded to whole numbers.
- Full dimensions are on [Page 1.12](#).
- Pricing Examples:

HC5019-200	Use HC5020-200 = \$1,374.00
HC5052-200	HC5048-200 (\$2,075.00) + (4" x \$40.00) = \$2,235.00
HC5036-200 + 4" Stop Tube	HC5036-200 (\$1,764.00) + (4" x \$80.00) = \$2,084.00
HC5052-200 + 4" Stop Tube	HC5048-200 (\$2,075.00) + (4" x \$40.00) + (4" x \$80.00) = \$2,555.00

Dimensions



Bore Ø	1.5"	2.0"	2.0"	2.5"	3.0"	3.5"	4.0"	5.0"
Rod Ø A	0.875"	1.00"	1.25"	1.50"	1.50"	1.75"	1.75" or 2.00"	2.00"
Pin Ø B	0.75" 19.05	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	23	28	28	28	28	28	34
D	23	23	25	28	28	33	34	34
E ± 3 mm	9.50" 241	9.50" 241	12.25" 311	12.25" 311	12.25" 311	12.25" 311	12.25" 311	12.25" 311
F	105	104	123	123	123	123	126	132
G	90	88	120	120	120	120	117	106
H	46	49	68	68	68	68	68	73
I	22	22	28	28	28	28	28	28
J	46	46	63	63	63	63	63	68
K	22	22	28	28	28	28	28	28
L	46	46	60	63	63	63	63	68
M	32	32	54	54	54	54	54	54
N	32	32	51	51	51	51	51	51
O	9	6	8	8	8	8	8	6
P	61	58	90	90	90	90	90	88
Port Ø Q	9/16" UNO (SAE 6)	9/16" UNO (SAE 6)	9/16" UNO (SAE 6)	3/4" UNO (SAE 8)	3/4" UNO (SAE 8)	3/4" UNO (SAE 8)	3/4" UNO (SAE 8)	3/4" UNO (SAE 8)
Barrel O.D.	2.0" 51	2.5" 64	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	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.

	Stroke	8"	10"	12"	16"	18"	20"	24"	30"	36"	42"	48"	
Bore	Rod	Maximum Extension Force (Vertical & Guided) kN bar											Maximum Retraction Force kN bar
1.5"	0.875"	23 207	22 193	17 149	11 96	9 79	8 70	6 53	4 35	3 26	2 17	1 9	15 207
2.0"	1.00"	42 207	38 187	29 143	19 94	16 79	13 64	10 49	7 34	5 25	4 20	3 15	31 207
2.0"	1.25"	42 207	42 207	38 187	25 123	21 104	17 84	13 64	9 44	7 34	5 25	4 20	25 207
2.5"	1.50"	65 207	65 207	65 207	65 207	65 207	61 193	46 145	32 101	23 73	18 57	14 44	42 207
3.0"	1.50"	94 207	94 207	94 207	85 186	71 156	61 134	46 101	32 70	23 50	18 39	14 31	71 207
3.5"	1.75"	128 207	128 207	128 207	128 207	128 207	113 182	85 137	59 95	43 69	33 53	26 42	96 207
4.0"	1.75"	168 207	168 207	168 207	157 194	132 163	113 139	85 105	59 73	43 53	33 41	26 32	135 207
4.0"	2.00"	168 207	168 207	168 207	168 207	168 207	168 207	144 178	100 123	74 91	57 70	45 55	126 207
5.0"	2.00"	262 207	262 207	262 207	262 207	225 178	192 152	144 114	100 79	74 58	57 45	45 35	220 207

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.

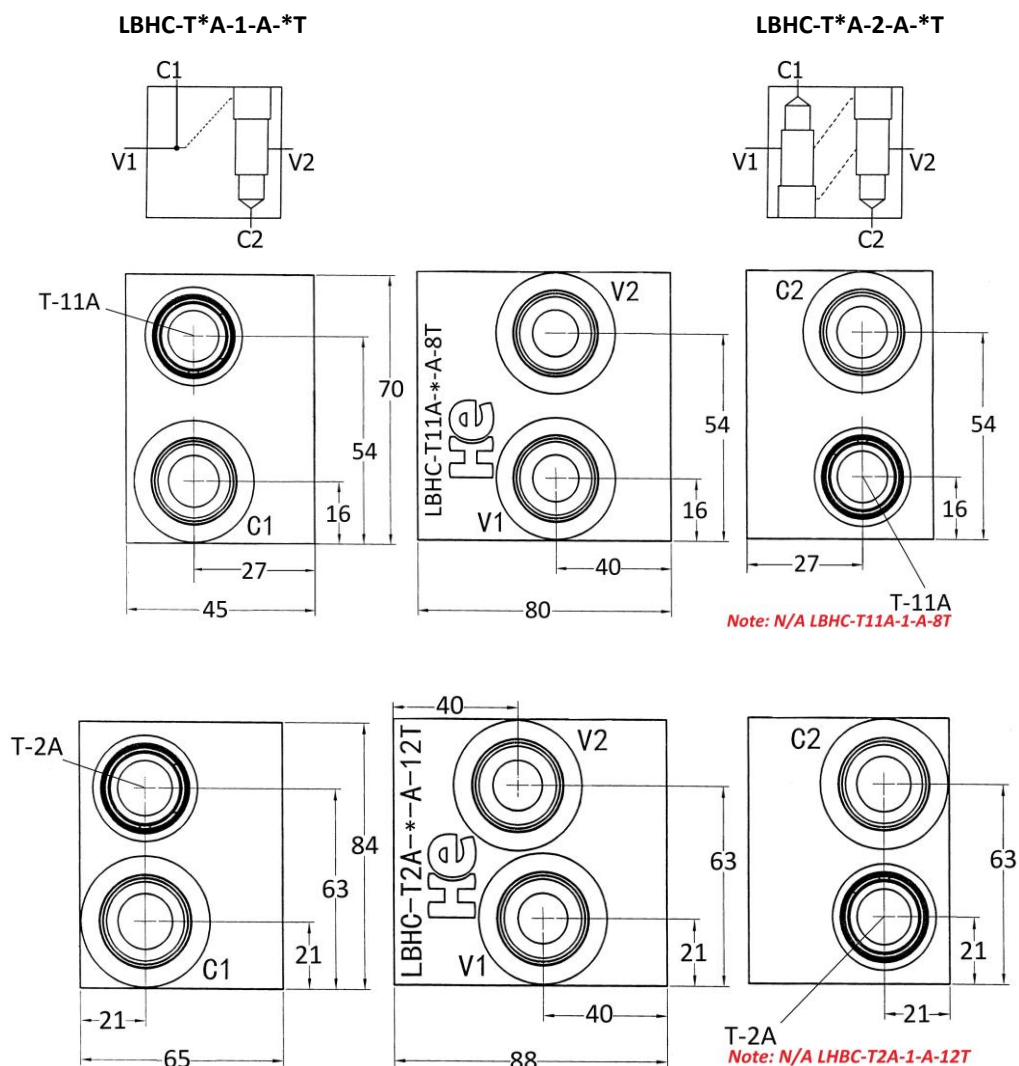
Cylinder Mount Counterbalance & Pilot Operated Check Valves



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	\$134.00
LBHC-T11A-2-A-8T	T-11A x 2				\$160.00
LBHC-T2A-1-A-12T	T-2A x 1	1 1/16" UNO			\$182.00
LBHC-T2A-2-A-12T	T-2A x 2				\$210.00

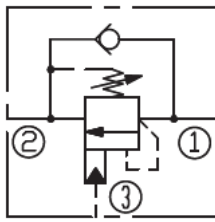
Note:

- LBHC-T*A-1-A-*T (single cavity body), load is held on port C2.
- Cartridge Information on [Page 1.15](#).



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Counterbalance Valves

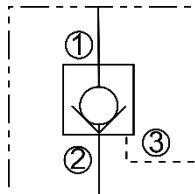


Order Code	Cavity	Max. Flow (L/min)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Adjustable Pressure (bar)	Factory Set (bar)	List Each
LCBCA-LAN	T-11A	60	3 : 1	0.3	70 - 280	210	\$165.00
LCBCA-LHN			3 : 1	1.7	70 - 280	210	\$165.00
LCBCA-LIN			3 : 1	1.7	25 - 105	70	\$165.00
LCBCH-LIN			10 : 1	1.7	140 - 350	210	\$178.00
LCBEA-LHN	T-2A	120	3 : 1	1.7	70 - 280	210	\$246.00

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 and 1.5 times when valve is set below 140 bar.
- Additional information available on [Page 9.20](#).

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	\$123.00
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"	\$31.00
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.

Accessories & Spare Parts



Male Rod Clevis Male Rod Clevis With Bronze Bushes Female Rod Clevis Male Clevis Plate Swivel Foot Mount

	Male Rod Clevis	Male Rod Clevis With Bronze Bushes	Female Rod Clevis	Male Clevis Plate	Swivel Foot Mount
HC15XX-875	N/A	N/A	HC075-075CLEVIS \$90.00	HC075MCP \$127.00	N/A
HCS20XX-100	N/A	N/A	HC075-075CLEVIS \$90.00	HC075MCP \$127.00	N/A
HC20XX-125	HC100-125BLOCK \$168.00	HC100-125BLOCK - BUSH \$217.00	HC100-125CLEVIS \$105.00	HC100MCP \$152.00	HC125SFM \$300.00
HC25XX-150	HC100-125BLOCK \$168.00	HC100-125BLOCK - BUSH \$217.00	HC100-125CLEVIS \$105.00	HC100MCP \$152.00	HC125SFM \$300.00
HC30XX-150	HC100-125BLOCK \$168.00	HC100-125BLOCK - BUSH \$217.00	HC100-125CLEVIS \$105.00	HC100MCP \$152.00	HC125SFM \$300.00
HC35XX-175	HC100-125BLOCK \$168.00	HC100-125BLOCK - BUSH \$217.00	HC100-125CLEVIS \$105.00	HC100MCP \$152.00	HC125SFM \$300.00
HC40XX-175	HC100-125BLOCK \$168.00	HC100-125BLOCK - BUSH \$217.00	HC100-125CLEVIS \$105.00	HC100MCP \$152.00	HC125SFM \$300.00
HC40XX-200	HC100-125BLOCK \$168.00	HC100-125BLOCK - BUSH \$217.00	HC100-125CLEVIS \$105.00	HC100MCP \$152.00	HC125SFM \$300.00
HC50XX-200	N/A	N/A	HC125-150CLEVIS \$120.00	HC125MCP \$287.00	HC150SFM \$300.00

Note:

- Male & Female Rod Clevis are supplied with Grub Screw, Plastic Insert & Grease Nipple.
- Male Rod Clevis dimensions are the same as Female Rod Clevis fitted to 2.0" Bore x 1.25" Rod to 4.0" Bore x 1.75" or 2.00" Rod cylinders. Refer to [Page 1.12](#).
- Male Clevis Plate is not supplied with mounting screws. It is manufactured from Cast Steel and can be welded. Dimensions & Maximum Force are on [Page 1.21](#).
- Swivel Foot Mount is supplied with a Grease Nipple. There is no Grub Screw & Plastic Insert. The parts are not assembled.
Customer to supply and weld their own Foot Plate.
The photo above is shown with customer supplied and fitted Foot Plate.
Dimensions on [Page 1.22](#).

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Pin & Clip for Female Clevis

Anti-Rotation Pin

Breather Plug

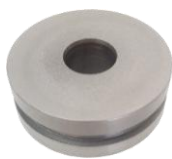
Seal Kit

	Pin & Clip for Female Rod Clevis	Clevis Pin Clip	Anti-Rotation Pin for Female Rod Clevis	Breather Plug	Seal Kit
HC15XX-875	HC075PIN \$28.00	HC100CLIP \$6.00	N/A	HC-BP-SAE6 \$28.00	HC15-875SK \$103.00
HCS20XX-100	HC075PIN \$28.00	HC100CLIP \$6.00	N/A	HC-BP-SAE6 \$28.00	HCS20-100SK \$105.00
HC20XX-125	HC100PIN \$30.00	HC100CLIP \$6.00	HC100PIN-ARGx65 \$59.00	HC-BP-SAE6 \$28.00	HC20-125SK \$110.00
HC25XX-150	HC100PIN \$30.00	HC100CLIP \$6.00	HC100PIN-ARGx65 \$59.00	HC-BP-SAE8 \$33.00	HC25-150SK \$129.00
HC30XX-150	HC100PIN \$30.00	HC100CLIP \$6.00	HC100PIN-ARGx65 \$59.00	HC-BP-SAE8 \$33.00	HC30-150SK \$133.00
HC35XX-175	HC100PIN \$30.00	HC100CLIP \$6.00	HC100PIN-ARGx65 \$59.00	HC-BP-SAE8 \$33.00	HC35-175SK \$159.00
HC40XX-175	HC100PIN \$30.00	HC100CLIP \$6.00	HC100PIN-ARGx65 \$59.00	HC-BP-SAE8 \$33.00	HC40-175SK \$178.00
HC40XX-200	HC100PIN \$30.00	HC100CLIP \$6.00	HC100PIN-ARGx65 \$59.00	HC-BP-SAE8 \$33.00	HC40-200SK \$209.00
HC50XX-200	HC125PIN \$36.00	HC125CLIP \$14.00	HC125PIN-ARGx70 \$70.00	HC-BP-SAE8 \$33.00	HC50-200SK \$270.00

Note:

- Seal Kit supplied with Nyloc Nut.
- Anti-Rotation Pin supplied with Grease Nipple & Retaining Screw (M6x20).
It is the customers responsibility to machine M6 thread for Retaining Screw.

Continued Next Page


Gland

Piston

Base End Cap

Steel Port Plug

	Gland	Piston	Base End Cap	Steel Port Plug
HC15XX-875	HC15-875G \$97.00	HC15P \$37.00	HC15BEC \$80.00	PLUG-SAE6-S \$7.00
HCS20XX-100	HCS200-100G \$112.00	HCS20P \$49.00	HCS20BEC \$81.00	PLUG-SAE6-S \$7.00
HC20XX-125	HC20-125G \$114.00	HC20P \$51.00	HC20BEC \$86.00	PLUG-SAE6-S \$7.00
HC25XX-150	HC25-150G \$139.00	HC25P \$61.00	HC25BEC \$90.00	PLUG-SAE8-S \$8.00
HC30XX-150	HC30-150G \$167.00	HC30P \$76.00	HC30BEC \$103.00	PLUG-SAE8-S \$8.00
HC35XX-175	HC35-175G \$199.00	HC35P \$90.00	HC35BEC \$118.00	PLUG-SAE8-S \$8.00
HC40XX-175	HC40-175G \$224.00	HC40P \$106.00	HC40BEC \$139.00	PLUG-SAE8-S \$8.00
HC40XX-200	HC40-200G \$224.00	HC40P \$106.00	HC40BEC \$139.00	PLUG-SAE8-S \$8.00
HC50XX-200	HC50-200G \$307.00	HC50P \$168.00	HC50BEC \$244.00	PLUG-SAE8-S \$8.00

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Order Code	Description	List Each
Male Rod Clevis		
HC100-125BLOCK	Ø 1.00" Pin x 1-1/4" UNF Female Thread Supplied with a Grease Nipple, Grub Screw & Insert	\$168.00
Male Rod Clevis With Bronze Bushes		
HC100-125BLOCK - BUSH	Ø 1.00" Pin x 1-1/4" UNF Female Thread Supplied with a Grease Nipple, Grub Screw & Insert	\$217.00
Female Rod Clevis		
HC075-075CLEVIS	Ø 0.75" Pin x 3/4" UNF Female Thread Supplied with a Grub Screw & Insert	\$90.00
HC100-125CLEVIS	Ø 1.00" Pin x 1-1/4" UNF Female Thread Supplied with a Grub Screw & Insert	\$105.00
HC125-125CLEVIS	Ø 1.25" Pin x 1-1/4" UNF Female Thread (Suits HC40XX-175 & HC40XX-200) Supplied with a Grub Screw & Insert	\$120.00
HC125-150CLEVIS	Ø 1.25" Pin x 1-1/2" UNF Female Thread Supplied with a Grub Screw & Insert	\$120.00
Grub Screw & Plastic Insert		
HC-SCREW	Suits all Male & Female Rod Clevises	\$9.00
HC-INSERT	Plastic Insert for use with Grub Screw (Suits all Male & Female Rod Clevises)	\$3.00
Male Clevis Plate		
HC075MCP	Suits Ø 0.75" Pin	\$127.00
HC100MCP	Suits Ø 1.00" Pin	\$152.00
HC125MCP	Suits Ø 1.25" Pin	\$287.00
Swivel Foot Mount		
HC125SFM	1-1/4" UNF Female Thread	\$300.00
HC150SFM	1-1/2" UNF Female Thread	\$300.00
Pin & Clip for Female Clevis		
HC075PIN	Ø 0.75" Pin x 46 mm Maximum Clevis Width	\$28.00
HC100PIN	Ø 1.00" Pin x 63 mm Maximum Clevis Width	\$30.00
HC125PIN	Ø 1.25" Pin x 68 mm Maximum Clevis Width	\$36.00
Anti-Rotation Pin for Female Clevis		
HC100PIN-ARGx65	Ø 1.00" Pin x 63 mm Maximum Clevis Width	\$59.00
HC125PIN-ARGx70	Ø 1.25" Pin x 68 mm Maximum Clevis Width	\$70.00
Breather Plug		
PLUG-SAE6-S	9/16" UNO - Suits HC15XX-875, HCS20XX-100, HC20XX-125	\$7.00
PLUG-SAE8-S	3/4" UNO - Suits HC25XX-150 to HC50XX-200	\$8.00
Seal Kit		
HC15-875SK	Suits HC15XX-875	\$103.00
HCS20-100SK	Suits HCS20XX-100	\$105.00
HC20-125SK	Suits HC20XX-125	\$110.00
HC25-150SK	Suits HC25XX-150	\$129.00
HC30-150SK	Suits HC30XX-150	\$133.00
HC35-175SK	Suits HC35XX-175	\$159.00
HC40-175SK	Suits HC40XX-175	\$178.00
HC40-200SK	Suits HC40XX-200	\$209.00
HC50-200SK	Suits HC50XX-200	\$270.00

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Gland		
HC15-875G	Suits HC15XX-875	\$97.00
HCS20-100G	Suits HCS20XX-100	\$112.00
HC20-125G	Suits HC20XX-125	\$114.00
HC25-150G	Suits HC25XX-150	\$139.00
HC30-150G	Suits HC30XX-150	\$167.00
HC35-175G	Suits HC35XX-175	\$199.00
HC40-175G	Suits HC40XX-175	\$224.00
HC40-200G	Suits HC40XX-200	\$224.00
HC50-200G	Suits HC50XX-200	\$307.00
Piston		
HC15P	Suits HC15XX-875	\$37.00
HCS20P	Suits HCS20XX-100	\$49.00
HC20P	Suits HC20XX-125	\$51.00
HC25P	Suits HC25XX-150	\$61.00
HC30P	Suits HC30XX-150	\$76.00
HC35P	Suits HC35XX-175	\$90.00
HC40P	Suits HC40XX-175 & HC40XX-200	\$106.00
HC50P	Suits HC50XX-200	\$168.00
Base End Cap		
HC15BEC	Suits HC15XX-875	\$80.00
HCS20BEC	Suits HCS20XX-100	\$81.00
HC20BEC	Suits HC20XX-125	\$86.00
HC25BEC	Suits HC25XX-150	\$90.00
HC30BEC	Suits HC30XX-150	\$103.00
HC35BEC	Suits HC35XX-175	\$118.00
HC40BEC	Suits HC40XX-175 & HC40XX-200	\$139.00
HC50BEC	Suits HC50XX-200	\$244.00
Steel Port Plug		
PLUG-SAE6-S	9/16" UNO - Suits HC15XX-875, HCS20XX-100, HC20XX-125	\$7.00
PLUG-SAE8-S	3/4" UNO - Suits HC25XX-150 to HC50XX-200	\$8.00

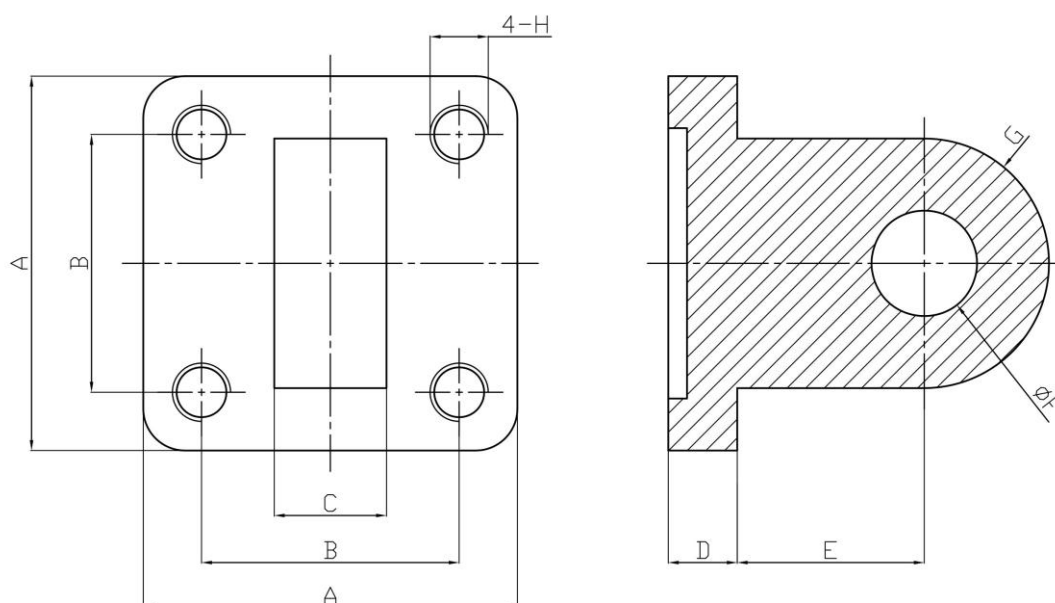
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Male Clevis Plate



Bore	Rod	Maximum Extension Force		Maximum Retraction Force	
		kN	bar	kN	bar
1.5"	0.875"	23	207	15	207
2.0"	1.00"	42	207	31	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

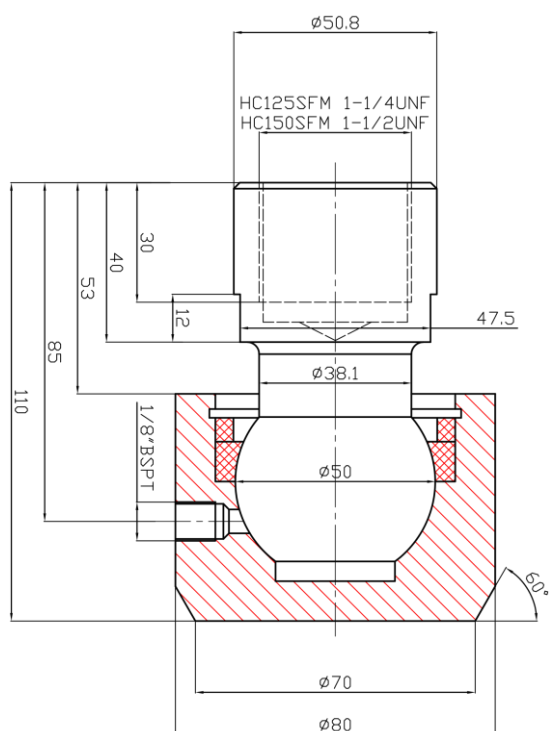
Note: Check Cylinder **Maximum Force & Pressure** on [Page 1.13](#). The lower Force of the two is applicable.



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

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Swivel Foot Mount



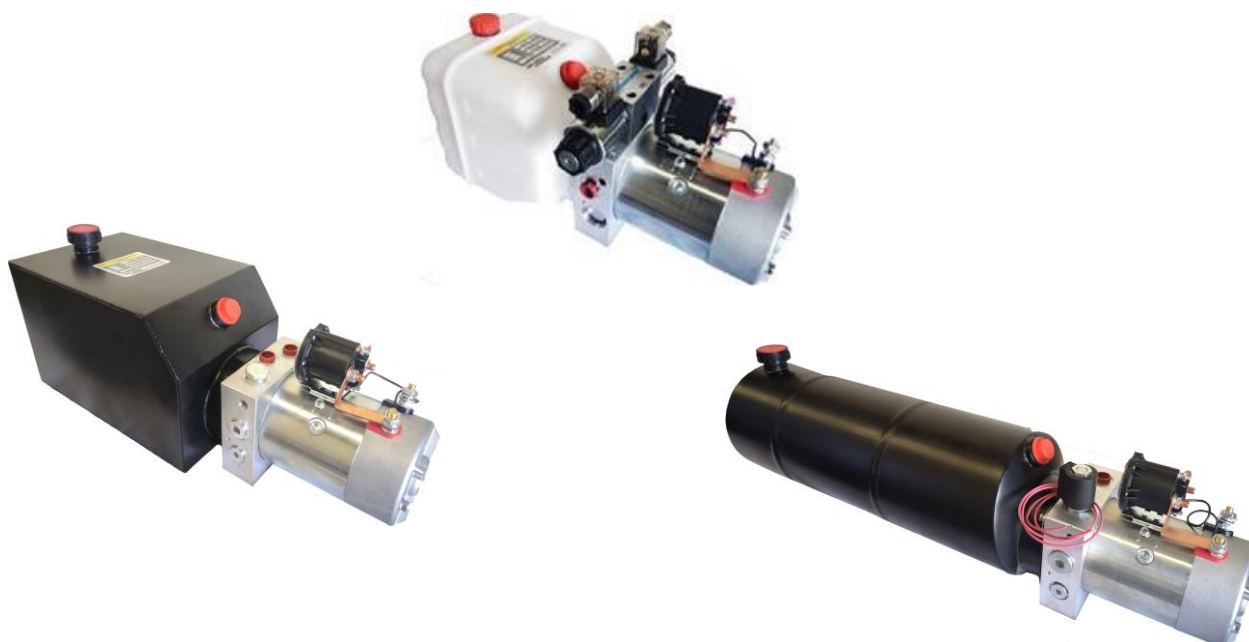
Swivel Foot Mount as supplied



**Swivel Foot Mount shown with
customer supplied and fitted Foot Plate**

Hydraulic Power Units

Features	2.02
Order Code	2.02
Standard Power Unit Specifications	2.03
Oil Recommendation	2.03
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Single Acting - Solenoid Control with Flow Control	2.05
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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.
- ▶ Horizontal mount is standard, vertical mount optional (N/A MT19 & 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

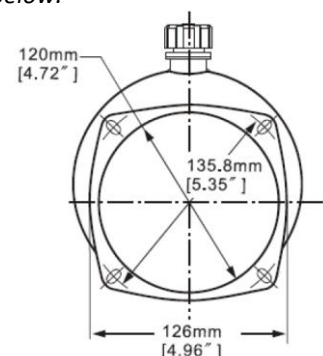
PU - D** - **** - 20TG21H - ***** - ****

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, MT19
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 = 50 - 250 bar (725 - 3625 psi)
Preset 180 bar (2610 psi)</p> <p>⑦ Release Valve Coil Connector (For Circuit 03 & 42)
D = DIN
W = Wire
ER = Deutsch
Omit for Circuit 01, 04, 05 & 13</p> <p>⑧ Locking Manual Override (Circuit 03, 13, 42 only)
Omit = Not required
LMO = Circuit 03, 13, 42 (Option)</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:

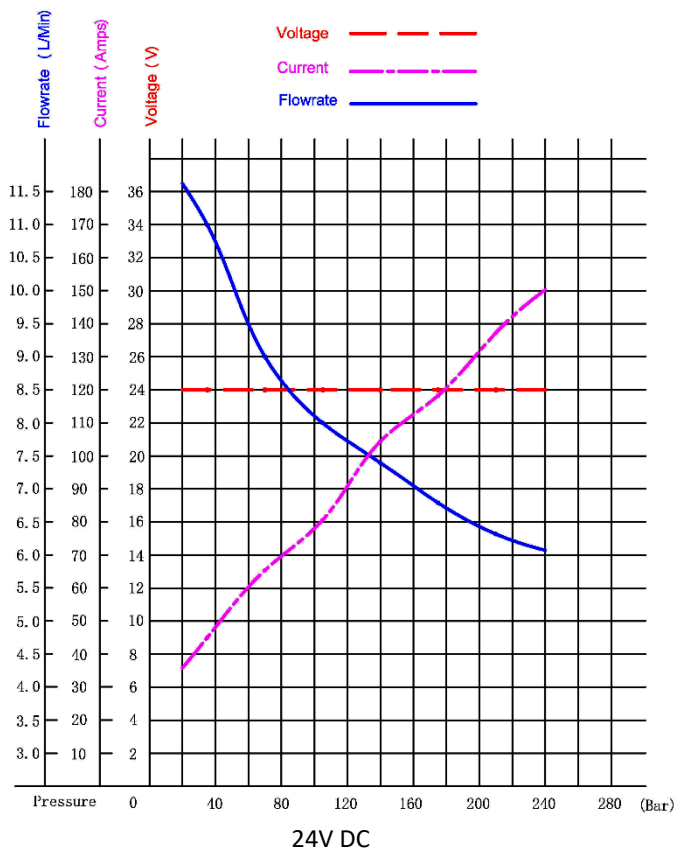
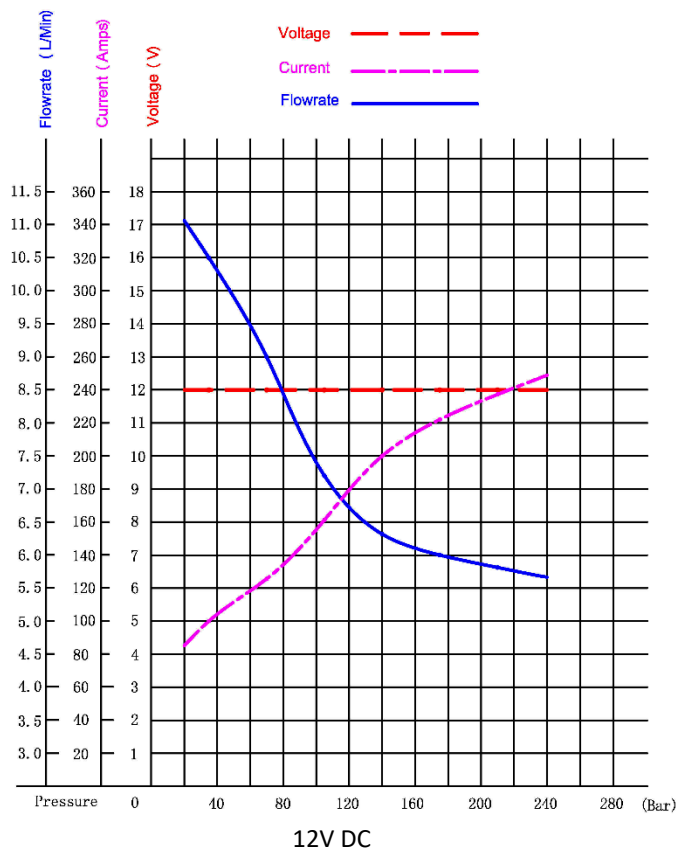
- *For Vertical Mount Power Units we recommend return oil is below the reservoir oil level. Order hardware separately from the table on [Page 2.09](#).*
- *Power Units ordered without a Reservoir are supplied without any pump suction hardware. Order separately from the table on [Page 2.11](#).*
- *If 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)	Max. Pump Pressure (bar)		Ports
12V DC	1.6 kW	2.1 cc/rev	5.9 L/min	50 - 250 (Factory Set 180)	Continuous	Intermittent	9/16" UNO (SAE 6)
24V DC	2.2 kW		6.7 L/min		210	250	

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



Oil Recommendation

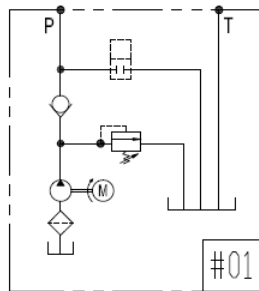
For normal operating conditions we recommend Mineral Based Hydraulic Oil with a viscosity of ISO 32 or 46 Centistokes (cSt).

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.

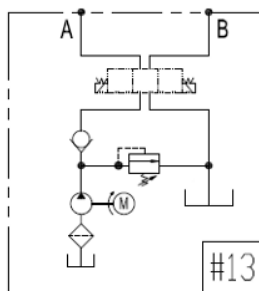


Pump, Motor, Reservoir (Circuit - 01)



Order Code	Reservoir	List Each
PU01-D**-XXXX-20TG21H	Add price from Page 2.07	\$1,197.00

Double Acting - Solenoid Control (Circuit - 13)

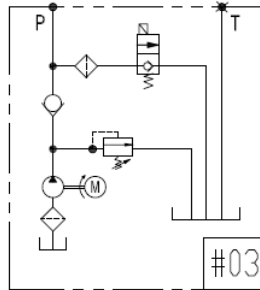


Order Code	Reservoir	List Each
PU13- D**-XXXX-20TG21H	Add price from Page 2.07	\$1,180.00

Note:

- Price does not include Solenoid Valve. Refer to [Page 2.08](#).
- 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 2.08](#).
- *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.*

Single Acting - Solenoid Control (Circuit - 03)



Order Code	Reservoir	List Each
PU03- D**-XXXX-20TG21H	Add price from Page 2.07	\$1,264.00

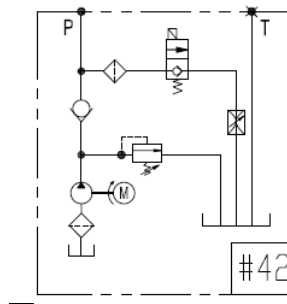
Note:

- Above price does not include a coil for the Release Valve, choose from table below and order separately.
- Locking Manual Override add \$22.00.

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	Add price from Page 2.07	\$1,325.00

Note:

- Above price does not include a coil for the Release Valve, choose from table below and order separately.
- Locking Manual Override add \$22.00.

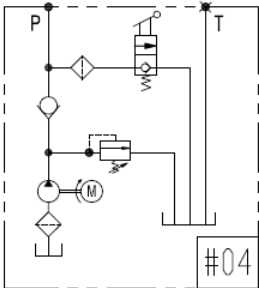
Operation of Locking Manual Override Option:

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



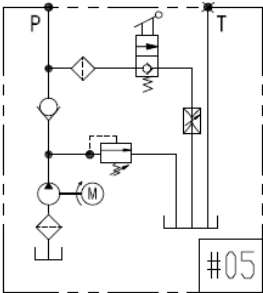
Order Code	Voltage	Connector	List Each
D12W	12V/18W DC	Wire	\$36.00
MC-13-C-12HDC	12V/21W DC	DIN 12V DC with Light Plug	\$40.00
ECDS-12V-13-DT06	12V/18W DC	Deutsch 12V DC with Plug	\$53.00
D24W	24V/18W DC	Wire	\$36.00
MC-13-C-24HDC	24V/21W DC	DIN 24V DC with Light Plug	\$40.00
ECDS-24V-13-DT06	24V/18W DC	Deutsch 24V DC with Plug	\$53.00
C01010001-N	N/A	DIN Light Plug - DC	\$16.00
DT06-2S-0462		Deutsch Plug - Male (Includes 2 pcs Solid Socket)	\$15.00
0462-209-16141x10		Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)	\$50.00

Single Acting - Manual Control (Circuit - 04)



Order Code	Reservoir	List Each
PU04- D**-XXXX-20TG21H	Add price from Page 2.07	\$1,407.00

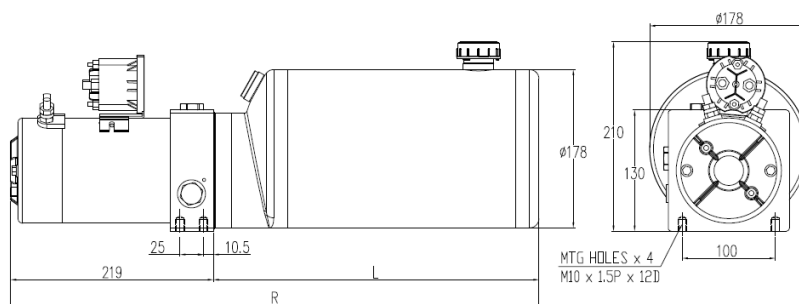
Single Acting - Manual Control with Flow Control (Circuit - 05)



Order Code	Reservoir	List Each
PU05- D**-XXXX-20TG21H	Add price from Page 2.07	\$1,468.00

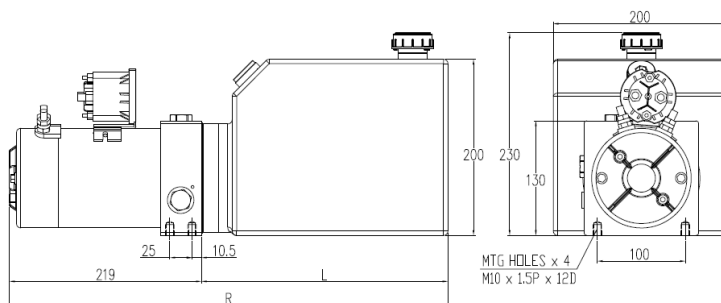
Reservoirs

LS Series - Steel



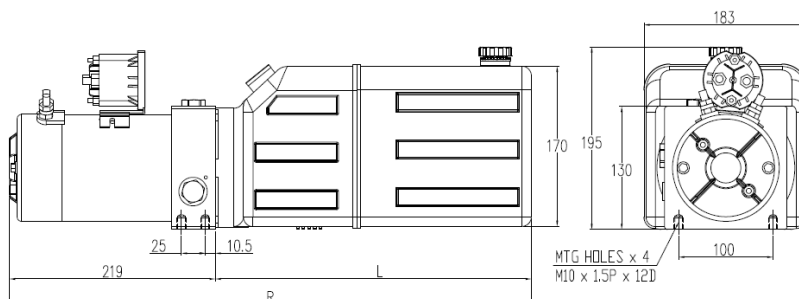
Order Code	Usable Capacity (Litres)	L (mm)	R (mm)	List Each
LS04	04	270	489	\$108.00
LS06	06	350	569	\$126.00
LS08	08	440	659	\$134.00
LS10	10	540	759	\$152.00

MT Series - Steel



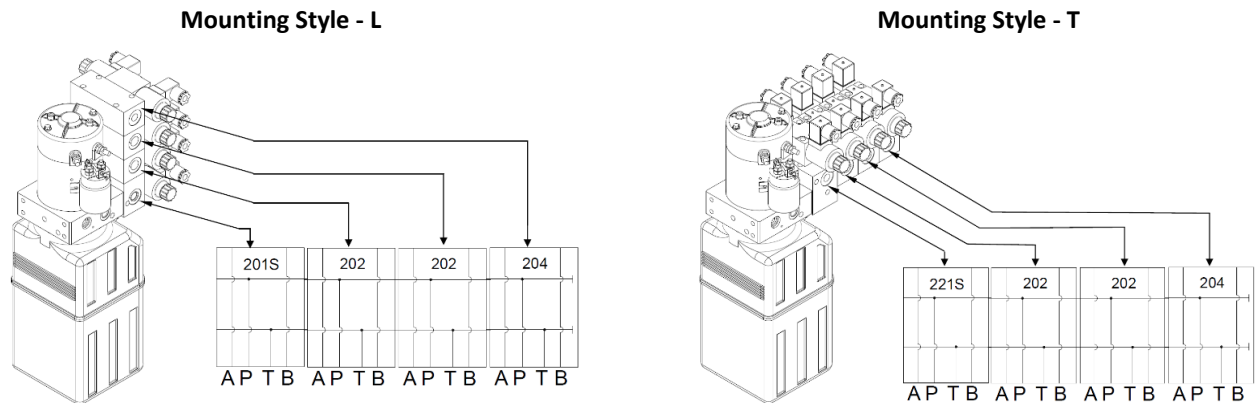
Order Code	Usable Capacity (Litres)	L (mm)	R (mm)	List Each
MT06	06	200	419	\$132.00
MT08	08	280	499	\$143.00
MT10	10	340	559	\$151.00
MT12	12	400	619	\$162.00
MT15	15	510	729	\$171.00
MT19 (Horizontal mounting only)	19	630	849	\$180.00

RP Series - Polyethylene



Order Code	Usable Capacity (Litres)	L (mm)	R (mm)	List Each
RP04	04	200	419	\$57.00
RP06	06	290	509	\$67.00
RP08	08	335	554	\$76.00
RP10	10	440	659	\$86.00
RP12	12	550	769	\$105.00
RP15 (Horizontal mounting only)	15	690	909	\$124.00

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)	\$196.00
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)	\$130.00
203-SAE6	Manifold - PU13 - P & T Tapping (includes O Rings) – 40 mm thick	\$130.00
204-SAE6	Manifold - End (includes O Rings)	\$130.00
205-SAE6	Manifold - End with 9/16" UNO (SAE 6) P & T Ports (includes O Rings)	\$145.00
BKM6x50	Bolt Kit (for assembly of manifolds with 2 x DCV)	\$7.00
BKM6x100	Bolt Kit (for assembly of manifolds with 3 x DCV)	\$11.00
BKM6x150	Bolt Kit (for assembly of manifolds with 4 x DCV)	\$39.00
BKM6x200	Bolt Kit (for assembly of manifolds with 5 x DCV)	\$63.00

Standard Cetop Valves for Power Units

Basic Symbol b A B a b 0 a P T	Transient Condition A B b 0 a P T	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.	\$261.00
		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 (Bolt Kit for valve only, not for valve with modules).
- Deutsch Connector Coils available at additional cost. Add \$40.00 per valve. (Includes Deutsch Plugs).
- Additional information on Cetop Valves, Modules & 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.

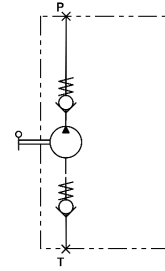
Remote Mount Hand Pump & Vertical Mounting Hardware



PM20SE



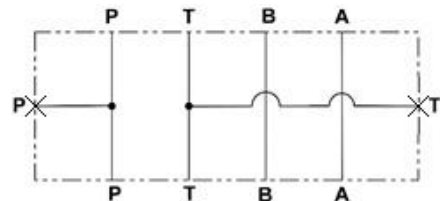
PM50SE



Order Code	Displacement (cm ³)	Max. Pressure (bar)	Optimum Pressure (bar)	Ports (Female)	Release Knob	List Each
PM20SE	20	300	225	P = G 3/8 T = G 1/2	No	\$443.00
PM50SE	50	280	80	P = G 1/2 x 1 (Top) G 3/8 x 2 (Side) T = G 1/2 x 1 (End)	No	\$443.00

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.
- PM 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	\$130.00

Note:

- 203-SAE6 only required for PU13 with 1 valve. Bolt Kit Information on [Page 5.35](#).
- 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-3M-DN10	1	Barbed Fitting - R 3/8 (BSPT) Male x Ø 10 mm ID Suction Hose (G Series Pumps)	\$6.00
STFT-4F-DN10	1	Barbed Fitting - R 1/2 (BSPT) Female x Ø 10 mm ID Suction Hose	\$8.00
STC-13	2	Hose Clamp for Ø 10 mm ID Suction Hose	\$4.00
STT-10	As Required	Suction Hose - Ø 10 mm ID	\$15.00 (per metre)

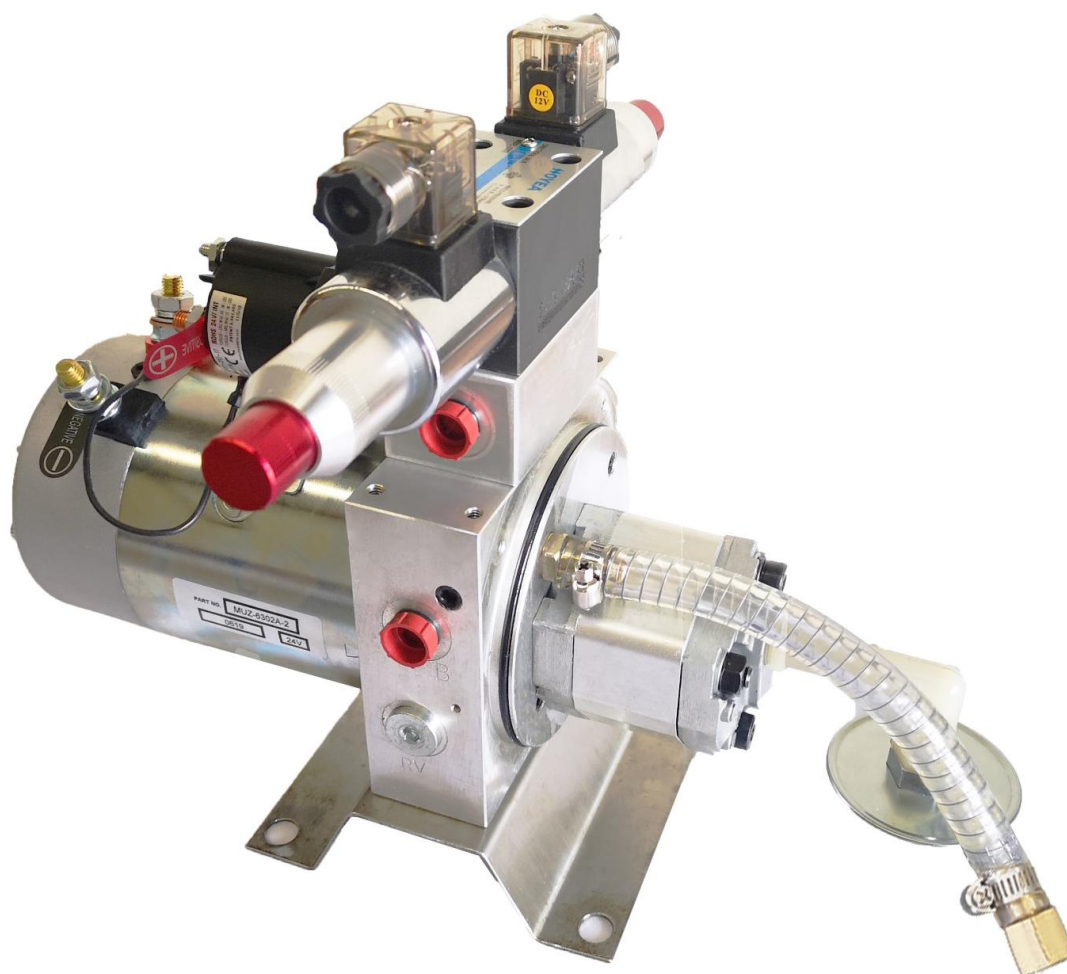


FW-3-***-D**-K40-50



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	\$35.00
FW-3-DC-CT-N9-50	DC Core Tube with N9 Manual Override – M5 Male Thread	\$42.00
FW-3-RC-50	Rubber Cap (no manual override) – use with FW-3-DC-CT-N9-50	\$6.00
FW-RB	Red Ball – use with FW-3-DC-CT-N9-50	\$7.00



Weld Flange



Order Code	Description	List Each
HPU-WF-130	Weld Flange 130 x 130 (Ø 122 hole required)	\$48.00

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

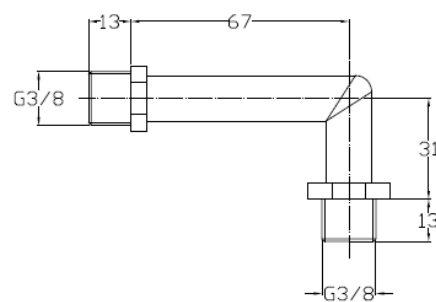
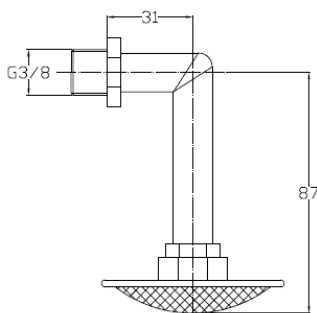
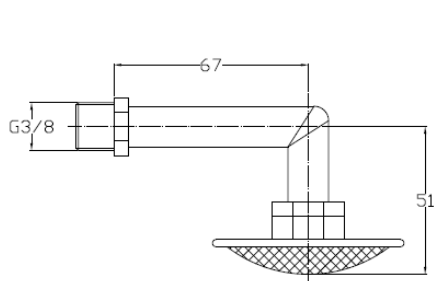
Order Code	Qty	Description	List Each
STPR-2	1	Suction Strainer - G 3/8 Female	\$15.00
AND			
STPR-1	1	Suction Pipe – R 3/8 (BSPT) Male x R 3/8 Male (G Series Pumps)	\$8.00
OR			
STFT-3M-DN10	1 or 2	Barbed Fitting - R 3/8 (BSPT) Male x Ø 10 mm ID Suction Hose	\$6.00
STC-13	2	Hose Clamp for Ø 10 mm ID Suction Hose	\$4.00
STT-10	As Required	Suction Hose - Ø 10 mm ID (Max. Length 400 mm)	(per metre) \$15.00



Complete Suction Pipe Assembly



Complete Suction Hose Assembly

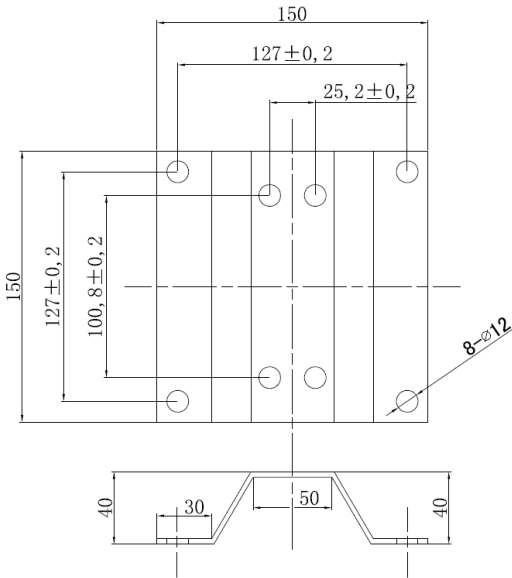


Complete Suction Pipe Assembly

Foot Bracket



Order Code	Description	List Each
HPU-FB-130-M10	Foot Bracket 130 x 130 (Includes SHCS, Flat & Spring Washers to fit to HPU)	\$48.00



Cable Controllers - Single Acting



KCB21-C-3000



KCB21-C-TQ-3000



KCB-BK

Order Code	Description	Cable Length	List Each
KCB21-C-3000	Cable Controller - Single Acting without Cable Plug	3 m	\$104.00
KCB21-C-6000		6 m	\$133.00
KCB21-C-TQ-3000	Cable Controller - Single Acting with half Cable Plug	3 m	\$110.00
KCB21-C-TQ-6000		6 m	\$132.00
KCB-BK	KCB Bracket		\$32.00

Note:

- KCB21-C-TQ-3000 & KCB21-C-TQ-6000 is controller, cable and half a plug only. See photo above.
- A cable harness comprising the second half of the plug and cable to the Power Unit is purchased separately. Choose from below. Start of Harness Order Code must be same as Controller Order Code.
- KCB-BK Bracket sold separately.



Straight Plug



Flange Mount Plug

Order Code	Description	Cable Length	List Each
KCB21-H-ZQ-0350	Cable Harness - Straight Plug	350 mm	\$44.00
KCB21-H-ZQF-1000	Cable Harness - Flange Mount Plug	1000 mm	\$50.00

Note: Start of Harness Order Code must be same as Controller Order Code.

Cable Controllers - Double Acting



KCB22-C-3000



KCB22-C-TQ-3000



KCB62-C-TQ-3000



KCB82-C-TQ-3000

Order Code	Description		Cable Length	List Each
KCB22-C-3000	Cable Controller - Double Acting without Cable Plug	1 x DCV	3 m	\$104.00
KCB22-C-6000		1 x DCV	6 m	\$133.00
KCB22-C-TQ-3000	Cable Controller – Double Acting with half Cable Plug	1 x DCV	3 m	\$110.00
KCB22-C-TQ-6000		1 x DCV	6 m	\$132.00
KCB42-C-TQ-3000		2 x DCV	3 m	\$162.00
KCB62-C-TQ-3000		3 x DCV	3 m	\$226.00
KCB82-C-TQ-3000		4 x DCV	3 m	\$279.00
KCB-BK	KCB Bracket			\$32.00

Note:

- KCB*2-C-TQ-*000 is controller, cable and half a plug only. See photos above.
- A cable harness comprising the second half of the plug and cable to the Power Unit is purchased separately. Choose from below. Start of Harness Order Code must be same as Controller Order Code.
- KCB-BK Bracket sold separately. Not suitable for KCB82-C-TQ-3000.



Straight Plug



Flange Mount Plug

Order Code	Description	Cable Length	List Each
KCB22-H-ZQ-0350	Cable Harness - Straight Plug	350 mm	\$44.00
KCB42-H-ZQ-0350			\$47.00
KCB62-H-ZQ-0350			\$50.00
KCB82-H-ZQ-0350			\$52.00
KCB22-H-ZQF-1000	Cable Harness - Flange Mount Plug	1000 mm	\$50.00
KCB42-H-ZQF-1000			\$53.00
KCB62-H-ZQF-1000			\$58.00
KCB82-H-ZQF-1000			\$61.00

Note: Start of Harness Order Code must be same as Controller Order Code.

WRB Wireless/Cable Control Kits



Order Code	Description	Voltage	Cable Length	List Each
WRB21-C-TQ-3000-12V-2WRM2A	Wireless & Cable Control Kit Single Acting with half Cable Plug	12V DC	3 m	\$242.00
WRB21-C-TQ-3000-24V-2WRM2A		24V DC		
WRB22-C-TQ-3000-12V-2WRM2A	Wireless & Cable Control Kit Double Acting with half Cable Plug 1 x DCV (Double Solenoid)	12V DC		
WRB22-C-TQ-3000-24V-2WRM2A		24V DC		
WRB-BK	WRB Bracket			\$25.00

Note:

- WRB Wireless Control Kit includes 1 x Receiver with cable and half plug only, 2 x Wireless Remotes (Handheld Transmitter) & 1 x WRB-BK Bracket.
- A cable harness comprising the second half of the plug and cable to the Power Unit is purchased separately. Choose from below. Start of Harness Order Code must be same as Controller Order Code.
- 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.
- **Replacement or additional Wireless Remotes are not available.**



Straight Plug



Flange Mount Plug

Order Code	Description	Cable Length	List Each
WRB21-H-ZQ-0350	Cable Harness - Straight Plug	350 mm	\$42.00
WRB22-H-ZQ-0350			
WRB21-H-ZQF-1000	Cable Harness - Flange Mount Plug	1000 mm	\$48.00
WRB22-H-ZQF-1000			

Note: Start of Harness Order Code must be same as Controller Order Code.

Continued Next Page

WRC Wireless Control Kits



Order Code	Description	Voltage	Cable Length	List Each
WRC21-1000-1WRM2B-USB	Wireless Control Kit - Single Acting without Cable Plug 1 x Solenoid	Dual Voltage 12V DC & 24V DC	1 m	\$675.00
WRC22-1000-1WRM2B-USB	Wireless Control Kit - Double Acting without Cable Plug 1 x DCV (Double Solenoid)			\$675.00
WRC42-1000-1WRM4B-USB	Wireless Control Kit - Double Acting without Cable Plug 2 x DCV (Double Solenoid)			\$780.00
WRC62-1000-1WRM6B-USB	Wireless Control Kit - Double Acting without Cable Plug 3 x DCV (Double Solenoid)			\$885.00
WRC82-1000-1WRM8B-USB	Wireless Control Kit - Double Acting without Cable Plug 4 x DCV (Double Solenoid)			\$990.00
WRC102-1000-1WRM10-USB	Wireless Control Kit - Double Acting without Cable Plug 5 x DCV (Double Solenoid)			\$1,095.00
WRC-WRSS	Wireless Remote Symbol Sheet (180 Symbols)			\$30.00

Note:

- WRC Wireless Control Kit includes 1 x Receiver & 1 x Wireless Remote (Handheld Transmitter) which are paired.
- Wireless Remote (Handheld Transmitter) is supplied fitted with **Green ON**, **Red OFF** and numbered buttons for functions. 1 x WRC-WRSS is included and is also available to order separately as a spare part. See [Page 2.17](#).
- Receiver has no control buttons.
- A mounting 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 (Handheld Transmitter).*

Continued Next Page

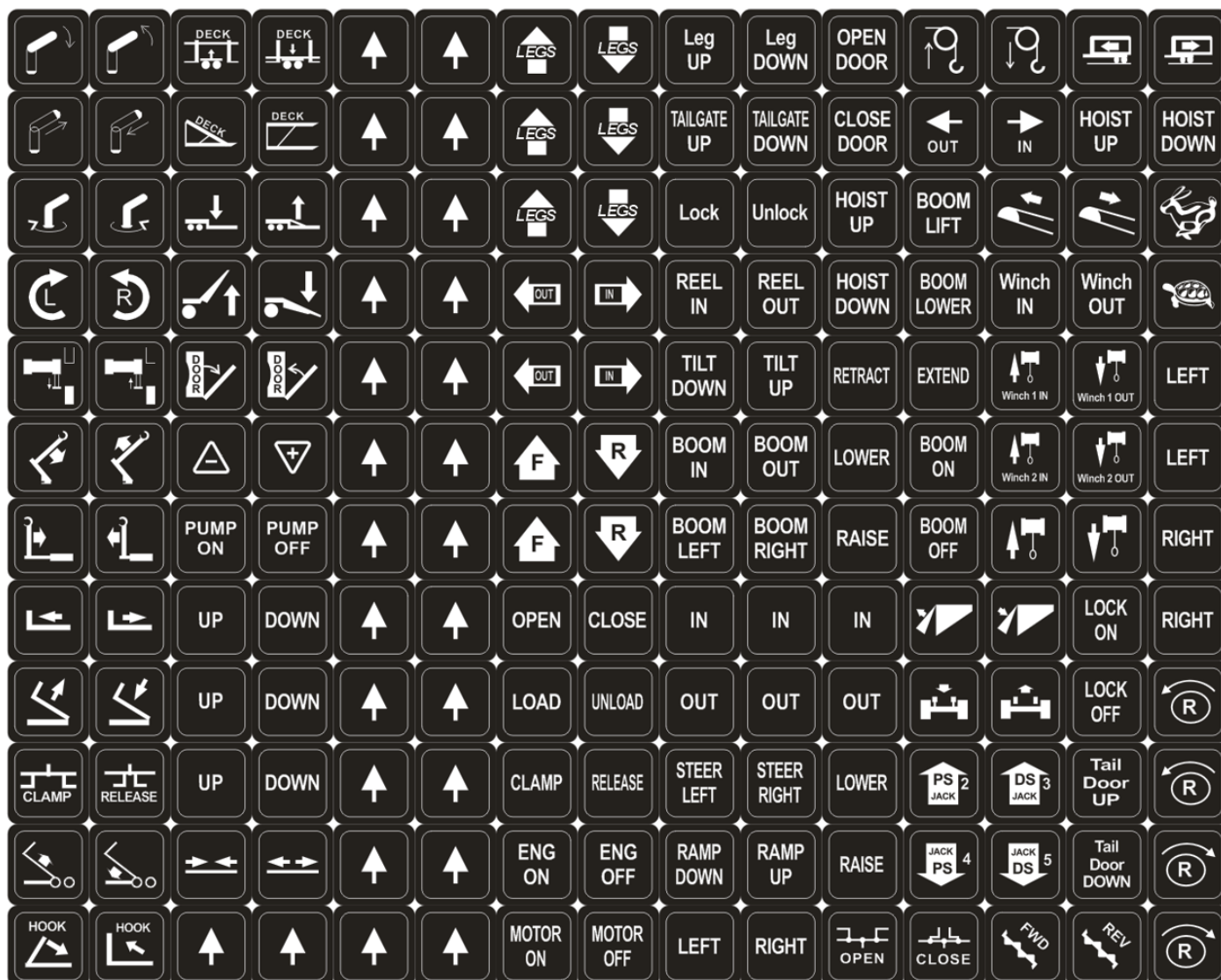
WRC Wireless Remotes (Handheld Transmitter)



Order Code	Description	Suits	List Each
WRC-WRM2B-USB	Wireless Remote 2 Button	WRC21 & WRC22	\$213.00
WRC-WRM4B-USB	Wireless Remote 4 Button	WRC42	\$231.00
WRC-WRM6B-USB	Wireless Remote 6 Button	WRC62	\$252.00
WRC-WRM8B-USB	Wireless Remote 8 Button	WRC82	\$275.00
WRC-WRM10B-USB	Wireless Remote 10 Button	WRC102	\$296.00
WRC-WRSS	Wireless Remote Symbol Sheet (180 Symbols)		\$30.00

Note: Wireless Remote (Handheld Transmitter) is supplied fitted with **Green ON**, **Red OFF** and numbered buttons for functions.
1 x WRC-WRSS is included and is also available to order separately as a spare part.

WRC Wireless Remote Symbol Sheet (WRC-WRSS)



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	\$253.00
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

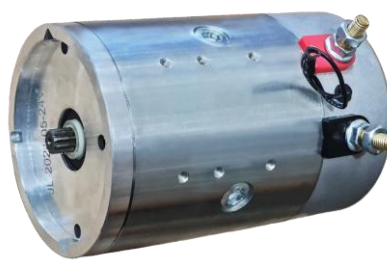


Gear Pump	Order Code	List Each
G110	BKG110-G130-G160	\$6.00
G130		
G160		
G210	BKG210	\$7.00
G270	BKG270	\$8.00
G320	BKG320	\$9.00

Electric Motors



Old Design
(No Longer Available)



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	N/A
MUP-6308A-2 (Old Design)			Yes			N/A
MUP-6308B-2 (New Design)		24V DC	No	2.2 kW		\$564.00
MUZ-6302-2 (Old Design)			Yes			N/A
MUZ-6302A-2 (Old Design)						N/A
MUZ-6302B-2 (New Design)						\$564.00
T0298	Copper Wiring Strap (suits silver metal relay)					\$8.00
T0300	Copper Wiring Strap (suits black plastic relay)					\$10.00

Note:

- If replacing **Old Design** with **New Design** the Drive Coupling must be replaced with P/N CP-18-55, refer to [Page 2.21](#).
- The Positive & Negative cables are reversed on the **New Design**. Refer to photo above.
Therefore the Copper Wiring Strap must be replaced or rebent and then repositioned.

Electric Motor Relays



Order Code	Motor Dia.	Description	List Each
684-1261-212-17	3.15" & 4.5"	Relay 12V DC	\$143.00
684-2461-212-17		Relay 24V DC	
T0298	Copper Wiring Strap (suits silver metal relay) 32 mm x 32 mm		\$8.00
T0300	Copper Wiring Strap (suits black plastic relay) 45 mm x 60 mm		\$10.00

Coils

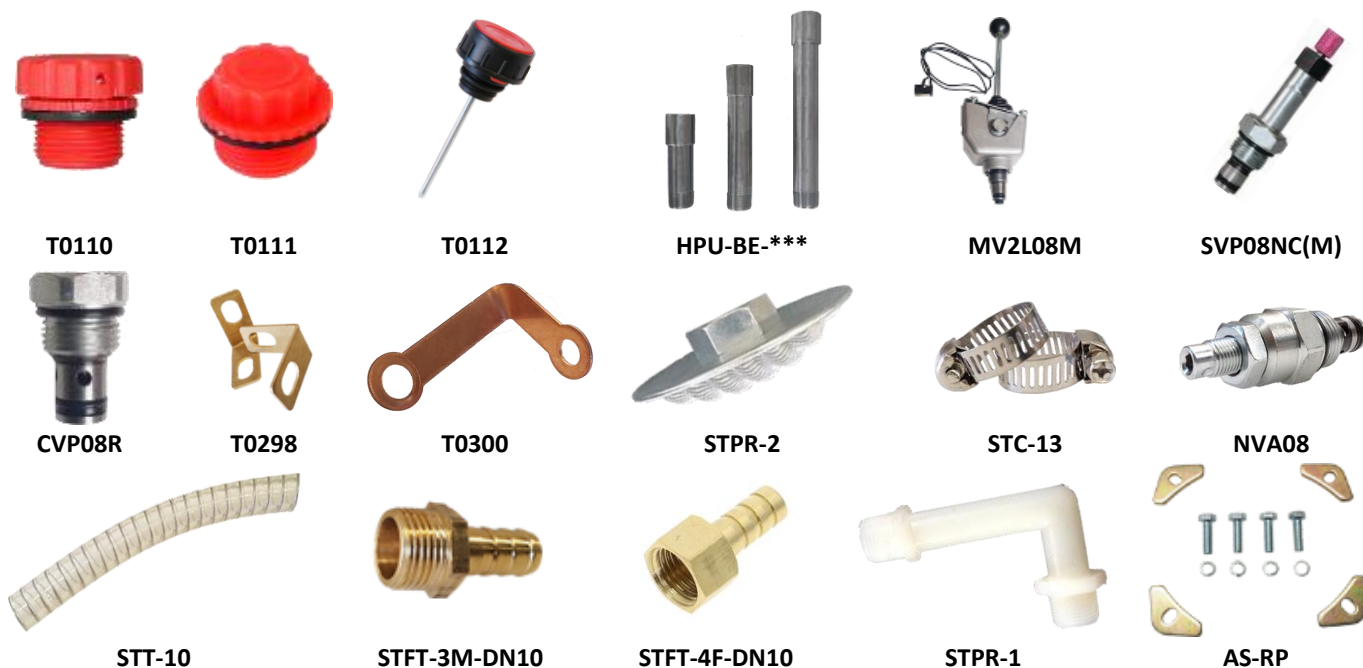


Order Code	Voltage	Connector	List Each
D12W	12V/18W DC	Wire	\$36.00
MC-13-C-12HDC	12V/21W DC	DIN 12V DC with Light Plug	\$40.00
ECDS-12V-13	12V/18W DC	Deutsch 12V DC without Plug	\$53.00
D24W	24V/18W DC	Wire	\$36.00
MC-13-C-24HDC	24V/21W DC	DIN 24V DC with Light Plug	\$40.00
ECDS-24V-13	24V/18W DC	Deutsch 24V DC without Plug	\$53.00
DT06-2S-0462	N/A	Deutsch Plug - Male (Includes 2 pcs Solid Socket)	\$15.00
0462-209-16141x10		Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)	\$50.00

Note:

- Coil must be installed with letters up, so they are closest to the Coil Retaining Nut.
- DIN & Deutsch Plug Wiring Information on [Page 5.10](#).

HPU Accessories & Spare Parts



Order Code	Description			List Each
HPU-BE-100	Filler Breather Extension – 100 mm	SUS304	3/4" NPT	\$20.00
HPU-BE-150	Filler Breather Extension – 150 mm			\$26.00
HPU-BE-200	Filler Breather Extension – 200 mm			\$32.00
T0110	Filler Breather without Dipstick (Standard - RP Reservoirs)			\$12.00
T0111	Reservoir Plug - DC PU			\$8.00
T0112	Filler Breather with Dipstick (Standard - LS & MT Reservoirs)			\$15.00
AS-RP	PU Reservoir Retainer Kit			\$8.00
CP-18-43	DC HPU Drive Coupling Tang / Tang (Old Design Electric Motor)			\$24.00
CP-18-55	DC HPU Drive Coupling Spline / Tang (New Design Electric Motor)			\$30.00
CVP08R	Check Valve Cartridge			\$36.00
MV2L08M	Manual 2W2P Valve with Switch			\$253.00
NVA08	Flow Control Valve			\$61.00
OR-9.0x1.6-N90	O Ring - Circuit 13 Manifold			\$2.00
OR-103.8x3.1-N80	O Ring - LS/MS/MT/RP Reservoir			\$5.00
PLUG-C08-2-A	Cavity Plug - Alloy			\$29.00
PLUG-SAE6-S	9/16" UNO - Steel Port Plug			\$7.00
PLUG-SAE8-S	3/4" UNO - Steel Port Plug			\$8.00
LRV-08-C-25-N (Standard)	Pressure Relief Cartridge (50 – 250 bar) (New Design)			\$75.00
RVD08-H (Standard)	Pressure Relief Valve (103 - 220 bar) (Old Design)			\$36.00
RVD08-L (Optional)	Pressure Relief Valve (34 - 138 bar) (Old Design)			\$36.00
STC-13	Hose Clamp for Ø 10 mm ID Suction Hose			\$4.00
STFT-3M-DN10	Barbed Fitting - R 3/8 (BSPT) Male x Ø 10 mm ID Suction Hose (G Series Pumps)			\$6.00
STFT-4F-DN10	Barbed Fitting - R 1/2 (BSPT) Female x Ø 10 mm ID Suction Hose			\$8.00
STT-10	Suction Hose - Ø 10 mm ID (per metre)			\$15.00
STPR-1	Suction Pipe - R 3/8 (BSPT) Male x R 3/8 (BSPT) Male (Suits MT06, RP04, RP15)			\$8.00
STPR-2	Suction Strainer - G 3/8 Female			\$15.00
SVP08NC (Standard)	2W2P N.C. Cartridge			\$110.00
SVP08NCM (Optional)	2W2P N.C. Cartridge with Manual Override			\$132.00
T0298	Copper Wiring Strap (suits silver metal relay) 32 mm x 32 mm			\$8.00
T0300	Copper Wiring Strap (suits black plastic relay) 45 mm x 60 mm			\$10.00

Hand Pumps

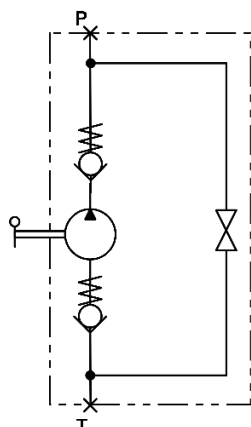
<i>Double Acting Function for Single Acting Cylinder – Tankless (Wall Mount)</i>	-----	3.02
<i>Double Acting Function for Single Acting Cylinder – Tank Mounting</i>	-----	3.03
<i>Double Acting Function for Double Acting Cylinder – Tank Mounting</i>	-----	3.04
<i>Steel Tanks</i>	-----	3.05
<i>Spare Parts</i>	-----	3.06



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



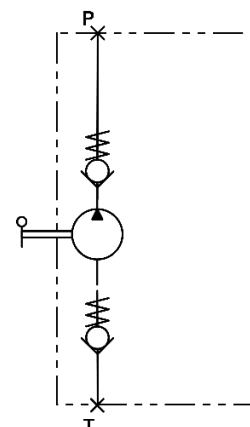
PM20S



PM20S & PM50S



PM50SE



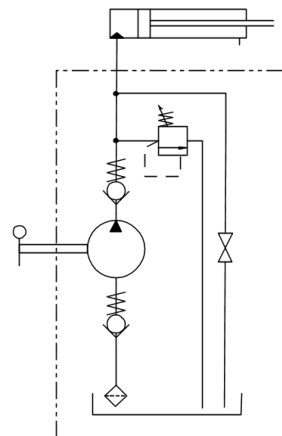
PM20SE & PM50SE

Order Code	Displacement (cm ³)	Max. Pressure (bar)	Optimum Pressure (bar)	Ports (Female)	Release Knob	List Each
PM20S	20	300	225	P = G 3/8 x 1	Yes	\$457.00
				T = G 1/2 x 1		
PM20SE	20	300	225	P = G 3/8 x 2	No	\$443.00
				T = G 1/2 x 1		
PM50S	50	280	80	P = G 1/2 x 1 (Top) G 3/8 x 1 (Side)	Yes	\$457.00
				T = G 1/2 x 1 (End)		
PM50SE	50	280	80	P = G 1/2 x 1 (Top) G 3/8 x 2 (Side)	No	\$443.00
				T = G 1/2 x 1 (End)		

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.
- PM Hand Pumps do not have a Relief Valve.

Double Acting Function for Single Acting Cylinder - Tank Mounting



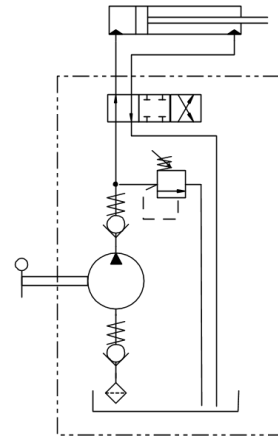
Order Code	Displacement (cm ³)	Max. Pressure (bar)	Optimum Pressure (bar)	Outlet Port	List Each
PM12SVM-Y	12	380	220	G 3/8 (Female)	\$432.00
PM25SVM-Y	25	330	120		\$432.00
PM45SVM-Y	45	280	80		\$480.00

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, Cork Gasket, SHCS & Spring Washers for mounting to our tank or yours.
- Prices **do not** include a tank. They are sold separately. Refer to [Page 3.06](#).
- When using ST 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.
- If fitting to your tank order the accessories below if required.

P/N	Description	Qty	List Each
STPR-3	Suction Strainer – G 3/8 x 44 Ø	1	\$28.00
STFT-3M-DN10	Barbed Fitting - R 3/8 (BSPT) Male x Ø 10 mm ID Suction Hose	1	\$6.00
STFT-3F-DN10	Barbed Fitting - R 3/8 (BSPT) Female x Ø 10 mm ID Suction Hose Use with P/N HPSS	1	\$6.00
HPSS	Hand Pump Suction Seal Use with P/N STFT-3F-DN10	1	\$5.00
STC-13	Hose Clamp for Ø 10 mm ID Suction Hose	2	\$4.00
STT-10	Suction Hose - Ø 10 mm ID	As Required	(per metre) \$15.00

Double Acting Function for Double Acting Cylinder - Tank Mounting



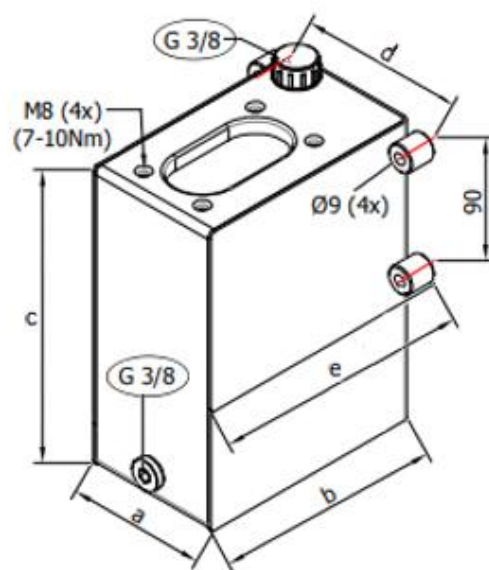
Order Code	Displacement (cm ³)	Max. Pressure (bar)	Optimum Pressure (bar)	Outlet Ports	Gauge Port	List Each
PMI12S-Y	12	380	220	G 1/4 (Female)	G 1/4 (Female)	\$452.00
PMI25S-Y	25	330	120			\$452.00
PMI45S-Y	45	280	80			\$500.00

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, Cork Gasket, SHCS & Spring Washers for mounting to our tank or yours.
- Prices **do not** include a tank. They are sold separately. Refer to [Page 3.06](#).
- When using ST 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.
- If fitting to your tank order the accessories below if required.

P/N	Description	Qty	List Each
STPR-3	Suction Strainer – G 3/8 x 44 Ø	1	\$28.00
STFT-3M-DN10	Barbed Fitting - R 3/8 (BSPT) Male x Ø 10 mm ID Suction Hose	1	\$6.00
STFT-3F-DN10	Barbed Fitting - R 3/8 (BSPT) Female x Ø 10 mm ID Suction Hose Use with P/N HPSS	1	\$6.00
HPSS	Hand Pump Suction Seal Use with P/N STFT-3F-DN10	1	\$5.00
STC-13	Hose Clamp for Ø 10 mm ID Suction Hose	2	\$4.00
STT-10	Suction Hose - Ø 10 mm ID	As Required	(per metre) \$15.00

Steel Tanks



Order Code	Usable Capacity (based on 20 mm air gap)	Dimensions				List Each
		a	b	c	d	
ST01	1 litre	100	170	120	120	\$131.00
ST02	2 litres			180		\$150.00
ST03	3 litres			220		\$161.00
ST05	5 litres	175	175	200	195	\$172.00
ST07	7 litres			290		\$222.00
ST10	10 litres			380		\$270.00
HPSA	Hand Pump Suction Adaptor – Use with ST01 & 12cc pump (No Seal Required)					\$180.00

Note:

- Tanks are 2.5 mm thick steel, welded construction and painted gloss black.
- ST01 Tanks are supplied with a Filler Breather & Suction Filter only.
When using a 12cc pump use P/N HPSA (sold separately) to connect the Suction Filter to the pump.
When using a 25cc or 45cc pump connect the Suction Filter directly to the Hand Pump.
- ST02 to ST10 Tanks are supplied with a Filler Breather, Suction Filter & Suction Hardware.
The Suction tube is cut for a 12cc pump, customer to cut shorter for 25cc & 45cc pumps.

Spare Parts



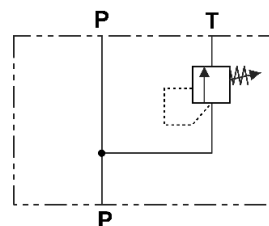
Order Code	Description	List Each
He		
HPH	Hand Pump Handle – Ø 26 mm x 600 mm LOA	\$41.00
T0113	Filler Breather with Dipstick - G 3/8	\$15.00
HPTG	Hand Pump Tank Gasket (Cork)	\$15.00
STPR-3	Suction Strainer - G 3/8 x 44 Ø	\$28.00
STFT-3M-DN10	Barbed Fitting - R 3/8 (BSPT) Male x Ø 10 mm ID Suction Hose	\$6.00
STFT-3F-DN10	Barbed Fitting - R 3/8 (BSPT) Female x Ø 10 mm ID Suction Hose - Use with P/N HPSS	\$6.00
HPSS	Hand Pump Suction Seal - Use with P/N STFT-3F-DN10	\$5.00
STT-10	Suction Hose - Ø 10 mm ID (per metre)	\$15.00
STC-13	Hose Clamp for Ø 10 mm ID Suction Hose	\$4.00
Badestnost		
4093434	Handle PRB / PRBC / PRBD – Ø 27 mm x 550 mm LOA	\$41.00
4093123	Relief Valve PRB**RM / PRBD**RM	\$80.00
4093934	Lowering Valve PRB12 / PRB25 / PRBC20	\$65.00
4123336	Lowering Valve PRB45	\$65.00
7569217	Filler Breather to suit RP* Tank - M22 x 1.5 (Suits Old Order Code without G)	\$15.00
T0113	Filler Breather with Dipstick to suit RP*G Tank - G 3/8 (Suits New Order Code with G)	
4109429	Suction Filter & Tube - PRB(D) (Tube – 300 mm long. Suits RP10, Cut tube to length for other sizes)	\$23.00
4092941	PVC Bellows PRB / PRBC / PRBD	\$24.00
4110111	Seal Kit - PRB12R	\$37.00
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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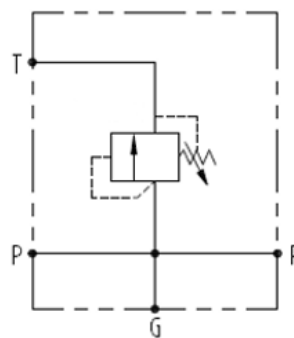
Pressure Relief Valves (Direct Acting Poppet) - Steel Body



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	50 - 210	200	315	\$190.00
HDR-G3/8-210	G 3/8	50				\$200.00
HDR-G1/2-210	G 1/2	80				\$210.00
HDR-G3/4-210	G 3/4	120				\$296.00
HDR-G1-210	G 1	220				\$327.00

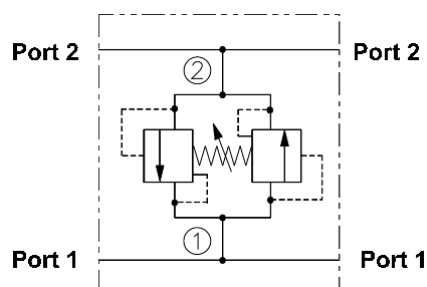
Order Code	Ports Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
HDR-G1/4-315	G 1/4	25	70 - 315	200	315	\$190.00
HDR-G3/8-315	G 3/8	50				\$200.00
HDR-G1/2-315	G 1/2	80				\$210.00
HDR-G3/4-315	G 3/4	120				\$296.00
HDR-G1-315	G 1	220				\$327.00

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-G1	G 1	G 1/4	200	35 - 210	196.5	210	\$346.00

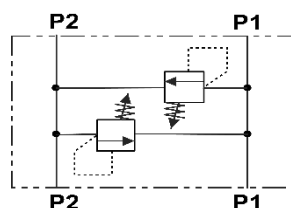
Bi-Directional Pressure Relief Valves (Direct Acting, Differential Area, Poppet) - Alloy Body



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	20 - 168	138	240	\$275.00
LBRV2-10-30/0138			100 - 210			
LB10-2-A-4G4	G 1/2	N/A	N/A	N/A	210	\$155.00

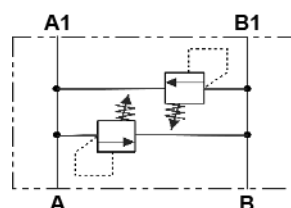
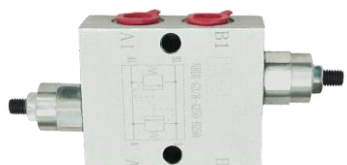
Note: Cartridge & Body are sold separately and not assembled.

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



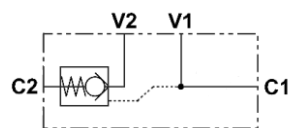
Order Code	Port Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
VAIL-G3/8-210	G 3/8	25	70 - 210	200	315	\$255.00
VAIL-G1/2-210	G 1/2	50				\$297.00
VAIL-G1-210	G 1	120				\$437.00

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	\$255.00
VAIL-G1/2-315	G 1/2	50				\$297.00
VAIL-G1-315	G 1	120				\$437.00



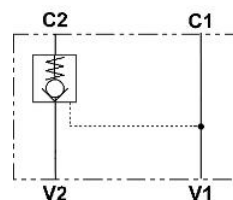
Order Code	Port Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
NHDR-G3/8-A250-B250	G 3/8	45	20 - 250	200	315	\$225.00
NHDR-G1/2-A250-B250	G 1/2	60				\$225.00

Single Pilot Operated Check Valves - Steel Body



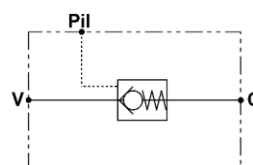
Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Length (mm)	List Each
VRSE-G1/4	G 1/4	20	350	4.5 : 1	3.5	116	\$111.00
VRSE-G3/8	G 3/8	50	350	4.0 : 1		139	\$139.00
VRSE-G1/2	G 1/2	80	300	4.0 : 1		173	\$151.00

Single Pilot Operated Check Valves - Steel Body



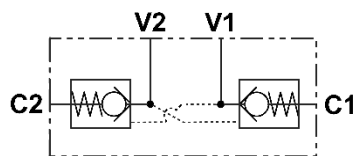
Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
VRSL-G1/4	G 1/4	20	350	7.1 : 1	3.5	\$161.00
VRSL-G3/8	G 3/8	30		7.1 : 1		\$193.00
VRSL-G1/2	G 1/2	50		4.8 : 1		\$225.00
VRSL-G3/4	G 3/4	100		5.4 : 1		\$284.00

Barrel Pilot Operated Check Valves - Steel Body



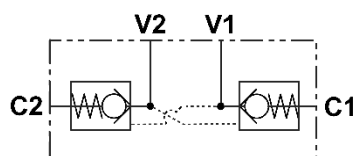
Order Code	Port Size	Pilot Port	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
VRPE-G1/4	G 1/4	G 1/4	20	350	3.6 : 1	3.5	\$136.00
VRPE-G3/8	G 3/8		40	350	4.5 : 1		\$136.00
VRPE-G1/2	G 1/2		60	350	4.5 : 1		\$149.00
VRPE-G3/4	G 3/4		100	300	4.5 : 1		\$308.00
VRPE-G1	G 1		150	300	3.5 : 1		\$412.00

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	115	\$109.00
VRDE-G3/8	G 3/8	50	350	4.0 : 1		139	\$114.00
VRDE-G1/2	G 1/2	80	300	4.0 : 1		173	\$119.00

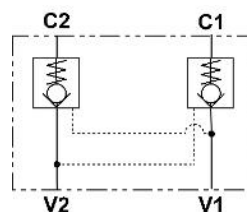
Short Length Double Pilot Operated Check Valve - Steel Body



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Length (mm)	List Each
VRDS-G1/4	G 1/4	20	350	4.0 : 1	3.0	80	\$192.00

Note: Valve is fitted with a Pilot Piston Seal. This is recommended when using the valve with a closed centre spool in the DCV or when you have very small flow which could be unloaded through the piston causing a malfunction. Remove the piston seal if reaction time is too slow.

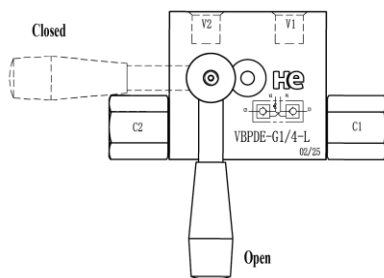
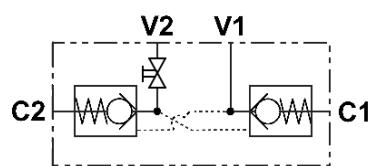
Double Pilot Operated Check Valves - Steel Body



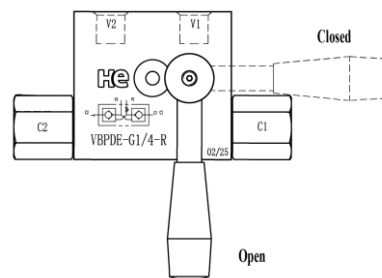
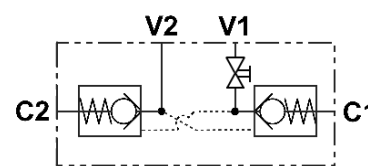
Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
VRDL-G1/4	G 1/4	20	350	7.1 : 1	3.5	\$204.00
VRDL-G3/8	G 3/8	30		7.1 : 1		\$233.00
VRDL-G1/2	G 1/2	50		4.8 : 1		\$262.00
VRDL-G3/4	G 3/4	100		5.4 : 1		\$438.00

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Double Pilot Operated Check Valves with Shut Off Valve - Steel Body



Left Hand build



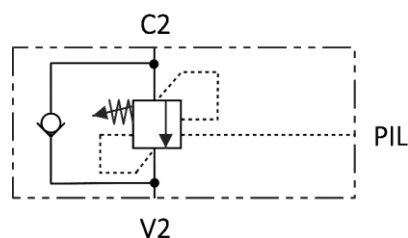
Right Hand build

Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Length (mm)	List Each
VBPDE-G1/4-*	G 1/4	20	350	5.5 : 1	4.0	113	\$363.00
VBPDE-G3/8-*	G 3/8	30		5.5 : 1	4.0	118	\$399.00
VBPDE-G1/2-*	G 1/2	50		5.0 : 1	3.0	142	\$545.00

Note:

- * = insert L for Left Hand build or R for Right Hand build.
- To prevent cylinder intensification on the rod end when the Shut Off Valve is closed and system pressure applied connect as follows:
VBPDE-G*/*-L Port C2 to full bore end.
VBPDE-G*/*-R Port C1 to full bore end.
- VBPDE-G1/2-* is not stocked and available as indent to customer order.

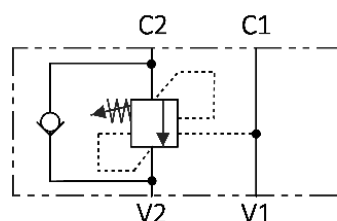
3 Port Single Counterbalance Valves - Steel Body



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
VBCD-G1/4-SE-3VIE	G 1/4	G 1/4	20	80 - 315	350	4.5 : 1	3.5	\$237.00
VBCD-G3/8-SE-3VIE	G 3/8		40					\$237.00
VBCD-G1/2-SE-3VIE	G 1/2		60					\$248.00
VBCD-G3/4-SE-3VIE	G 3/4		100					\$412.00
VBCD-G1-SE-3VIE	G 1		150					\$557.00

Note: Factory Set 300 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure and 1.5 times when valve is set below 140 bar. Therefore maximum load induced pressure is 242 bar.

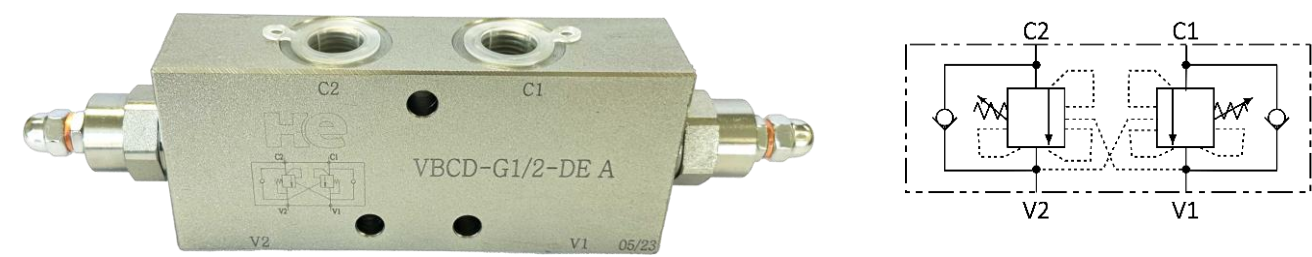
4 Port Single Counterbalance Valves - Steel Body



Order Code	Port Size	Max. Flow (L/min)	Adjustable Pressure (bar)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	List Each
VBCD-G1/4-SE A	G 1/4	20	80 - 315	350	4.5 : 1	3.5	\$237.00
VBCD-G3/8-SE A	G 3/8	40					\$237.00
VBCD-G1/2-SE A	G 1/2	60					\$248.00
VBCD-G3/4-SE A	G 3/4	100					\$412.00
VBCD-G1-SE A	G 1	150					\$557.00

Note: Factory Set 300 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure and 1.5 times when valve is set below 140 bar. Therefore maximum load induced pressure is 242 bar.

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
VBCD-G1/4-DE A	G 1/4	20	80 - 315	350	4.5 : 1	3.5	\$329.00
VBCD-G3/8-DE A	G 3/8	40					\$329.00
VBCD-G1/2-DE A	G 1/2	60					\$340.00
VBCD-G3/4-DE A	G 3/4	100					\$578.00
VBCD-G1-DE A	G 1	150					\$748.00

Note: Factory Set 300 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure and 1.5 times when valve is set below 140 bar. Therefore maximum load induced pressure is 242 bar.

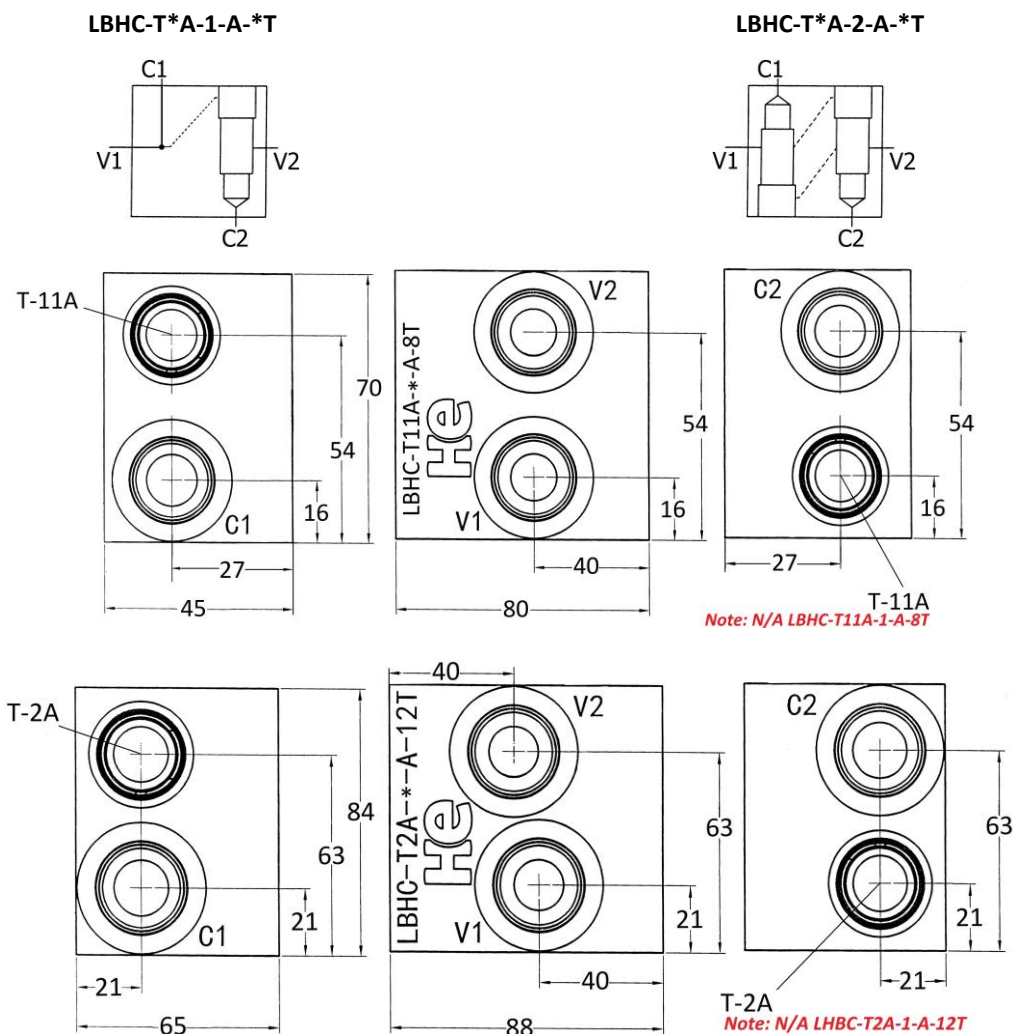
Cylinder Mount Counterbalance & Pilot Operated Check Valves



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	\$134.00
LBHC-T11A-2-A-8T	T-11A x 2				\$160.00
LBHC-T2A-1-A-12T	T-2A x 1	1 1/16" UNO			\$182.00
LBHC-T2A-2-A-12T	T-2A x 2				\$210.00

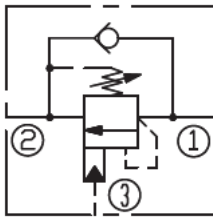
Note:

- LBHC-T*A-1-A-*T (single cavity body), load is held on port C2.
- Cartridge Information on [Page 4.10](#).



Continued Next Page

Counterbalance Valves

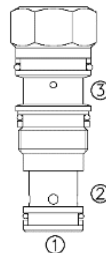
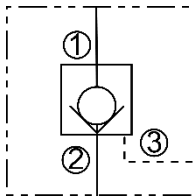


Order Code	Cavity	Max. Flow (L/min)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Adjustable Pressure (bar)	Factory Set (bar)	List Each
LCBCA-LAN	T-11A	60	3 : 1	0.3	70 - 280	210	\$165.00
LCBCA-LHN			3 : 1	1.7	70 - 280	210	\$165.00
LCBCA-LIN			3 : 1	1.7	25 - 105	70	\$165.00
LCBCH-LJN			10 : 1	1.7	140 - 350	210	\$178.00
LCBEA-LHN	T-2A	120	3 : 1	1.7	70 - 280	210	\$246.00

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 and 1.5 times when valve is set below 140 bar.
- Additional information available on [Page 9.20](#).

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	\$123.00
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"	\$31.00
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.

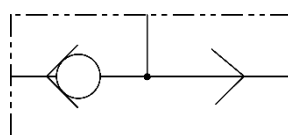
Inline Check Valves (Poppet) - Steel Body



Order Code	Port Size	Cracking Pressure (bar)	Max. Flow (L/min)	Max. Pressure (bar)	List Each
VUR-G1/4-0.5	G 1/4	0.5	20	400	\$32.00
VUR-G3/8-0.5	G 3/8		45	400	\$34.00
VUR-G1/2-0.5	G 1/2		70	350	\$45.00
VUR-G3/4-0.5	G 3/4		110	350	\$57.00
VUR-G1-0.5	G 1		160	350	\$86.00
VUR-G1 1/4-0.5	G 1 1/4		250	300	\$179.00
VUR-G1 1/2-0.5	G 1 1/2		350	250	\$214.00

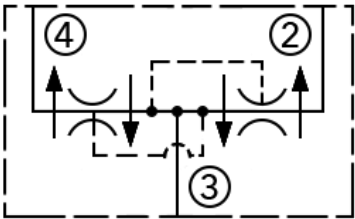
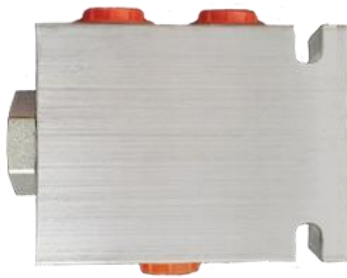
Order Code	Port Size	Cracking Pressure (bar)	Max. Flow (L/min)	Max. Pressure (bar)	List Each
VUR-G1/4-5.0	G 1/4	5.0	20	400	\$32.00
VUR-G3/8-5.0	G 3/8		45	400	\$34.00
VUR-G1/2-5.0	G 1/2		70	350	\$45.00
VUR-G3/4-5.0	G 3/4		110	350	\$57.00
VUR-G1-5.0	G 1		160	350	\$86.00
VUR-G1 1/4-5.0	G 1 1/4		250	300	\$179.00
VUR-G1 1/2-5.0	G 1 1/2		350	250	\$214.00

Shuttle Valves - Steel Body



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	List Each
VUSF-G1/4	G 1/4	35	350	\$69.00
VUSF-G3/8	G 3/8	50		\$91.00
VUSF-G1/2	G 1/2	90		\$103.00
VUSF-G3/4	G 3/4	140		\$148.00

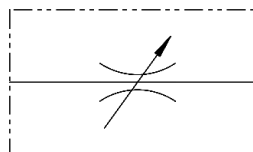
Flow Divider / Combiner - Alloy Body



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	\$235.00
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	\$112.00
LB10-4-A-4G/S	G 1/2				

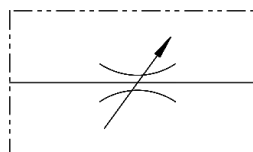
Note: Cartridge & Body are sold separately and not assembled.

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	\$70.00
NV-G1/4	G 1/4	40			\$73.00
NV-G3/8	G 3/8	60			\$77.00
NV-G1/2	G 1/2	85			\$89.00
NV-G3/4	G 3/4	175			\$101.00
NV-G1	G 1	200			\$149.00
NV-G1 1/4	G 1 1/4	300			\$353.00
NV-G1 1/2	G 1 1/2	400			\$742.00

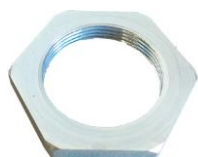
Note: Locking Grub Screw on Knob.



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)	\$66.00
STB-G3/8	G 3/8	30			\$96.00
STB-G1/2	G 1/2	50			\$112.00
STB-G3/4	G 3/4	85			\$132.00
STB-G1	G 1	150	320		\$182.00

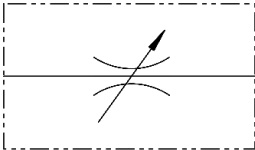
Note: Locking Grub Screw on Knob.

STB Series Panel Mount Nut



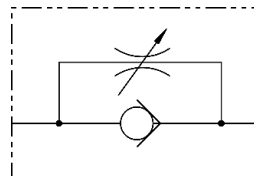
Order Code	Suits Valve	Material	List Each
STN-G1/4	STB-G1/4	Steel – Zinc Plated	\$10.00
STN-G3/8	STB-G3/8		\$11.00
STN-G1/2	STB-G1/2		\$12.00
STN-G3/4	STB-G3/4		\$13.00
STN-G1	STB-G1		\$15.00

Barrel Needle Valves



Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	List Each
VBRF-G1/4	G 1/4	12	320	\$76.00
VBRF-G3/8	G 3/8	30		\$90.00
VBRF-G1/2	G 1/2	50		\$111.00
VBRF-G3/4	G 3/4	85	280	\$144.00
VBRF-G1	G 1	120	250	\$210.00

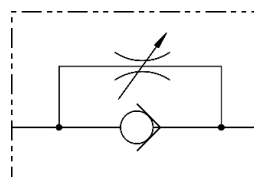
Flow Control Valves



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	\$73.00
FC-G1/4	G 1/4	40			\$75.00
FC-G3/8	G 3/8	60			\$79.00
FC-G1/2	G 1/2	85			\$93.00
FC-G3/4	G 3/4	175			\$116.00
FC-G1	G 1	200			\$167.00
FC-G1 1/4	G 1 1/4	300			\$371.00
FC-G1 1/2	G 1 1/2	400			\$788.00

Note:

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

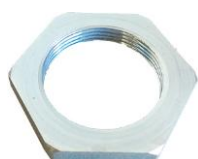


Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Materials	List Each
STU-G1/4	G 1/4	12	400	Body: Steel - Cr3+ (White Zinc Plating) Knob: Aluminium (Clear Anodised)	\$70.00
STU-G3/8	G 3/8	30			\$102.00
STU-G1/2	G 1/2	50			\$122.00
STU-G3/4	G 3/4	85			\$146.00
STU-G1	G 1	150	320		\$196.00

Note:

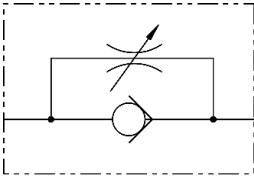
- Locking Grub Screw on Knob.
- Free Flow Cracking Pressure 0.5 bar.

STU Series Panel Mount Nut



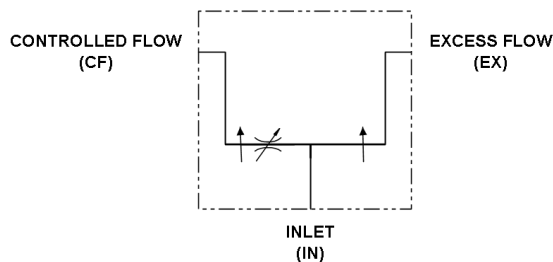
Order Code	Suits Valve	Material	List Each
STN-G1/4	STU-G1/4	Steel – Zinc Plated	\$10.00
STN-G3/8	STU-G3/8		\$11.00
STN-G1/2	STU-G1/2		\$12.00
STN-G3/4	STU-G3/4		\$13.00
STN-G1	STU-G1		\$15.00

Barrel Flow Control Valves



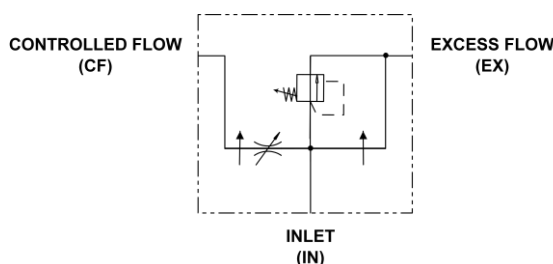
Order Code	Port Size	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	List Each
VURF-G1/4	G 1/4	12	320	0.5	\$95.00
VURF-G3/8	G 3/8	30			\$110.00
VURF-G1/2	G 1/2	50			\$136.00
VURF-G3/4	G 3/4	85	280		\$176.00
VURF-G1	G 1	120	250		\$202.00

Pressure Compensated 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	\$272.00
FC51-G1/2	G 1/2	60		\$272.00
FC51-G3/4	G 3/4	114		\$272.00
FC51-G1	G 1	190		\$1,031.00
FC51-G1 1/4	G 1 1/4	340		\$1,072.00

Pressure Compensated 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	\$295.00
FCR51-G1/2	G 1/2	60				
FCR51-G3/4	G 3/4	114				

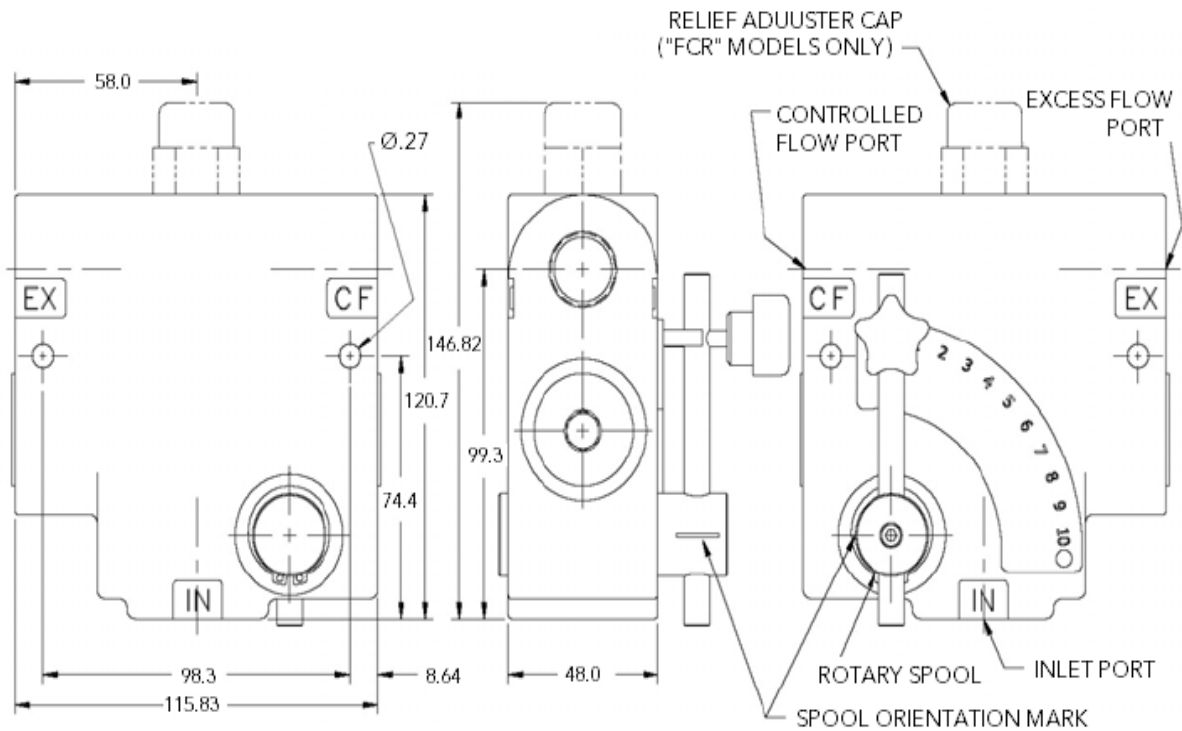
General Information

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 poppet 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.**

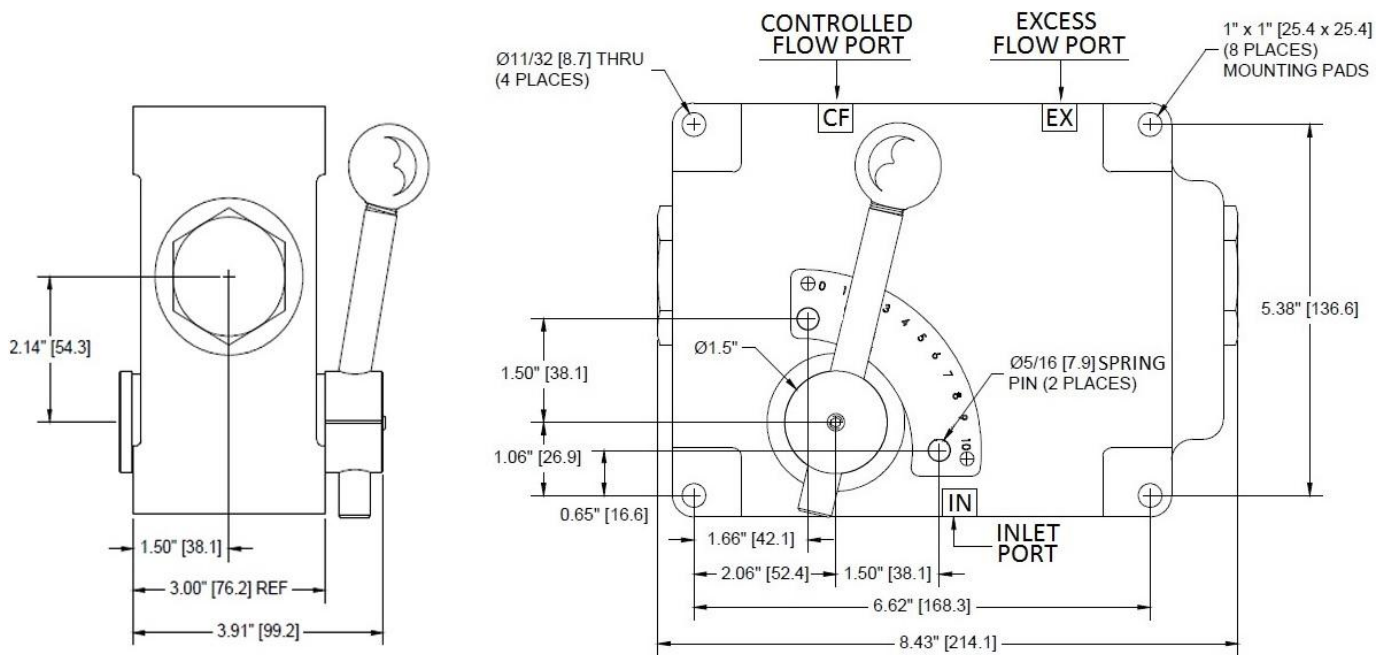
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FC(R)51-G3/8, G1/2 & G3/4



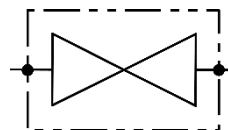
NOTE: ALL DIMENSIONS ARE FOR REFERENCE ONLY.

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-G1/4-06-11231-B-MH	G 1/4	06	6	500	\$45.00
KHB-G3/8-10-11231-B-MH	G 3/8	10	10		\$53.00
KHB-G1/2-13-11231-B-MH	G 1/2	13	13		\$60.00
KHB-G3/4-20-11231-B-MH	G 3/4	20	20	315	\$103.00
KHB-G1-25-11231-B-MH	G 1	25	25		\$135.00
KHB-G1 1/4-32-11231-B-MH	G 1 1/4	32	32		\$234.00
KHB-G1 1/2-40-11231-B-MH	G 1 1/2	40	40		\$297.00

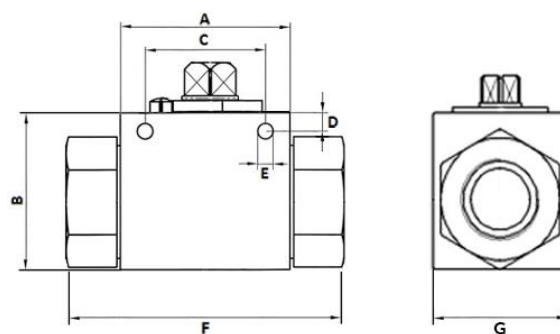
Note: Ball Seal material is POM, Valve Stem & Body Seal material is NBR.

2 Way SUS 316 Ball Valves (No Mounting Holes)

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	\$268.00
KHB-G3/8-10-33231	G 3/8	10	10		\$327.00
KHB-G1/2-13-33231	G 1/2	13	13		\$373.00

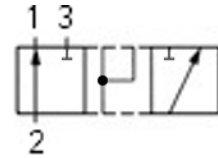
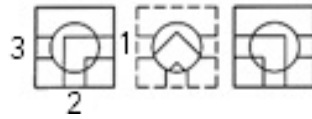
Note: Ball Seal material is POM, Valve Stem & Body Seal material is NBR.

2 Way Ball Valve Dimensions



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

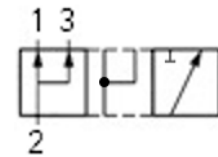
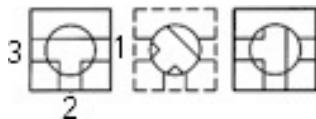
3 Way Steel Ball Valves (L - Type, Negative Overlap)



Order Code	Port Size	Nominal Dia. (DN)	Ball Hole Dia.	Max. Pressure (bar)	List Each
KHB3L-G1/4-06-11231-B-MH	G 1/4	06	6	500	\$65.00
KHB3L-G3/8-10-11231-B-MH	G 3/8	10	10		\$75.00
KHB3L-G1/2-13-11231-B-MH	G 1/2	13	12		\$82.00
KHB3L-G3/4-20-11231-B-MH	G 3/4	20	20	315	\$147.00
KHB3L-G1-25-11231-B-MH	G 1	25	25		\$184.00
KHB3L-G1 1/4-32-11231-B-MH	G 1 1/4	32	30		\$309.00
KHB3L-G1 1/2-40-11231-B-MH	G 1 1/2	40	36		\$409.00

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-G1/4-06-11231-B-MH	G 1/4	06	6	500	\$65.00
KHB3T-G3/8-10-11231-B-MH	G 3/8	10	10		\$75.00
KHB3T-G1/2-13-11231-B-MH	G 1/2	13	12		\$82.00
KHB3T-G3/4-20-11231-B-MH	G 3/4	20	20	315	\$147.00
KHB3T-G1-25-11231-B-MH	G 1	25	25		\$184.00
KHB3T-G1 1/4-32-11231-B-MH	G 1 1/4	32	30		\$309.00
KHB3T-G1 1/2-40-11231-B-MH	G 1 1/2	40	36		\$409.00

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

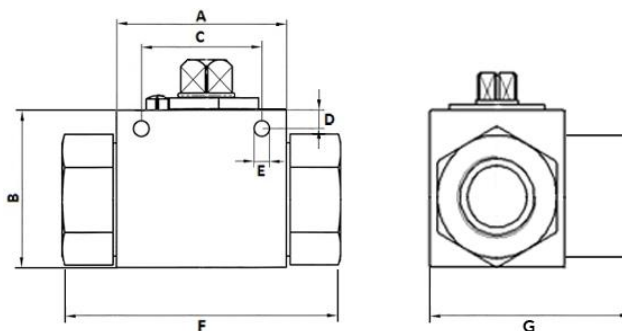
Negative Overlap:

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.

Continued Next Page

3 Way Ball Valve Dimensions



Port Size	A	B	C	D	E	F	G
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-9	G 1/4	SW9	9	M6	\$13.00
	G 3/8				
	G 1/2				
KHBH-12	G 3/4	SW12	12	M6	\$16.00
	G 1				
KHBH-14	G 1 1/4	SW14	14	M8	\$18.00
	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

- | | |
|---|--|
| <p>① Series Code
 KHB = 2 Way
 KHB3L = 3 Way L Configuration
 KHB3T = 3 Way T Configuration</p> <p>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)</p> <p>③ Nominal Diameter</p> <p>④ Valve Body Material
 1 = Steel
 2 = SUS304
 3 = SUS316</p> <p>⑤ Ball & Stem Material
 1 = Steel
 2 = SUS304
 3 = SUS316</p> | <p>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)</p> <p>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)</p> <p>⑧ Handle Type
 1 = Zinc Casting Offset (Crank) (Standard)
 2 = Zinc Casting Straight</p> <p>⑨ Surface Treatment
 Omit for Stainless Steel
 B = Cr3+ (White Zinc Plating) (Standard)
 H = Chemical (Electroless) Nickel
 P = Phosphoric</p> <p>⑩ MH
 Mounting Holes (Standard)</p> |
|---|--|

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	250			\$297.00
SV-3212-***-Z5L-51	G 1/2	80	210			\$340.00
SV-6214-***-Z5L-50	G 1/4	25	250			\$297.00
SV-6238-***-Z5L-50	G 3/8	40	210			\$328.00
SV-6212-***-Z5L-50	G 1/2	60	210			\$382.00
SV-6234-***-Z5L-50	G 3/4 Drain G 1/4	100	210 (Drain Plugged) 315 (Drain Connected)			\$590.00

Note:

- Valves supplied with DIN Light Plug. Wiring Information on [Page 5.10](#).
- Deutsch Connector Coil available for SV-3238, SV-6214 & SV-6238. Change Code Z5L to K40. Add 20.00 to valve price above (includes Deutsch 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-12V-G			\$431.00	
SVV-4103561	SVV-24V-G				

Note:

- Valves supplied with DIN Light Plug. Wiring Information on [Page 5.10](#).
- 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 - ** - **** - * - 5*

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 31.0 mm to 31.5 mm for D36, D48, R110 & R220.

Purchaser to make this modification.

⑤ **Coil Connector:**

Z5L = DIN Light Plug (standard)

K40 = Deutsch (Optional) 12V & 24V - SV-3238, 6214, 6238

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 (Is not stocked and available as indent to customer order)

⑨ **Design Number**



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



Deutsch Coil

SV Series Coils, Accessories & Spare Parts



DIN Coil



Deutsch Coil



Locking Manual Override



Rubber Cap



Red Ball

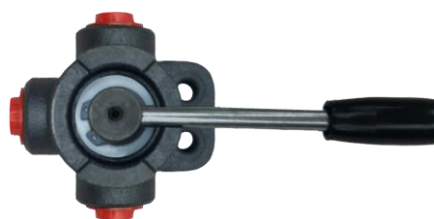


Core Tube with N9

SV-3238 / SV-6214 / SV-6238			
Order Code	Description	Coil Dimensions	List Each
FW-3-D12-Z5L-50	12V/30W DC DIN Coil (DIN Light Plug included)	23 ID x 45 OD x 51 L	\$60.00
FW-3-D24-Z5L-50	24V/30W DC DIN Coil (DIN Light Plug included)		\$60.00
FW-3-D36-Z5L-50	36V/30W DC DIN Coil (DIN Light Plug included)		\$60.00
FW-3-D48-Z5L-50	48V/30W DC DIN Coil (DIN Light Plug included)		\$60.00
FW-3-R110-Z5L-50	110V/30W AC Rectified DIN Coil (DIN Light Plug included)		\$60.00
FW-3-R220-Z5L-50	220V/30W AC Rectified DIN Coil (DIN Light Plug included)		\$60.00
FW-3-D12-K40-50	12V/30W DC Deutsch Coil (Deutsch Plug included)		\$80.00
FW-3-D24-K40-50	24V/30W DC Deutsch Coil (Deutsch Plug included)		\$80.00
FW-3-DC-CT-50	DC Core Tube		\$35.00
FW-3-DC-CT-N9-50	DC Core Tube with N9 Manual Override – M5 Male Thread		\$42.00
FW-3-DC-LMO-50	DC Locking Manual Override		\$35.00
FW-3-DC-NUT-50	DC Coil / Core Tube Nut (M22 x 1.5)		\$6.00
FW-RB	Red Ball		\$7.00
FW-3-RC-50	Rubber Cap (no manual override) – use with FW-3-DC-CT-N9-50		\$6.00
SV-3212			
Order Code	Description	Coil Dimensions	List Each
FW-5-D12-Z5L-51	12V/36W DC DIN Coil (DIN Light Plug included) (SV-3212)	31.5 ID x 63 OD x 75 L	\$118.00
FW-5-D24-Z5L-51	24V/36W DC DIN Coil (DIN Light Plug included) (SV-3212)		\$118.00
SV-6212			
FW-5-D12-Z5L-50	12V/36W DC DIN Coil (DIN Light Plug included)	31.0 ID x 63 OD x 75 L	\$118.00
FW-5-D24-Z5L-50	24V/36W DC DIN Coil (DIN Light Plug included)		\$118.00
FW-5-D36-Z5L-50	36V/36W DC DIN Coil (DIN Light Plug included)		\$118.00
FW-5-D48-Z5L-50	48V/36W DC DIN Coil (DIN Light Plug included)		\$118.00
FW-5-R110-Z5L-50	110V/36W AC Rectified DIN Coil (DIN Light Plug included)		\$118.00
FW-5-R220-Z5L-50	220V/36W AC Rectified DIN Coil (DIN Light Plug included)		\$118.00
FW-5-DC-CT-50	DC Core Tube		\$56.00
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
SV-6234 / SVV			
Order Code	Description	Coil Dimensions	List Each
03170569	12V/60W DC DIN Coil (DIN Light Plug included)	31.0 ID x 63 OD x 75 L	\$118.00
03170568	24V/60W DC DIN Coil (DIN Light Plug included)		\$118.00
DIN & Deutsch Plugs			
Order Code	Voltage	Description	List Each
C01010001-N	DC	DIN Light Plug - DC	\$18.00
C01010004-N	AC	DIN Light Plug - AC	\$18.00
DT06-2S-0462	DC	Deutsch Plug - Male (Includes 2 pcs Solid Socket)	\$15.00
0462-209-16141x10	N/A	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)	\$50.00

Note: DIN & Deutsch Plug Wiring Information on [Page 5.10](#).

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		\$95.00
RV-3-G1/2-A	G 1/2	90			\$121.00
RV-3-G3/4-A	G 3/4	120			\$158.00
RV-3-G1-A	G 1	200	250		\$210.00

Note: Closed Centre Crossover (Code B) is not stocked and 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		\$196.00
RV-6-G1/2-A	G 1/2	90			\$248.00
RV-6-G3/4-A	G 3/4	120			\$323.00
RV-6-G1-A	G 1	200	250		\$428.00

Note: Closed Centre Crossover (Code B) is not stocked and available as indent to customer order.



Order Code	Port Size		List Each
RV-6-G3/8-ASSY KIT		G 3/8	\$6.00
RV-6-G1/2- ASSY KIT		G 1/2	\$6.00
RV-6-G3/4- ASSY KIT		G 3/4	\$7.00
RV-6-G1- ASSY KIT		G 1	\$8.00
RV-G3/8-G1/2-H	Handle & Screw	G 3/8 & G 1/2	\$15.00
RV-G3/4-G1-H	Handle & Screw	G 3/4 & G 1	\$17.00

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

Continued Next Page



Max. Pressure: 210 bar					
Order Code	Description	Port Size	Max. Flow (L/min)	Symbol	List Each
SV80-4101623	SV80-A-G12-K	G 1/2	75		\$235.00
SV120-4107017	SV120-A-G34-K	G 3/4	113		\$352.00
4106858	Clevis SV80/SV120 (Replaces Knob)				\$49.00



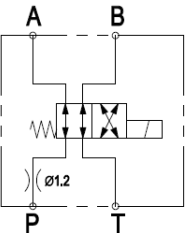
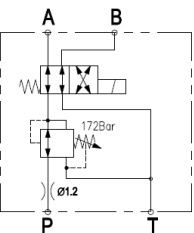
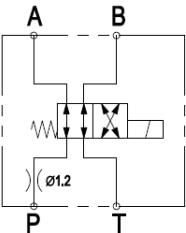
Max. Pressure: 315 bar						
Order Code	Description	Port Size	Max. Flow (L/min)	Basic Symbol	Transient Condition	List Each
DV60-4101034	DV60(R)/A11KZ1-G38	G 3/8	60			\$352.00
DV90-4113644	DV90/A11KZ1-G	G 1/2	90			\$456.00

Note:

- Closed Centre Crossover (Code B) is not stocked and available as indent to customer order.
- DV60 Inlet Ports can be changed to Left Inlet by reversing Spool & Controls.

Quick Hitch Valves - Steel Body



QHV-207-207-*H			QHV-207-207-*ER-LMO			QHV-350-350-*H-LMO		
								
Hirschman (DIN Light) Plug Connector								
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	\$339.00	
QHV-207-207-*H-LMO						Yes	\$377.00	
QHV-350-207-*H			350	207	172	No	\$713.00	
QHV-350-207-*H-LMO						Yes	\$751.00	
QHV-350-350-*H			350	350	N/A	No	\$529.00	
QHV-350-350-*H-LMO						Yes	\$585.00	
Deutsch Plug Connector								
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-*ER	G 1/4	11	207	207	N/A	No	\$367.00	
QHV-207-207-*ER-LMO						Yes	\$405.00	
QHV-350-207-*ER			350	207	172	No	\$741.00	
QHV-350-207-*ER-LMO						Yes	\$779.00	
QHV-350-350-*ER			350	350	N/A	No	\$541.00	
QHV-350-350-*ER-LMO						Yes	\$597.00	

Note:

- * = Coil Voltage
1 = 12V DC
2 = 24V DC
- Valve supplied with DIN Light Plug or Deutsch Plug. Wiring Information on [Page 5.10](#).
- LMO = Locking Manual Override.
- All components are supplied loose for customer assembly.
- Lubricate cartridge valve seals with oil before assembly.
- Coil must be installed with letters up, so they are closest to the Coil Retaining Nut.
- QHV-350-350-*# comes standard with Non-Locking Manual Override.
For QHV-350-350-*#-LMO replace the standard Coil Retaining Nut with the special Coil Retaining Nut.
The O Ring supplied with the valve is installed between the Coil & Coil Retaining Nut.

Continued Next Page

Quick Hitch Valves - LMO Operation

QHV-207-207-##-LMO & QHV-350-207-##-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-## (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-##-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.

Quick Hitch Valves - Spare Parts



QHV-207-207		
Order Code	Description	List Each
MSV2-08-4CO	4/2 Cartridge	\$141.00
MSV2-08-4CO-M	4/2 Cartridge with LMO	\$179.00
MC-13-C-12HDC	Coil DIN 12V/21W DC with Light Plug	\$40.00
MC-13-C-24HDC	Coil DIN 24V/21W DC with Light Plug	\$40.00
ECDS-12V-13	Coil Deutsch 12V/18W DC without Plug	\$53.00
ECDS-24V-13	Coil Deutsch 24V/18W DC without Plug	\$53.00
DT06-2S-0462	Deutsch Plug - Male (Includes 2 pcs Solid Socket)	\$15.00
0462-209-16141x10	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)	\$50.00
QHV-350-207		
Order Code	Description	List Each
MSV2-08-4CO	4/2 Cartridge	\$141.00
MSV2-08-4CO-M	4/2 Cartridge with LMO	\$179.00
MC-13-C-12HDC	Coil DIN 12V/21W DC with Light Plug	\$40.00
MC-13-C-24HDC	Coil DIN 24V/21W DC with Light Plug	\$40.00
ECDS-12V-13	Coil Deutsch 12V/18W DC without Plug	\$53.00
ECDS-24V-13	Coil Deutsch 24V/18W DC without Plug	\$53.00
DT06-2S-0462	Deutsch Plug - Male (Includes 2 pcs Solid Socket)	\$15.00
0462-209-16141x10	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)	\$50.00
MPBBB-LAN	Pressure Reducing Cartridge	\$180.00
QHV-350-350		
Order Code	Description	List Each
LSV2-M20-4RCO-M	4/2 Cartridge with Override	\$240.00
L2102NOPM-105	Locking Manual Override	\$56.00
LC3-10-C-1H	Coil DIN 12V/26W DC without Light Plug	\$57.00
LC3-10-C-2H	Coil DIN 24V/26W DC without Light Plug	\$57.00
C01010001-N	DIN Light Plug - DC	\$16.00
SC-10-C-1ER	Coil Deutsch 12V/22W DC without Plug	\$70.00
SC-10-C-2ER	Coil Deutsch 24V/22W DC without Plug	\$70.00
DT06-2S-0462	Deutsch Plug - Male (Includes 2 pcs Solid Socket)	\$15.00
0462-209-16141x10	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)	\$50.00

Cetop Products

Directional Valves

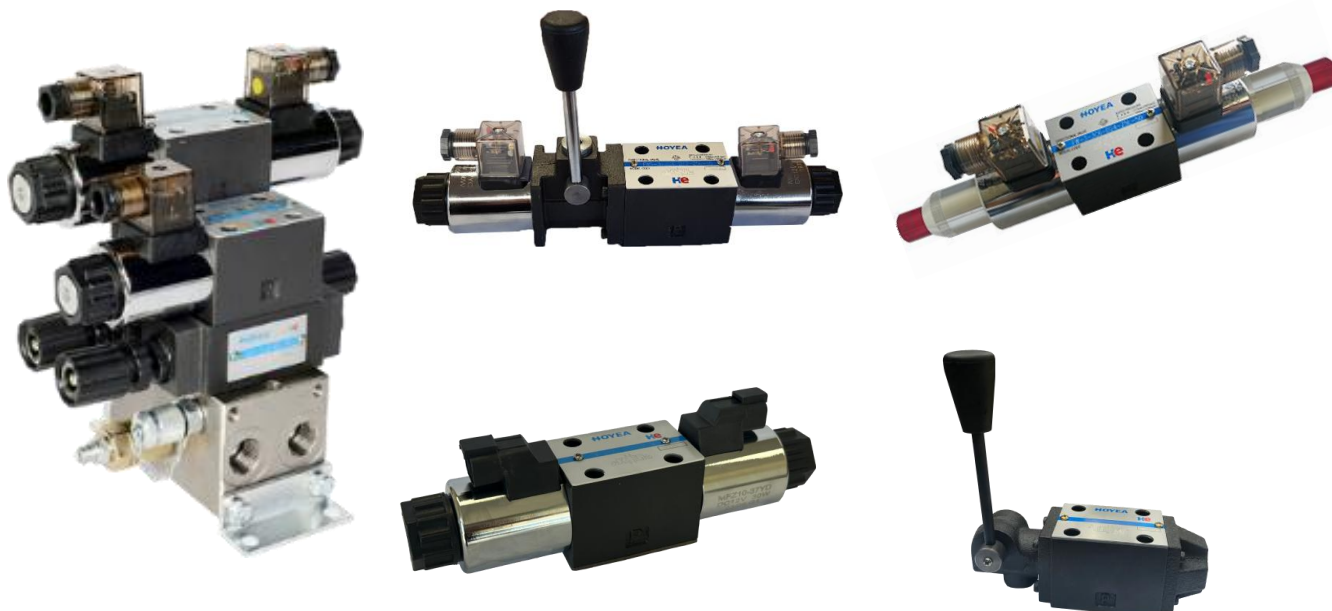
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<i>Order Code</i>	5.02
<i>Spool Description</i>	5.02
<i>FW Solenoid Stock Valves</i>	5.03
<i>FWS Solenoid / Lever Stock Valves</i>	5.04
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<i>Coils, Accessories & Spare Parts</i>	5.09
<i>DIN & Deutsch Plugs</i>	5.10

Modules

<i>Mounting Information</i>	5.11
<i>Check Valves</i>	5.12
<i>Pilot Operated Check Valves</i>	5.13
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<i>Needle & Check Valve</i>	5.14
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<i>Counterbalance Valves</i>	5.21

Subplates, Manifolds & Bolt Kits

<i>Cetop 3 (NG6) Subplates</i>	5.22
<i>Cetop 3 (NG6) Manifolds</i>	5.26
<i>Cetop 5 (NG10) Subplates</i>	5.29
<i>Cetop 5 (NG10) Manifolds</i>	5.32
<i>Bolt Kits – M5</i>	5.35
<i>Bolt Kits – M6</i>	5.36



Directional Valves

Specification

Valve Size		Cetop 3		Cetop 5	
Working Pressure (bar)	Ports P, A, B	FW & FWS - 350 FS - 315		315	
	Port T	100		100	
Max Flow <i>(depends on spool)</i>	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**

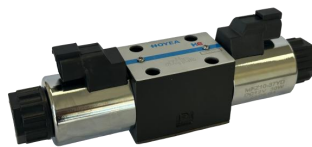
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

- | | |
|---|---|
| <p>① Control Type
FW = Solenoid
FS = Lever
FWS = Solenoid / Lever</p> <p>② Valve Size:
3 = Cetop 3 (NG6)
5 = Cetop 5 (NG10)</p> <p>③ Spool Type & Spring Arrangement</p> <p>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)</p> | <p>⑤ Coil Connector:
Z5L = DIN Light Plug (standard)
Z6 = Wire Box (Is not stocked and available as indent to customer order)
K40 = Deutsch Connector (D12 & D24 Only)
<i>(Coils Stocked – Valves available via conversion – FW-3 only)</i></p> <p>⑥ Manual Override Option:
Omit = Plain override(s) on solenoid end(s) only
<i>(No override on non-solenoid end of single solenoid valves)</i>
LMO = Locking Manual Override
N9 = Extended Push Pin with M5 male thread</p> <p>⑦ N9 Options:
Omit = M5 male thread only
RB = Red Ball
RC = Rubber Cap (Cetop 3 only)</p> <p>⑧ Seal Material:
Omit = NBR (Standard)
V = FPM (Is not stocked and available as indent to customer order)</p> <p>⑨ Design Number</p> |
|---|---|

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-*-D**-K40-50**

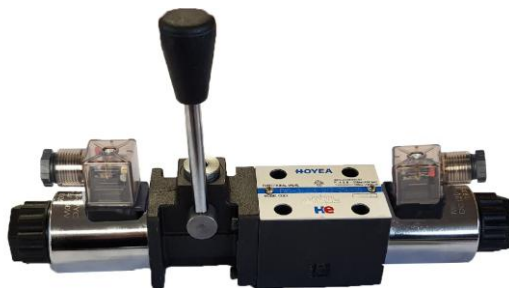
FW-3-*-***-Z5L-LMO-50**

Order Code	Basic Symbol A B b a P T	Transient Condition A B b a P T	List Each
FW-3-2B2-***-Z5L-50			\$202.00
FW-5-2B2-***-Z5L-50			\$309.00
FW-3-2B3-***-Z5L-50			\$202.00
FW-5-2B3-***-Z5L-50			\$309.00
Order Code	Basic Symbol A B b 0 P T	Transient Condition A B b 0 P T	List Each
FW-3-2B3B-***-Z5L-50			\$202.00
FW-5-2B3B-***-Z5L-50			\$309.00
FW-3-2B4B-***-Z5L-50			\$202.00
FW-5-2B4B-***-Z5L-50			\$309.00
FW-3-2B6B-***-Z5L-50			\$176.00
FW-5-2B6B-***-Z5L-50			\$202.00
Order Code	Basic Symbol A B a b a P T	Transient Condition A B b a P T	List Each
FW-3-2D2-***-Z5L-50			\$261.00
FW-5-2D2-***-Z5L-50			\$412.00
FW-3-2D3-***-Z5L-50			\$261.00
FW-5-2D3-***-Z5L-50			\$412.00
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			\$261.00
FW-5-3C2-***-Z5L-50			\$412.00
FW-3-3C3-***-Z5L-50			\$261.00
FW-5-3C3-***-Z5L-50			\$412.00
FW-3-3C4-***-Z5L-50			\$261.00
FW-5-3C4-***-Z5L-50			\$412.00
FW-3-3C6-***-Z5L-50			\$261.00
FW-5-3C6-***-Z5L-50			\$412.00
FW-3-3C2-***-Z5L-N9-RBRC-50			\$295.00

Note:

- Valves supplied with DIN Light Plug(s) (Code Z5L) & Bolt Kit (Bolt Kit for valve only, not for valve with modules). See [Page 5.35](#) (Cetop 3) & [Page 5.36](#) (Cetop 5).
- Deutsch Connector Coil (Code K40) add \$20.00 per coil. Price includes Deutsch Plug. Note: FW-3 valves only.

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			\$342.00
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			\$342.00
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			\$395.00
FWS-3-3C3- *** -Z5L-50			
FWS-3-3C4- *** -Z5L-50			
FWS-3-3C6- *** -Z5L-50			

Note:

- Valves supplied with DIN Light Plug(s) (Code Z5L) & Bolt Kit (Bolt Kit for valve only, not for valve with modules). See [Page 5.35](#).
- Deutsch Connector Coil (Code K40) add \$20.00 per coil. Price includes Deutsch Plug.
- FWS-5-***-***-Z5L-50 is not stocked and 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

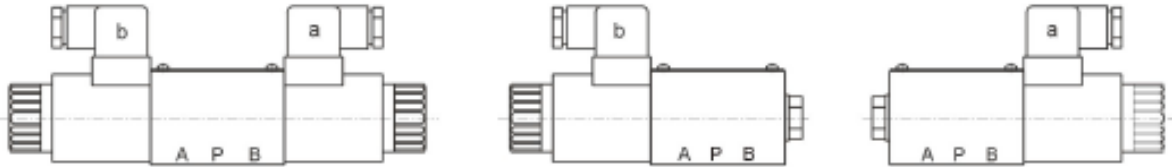
	2D2
	2D3
	2D8

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



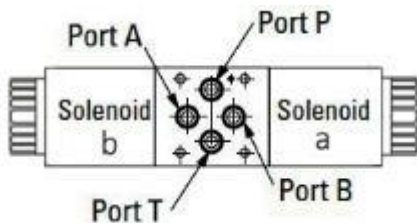
Hoyea **Spool Types & Spring Arrangements** relate to solenoid identity “a” and/or “b” according to NFPA/ANSI (U.S.) standards. Energising solenoid “a” gives flow P to A, energising solenoid “b” gives flow P to B except for the spools below, see **Note**. European Standard is reversed, energising solenoid “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.

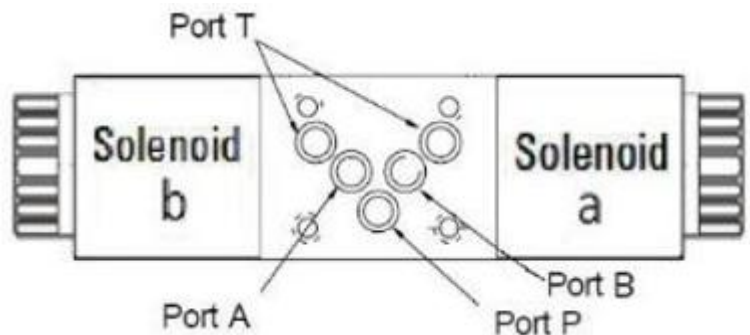
Energising solenoid “a” gives flow P to B, energising solenoid “b” gives flow P to A.

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

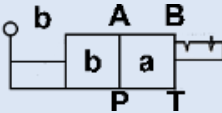
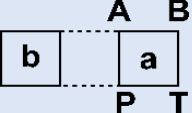
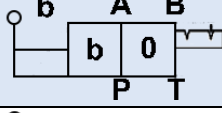
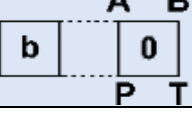
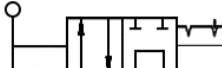
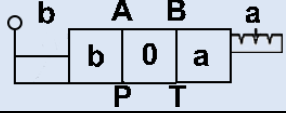
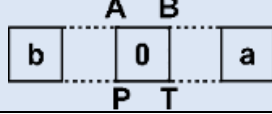
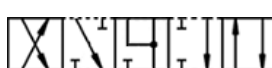
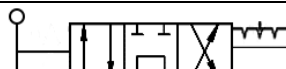
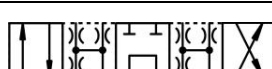


Order Code	Basic Symbol 	Transient Condition 	List Each
FS-3-2B2-50			\$250.00
FS-3-2B3-50			
Order Code	Basic Symbol 	Transient Condition 	List Each
FS-3-2B2B-50			\$250.00
FS-3-2B3B-50			
FS-3-2B4B-50			
FS-3-2B6B-50			
Order Code	Basic Symbol 	Transient Condition 	List Each
FS-3-3C2-50			\$250.00
FS-3-3C3-50			
FS-3-3C4-50			
FS-3-3C6-50			

Note:

- Valves supplied with Bolt Kit (Bolt Kit for valve only, not for valve with modules). See [Page 5.35](#).
- FS-5-***-50 is not stocked and available as indent to customer order.

Continued Next Page

Order Code	Basic Symbol 	Transient Condition 	List Each
FS-3-2B2-OF-50			\$261.00
FS-3-2B3-OF-50			
Order Code	Basic Symbol 	Transient Condition 	List Each
FS-3-2B2B-OF-50			\$261.00
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			\$261.00
FS-3-3C3-OF-50			
FS-3-3C4-OF-50			
FS-3-3C6-OF-50			

Note:

- Valves supplied with Bolt Kit (Bolt Kit for valve only, not for valve with modules). See [Page 5.35](#).
- FS-5-***-OF-50 is not stocked and available as indent to customer order.

Coils, Accessories & Spare Parts


DIN Coil

Deutsch Coil

**Locking Manual
Override**

**FS & FWS
Handle**

Rubber Cap

Red Ball

Core Tube with N9

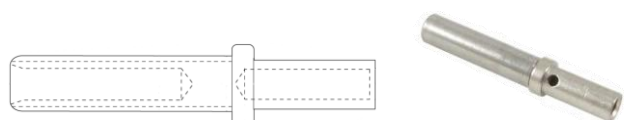
Cetop 3 (NG6)			
Order Code	Description	Coil Dimensions	List Each
FW-3-D12-Z5L-50	12V/30W DC DIN Coil (DIN Light Plug included)	23 ID x 45 OD x 51 L	\$60.00
FW-3-D24-Z5L-50	24V/30W DC DIN Coil (DIN Light Plug included)		\$60.00
FW-3-D36-Z5L-50	36V/30W DC DIN Coil (DIN Light Plug included)		\$60.00
FW-3-D48-Z5L-50	48V/30W DC DIN Coil (DIN Light Plug included)		\$60.00
FW-3-R110-Z5L-50	110V/30W AC Rectified DIN Coil (DIN Light Plug included)		\$60.00
FW-3-R220-Z5L-50	220V /30W AC Rectified DIN Coil (DIN Light Plug included)		\$60.00
FW-3-D12-K40-50	12V/30W DC Deutsch Coil (Deutsch Plug included)		\$80.00
FW-3-D24-K40-50	24V/30W DC Deutsch Coil (Deutsch Plug included)		\$80.00
FW-3-DC-CT-50	DC Core Tube		\$35.00
FW-3-DC-CT-N9-50	DC Core Tube with N9 Manual Override – M5 Male Thread		\$42.00
FW-3-DC-LMO-50	DC Locking Manual Override		\$35.00
FW-3-DC-NUT-50	DC Coil / Core Tube Nut (M22 x 1.5)		\$6.00
FW-3-EP-50	End Plug		\$15.00
FW-RB	Red Ball		\$7.00
FW-3-RC-50	Rubber Cap (no manual override) - use with FW-3-DC-CT-N9-50		\$6.00
FS-3-HM	Handle & Screw (Ø 6.0 mm machined down to 5.0 mm at valve end x 120 mm LOA)		\$19.00
FWS-3-HM	Handle (M6 - 1.0 x 114 mm LOA)		\$19.00

Cetop 5 (NG 10)			
Order Code	Description	Coil Dimensions	List Each
FW-5-D12-Z5L-50	12V/36W DC DIN Coil (DIN Light Plug included)	31.0 ID x 63 OD x 75 L	\$118.00
FW-5-D24-Z5L-50	24V/36W DC DIN Coil (DIN Light Plug included)		\$118.00
FW-5-D36-Z5L-50	36V/36W DC DIN Coil (DIN Light Plug included)		\$118.00
FW-5-D48-Z5L-50	48V/36W DC DIN Coil (DIN Light Plug included)		\$118.00
FW-5-R110-Z5L-50	110V/36W AC Rectified DIN Coil (DIN Light Plug included)		\$118.00
FW-5-R220-Z5L-50	220V/36W AC Rectified DIN Coil (DIN Light Plug included)		\$118.00
FW-5-DC-CT-50	DC Core Tube (M30 x 1.5)		\$56.00
FW-5-DC-CT-N9-50	DC Core Tube with N9 Manual Override - M5 Male Thread		\$84.00
FW-5-DC-LMO-50	DC Locking Manual Override (M30 x 1.5)	31.5 ID x 63 OD x 75 L	\$61.00
FW-5-DC-NUT-50	DC Coil / Core Tube Nut (M30 x 1.5)		\$8.00
FW-RB	Red Ball - use with FW-5-DC-CT-N9-50		\$7.00
FW-5-D12-Z5L-51	12V/36W DC DIN Coil (DIN Light Plug included)		\$118.00
FW-5-D24-Z5L-51	24V/36W DC DIN Coil (DIN Light Plug included)		\$118.00
FW-5-DC-CT-51	DC Core Tube (M16 x 1.5)		\$56.00
FW-5-DC-NUT-51	DC Coil / Core Tube Nut (M16 x 1.5)		\$8.00
FW-5-EP-50	End Plug (Use with either 50 or 51 Design Valves)		\$22.00

DIN & Deutsch Plugs

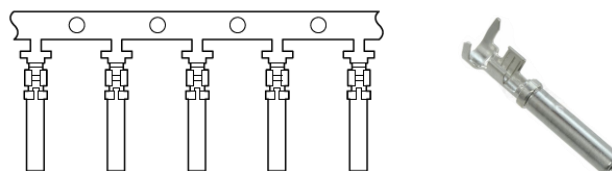


Order Code	Voltage	Description	List Each
C01010001-N	DC	DIN Light Plug - DC	\$16.00
C01010004-N	AC	DIN Light Plug - AC	
DT06-2S-0462	DC	Deutsch Plug - Male (Includes 2 pcs Solid Socket)	\$15.00
0462-209-16141x10	N/A	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)	\$50.00



Solid Socket

(Manufactured by a cold heading process of solid copper alloys or machined. Better for vibration.)

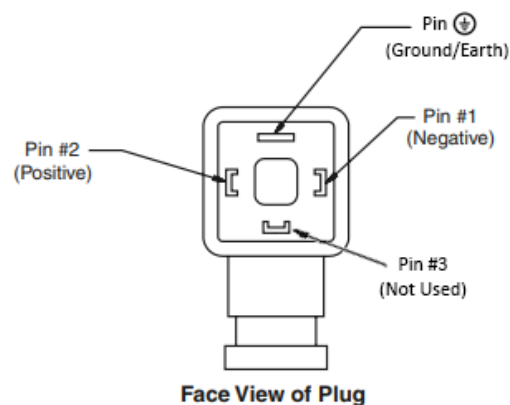


Stamped & Formed Sockets

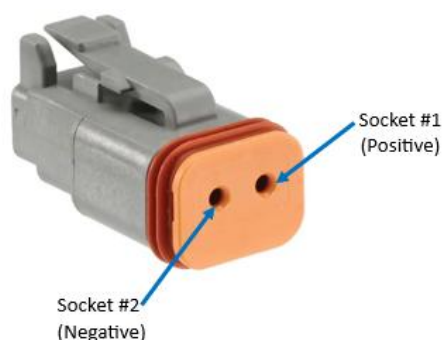
(Stamped out of a sheet of flat metal and then formed to the required shape. Lower cost.)

DIN Plug Wiring Information

Note: For AC Voltage Pin Ⓢ (Ground/Earth) must be connected.
Not required for DC Voltage.



Deutsch Plug Wiring Information



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.

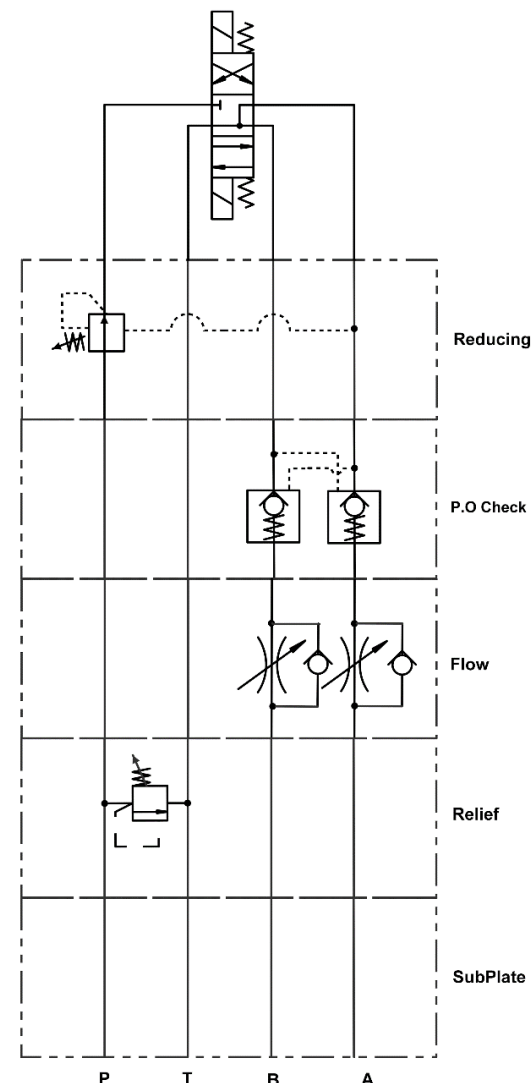
General Rules

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:

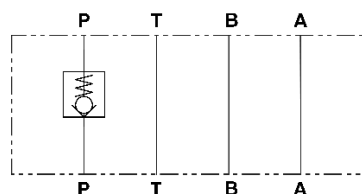
- When using a pilot operated check valve module use a meter-out flow control module stacked closest to the subplate or manifold. This prevents back pressure on the pilot operated check valve outlet which increases the pilot pressure required to open the valve and this can cause check valve chatter.
- 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 non-vented counterbalance valve mount it closest to the actuator and use a meter-in flow control module.



Check Valves



(Port P)

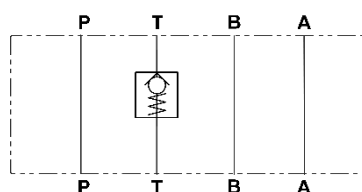


Cetop 3 (NG06)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DA-3-P-0.5-70	40	315	0.5	40	\$149.00
DA-3-P-4.0-70			4.0		

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	\$227.00
DA-5-P-4.0-70			4.0		



(Port T)



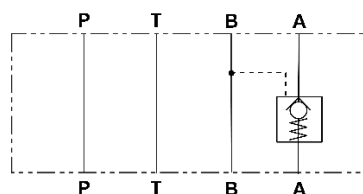
Cetop 3 (NG06)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DA-3-T-0.5-70	40	315	0.5	40	\$149.00
DA-3-T-4.0-70			4.0		

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	\$227.00
DA-5-T-4.0-70			4.0		

Pilot Operated Check Valves



(Port A)



Cetop 3 (NG6)

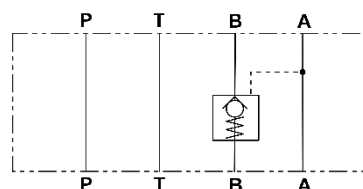
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DAY-3-A-4.0-50	60	315	2.9 : 1	4.0	40	\$187.00

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	\$285.00



(Port B)



Cetop 3 (NG6)

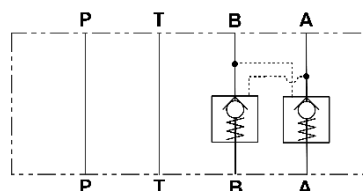
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DAY-3-B-4.0-50	60	315	2.9 : 1	4.0	40	\$187.00

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	\$285.00



(Port A & B)



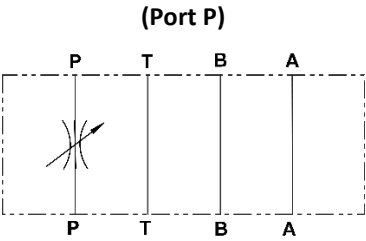
Cetop 3 (NG6)

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	\$193.00

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	\$297.00

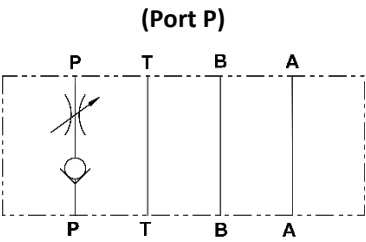
Needle Valves



Cetop 3 (NG6)				
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Thickness (mm)	List Each
DL-3-P-70	30	315	40	\$204.00

Cetop 5 (NG10)				
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Thickness (mm)	List Each
DL-5-P-70	50	315	55	\$285.00

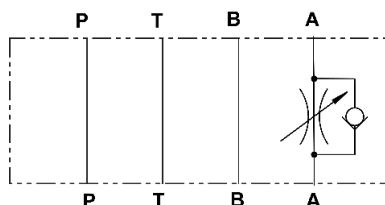
Needle & Check Valve



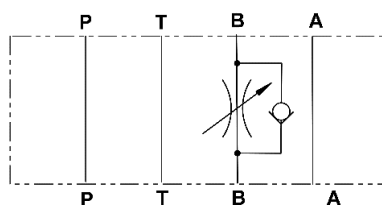
Cetop 3 (NG6)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DAL-3-P-70	30	315	0.5	40	\$211.00

Flow Control Valves

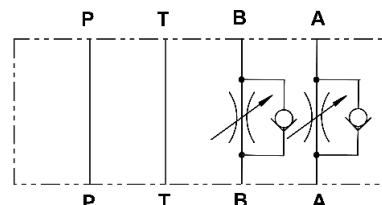
(Meter IN)



A Pipeline



B Pipeline

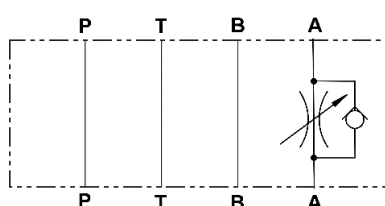


W Pipeline

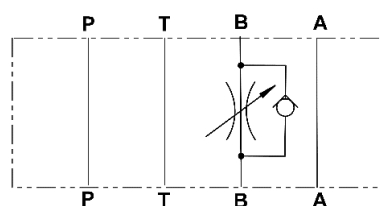
Cetop 3 (NG06)					
Order Code	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
DLA-3-A-MI-70	30	315	0.5	40	\$187.00
DLA-3-B-MI-70					\$261.00
DLA-3-W-MI-70					

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					\$272.00
DLA-5-W-MI-70					

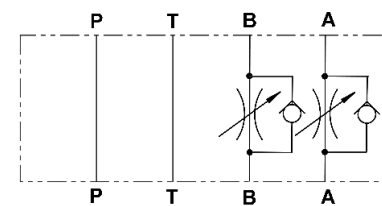
(Meter OUT)



A Pipeline



B Pipeline

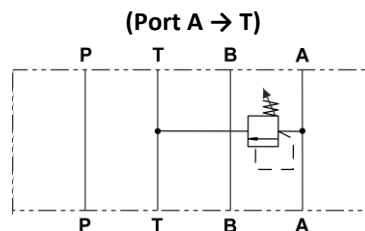


W Pipeline

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	\$187.00
DLA-3-B-MO-70					\$272.00
DLA-3-W-MO-70					

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					\$272.00
DLA-5-W-MO-70					

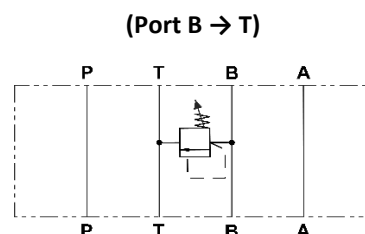
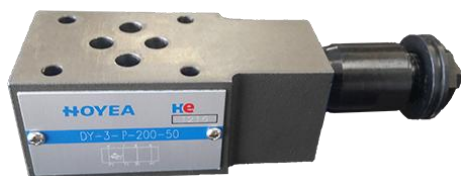
Pressure Relief Valves (Pilot Operated)



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	\$216.00
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	\$261.00
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.



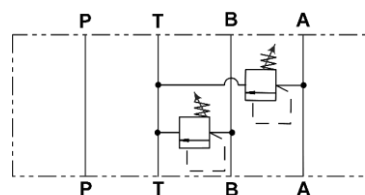
Cetop 3 (NG6) (50 Design)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-3-B-50-50	35	50	315	40	\$216.00
DY-3-B-100-50		100			
DY-3-B-200-50		200			
DY-3-B-315-50		315			

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	\$261.00
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.

Continued Next Page

(Port A → T & B → T)

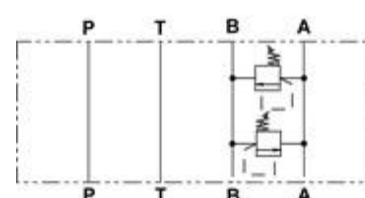


Cetop 3 (NG6) (50 Design)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-3-C-50-50	35	50	315	40	\$261.00
DY-3-C-100-50		100			
DY-3-C-200-50		200			
DY-3-C-315-50		315			

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	\$309.00
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.

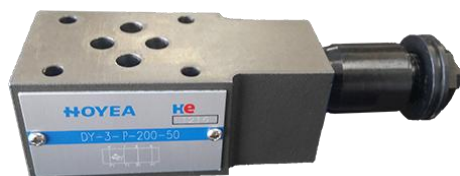
(Port A → B & B → A)



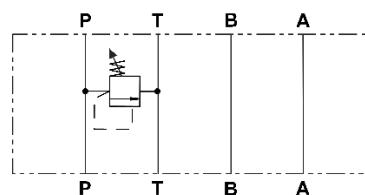
Cetop 3 (NG6)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-3-D-50-50	35	50	315	40	\$261.00
DY-3-D-100-50		100			
DY-3-D-200-50		200			
DY-3-D-315-50		315			

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

Continued Next Page



(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	\$216.00
DY-3-P-100-50		100			
DY-3-P-200-50		200			
DY-3-P-315-50		315			

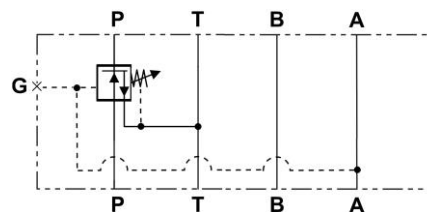
Cetop 5 (NG10)					
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	List Each
DY-5-P-70-70	70	70	315	55	\$261.00
DY-5-P-140-70		140			
DY-5-P-210-70		210			
DY-5-P-315-70		315			

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

Pressure Reducing Valves



(Port A)



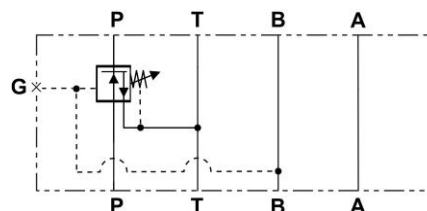
Cetop 3 (NG6)						
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	G	List Each
DYJ-3-A-70-70	35	70	315	40	1/4" BSPT	\$204.00
DYJ-3-A-140-70		140				
DYJ-3-A-210-70		210				

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	\$284.00
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	\$204.00
DYJ-3-B-140-70		140				
DYJ-3-B-210-70		210				

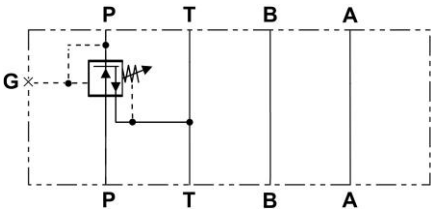
Cetop 5 (NG10)						
Order Code	Max. Flow (L/min)	Max. Set Pressure (bar)	Max. Pressure (bar)	Thickness (mm)	G	List Each
DYJ-5-B-70-70	70	70	315	55	1/4" BSPT	\$284.00
DYJ-5-B-140-70		140				
DYJ-5-B-210-70		210				

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

Continued Next Page



(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	\$204.00
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	\$284.00
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

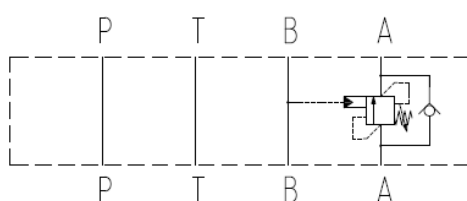


Cetop 3 (NG6)							
Order Code	Max. Flow (L/min)	Adjustable Pressure (bar)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
MCBS-3-A-G-LH-10	60	70 - 280	350	4.5 : 1	6	50	\$385.00
MCBS-3-B-G-LH-10							\$385.00
MCBS-3-W-G-LH-10							\$480.00

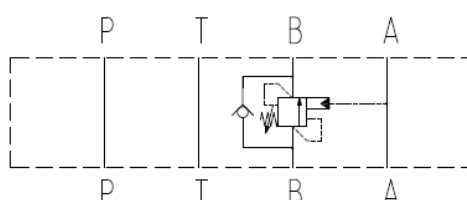
Cetop 5 (NG10)							
Order Code	Max. Flow (L/min)	Adjustable Pressure (bar)	Max. Pressure (bar)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Thickness (mm)	List Each
MCBS-5-A-G-LH-10	120	70 - 280	350	4.5 : 1	6	55	\$615.00
MCBS-5-B-G-LH-10							\$615.00
MCBS-5-W-G-LH-10							\$800.00

Note: Factory Set 180 bar. Counterbalance valves should be set at least 1.3 times the maximum load induced pressure and 1.5 times when valve is set below 140 bar.

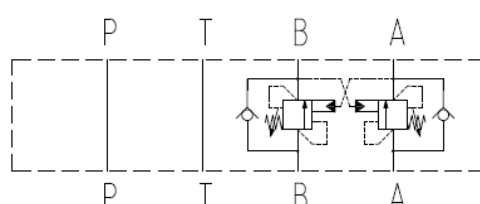
MCBS-*-A-G-LH-10 (Port A)



MCBS-*-B-G-LH-10 (Port B)



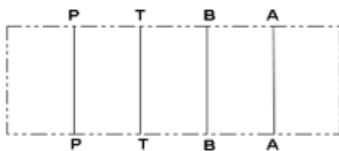
MCBS-*-W-G-LH-10 (Port A & B)



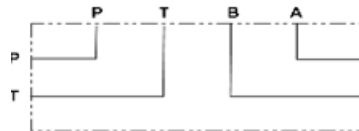
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Subplates, Manifolds & Bolt Kits

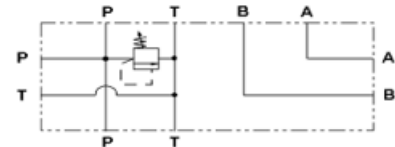
Cetop 3 (NG6) Subplates



Bottom Port



Side & Lateral Port



Dual P & T 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	\$78.00
SP-3-SP-A	Side Port				\$78.00
SP-3-RV-A	Dual P & T Port with Relief Cavity				\$204.00
SP-3-BP-C	Bottom Port	Ductile Cast Iron (Phosphate Treated)	350	G 3/8	\$109.00
SP-3-SP-C	Side Port				\$109.00
SP-3-BP-S	Bottom Port	Steel (Nickel Plated)	350	G 3/8	\$75.00
SP-3-SP-S	Side Port				\$75.00
SP-3-RV-S	Dual P & T Port with Relief Cavity				\$204.00
SP-3-LP-S-G1/4	Lateral Port			G 1/4	\$161.00
SP-3-LP-S-G3/8	Lateral Port			G 3/8	\$161.00

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

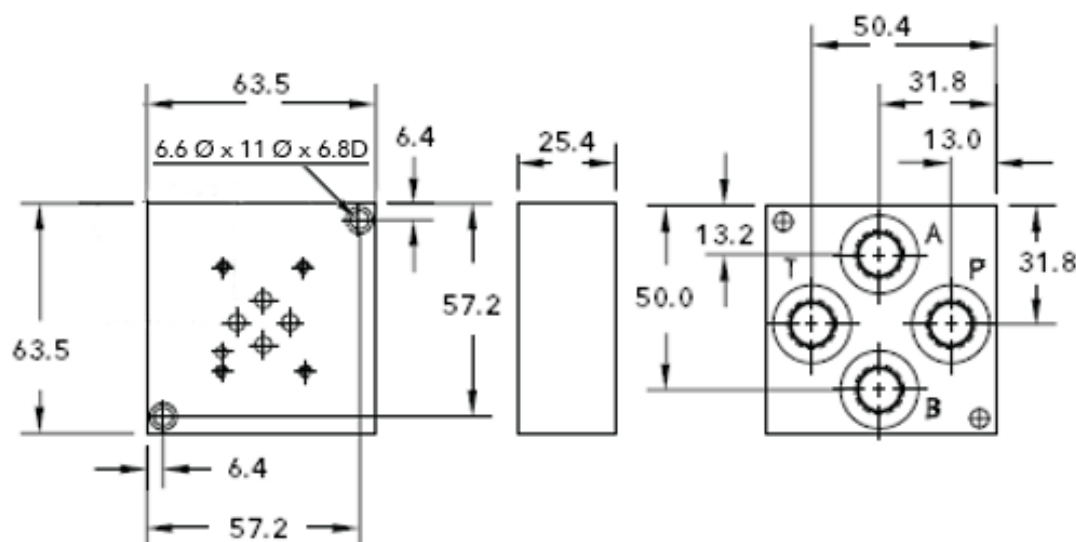
Order Code	Max. Flow (L/min)	Adjustable Pressure (bar)	Preset Pressure (bar)	Max. Pressure (bar)	List Each
LPSRV2-10-8	120	7 - 55	47	420	\$129.00
LPSRV2-10-20		35 - 140	48		\$129.00
LPSRV2-10-40		70 - 280	88		\$129.00
LPSRV2-10-60		140 - 420	140		\$140.00
PLUG-C10-2-S	Cavity Plug - Steel				\$35.00

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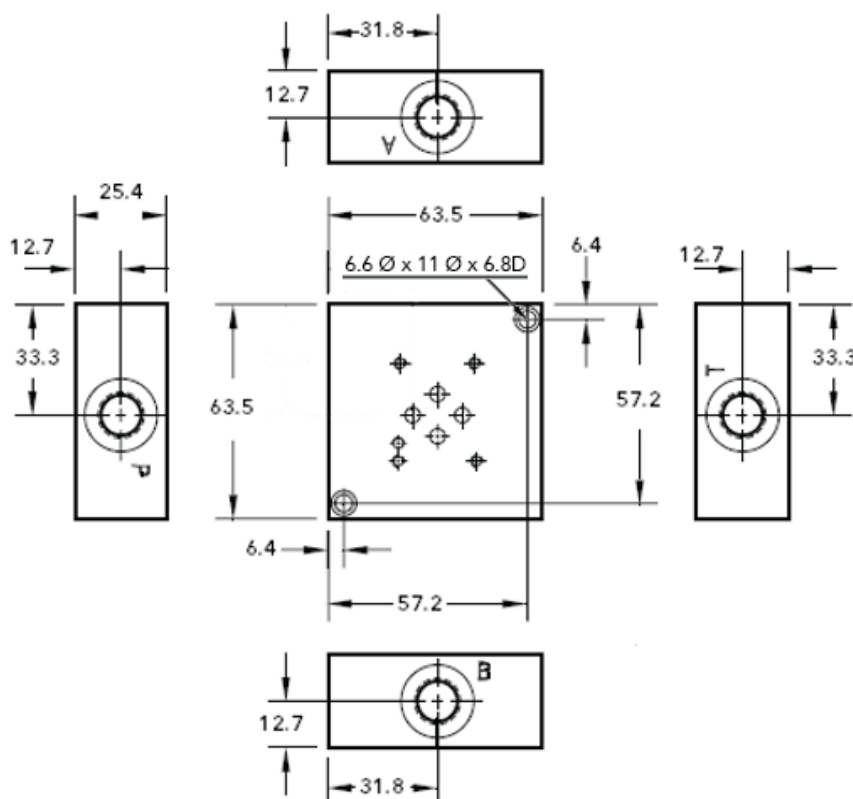
Test Fitting & Port Plug

Order Code	Thread	Valve Sealing Type	List Each
PT-06-B	G 1/8 - Dowty Seal	Poppet	\$26.00
PT-06-C	G 1/8 - Encapsulated Seal		
PT-08-B	G 3/8 - Dowty Seal		
PT-08-C	G 3/8 - Encapsulated Seal		
PLUG-G3/8-S	G 3/8 - Steel Port Plug		\$7.00

Bottom Port (Alloy & Steel)

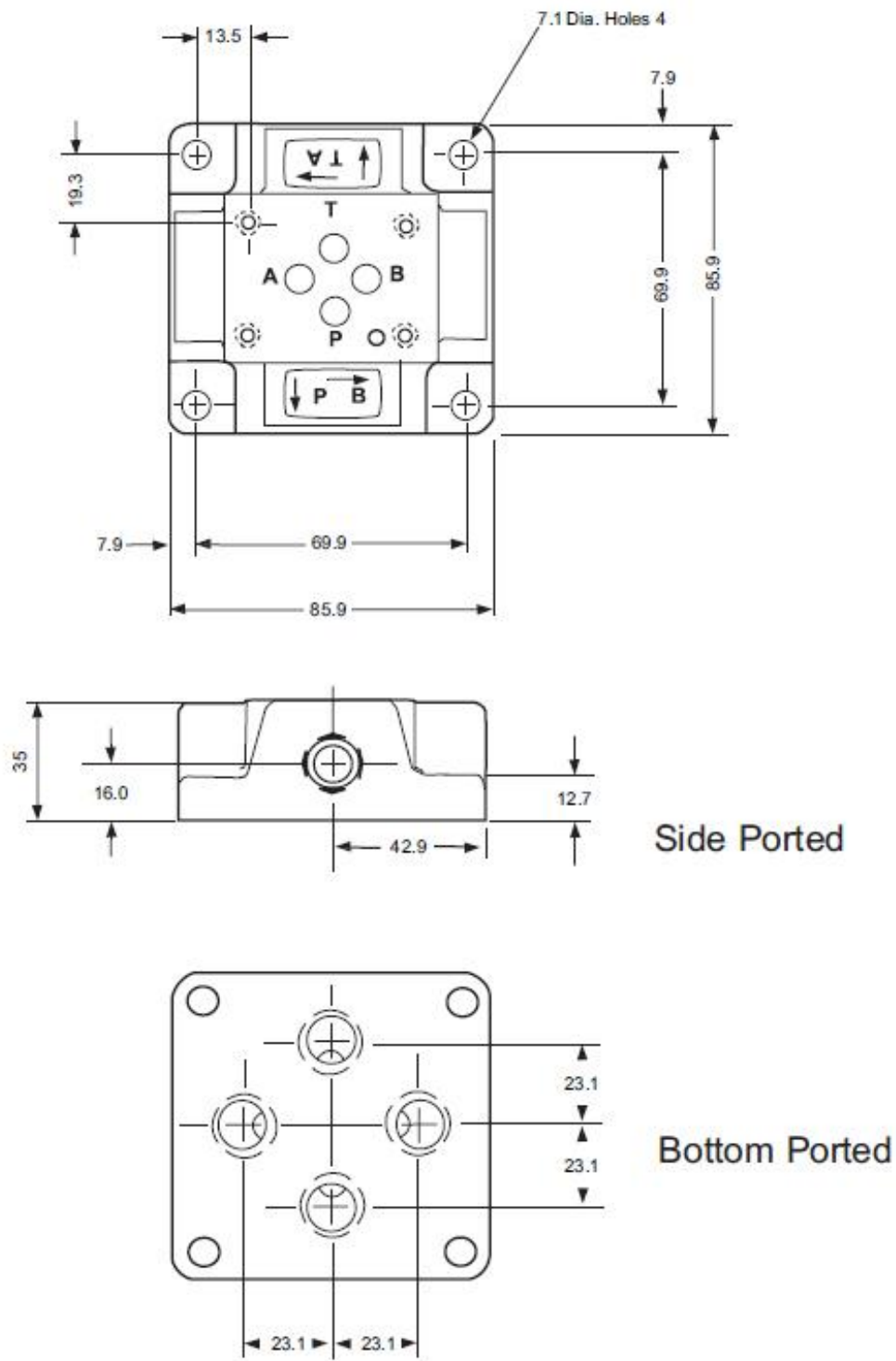


Side Port (Alloy & Steel)



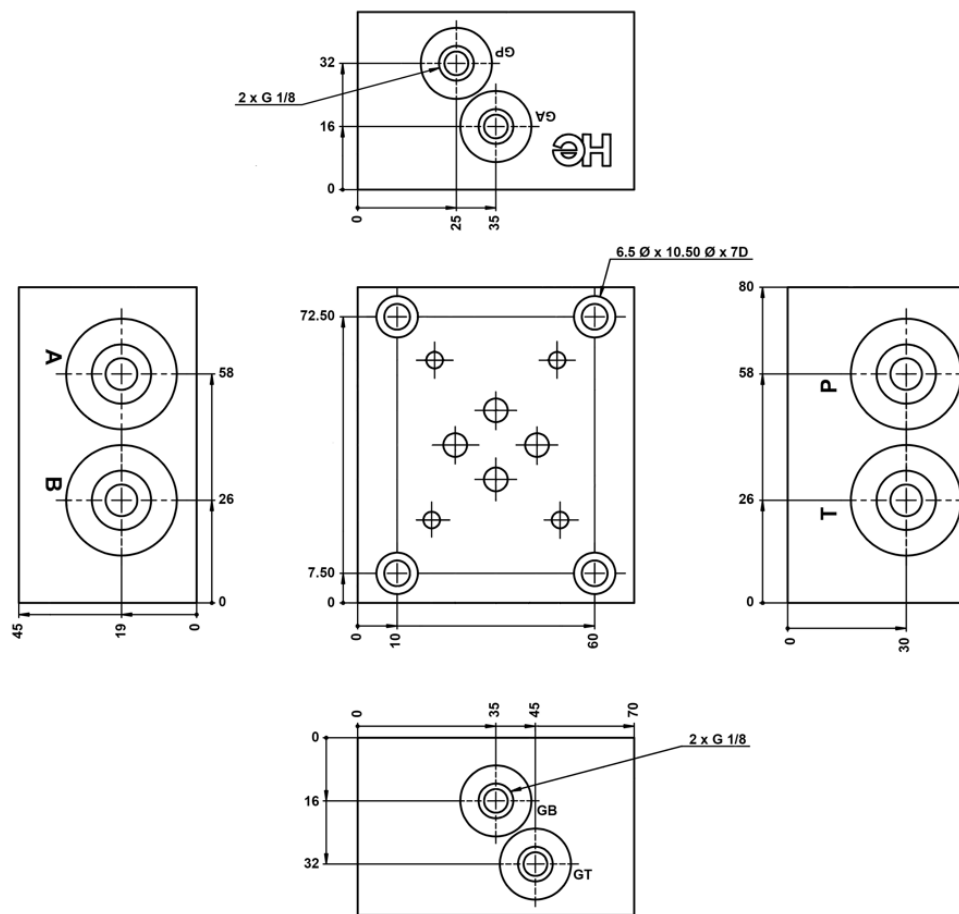
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Bottom & Side Port (Ductile Cast Iron)

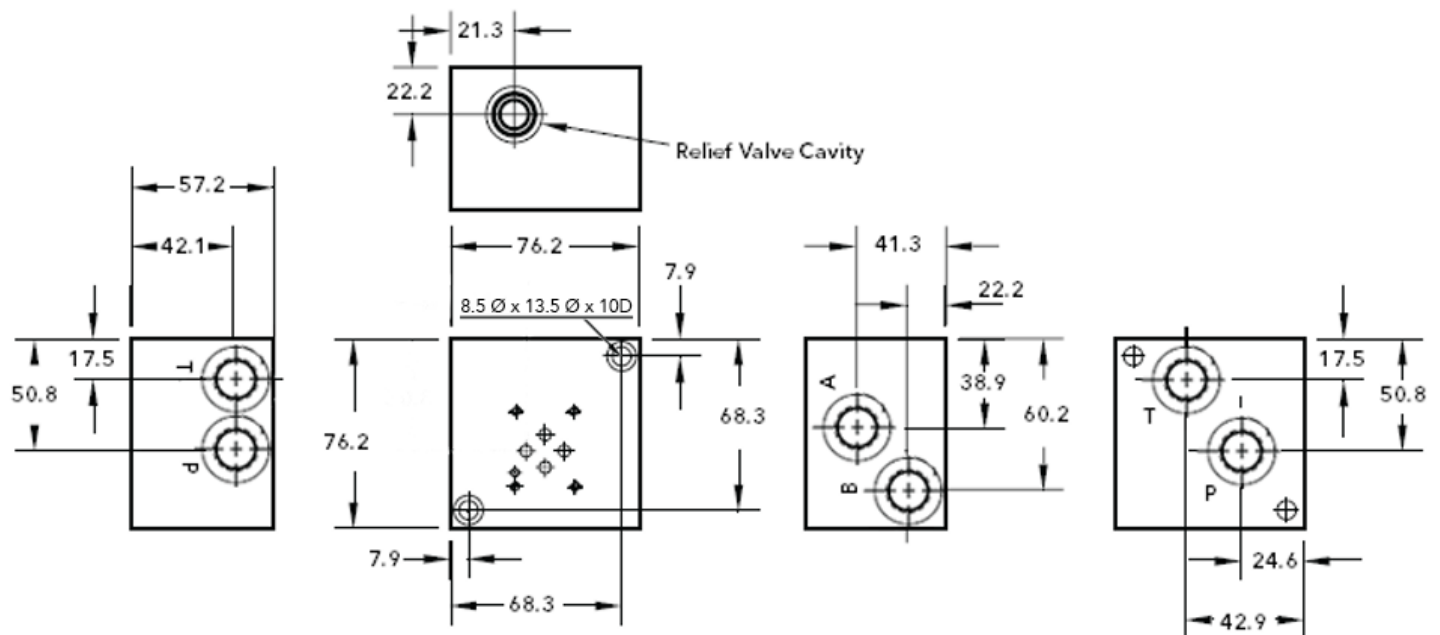


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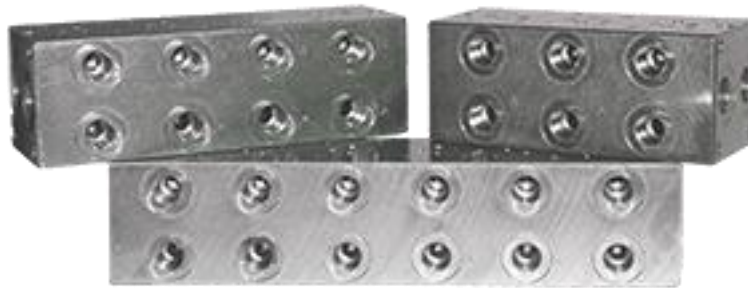
Lateral Port (Steel)



Dual P & T Port with Relief Cavity (Alloy & Steel)



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	\$174.00
MB-3-P2-A	2				\$260.00
MB-3-P3-A	3				\$330.00
MB-3-P4-A	4				\$401.00
MB-3-P5-A	5				\$471.00
MB-3-P6-A	6				\$541.00
MB-3-P7-A	7				\$617.00
MB-3-P8-A	8				\$703.00
203-SAE6	P & T Tapping – Alloy (40 mm Thick)			9/16” UNO (SAE 6)	\$130.00
SP-3-CP-S	Cover (Blanking) Plate - Steel (19 mm Thick - Bolts not included) (Use BKM5x25)				\$59.00
MB-3-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$17.00

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	\$163.00
MB-3-P2-S	2				\$225.00
MB-3-P3-S	3				\$296.00
MB-3-P4-S	4			A & B = G 3/8	\$366.00
MB-3-P5-S	5			Gauge = G 1/4	\$436.00
MB-3-P6-S	6				\$501.00
MB-3-P7-S	7				\$588.00
203-SAE6	P & T Tapping – Alloy (40 mm Thick)		210	9/16” UNO (SAE 6)	\$130.00
SP-3-CP-S	Cover (Blanking) Plate - Steel (19 mm Thick - Bolts not included) (Use BKM5x25)				\$59.00
MB-3-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$17.00

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	\$265.00
MB-3-S3-A	3			A & B = G 3/8	\$336.00
MB-3-S4-A	4			Gauge = G 1/4	\$406.00
203-SAE6	P & T Tapping – Alloy (40 mm Thick)			9/16” UNO (SAE 6)	\$130.00
MB-3-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$17.00

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	\$129.00
LPSRV2-10-20		35 - 140	48		\$129.00
LPSRV2-10-40		70 - 280	88		\$129.00
LPSRV2-10-60		140 - 420	140		\$140.00
PLUG-C10-2-S	Cavity Plug - Steel				\$35.00

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

Solenoid Unloading Valve for Relief Valve Cavity

Order Code	Description	Max. Flow (L/min)	Max. Pressure (bar)	List Each
LSV2-10-2NOS	2/2 N.O. Cartridge	22.7	207	\$140.00
LC2-10-C-1H	Coil DIN 12V/20W DC without Plug			\$57.00
LC2-10-C-2H	Coil DIN 24V/20W DC without Plug			\$57.00
C01010001-N	DIN Light Plug - DC			\$16.00
LC2-10-C-3H	Coil DIN 110V/20W AC without Plug			\$64.00
LC2-10-C-4H	Coil DIN 220V/20W AC without Plug			\$64.00
C01010004-N	DIN Light Plug - AC			\$16.00
LC2-10-C-1ER	Coil Deutsch 12V/20W DC without Plug			\$70.00
LC2-10-C-2ER	Coil Deutsch 24V/20W DC without Plug			\$70.00
DT06-2S-0462	Deutsch Plug - Male (Includes 2 pcs Solid Socket)			\$15.00
0462-209-16141x10	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)			\$50.00
Order Code	Description	Max. Flow (L/min)	Max. Pressure (bar)	List Each
LSV6-10-2NOSP	2/2 N.O. Cartridge	70	350	\$429.00
LSV6-10-2NOSP-M	2/2 N.O. Cartridge with O'ride			\$475.00
LC3-10-C-1H	Coil DIN 12V/26W DC without Plug			\$57.00
LC3-10-C-2H	Coil DIN 24V/26W DC without Plug			\$57.00
C01010001-N	DIN Light Plug - DC			\$16.00
LC3-10-C-3H	Coil DIN 110V/26W AC without Plug			\$62.00
LC3-10-C-4H	Coil DIN 220V/26W AC without Plug			\$62.00
C01010004-N	DIN Light Plug - AC			\$16.00
SC-10-C-1ER	Coil Deutsch 12V/22W DC without Plug			\$70.00
SC-10-C-2ER	Coil Deutsch 24V/22W DC without Plug			\$70.00
DT06-2S-0462	Deutsch Plug - Male (Includes 2 pcs Solid Socket)			\$15.00
0462-209-16141x10	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)			\$50.00

Note:

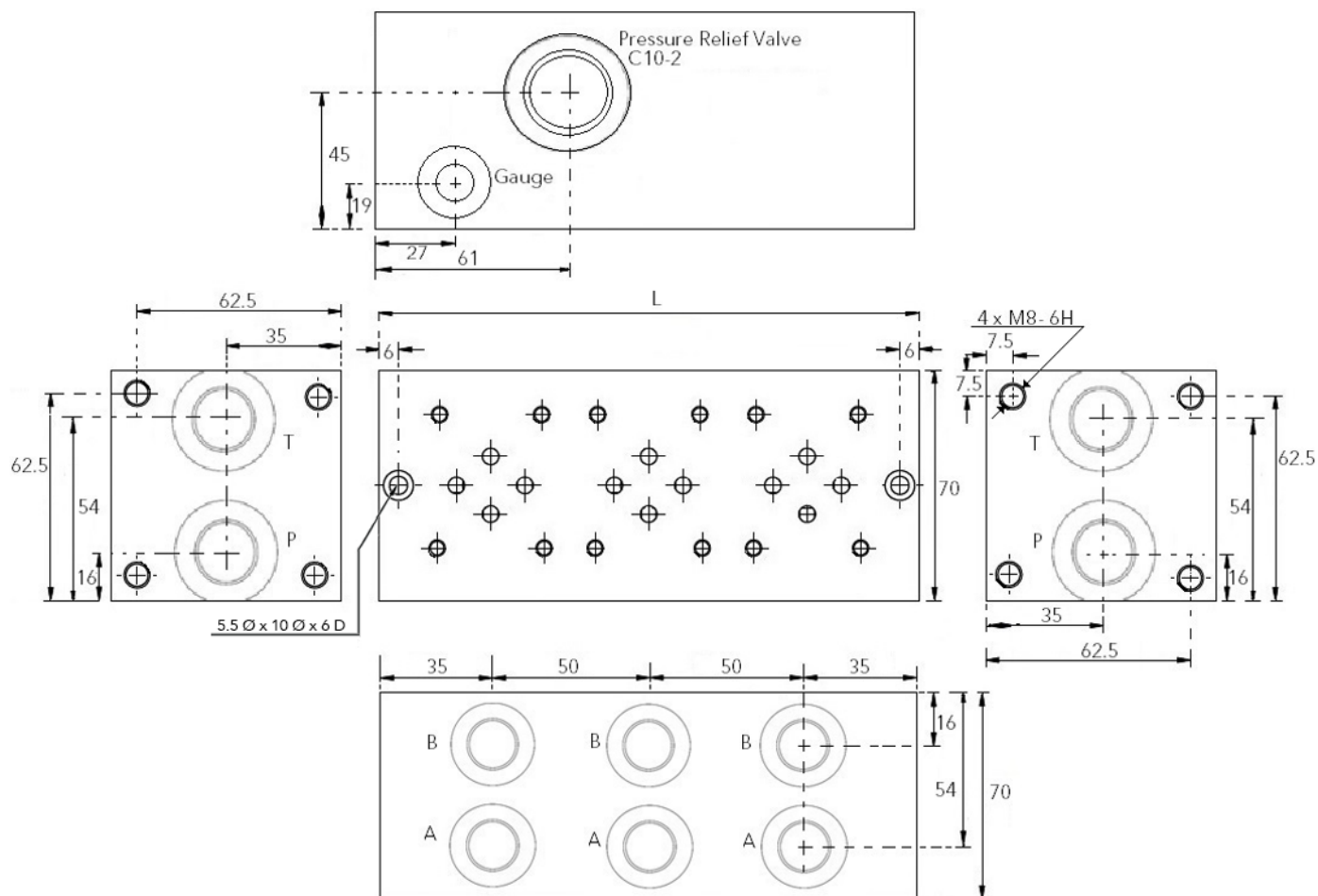
- Solenoid Unloading Valve cannot be used with Pressure Relief Valve Cartridge or Cavity Plug.
- Additional Cartridge information available on [Page 9.06](#).
- Coil installation, DIN & Deutsch Plug Wiring Information available on [Page 5.10](#).

Test Fitting & Port Plugs

Order Code	Thread	Valve Sealing Type	List Each
PT-07-B	G 1/4 - Dowty Seal	Poppet	\$26.00
PT-07-C	G 1/4 - Encapsulated Seal		
PLUG-G1/4-S	G 1/4 - Steel Port Plug		\$6.00
PLUG-G3/8-S	G 3/8 - Steel Port Plug		\$7.00
PLUG-G1/2-S	G 1/2 - Steel Port Plug		\$8.00

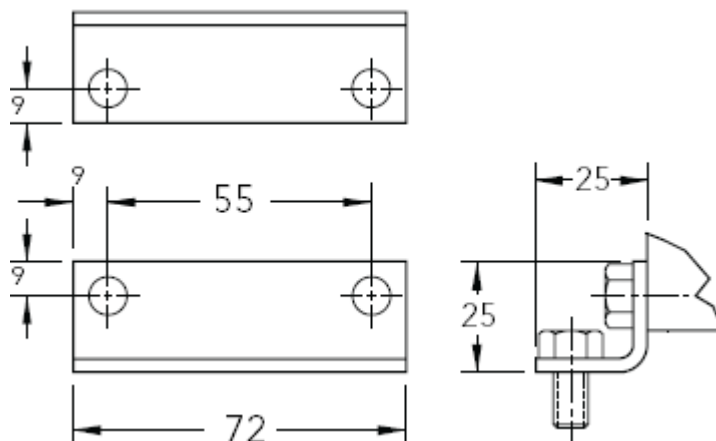
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MB-3 Parallel & Series (Alloy & Steel)



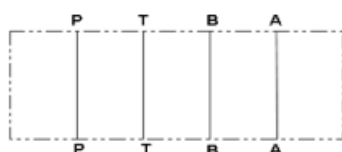
Station	Dim. L	Ports
1	94	P & T = G 1/2 A & B = G 3/8 Gauge = G 1/4
2	120	
3	170	
4	220	
5	270	
6	320	
7	370	
8	420	

MB-3-MBK

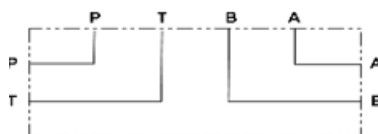


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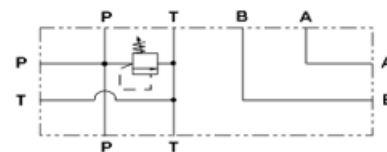
Cetop 5 (NG10) Subplates



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	\$136.00
SP-5-SP-A	Side Port				\$136.00
SP-5-RV-A	Dual P & T Port with Relief Cavity				\$365.00
SP-5-BP-C	Bottom Port	Ductile Cast Iron (Phosphate Treated)	350		\$174.00
SP-5-SP-C	Side Port				\$174.00
SP-5-BP-S	Bottom Port	Steel (Nickel Plated)	350		\$133.00
SP-5-SP-S	Side Port				\$133.00
SP-5-RV-S	Dual P & T Port with Relief Cavity				\$365.00

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

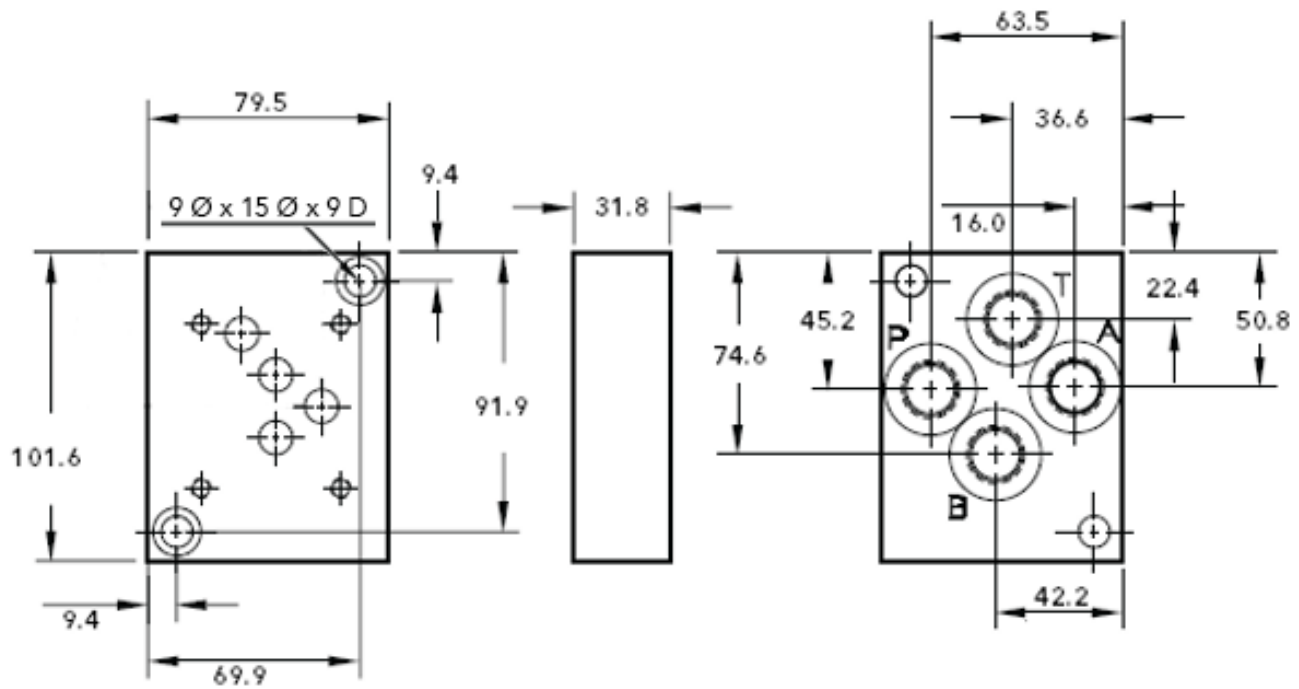
Order Code	Max. Flow (L/min)	Adjustable Pressure (bar)	Preset Pressure (bar)	Max. Pressure (bar)	List Each
LPSRV2-10-8	120	7 - 55	47	420	\$129.00
LPSRV2-10-20		35 - 140	48		\$129.00
LPSRV2-10-40		70 - 280	88		\$129.00
LPSRV2-10-60		140 - 420	140		\$140.00
PLUG-C10-2-S	Cavity Plug - Steel				\$35.00

Test Fitting & Port Plug

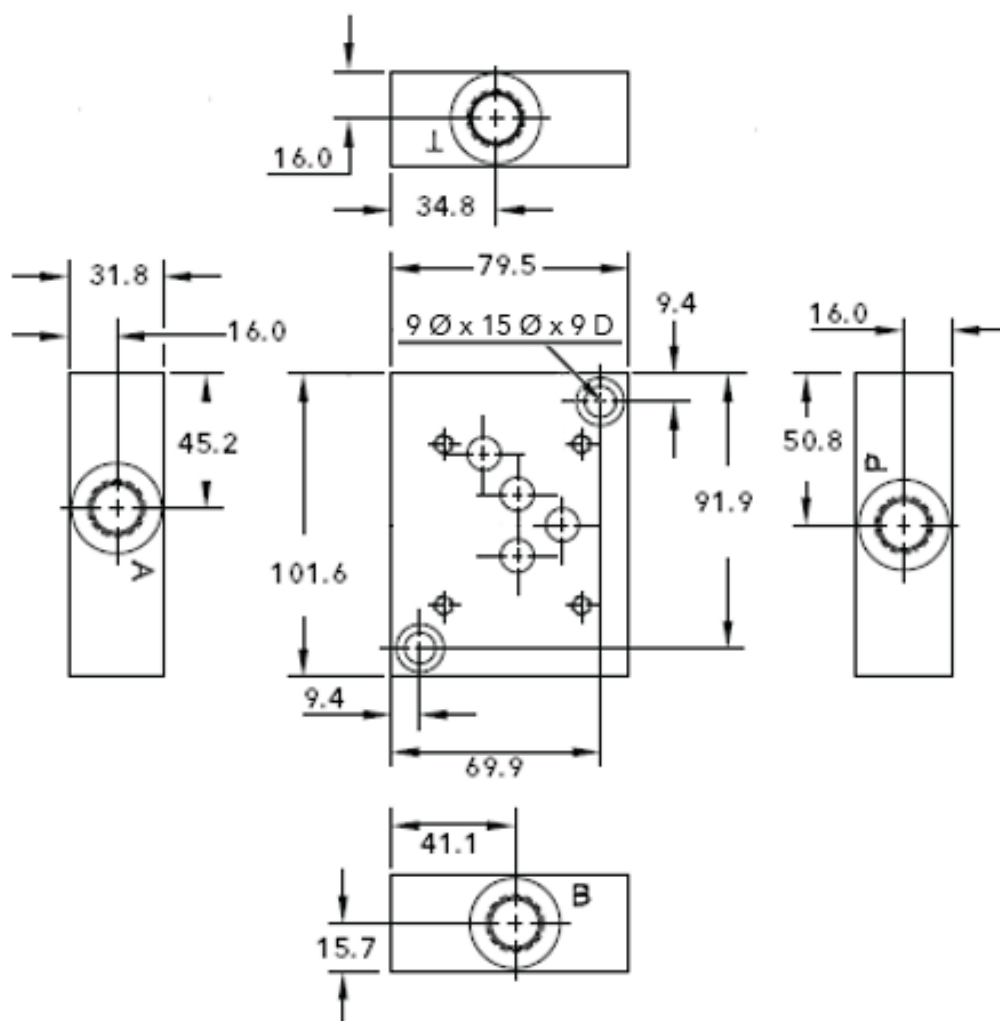
Order Code	Thread	Valve Sealing Type	List Each
PT-09-B	G 1/2 - Dowty Seal	Poppet	\$31.00
PT-09-C	G 1/2 - Encapsulated Seal		
PLUG-G1/2-S	G 1/2 - Steel Port Plug		\$8.00

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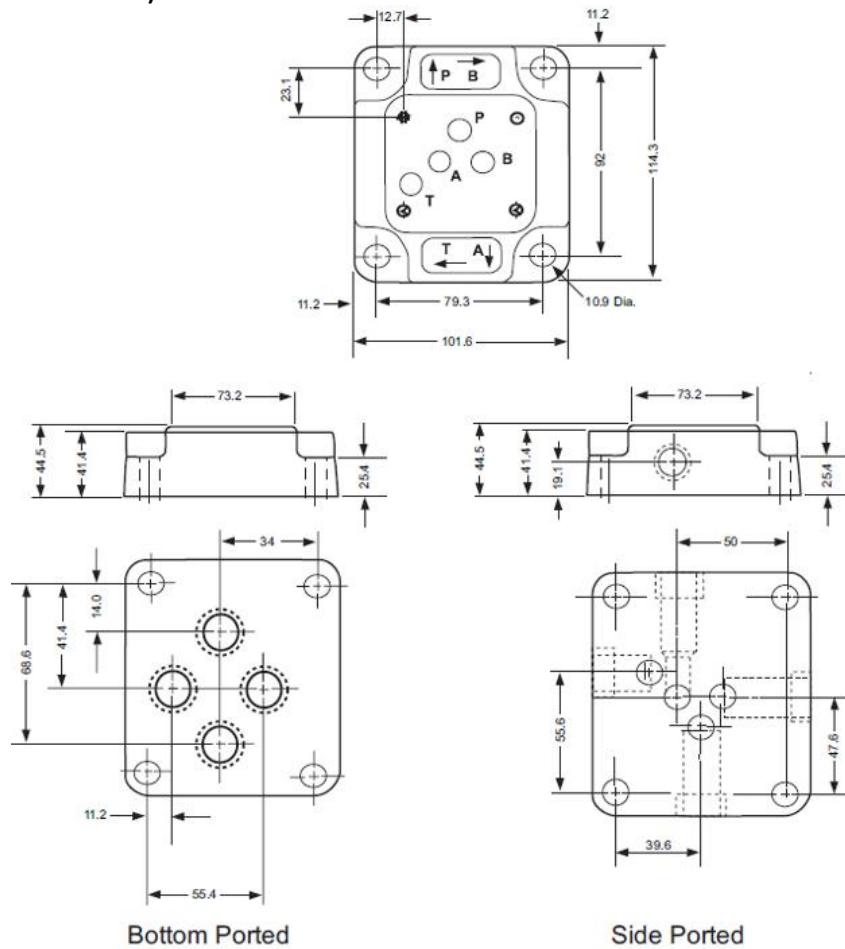
Bottom Port (Alloy & Steel)



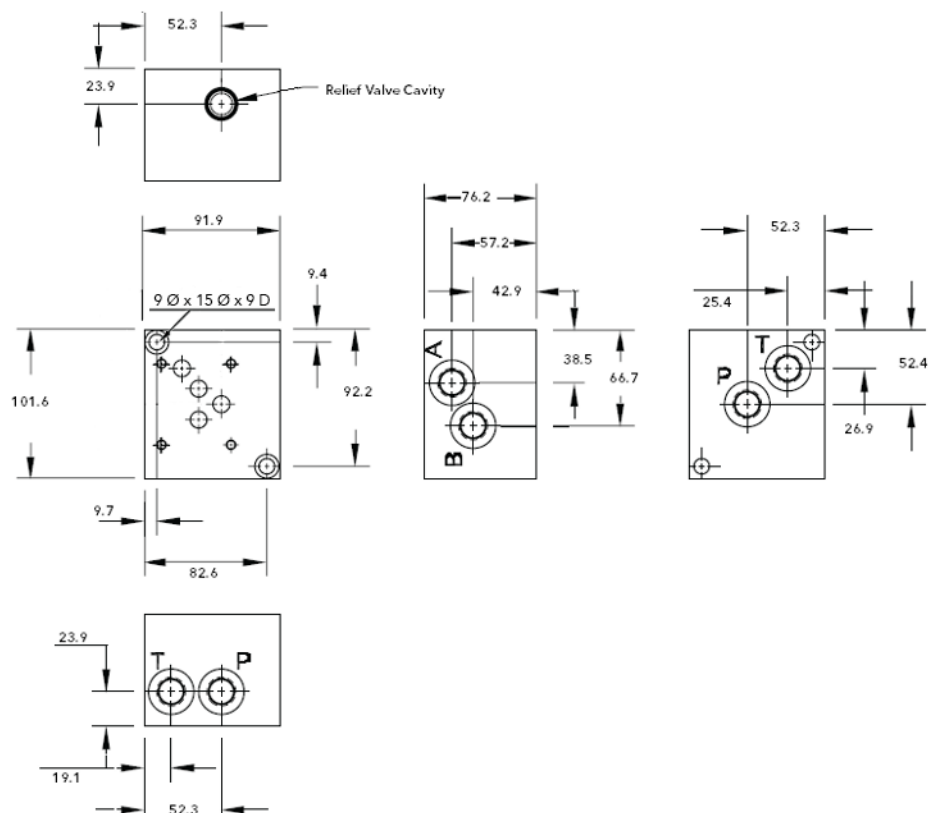
Side Port (Alloy & Steel)



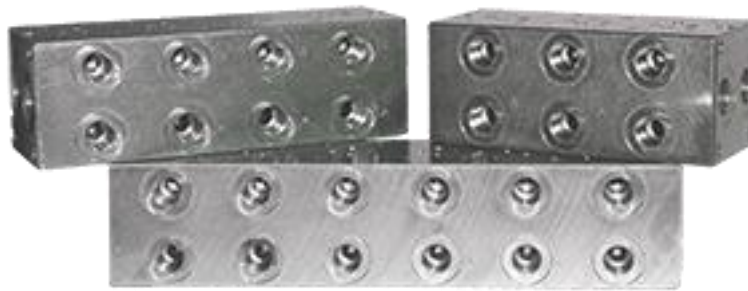
Bottom & Side Port (Ductile Cast Iron)



Dual P & T Port with Relief Cavity (Alloy & Steel)



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	\$309.00
MB-5-P2-A	2				\$505.00
MB-5-P3-A	3			A & B = G 1/2	\$665.00
MB-5-P4-A	4				\$855.00
MB-5-P5-A	5			Gauge = G 1/4	\$1,051.00
MB-5-P6-A	6				\$1,226.00
SP-5-CP-S	Cover (Blanking) Plate - Steel (19 mm Thick - Bolts not included) (Use BKM6x30)				\$78.00
MB-5-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$23.00

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	\$289.00
MB-5-P2-S	2				\$485.00
MB-5-P3-S	3			A & B = G 1/2	\$606.00
MB-5-P4-S	4				\$763.00
MB-5-P5-S	5			Gauge = G 1/4	\$897.00
MB-5-P6-S	6				\$1,046.00
SP-5-CP-S	Cover (Blanking) Plate - Steel (19 mm Thick - Bolts not included) (Use BKM6x30)				\$78.00
MB-5-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$23.00

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	\$515.00
MB-5-S3-A	3			A & B = G 1/2	\$675.00
MB-5-S4-A	4			Gauge = G 1/4	\$866.00
MB-5-MBK	Mounting Bracket Kit (includes Hex Bolts & Spring Washers for Manifold only)				\$23.00

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 5.34](#).

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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	\$129.00
LPSRV2-10-20		35 - 140	48		\$129.00
LPSRV2-10-40		70 - 280	88		\$129.00
LPSRV2-10-60		140 - 420	140		\$140.00
PLUG-C10-2-S	Cavity Plug - Steel				\$35.00

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

Solenoid Unloading Valve for Relief Valve Cavity

Order Code	Description	Max. Flow (L/min)	Max. Pressure (bar)	List Each
LSV6-10-2NOSP	2/2 N.O. Cartridge	70	350	\$429.00
LSV6-10-2NOSP-M	2/2 N.O. Cartridge with O'ride			\$475.00
LC3-10-C-1H	Coil DIN 12V/26W DC without Plug			\$57.00
LC3-10-C-2H	Coil DIN 24V/26W DC without Plug			\$57.00
C01010001-N	DIN Light Plug - DC			\$16.00
LC3-10-C-3H	Coil DIN 110V/26W AC without Plug			\$62.00
LC3-10-C-4H	Coil DIN 220V/26W AC without Plug			\$62.00
C01010004-N	DIN Light Plug - AC			\$16.00
SC-10-C-1ER	Coil Deutsch 12V/22W DC without Plug			\$70.00
SC 10-C-2ER	Coil Deutsch 24V/22W DC without Plug			\$70.00
DT06-2S-0462	Deutsch Plug - Male (Includes 2 pcs Solid Socket)			\$15.00
0462-209-16141x10	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)			\$50.00

Note:

- Solenoid Unloading Valve cannot be used with Pressure Relief Valve Cartridge or Cavity Plug.
- Additional Cartridge information available on [Page 9.06](#).
- Coil & DIN Light Plug installation information available on [Page 5.10](#).

Test Fitting & Port Plugs

Order Code	Thread	Valve Sealing Type	List Each
PT-07-B	G 1/4 - Dowty Seal	Poppet	\$26.00
PT-07-C	G 1/4 - Encapsulated Seal		
PLUG-G1/4-S	G 1/4 - Steel Port Plug		\$6.00
PLUG-G1/2-S	G 1/2 - Steel Port Plug		\$8.00
PLUG-G3/4-S	G 3/4 - Steel Port Plug		\$12.00

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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-SAE6 Tapping Plate = 40 mm except MCBS = 50 mm		
SP-3-CP-S = 19 mm (Use BKM5x25)		
Order Code	Length (mm)	List Each
BKM5x25	25	\$5.00
BKM5x30	30	\$6.00
BKM5x45	45	\$7.00
BKM5x85	85	\$8.00
BKM5x90	90	\$12.00
BKM5x95	95	\$14.00
BKM5x100	100	\$15.00
BKM5x105	105	\$17.00
BKM5x110	110	\$18.00
BKM5x125	125	\$23.00
BKM5x130	130	\$25.00
BKM5x135	135	\$26.00
BKM5x140	140	\$27.00
BKM5x145	145	\$32.00
BKM5x150	150	\$38.00
BKM5x165	165	\$54.00
BKM5x170	170	\$56.00
BKM5x175	175	\$58.00
BKM5x180	180	\$60.00
BKM5x185	185	\$65.00
BKM5x205	205	\$72.00
BKM5x225	225	\$85.00

Note: 1 Bolt Kit consist of 4 pcs SHCS.

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Bolt Kits - M6

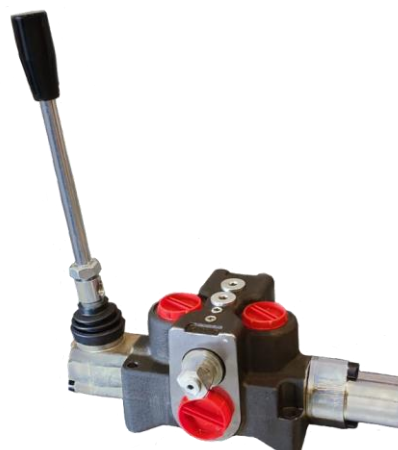


Cetop 5 (NG10)		
Valve only bolt length = 40 mm (including Thread Engagement) All modules = 55 mm except DAY-5 = 50 mm SP-5-CP-S = 19 mm (Use BKM6x30)		
Order Code	Length (mm)	List Each
BKM6x30	30	\$5.00
BKM6x40	40	\$6.00
BKM6x50	50	\$7.00
BKM6x60	60	\$8.00
BKM6x90	90	\$9.00
BKM6x95	95	\$10.00
BKM6x100	100	\$11.00
BKM6x110	110	\$12.00
BKM6x145	145	\$37.00
BKM6x150	150	\$39.00
BKM6x160	160	\$45.00
BKM6x200	200	\$63.00
BKM6x205	205	\$78.00
BKM6x255	255	\$127.00
BKM6x260	260	\$132.00

Note: 1 Bolt Kit consist of 4 pcs SHCS.

Mobile Valves

<i>Monoblock Valve Selection Guide</i>	6.02
<i>P40 – 40 L/min Monoblock Valves</i>	6.02
<i>Z50 – 50 L/min Monoblock Valves with Lever, Metering Spool & Body</i>	6.03
<i>Z50 – 50 L/min Monoblock Valves with Solenoid / Lever, Metering Spool & Body</i>	6.04
<i>P40 / Z50 Accessories & Spare Parts</i>	6.05
<i>Z80 – 80 L/min Monoblock Valves with Metering Spool & Body</i>	6.10
<i>P80 / Z80 Accessories & Spare Parts</i>	6.11
<i>P120 – 160 L/min Monoblock Valves with Metering Spool & Body</i>	6.13
<i>P120 Accessories & Spare Parts</i>	6.14
<i>P81 Log Splitter Valves</i>	6.16
<i>P70LS Monoblock Valves with Pressure Compensated By-Pass Flow Control</i>	6.18



Monoblock Valve Selection Guide

Series	Max. Flow (L/min)	Max. Pressure (bar)	Spool / Flow Characteristics				
			Lever Only	1ESD		ES	
				Solenoid	Manual	Solenoid	Manual
Z50	50	315	Precise Metering	No Metering	Precise Metering	No Metering	Moderate Metering
Z80	80		Precise Metering	No Metering	Precise Metering	No Metering	Moderate Metering
P120	160		Precise Metering	N/A		N/A	

Note: Valves marked in **red** are currently not stocked and will be available soon.

P40 – 40 L/min Monoblock Valves (P40 Series being Superseded by Z50 Series – Check Availability)



Nominal Flow: 40 L/min (See manufacturers catalogue) 1 - 7 Spools Parallel Circuit Common Load Hold Check on P Port				
Max. Port Pressures: P - 250 bar A & B - 300 bar T - 50 bar				
Adjustable Pressure: 120 - 250 bar (Options Available) Preset: 180 bar				
Ports: P - G 1/2 A & B - G 3/8 T - G 1/2				
Order Code	Description	Spools	Spool/Operator	List Each
P40-1000257	02P40-A1A1-GKZ1-11	2	D/A Cylinder / Spring Centred	\$316.00
P40-1000276	02P40-A1K16-GKZ1-11		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	02P40-K16A1-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	
P40-1000274	02P40-K16K16-GKZ1-11		Spool 1 & 2 - 4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool OUT	\$630.00
P40-1000336	05P40-A1A1A1A1A1-GKZ1-11	5	D/A Cylinder / Spring Centred	\$702.00
P40-1001956	06P40-A1A1A1A1A1A1-GKZ1-11	6	D/A Cylinder / Spring Centred	\$854.00
P40-1001965	07P40-A1A1A1A1A1A1A1-GKZ1-11	7	D/A Cylinder / Spring Centred	\$990.00

Note:

- To calculate a price for a valve not listed above add the price of the Spool & Spool Positioner from P40 & Z50 Accessories & Spare Parts on [Page 6.05](#).
- Valves cannot be converted from left inlet to right inlet. A different spool is required.
- All valves have 2 x P & 2 x T ports, side and top.
- K16 Spool/Positioner requires modification to the valve body.**
Contact [Hydraulic Equipment](#) for details if doing this conversion.

Z50 – 50 L/min Monoblock Valves with Metering Spool & Body



Nominal Flow: 50 L/min (See manufacturers catalogue) 1 - 8 Spools Parallel Circuit Common Load Hold Check on P Port				
Max. Port Pressures: P - 315 bar A & B - 315 bar T - 35 bar				
Adjustable Pressure: 120 - 250 bar (Options Available) Preset: 180 bar				
Ports: P - G 1/2 A & B - G 3/8 T - G 1/2				
Order Code	Description	Spools	Spool/Operator	List Each
Z50-1000005	Z50/A1KZ1-G	1	D/A Cylinder / Spring Centred	\$260.00
Z50-1000006	Z50/B1KZ1-G		S/A Cylinder / Spring Centred P → A, Lever Box Position 2 / Spool IN	
Z50-1000004	Z50/C1KZ1-G		S/A Cylinder / Spring Centred P → B, Lever Box Position 1 / Spool OUT	
Z50-1006168	Z50/D1KZ1-G		D/A Motor / Spring Centred	
Z50-1000011	Z50/A8KZ1-G		D/A Cylinder / 3 Position Detent	\$320.00
Z50-1006171	Z50/D8KZ1-G		D/A Motor / 3 Position Detent	
Z50-4109482	Z50/A1KZ1-C-G		D/A Cylinder / Spring Centred + Plug C (4093148)	\$279.00
Z50-4112514	Z50/K16KZ1-G		4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool OUT	\$453.00
Z50-4121108	Z50R/L12KZ1-G (Right Hand Inlet)		4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool IN	
Z50-1000257	02Z50/2x(A1KZ1)-G	2	D/A Cylinder / Spring Centred	\$391.00
Z50-4106244	02Z50/A1KZ1/K16KZ1-G		Spool 1 - D/A Cylinder / Spring Centred Spool 2 - 4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool OUT	\$583.00
Z50-4108908	02Z50/K16KZ1/A1KZ1-G		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	02Z50/2x(K16KZ1)-G		Spool 1 & 2 - 4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool OUT	\$776.00
Z50-1000290	03Z50/3x(A1KZ1)-G	3	D/A Cylinder / Spring Centred	\$534.00
Z50-1000306	04Z50/4x(A1KZ1)-G	4	D/A Cylinder / Spring Centred	\$677.00
Z50-1000336	05Z50/5x(A1KZ1)-G	5	D/A Cylinder / Spring Centred	\$833.00
Z50-1001956	06Z50/6x(A1KZ1)-G	6	D/A Cylinder / Spring Centred	\$976.00
Z50-1001965	07Z50/7x(A1KZ1)-G	7	D/A Cylinder / Spring Centred	\$1,132.00
Z50-4126388	08Z50/8x(A1KZ1)-G	8	D/A Cylinder / Spring Centred	\$1,288.00

Note:

- To calculate a price for a valve not listed above add the price of the Spool &/or Spool Positioner from P40 & Z50 Accessories & Spare Parts on [Page 6.05](#).
- 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.

Z50 – 50 L/min Monoblock Valves with Solenoid/Lever, Metering Spool & Body



- Metering notches on spool & body provide precise control when used manually ensuring accurate operation.
- Unlike others with small levers intended only for emergency use, our lever is large enough to be used comfortably by hand for everyday operation.
- The lever does not move with the spool, resulting in significantly less friction. This design allows for softer centring springs, reducing power requirements and enabling the use of a 53 W solenoid.

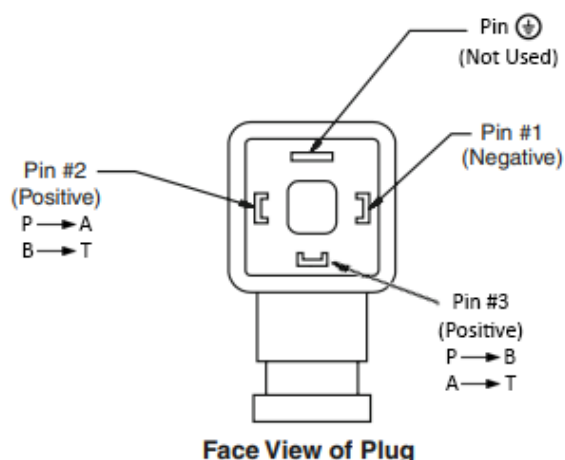
Nominal Flow: 50 L/min (See manufacturers catalogue) 1 - 8 Spools Parallel Circuit Common Load Hold Check on P Port				
Max. Port Pressures: P - 315 bar A & B - 315 bar T - 35 bar				
Adjustable Pressure: 120 - 250 bar (Options Available) Preset: 180 bar				
Ports: P - G 1/2 A & B - G 3/8 T - G 1/2				
Order Code	Description	Spools	Spool/Operator	List Each
Z50/1ESD-4110243	Z50-A1ESDK1-12V-G	1	D/A Cylinder / Spring Centred	\$1,171.00
Z50/1ESD-4109001	Z50-A1ESDK1-24V-G		S/A Cylinder / Spring Centred	
Z50/1ESD-4114155	Z50-B1ESDK1-12V-G		P → A, Lever Box Position 2 / Spool IN	
Z50/1ESD-4115118	Z50-B1ESDK1-24V-G		S/A Cylinder / Spring Centred	
Z50/1ESD-4128283	Z50-C1ESDK1-12V-G		P → B, Lever Box Position 1 / Spool OUT	
Z50/1ESD-4128284	Z50-C1ESDK1-24V-G			
Z50/1ESD-4112382	Z50-D1ESDK1-12V-G		D/A Motor / Spring Centred	
Z50/1ESD-4117511	Z50-D1ESDK1-24V-G			
Z50/1ESD-4110462	02Z50/2x(A1ESDK1)-12V-G	2	D/A Cylinder / Spring Centred	\$2,211.00
Z50/1ESD-4109670	02Z50/2x(A1ESDK1)-24V-G			
Z50/1ESD-4110463	03Z50/3x(A1ESDK1)-12V-G	3	D/A Cylinder / Spring Centred	\$3,265.00
Z50/1ESD-4109671	03Z50/3x(A1ESDK1)-24V-G			
Z50/1ESD-4110087	04Z50/4x(A1ESDK1)-12V-G	4	D/A Cylinder / Spring Centred	\$4,318.00
Z50/1ESD-4113253	04Z50/4x(A1ESDK1)-24V-G			
Z50/1ESD-4112134	05Z50/5x(A1ESDK1)-12V-G	5	D/A Cylinder / Spring Centred	\$5,397.00
Z50/1ESD-4112553	05Z50/5x(A1ESDK1)-24V-G			
Z50/1ESD-4112133	06Z50/6x(A1ESDK1)-12V-G	6	D/A Cylinder / Spring Centred	\$6,451.00
Z50/1ESD-4115108	06Z50/6x(A1ESDK1)-24V-G			
Z50/1ESD-4113419	07Z50/7x(A1ESDK1)-12V-G	7	D/A Cylinder / Spring Centred	\$7,517.00
Z50/1ESD-4115136	07Z50/7x(A1ESDK1)-24V-G			
Z50/1ESD-4128421	08Z50/8x(A1ESDK1)-12V-G	8	D/A Cylinder / Spring Centred	\$8,583.00
Z50/1ESD-4128422	08Z50/8x(A1ESDK1)-24V-G			

Note:

- To calculate a price for a valve not listed above add the price of the Spool from P40 / Z50 Accessories & Spare Parts on [Page 6.05](#).
- Valves supplied with standard DIN Plug(s). [Wiring Information on Page 6.05](#).
- Valves cannot be converted from left inlet to right inlet. A different spool is required.
- Z50/1ESD 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.
- Internal Spool Leakage. A or B → T is 15 cm³/min (0.91 in³/min) to 25 cm³/min (1.1 in³/min) at Δ p 100 bar @ 40 °C. This must be considered when designing a circuit and load holding valves may be required.

Z50/1ESD DIN Plug Wiring Information

Nominal Voltage Tolerance..... +/- 10%
 Power Rating 53 W
 Current..... 12 V = 4.5 A; 24 V = 2.25 A
 Coil Insulation..... Class H
 Duty Cycle..... 100%



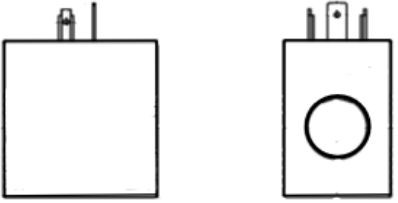
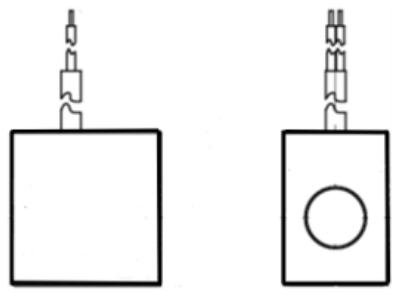
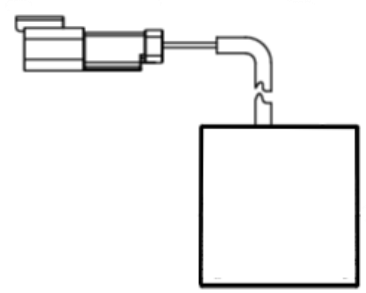
P40 / Z50 Accessories & Spare Parts

Order Code	Description	List Each
Z50 Spools		
4122810	Spool A - Z50 - D/A Cylinder	\$88.00
4107641	Spool B - Z50 - S/A Cylinder (P → A), Lever Box Position 2 / Spool IN	\$120.00
4125827	Spool C - Z50 - S/A Cylinder (P → B), Lever Box Position 1 / Spool OUT	\$88.00
4123440	Spool D - Z50 - D/A Motor	\$88.00
4107740	Spool K - Z50 - 4 Position Float (Use only with Spool Positioner 16 - See Notes)	\$168.00
4121789	Spool L - Z50R - 4 Position Float (Use only with Spool Positioner 12 - P/N 4121829)	\$168.00
Z50/1ESD Spools		
4109002	Spool A - Z50/1ESD - D/A Cylinder	\$106.00
4110799	Spool B - Z50/1ESD - S/A Cylinder (P → A), Lever Box Position 2 / Spool IN	\$106.00
4110800	Spool C - Z50/1ESD - S/A Cylinder (P → B), Lever Box Position 1 / Spool OUT	\$106.00
4110642	Spool D - Z50/1ESD - D/A Motor	\$106.00
P40 Spools		
1000043	Spool A - P40 - D/A Cylinder	\$82.00
4107957	Spool B - P40 - S/A Cylinder (P → A), Lever Box Position 2 / Spool IN	\$112.00
1000044	Spool C - P40 - S/A Cylinder (P → B), Lever Box Position 1 / Spool OUT	\$82.00
1000045	Spool D - P40 - D/A Motor	\$82.00
4099399	Spool K - P40 - 4 Position Float (Use only with Spool Positioner 16 - See Notes)	\$147.00
1000081	Spool AR - P40 - D/A Cylinder	\$82.00

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Order Code	Description	List Each
Spool Positioners (Side B)		
4093162	Spool Positioner 1 - P40 / Z50 - 3 Position Spring Centred	\$45.00
4093172	Spool Positioner 2 - P40 / Z50 - 3 Position, Spring Centred / Detent Detent P → B, Lever Box Pos. 1 / Spool OUT	\$69.00
4093173	Spool Positioner 3 - P40 / Z50 - 3 Position, Spring Centred / Detent Detent P → A, Lever Box Pos. 2 / Spool IN	\$69.00
4093174	Spool Positioner 4 - P40 / Z50 - 2 Position, Spring Centred, 0 & 2 P → A, Lever Box Pos. 2 / Spool IN	\$45.00
4093175	Spool Positioner 5 - P40 / Z50 - 2 Position, Spring Centred, 0 & 1 P → B, Lever Box Pos. 1 / Spool OUT	\$45.00
4093160	Spool Positioner 8 - P40 / Z50 - 3 Position Detent	\$60.00
4093161	Spool Positioner 9 - P40 / Z50 - 2 Position Detent, 0 & 1 Detent P → B, Lever Box Position 1 / Spool OUT	\$60.00
4093163	Spool Positioner 10 - P40 / Z50 - 2 Position Detent, 0 & 2 Detent P → A, Lever Box Pos. 2 / Spool IN	\$60.00
4121829	Spool Positioner 12 - Z50R - 4 Position Float (Use only with Spool L - P/N 4121789) Spring Centred / Detent on Float. Detent - Lever Box Position 3 / Spool IN	\$156.00
4093171	Spool Positioner 16 - P40 / Z50 - 4 Position Float (Use only with Spool K) Spring Centred / Detent on Float. Detent - Lever Box Position 3 / Spool OUT (Old Design - Can be used with Microswitch Kit P/N 4114236)	\$156.00
4107739	Spool Positioner 16 - P40 / Z50 - 4 Position Float (Use only with Spool K) Spring Centred / Detent on Float. Detent - Lever Box Position 3 / Spool OUT (New Design - Can not be used with Microswitch Kit P/N 4114236)	\$156.00
4093702	Spool Positioner 1H - Proportional Hydraulic Control - P40 / Z50 (G 1/4 Ports)	\$196.00
4103491	Spool Positioner 1P - On / Off Pneumatic Control - P40 / Z50 (1/8-27 NPTF Ports)	\$235.00
N/A	Spool Positioner 1EP - On / Off Electro-Pneumatic Control (For each spool order)	N/A
	1 pcs P/N 4103491 Spool Positioner 1P (see above)	
	2 pcs P/N 3V1-06-01-1/8 NPT 3/2 Pneumatic Valve - 1/8-27 NPT (see below)	
	2 pcs Coil (see below)	
3V1-06-01-1/8 NPT	3/2 Pneumatic Valve - 1/8-27 NPT for Spool Positioner 1EP	\$44.00
3V1-06-01-D12-D	Coil 12V/4W DC DIN with Plug	\$26.00
3V1-06-01-D24-D	Coil 24V/4W DC DIN with Plug	\$26.00
3V1-06-01-DLP-DC	DIN Light Plug DC (Spare Part)	\$12.00
3V1-06-01-D12-W	Coil 12V/4W DC Wire – To convert to Deutsch use DT04-2P-0460 (Customer to fit)	\$14.00
3V1-06-01-D24-W	Coil 24V/4W DC Wire – To convert to Deutsch use DT04-2P-0460 (Customer to fit)	\$14.00
DT04-2P-0460	Deutsch Receptacle - Female (Includes 2 pcs Solid Pin) (Customer to fit)	\$12.00
0460-215-16141x10	Deutsch Receptacle Solid Pin (Male) - Pack of 10 pcs (Spare Parts)	\$33.00
DT06-2S-0462	Deutsch Plug - Male (Includes 2 pcs Solid Socket) (To connect to DT04-2P-0460)	\$15.00
0462-209-16141x10	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)	\$50.00

Wiring Information on Page 5.10 & Page 9.13.

 DIN without Plug fitted (Plug supplied with Coil)	 Wire	 Wire with DT04-2P-0460 (Customer to fit)
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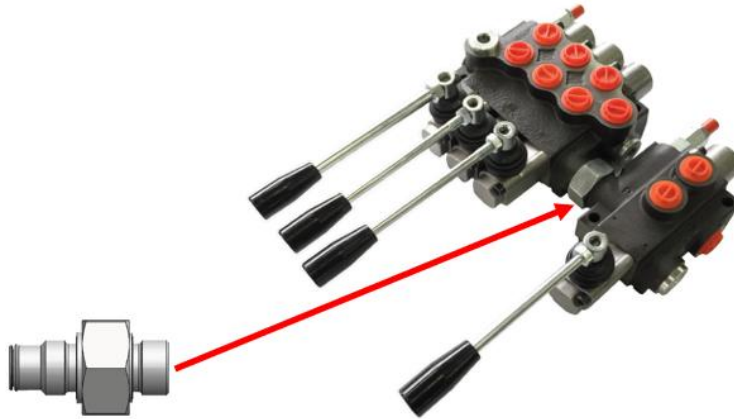
Order Code	Description	List Each
By-Pass Gallery (N Port) Plugs		
4093148	Plug C - Closed Centre - P40 / Z50	\$19.00
4093146	Sleeve C2 - High Pressure Carry Over / Power Beyond - P40 / Z50 (G 1/2 Port)	\$28.00
4112499	Sleeve C2D - High Pressure Carry Over / Power Beyond - P40 / Z50 (G 1/2 Male Threads) See Page 6.09 .	\$130.00
Relief Valve Parts		
4125633	Plug SVP (Main Relief Valve Cavity Plug) - P40 / Z50 / P80 / Z80	\$39.00
4093120	Main Relief Valve - P40 / Z50 / P80 / Z80 (120 - 250 bar) (22 mm Hex) (Original Design)	\$117.00
4124492	Main Relief Valve - P40 / Z50 / P80 / Z80 – Code D2 (50 - 120 bar) (20 mm Hex)	\$117.00
4123439	Main Relief Valve - P40 / Z50 / P80 / Z80 – Code D3 (120 - 250 bar) (20 mm Hex) (Standard)	\$117.00
4125846	Main Relief Valve - P40 / Z50 / P80 / Z80 – Code D4 (220 - 315 bar) (20 mm Hex)	\$117.00
Microswitch Parts		
4109518	Microswitch Kit 1E - P40 / Z50 - Spool / Positioner A1 & D1 (1 per spool) (Microswitch not included)	\$56.00
4109519	Microswitch Kit 1E - P40 / Z50 - Spool / Positioner B1 (1 per spool) (Microswitch not included)	\$56.00
4109520	Microswitch Kit 1E - P40 / Z50 - Spool / Positioner C1 (1 per spool) (Microswitch not included)	\$56.00
4114236	Microswitch Kit 1E - P40 / Z50 - Spool / Positioner K16 (1 per spool) Can only be used with Spool Positioner 16 P/N 4093171 which is being phased out. Check for availability. (Microswitch not included)	\$56.00
673614	Microswitch - IP67, SPDT, 250V AC, 30V DC (1 per spool) Wiring Information on Page 6.09 .	\$60.00
P40 / Z50 Lever Parts		
4093131	Lever - P40 / Z50 (M8 - 1.25 x 170 mm LOA)	\$17.00
4093217	Lever Box - P40 / Z50 - KZ (Lever Box, PVC Boot, SHCS) (Standard)	\$56.00
1000169	PVC Boot - Lever Box P40 / Z50(1ESD) / P80 / Z80 / PC70 / PC100 (Standard)	\$12.00
4109045	Rubber Boot - Lever Box P40 / Z50(1ESD) / P80 / Z80 / PC70 / PC100	\$20.00
4118501	Joystick Assembly - P40 / Z50 (J+1 or J+3)	\$300.00
4093048	Lever - P80 / Z80 / PC70 / PC100 / Joystick (M10 - 1.5 x 180 mm LOA)	\$20.00
4093561	PVC Boot - Joystick P40 / Z50 / P80 / Z80 / PC70 / PC100	\$78.00
Z50/1ESD Lever Parts		
4113008	Lever Box Assembly - Z50/1ESDK1 (Lever, Lever Box, PVC Boot, SHCS)	\$157.00
1000169	PVC Boot - Lever Box P40 / Z50(1ESD) / P80 / Z80 / PC70 / PC100 (Standard)	\$12.00
4109045	Rubber Boot - Lever Box P40 / Z50(1ESD) / P80 / Z80 / PC70 / PC100	\$20.00
Z50/1ESD Coils		
4128325	Coil Z50/1ESD 12V/53W DC DIN with standard Plug	\$495.00
4115426	Coil Z50/1ESD 24V/53W DC DIN with standard Plug	\$495.00
4128380	DIN Plug - Z50/1ESD	\$32.00

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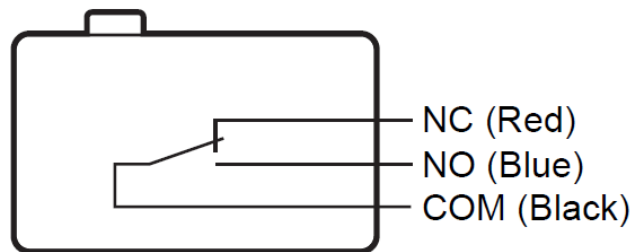
Order Code	Description	List Each
P40 / Z50 Seal Kits		
4093101	Seal Kit - P40 / Z50	\$46.00
4093095	Seal Kit - 02P40 / Z50	\$62.00
4093096	Seal Kit - 03P40 / Z50	\$77.00
4093097	Seal Kit - 04P40 / Z50	\$91.00
4093098	Seal Kit - 05P40 / Z50	\$108.00
4093099	Seal Kit - 06P40 / Z50	\$122.00
4103815	Seal Kit - 07P40 / Z50	\$139.00
4128458	Seal Kit - 08Z50	\$155.00
4110440	Seal Kit - Spool Positioner 1H - Proportional Hydraulic Control P40 / Z50 / P80 / Z80 / PC70 / PC100 <i>For Old Design - Square Body & Flush Ports - See Page 6.09.</i>	\$21.00
4128803	Seal Kit - Spool Positioner 1H - Proportional Hydraulic Control P40 / Z50 / P80 / Z80 / PC70 / PC100 <i>For New Design – Round Body & Port Sockets - See Page 6.09.</i>	\$21.00
4110375	Seal Kit – Spool Positioner 1P - On / Off Pneumatic Control P40 / Z50 / P80 / Z80 / PC70 / PC100	\$26.00
Z50/1ESD Seal Kits		
4128289	Seal Kit - Z50/1ESD	\$45.00
4128290	Seal Kit - 02Z50/1ESD	\$63.00
4128291	Seal Kit - 03Z50/1ESD	\$82.00
4127261	Seal Kit - 04Z50/1ESD	\$98.00
4128292	Seal Kit - 05Z50/1ESD	\$115.00
4128293	Seal Kit - 06Z50/1ESD	\$133.00
4128294	Seal Kit - 07Z50/1ESD	\$150.00
4128462	Seal Kit - 08Z50/1ESD	\$167.00

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Plug C2D – HPCO (High Pressure Carry Over / Power Beyond) (P40 & Z50 Only)



Microswitch Wiring Information



Spool Positioner 1H - Proportional Hydraulic Control Identification



New Design



Old Design

Z80 – 80 L/min Monoblock Valves with Metering Spool & Body



Nominal Flow: 80 L/min (See manufacturers catalogue) 1 - 6 Spools Parallel Circuit Individual Load Hold Check on All Ports				
Max. Port Pressures: P - 315 bar A & B - 315 bar T - 35 bar				
Adjustable Pressure: 120 - 250 bar (Options Available) Preset: 180 bar				
Ports: P - G 1/2 A & B - G 1/2 T - G 3/4				
Order Code	Description	Spools	Spool/Operator	List Each
Z80-1000830	Z80/A1KZ1-G	1	D/A Cylinder / Spring Centred	\$404.00
Z80-1000831	Z80/B1KZ1-G		S/A Cylinder / Spring Centred	
Z80-1000832	Z80/C1KZ1-G		P → A, Lever Box Position 2 / Spool IN	
Z80-4090608	Z80/D1KZ1-G		S/A Cylinder / Spring Centred	
Z80-1000838	Z80/A8KZ1-G		P → B, Lever Box Position 1 / Spool OUT	\$464.00
Z80-1005959	Z80/D8KZ1-G		D/A Motor / 3 Position Detent	
Z80-1000835	Z80/L12KZ1-G		D/A Motor / 3 Position Detent	\$593.00
Z80-1000999	2Z80/1/2x(A1KZ1)-G	2	4 Position Float Spring Centred / Detent on Float Detent - Lever Box Position 3 / Spool IN	\$599.00
Z80-1001024	3Z80/1/3x(A1KZ1)-G	3	D/A Cylinder / Spring Centred	\$820.00
Z80-4119700	4Z80(193-FV)/1/4x(A1KZe1)-G	4	D/A Cylinder / Spring Centred MRV Preset at 193 bar and steel cap nut. KZe Lever Box - SUS Hinge Pin & Rubber Boot.	\$1,015.00
Z80-4119701	4Z80(193-FV)/1/4x(A1PKZe1)-G		D/A Cylinder / Spring Centred plus Pneumatic Control MRV Preset at 193 bar and steel cap nut. KZe Lever Box - SUS Hinge Pin & Rubber Boot.	\$1,955.00
Z80-1001134	5Z80/1/5x(A1KZ1)-G	5	D/A Cylinder / Spring Centred	\$1,236.00
Z80-1001139	6Z80/1/6x(A1KZ1)-G	6	D/A Cylinder / Spring Centred	\$1,496.00

Note:

- To calculate a price for a valve not listed above add the price of the Spool &/or Spool Positioner P80 & Z80 Accessories & Spare Parts on [Page 6.11](#).
- Valves cannot be converted from left inlet to right inlet. A different spool is required.
- Z80 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.

P80 / Z80 Accessories & Spare Parts

Order Code	Description	List Each
Z80 Spools		
4124611	Spool A - Z80 - D/A Cylinder	\$97.00
4105558	Spool B - Z80 - S/A Cylinder (P → A), Lever Box Position 2 / Spool IN	\$97.00
4105559	Spool C - Z80 - S/A Cylinder (P → B), Lever Box Position 1 / Spool OUT	\$97.00
4124612	Spool D - Z80 - D/A Motor	\$97.00
4105561	Spool L – Z80 - 4 Position Float (Use only with Spool Positioner 12 - P/N 4093168)	\$97.00
4106996	Spool AR - Z80 - D/A Cylinder	\$97.00
P80 Spools		
1000853	Spool A - P80 - D/A Cylinder	\$90.00
1000854	Spool B - P80 - S/A Cylinder (P → A), Lever Box Position 2 / Spool IN	\$90.00
1000855	Spool C - P80 - S/A Cylinder (P → B), Lever Box Position 1 / Spool OUT	\$90.00
1000856	Spool D - P80 - D/A Motor	\$90.00
1000883	Spool AR - P80 - D/A Cylinder	\$90.00
Spool Positioners (Side B)		
4093150	Spool Positioner 1 - P80 / Z80 / PC70 / PC100 - 3 Position Spring Centred	\$45.00
4093153	Spool Positioner 2 - P80 / Z80 / PC70 / PC100 - 3 Position, Spring Centred / Detent Detent P → B, Lever Box Position 1 / Spool OUT	\$69.00
4093154	Spool Positioner 3 - P80 / Z80 / PC70 / PC100 - 3 Position, Spring Centred / Detent Detent P → A, Lever Box Position 2 / Spool IN	\$69.00
4093816	Spool Positioner 4 - P80 / Z80 / PC70 / PC100 - 2 Position, Spring Centred, 0 & 2 P → A, Lever Box Position 2 / Spool IN	\$45.00
4099054	Spool Positioner 5 - P80 / Z80 / PC70 / PC100 - 2 Position, Spring Centred, 0 & 1 P → B, Lever Box Position 1 / Spool OUT	\$45.00
4093156	Spool Positioner 8 - P80 / Z80 / PC70 / PC100 - 3 Position Detent	\$60.00
4093157	Spool Positioner 9 - P80 / Z80 / PC70 / PC100 - 2 Position Detent, 0 & 1 Detent P → B, Lever Box Position 1 / Spool OUT	\$60.00
4093151	Spool Positioner 10 - P80 / Z80 / PC70 / PC100 - 2 Position Detent, 0 & 2 Detent P → A, Lever Box Position 2 / Spool IN	\$60.00
4093168	Spool Positioner 12 – P80 / Z80 - 4 Position Float (Only use with Spool L - P/N 4105561) Spring Centred / Detent on Float. Detent - Lever Box Position 3 / Spool OUT	\$156.00
4093696	Spool Positioner 1H - Proportional Hydraulic Control - P80 / Z80 / PC70 / PC100 (G 1/4 Ports)	\$196.00
4103492	Spool Positioner 1P - On / Off Pneumatic Control - P80 / Z80 / PC70 / PC100 (1/8-27 NPTF Ports)	\$235.00
N/A	Spool Positioner 1EP - On / Off Electro-Pneumatic Control (For each spool order)	N/A
	1 pcs P/N 4103492 Spool Positioner 1P (see above)	
	2 pcs P/N 3V1-06-01-1/8 NPT 3/2 Pneumatic Valve - 1/8-27 NPT (see below)	
	2 pcs Coil (see below)	
3V1-06-01-1/8 NPT	3/2 Pneumatic Valve - 1/8-27 NPT for Spool Positioner 1EP	\$44.00
3V1-06-01-D12-D	Coil 12V/4W DC DIN with Plug	\$26.00
3V1-06-01-D24-D	Coil 24V/4W DC DIN with Plug	\$26.00
3V1-06-01-DLP-DC	DIN Light Plug DC (Spare Part)	\$12.00
3V1-06-01-D12-W	Coil 12V/4W DC Wire – To convert to Deutsch use DT04-2P-0460 (Customer to fit)	\$14.00
3V1-06-01-D24-W	Coil 24V/4W DC Wire – To convert to Deutsch use DT04-2P-0460 (Customer to fit)	\$14.00
DT04-2P-0460	Deutsch Receptacle - Female (Includes 2 pcs Solid Pin) (Customer to fit)	\$12.00
0460-215-16141x10	Deutsch Receptacle Solid Pin (Male) - Pack of 10 pcs (Spare Parts)	\$33.00
DT06-2S-0462	Deutsch Plug - Male (Includes 2 pcs Solid Socket) (To connect to DT04-2P-0460)	\$15.00
0462-209-16141x10	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)	\$50.00
Wiring Information on Page 5.10 & Page 9.13.		

Note: See Page 6.06 or Page 6.14 for drawings of Spool Positioner 1EP Coils.

Continued Next Page

Order Code	Description	List Each
By-Pass Gallery (N Port) Plugs		
4093138	Plug C - Closed Centre - P80 / Z80	\$19.00
4093057	Sleeve C2 - High Pressure Carry Over / Power Beyond - P80 / Z80 (G 3/4 Port)	\$28.00
Relief Valve Parts		
4125633	Plug SVP (Main Relief Valve Cavity Plug) - P40 / Z50 / P80 / Z80	\$39.00
4093120	Main Relief Valve - P40 / Z50 / P80 / Z80 (120 - 250 bar) (22 mm Hex) (Original Design)	\$117.00
4124492	Main Relief Valve - P40 / Z50 / P80 / Z80 - D2 (50 - 120 bar) (20 mm Hex)	\$117.00
4123439	Main Relief Valve - P40 / Z50 / P80 / Z80 - D3 (120 - 250 bar) (20 mm Hex) (Standard now Fitted)	\$117.00
4125846	Main Relief Valve - P40 / Z50 / P80 / Z80 - D4 (220 - 315 bar) (20 mm Hex)	\$117.00
Microswitch Parts		
4109521	Microswitch Kit 1E - P80 / Z80 / PC70 / PC100 - Spool / Positioner A1 & D1 (1 per spool) (Microswitch not included)	\$56.00
4109522	Microswitch Kit 1E - P80 / Z80 / PC70 / PC100 - Spool / Positioner B1 (1 per spool) (Microswitch not included)	\$56.00
4109523	Microswitch Kit 1E - P80 / Z80 / PC70 / PC100 - Spool / Positioner C1 (1 per spool) (Microswitch not included)	\$56.00
673614	Microswitch - IP67, SPDT, 250V AC, 30V DC (1 per spool) Wiring Information on Page 6.09 .	\$60.00
Lever Parts		
4093048	Lever - P80 / Z80 / PC70 / PC100 / Joystick (M10 - 1.5 x 180 mm LOA)	\$20.00
4093211	Lever Box - P80 / Z80 / PC70 - KZ (Lever Box, PVC Boot, SHCS) (Standard)	\$56.00
4119600	Lever Box - P80 / Z80 / PC70 - KZe (Lever Box with SUS Hinge Pin, Rubber Boot, SHCS)	\$101.00
1000169	PVC Boot - Lever Box P40 / Z50(1ESD) / P80 / Z80 / PC70 / PC100 (Standard)	\$12.00
4109045	Rubber Boot - Lever Box P40 / Z50(1ESD) / P80 / Z80 / PC70 / PC100	\$20.00
4093443	Joystick Assembly - P80 / Z80 (J+1 or J+3)	\$300.00
4093561	PVC Boot - Joystick P40 / Z50 / P80 / Z80 / PC70 / PC100	\$78.00
Seal Kits		
4093102	Seal Kit - P80 / Z80	\$46.00
4093093	Seal Kit - 2P80 / Z80	\$84.00
4093100	Seal Kit - 3P80 / Z80	\$108.00
4093091	Seal Kit - 4P80 / Z80	\$130.00
4093092	Seal Kit - 5P80 / Z80	\$153.00
4093094	Seal Kit - 6P80 / Z80	\$177.00
4110440	Seal Kit - Spool Positioner 1H - Proportional Hydraulic Control P40 / Z50 / P80 / Z80 / PC70 / PC100 For Old Design - Square Body & Flush Ports	\$21.00
4128803	Seal Kit - Spool Positioner 1H - Proportional Hydraulic Control P40 / Z50 / P80 / Z80 / PC70 / PC100 For New Design – Round Body & Port Sockets	\$21.00
4110375	Seal Kit - Spool Positioner 1P - On / Off Pneumatic Control P40 / Z50 / P80 / Z80 / PC70 / PC100	\$26.00

Spool Positioner 1H - Proportional Hydraulic Control Identification



New Design



Old Design

P120 – 160 L/min Monoblock Valves with Metering Spool & Body



Nominal Flow: 160 L/min <i>(See manufacturers catalogue)</i>				
1 - 4 Spools Parallel Circuit Common Load Hold Check on P Port				
Max. Port Pressures: P - 315 bar A & B - 315 bar T - 35 bar				
Adjustable Pressure: 50 - 315 bar Preset: 180 bar				
Ports: P - G 1 A & B - G 1 T - G 1				
Order Code	Description	Spools	Spool/Operator	List Each
P120-1002920	P120/A1KZ1-G	1	D/A Cylinder / Spring Centred	\$859.00
P120-4101803	P120/B1KZ1-G		S/A Cylinder / Spring Centred P → A, Lever Box Position 2 / Spool IN	
P120-4105727	P120/C1KZ1-G		S/A Cylinder / Spring Centred P → B, Lever Box Position 1 / Spool OUT	
P120-4092968	P120/D1KZ1-G		D/A Motor / Spring Centred	
P120-1002923	P120/A8KZ1-G		D/A Cylinder / 3 Position Detent	\$934.00
P120-4101163	P120/D8KZ1-G		D/A Motor / 3 Position Detent	
P120-4092562	02P120/2x(A1KZ1)-G	2	D/A Cylinder / Spring Centred	\$1,197.00
P120-4092566	03P120/3x(A1KZ1)-G	3	D/A Cylinder / Spring Centred	\$1,587.00
P120-4096785	04P120/4x(A1KZ1)-G	4	D/A Cylinder / Spring Centred	\$1,990.00

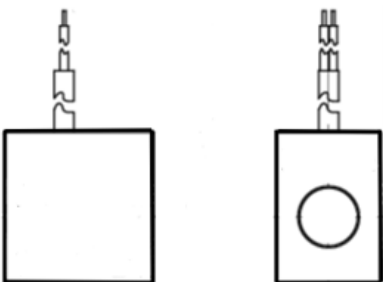
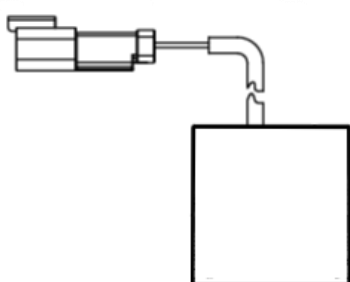
Note:

- To calculate a price for a valve not listed above add the price of the Spool &/or Spool Positioner from P120 Accessories & Spare Parts on [Page 6.14](#).
- 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.

P120 Accessories & Spare Parts

Order Code	Description	List Each
Spools		
1002927	Spool A - P120 - D/A Cylinder	\$119.00
4093354	Spool B - P120 - S/A Cylinder (P → A), Lever Box Position 2 / Spool IN	\$119.00
4100010	Spool C - P120 - S/A Cylinder (P → B), Lever Box Position 1 / Spool OUT	\$119.00
4092942	Spool D - P120 - D/A Motor	\$119.00
Spool Positioners (Side B)		
4099875	Spool Positioner 1 - P120 - 3 Position Spring Centred	\$51.00
4100011	Spool Positioner 2 - P120 - 3 Position, Spring Centred / Detent Detent P → B, Lever Box Position 1 / Spool OUT	\$91.00
4100012	Spool Positioner 3 - P120 - 3 Position, Spring Centred / Detent Detent P → A, Lever Box Position 2 / Spool IN	\$91.00
4100060	Spool Positioner 4 - P120 - 2 Position, Spring Centred, 0 & 2 P → A, Lever Box Position 2 / Spool IN	\$51.00
4103771	Spool Positioner 5 - P120 - 2 Position, Spring Centred, 0 & 1 P → B, Lever Box Position 1 / Spool OUT	\$51.00
4093158	Spool Positioner 8 - P120 - 3 Position Detent	\$75.00
4103772	Spool Positioner 9 - P120 - 2 Position Detent, 0 & 1 Detent P → B, Lever Box Position 1 / Spool OUT	\$75.00
4100732	Spool Positioner 10 - P120 - 2 Position Detent, 0 & 2 Detent P → A, Lever Box Position 2 / Spool IN	\$75.00
4103880	Spool Positioner 1H - Proportional Hydraulic Control - P120 (G 1/4 Ports)	\$261.00
4098867	Spool Positioner 1P - On / Off Pneumatic Control - P120 (1/8-27 NPTF Ports)	\$260.00
N/A	Spool Positioner 1EP - On / Off Electro-Pneumatic Control (For each spool order)	N/A
	1 pcs P/N 4098867 Spool Positioner 1P (see above)	
	2 pcs P/N 3V1-06-01-1/8 NPT 3/2 Pneumatic Valve - 1/8-27 NPT (see below)	
	2 pcs Coil (see below)	
3V1-06-01-1/8 NPT	3/2 Pneumatic Valve - 1/8-27 NPT for Spool Positioner 1EP	\$44.00
3V1-06-01-D12-D	Coil 12V/4W DC DIN with Plug	\$26.00
3V1-06-01-D24-D	Coil 24V/4W DC DIN with Plug	\$26.00
3V1-06-01-DLP-DC	DIN Light Plug DC (Spare Part)	\$12.00
3V1-06-01-D12-W	Coil 12V/4W DC Wire – To convert to Deutsch use DT04-2P-0460 (Customer to fit)	\$14.00
3V1-06-01-D24-W	Coil 24V/4W DC Wire – To convert to Deutsch use DT04-2P-0460 (Customer to fit)	\$14.00
DT04-2P-0460	Deutsch Receptacle - Female (Includes 2 pcs Solid Pin) (Customer to fit)	\$12.00
0460-215-16141x10	Deutsch Receptacle Solid Pin (Male) - Pack of 10 pcs (Spare Parts)	\$33.00
DT06-2S-0462	Deutsch Plug - Male (Includes 2 pcs Solid Socket) (To connect to DT04-2P-0460)	\$15.00
0462-209-16141x10	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)	\$50.00

Wiring Information on Page 5.10 & Page 9.13.

 DIN without Plug fitted (Plug supplied with Coil)	 Wire	 Wire with DT04-2P-0460 (Customer to fit)
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Continued Next Page

Order Code	Description	List Each
By-Pass Gallery (N Port) Plugs		
4093139	Plug C - Closed Centre - P120	\$23.00
4093144	Sleeve C2 - High Pressure Carry Over / Power Beyond - P120 (G 1 Port)	\$33.00
Relief Valve Parts		
4110139	Plug SVP (Main Relief Valve Cavity Plug) - P120	\$55.00
4109057	Main Relief Valve - P120 (50 - 315 bar)	\$156.00
Lever Parts		
4098498	Lever - P120 (M12 - 1.75 x 260 mm LOA)	\$23.00
4102378	Lever Box - P120 - KZ (Lever Box, PVC Boot, SHCS) (Standard)	\$64.00
1002968	PVC Boot - P120 (Standard)	\$24.00
Seal Kits		
4093773	Seal Kit - P120	\$51.00
4103779	Seal Kit - 02P120	\$90.00
4103781	Seal Kit - 03P120	\$115.00
4103783	Seal Kit - 04P120	\$141.00
4110441	Seal Kit - Spool Positioner 1H - Proportional Hydraulic Control - P120	\$30.00
4110393	Seal Kit - Spool Positioner 1P - On / Off Pneumatic Control - P120	\$37.00

P81 Log Splitter Valves



Nominal Inlet Flow: P81-A2-G = 80 L/min P81-Rs-G = 16 L/min				
Max. Port Pressures: P - 250 bar A & B - 300 bar T - 10 bar				
Main Relief Valve Adjustable Pressure: 50 - 250 bar Preset: 150 bar				
Pressure Release Detent Adjustable Pressure: 70 – 140 bar Preset: 70 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.	\$391.00
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.	\$495.00

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.**

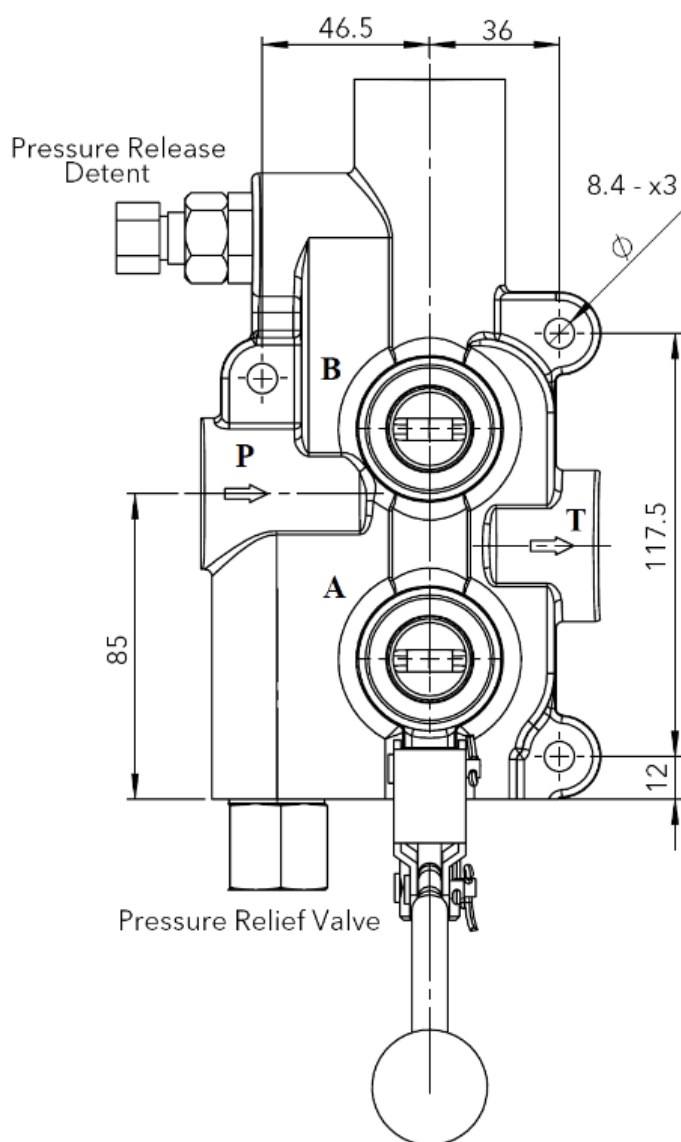
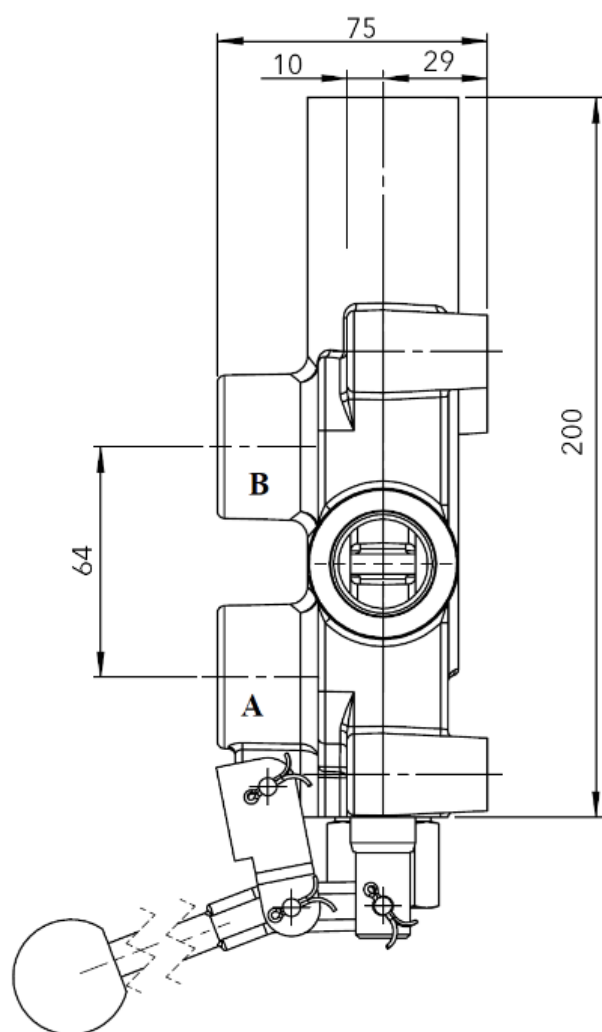
The B Port hose needs to be larger due to high Re-Gen flows.

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

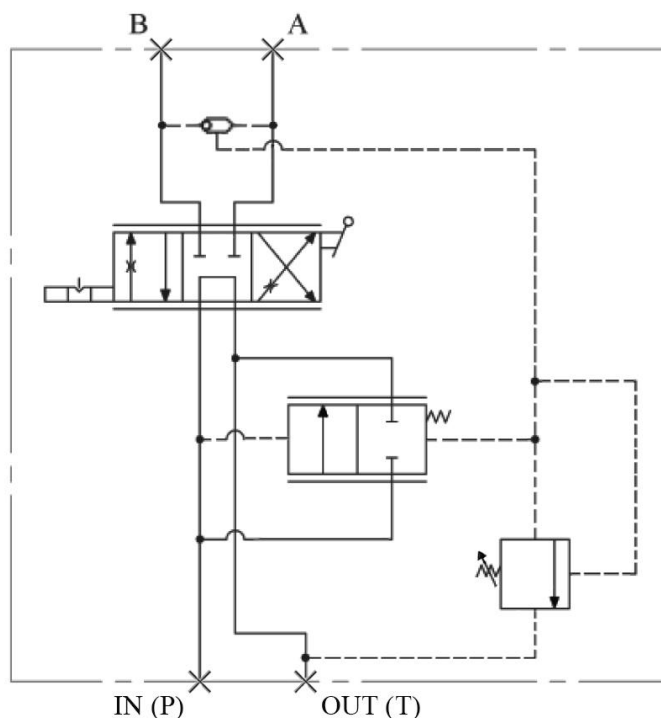
The detent release pressure is adjustable by first loosening the locking nut. Turning the adjusting screw clockwise will increase the detent release pressure and counterclockwise will decrease the pressure.

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 Valves with Pressure Compensated By-Pass Flow Control



Max. Inlet Flow: 70 L/min 1 Spool Only No Load Hold Check on P Port				
Max. Port Pressures: IN (P) - 210 bar A & B - 210 bar OUT (T) - 25 bar				
Adjustable Pressure: 50 - 210 bar Preset: 180 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/G/F1	22		\$716.00
P70LS-4114383	P70LS/120/TM12/G/F1	45		
P70LS-4114390	P70LS/120/TM18/G/F1	68		
P70LS-4114389	P70LS/120/OM6/G/F1	22		
P70LS-4114386	P70LS/120/OM12/G/F1	45		
P70LS-4114385	P70LS/120/OM18/G/F1	68		

The **P70LS series** is a 4-port, 3-position directional control valve featuring an integrated pressure-compensated by-pass flow control valve and an adjustable pilot-operated pressure relief valve — all in one compact, reliable package.

Engineered for precision, the manual lever enables proportional metering of flow from either work port, ensuring consistent and smooth control of hydraulic cylinders or motors regardless of load fluctuations. The **friction detent** mechanism holds the spool in position and features a detent groove that clearly indicates the neutral position.

Note: P70LS valves are open By-Pass and do not have HPCO (High Pressure Carry Over / Power Beyond) capability, the T port must be connected back to tank.

Pressure Gauges & Test Box

Description	7.02
63 mm Bottom Entry	7.03
63 mm Rear Entry - Flange Mount	7.03
63 mm Rear Entry - Clamp Mount	7.04
100 mm Bottom Entry	7.05
100 mm Rear Entry - Flange Mount	7.05
Special Gauges	7.06
Accessories & Spare Parts	7.06
Test Boxes	7.06



Description

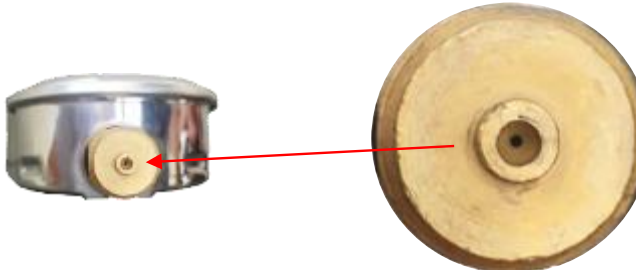
Our high-quality liquid-filled gauges feature a polished 304 stainless steel case for protection in harsh environments. Glycerine oil filled with inbuilt snubber for adverse service conditions where pulsating and vibration exists. Suitable for liquid or non-combustible gaseous media (not Oxygen).

Main Features:

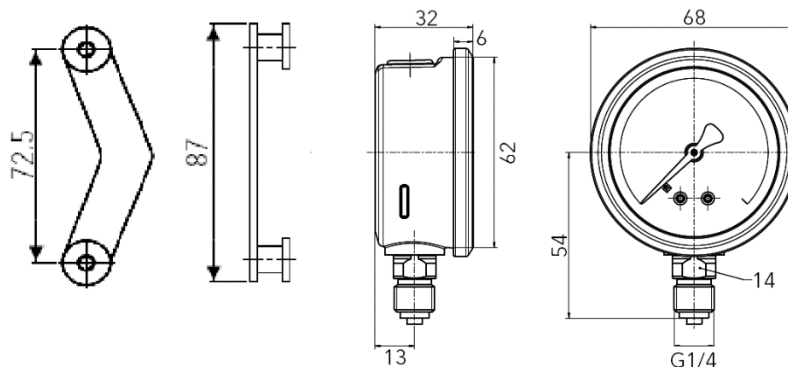
- Dual scale dial in bar/psi.
- Glycerine Oil Filled.
- Polished 304 stainless steel case with vent plug.
- Phosphor bronze bourdon tube.
- Polycarbonate window.
- Black Aluminium pointer.
- One-piece copper alloy connection.
- Inbuilt snubber machined into copper alloy connection. Not screwed or pressed.
- 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 photos below show the difference and how to identify them.

One-piece connection	Two-piece connection
 Screws secure copper alloy connection. No thread and min. dia. is 13 mm. Square for spanner.	 Thread dia. approx. 8 mm and is under tension with pressure in gauge. Hex for spanner.
 Inbuilt snubber machined into copper alloy connection. Not screwed or pressed.	

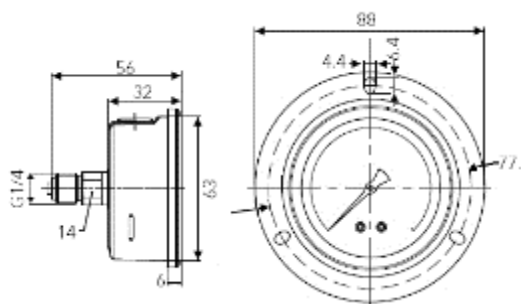
63 mm Bottom Entry - G 1/4 B (DIN16288 / EN 837-1) Connection



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

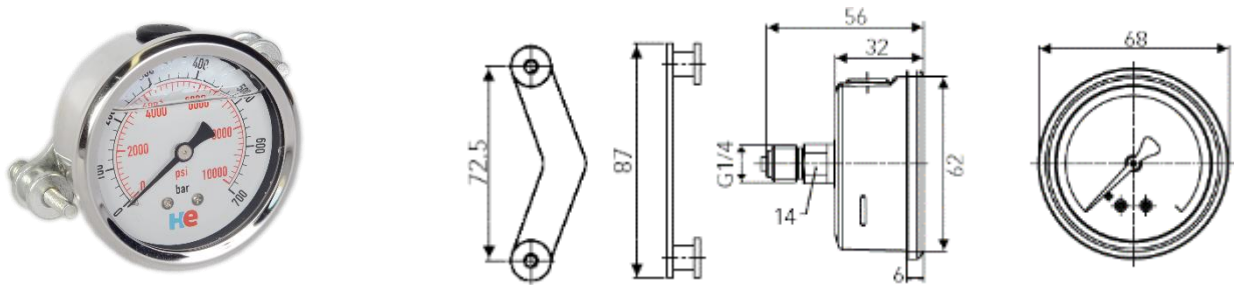
Order Code	Dial Range	List Each
PG63-016-B	0 – 16 bar / 0 – 230 psi	\$52.00
PG63-040-B	0 – 40 bar / 0 – 600 psi	
PG63-070-B	0 – 70 bar / 0 – 1,000 psi	
PG63-140-B	0 – 140 bar / 0 – 2,000 psi	
PG63-200-B	0 – 200 bar / 0 – 3,000 psi	
PG63-280-B	0 – 280 bar / 0 – 4,000 psi	
PG63-350-B	0 – 350 bar / 0 – 5,000 psi	
PG63-400-B	0 – 400 bar / 0 – 6,000 psi	
PG63-550-B	0 – 550 bar / 0 – 8,000 psi	
PG63-700-B	0 – 700 bar / 0 – 10,000 psi	

63 mm Rear Entry - Flange Mount - G 1/4 B (DIN16288 / EN 837-1) Connection



Order Code	Dial Range	List Each
PG63-070-RF	0 – 70 bar / 0 – 1,000 psi	\$55.00
PG63-140-RF	0 – 140 bar / 0 – 2,000 psi	
PG63-200-RF	0 – 200 bar / 0 – 3,000 psi	
PG63-280-RF	0 – 280 bar / 0 – 4,000 psi	
PG63-350-RF	0 – 350 bar / 0 – 5,000 psi	
PG63-400-RF	0 – 400 bar / 0 – 6,000 psi	
PG63-550-RF	0 – 550 bar / 0 – 8,000 psi	
PG63-700-RF	0 – 700 bar / 0 – 10,000 psi	

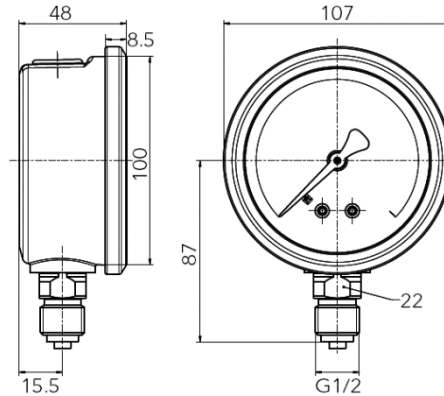
63 mm Rear Entry - Clamp Mount - G 1/4 B (DIN16288 / EN 837-1) Connection



Note: PG63-C clamp is supplied with gauge.

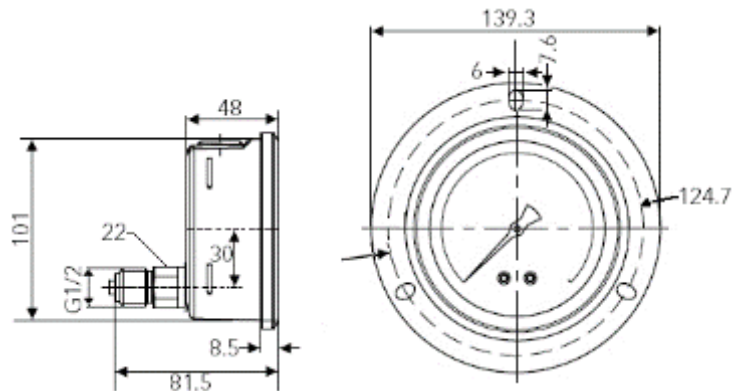
Order Code	Dial Range	List Each
PG63-070-RC	0 – 70 bar / 0 – 1,000 psi	\$55.00
PG63-140-RC	0 – 140 bar / 0 – 2,000 psi	
PG63-200-RC	0 – 200 bar / 0 – 3,000 psi	
PG63-280-RC	0 – 280 bar / 0 – 4,000 psi	
PG63-350-RC	0 – 350 bar / 0 – 5,000 psi	
PG63-400-RC	0 – 400 bar / 0 – 6,000 psi	
PG63-550-RC	0 – 550 bar / 0 – 8,000 psi	
PG63-700-RC	0 – 700 bar / 0 – 10,000 psi	

100 mm Bottom Entry - G 1/2 B (DIN16288 / EN 837-1) Connection



Order Code	Dial Range	List Each
PG100-070-B	0 – 70 bar / 0 – 1,000 psi	\$120.00
PG100-140-B	0 – 140 bar / 0 – 2,000 psi	
PG100-200-B	0 – 200 bar / 0 – 3,000 psi	
PG100-280-B	0 – 280 bar / 0 – 4,000 psi	
PG100-350-B	0 – 350 bar / 0 – 5,000 psi	
PG100-400-B	0 – 400 bar / 0 – 6,000 psi	
PG100-550-B	0 – 550 bar / 0 – 8,000 psi	
PG100-700-B	0 – 700 bar / 0 – 10,000 psi	

100 mm Rear Entry - Flange Mount - G 1/2 B (DIN16288 / EN 837-1) Connection



Order Code	Dial Range	List Each
PG100-070-RF	0 – 70 bar / 0 – 1,000 psi	\$132.00
PG100-140-RF	0 – 140 bar / 0 – 2,000 psi	
PG100-200-RF	0 – 200 bar / 0 – 3,000 psi	
PG100-280-RF	0 – 280 bar / 0 – 4,000 psi	
PG100-350-RF	0 – 350 bar / 0 – 5,000 psi	
PG100-400-RF	0 – 400 bar / 0 – 6,000 psi	
PG100-550-RF	0 – 550 bar / 0 – 8,000 psi	
PG100-700-RF	0 – 700 bar / 0 – 10,000 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)	\$10.00
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	\$17.00
PG100-RP	100 mm Rubber Protector	\$15.00

Test Boxes



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

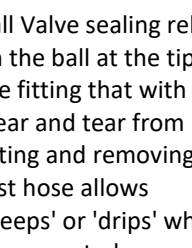
Order Code	Description	List Each
BDTK-B	Test Kit Box (Black)	\$66.00
BDTK-G	Test Kit Box (Green)	

Test Hoses, Fittings & Test Box

Test Points & Fittings - Series 20 (M16 x 2)	8.02
Adaptors - Series 20 (M16 x 2)	8.03
Bulkheads - Series 20 (M16 x 2)	8.04
Test Boxes	8.04
Test Hoses - M16 x 2 Female - M16 x 2 Female	8.05
Test Hoses - M16 x 2 Female - 1/4" BSPP Gauge	8.05
Test Hoses - M16 x 2 Female - 1/2" BSPP Gauge	8.05



Test Points & Fittings - Series 20 (M16 x 2)

Order Code	BSPP Male	Image	Valve Sealing Type	List Each
PT-06-B	G 1/8 Dowty Seal		All our Test Points are Poppet Valve sealing. Poppet Valves seal lower down in the fitting and do not get damaged by the hollow pin of the test hose. Therefore longer lasting sealing with no 'weeps' or 'drips' when disconnected.	\$26.00
PT-06-C	G 1/8 Encapsulated Seal			\$26.00
PT-07-B	G 1/4 Dowty Seal			\$26.00
PT-07-C	G 1/4 Encapsulated Seal			\$26.00
PT-08-B	G 3/8 Dowty Seal			\$26.00
PT-08-C	G 3/8 Encapsulated Seal			\$31.00
PT-09-B	G 1/2 Dowty Seal			\$31.00
PT-09-C	G 1/2 Encapsulated Seal			\$39.00
PT-21-C	G 3/4 Encapsulated Seal			\$59.00
PT-36-C	G 1 Encapsulated Seal			
Order Code	UNO Male		Poppet Type 	List Each
PT-10	7/16 -20 UNF			\$26.00
PT-11	1/2 -20 UNF			\$26.00
PT-12	9/16 -18 UNF			\$26.00
PT-34	3/4 -16 UNF			\$31.00
PT-35	7/8 -14 UNF			\$47.00
PT-37	1 1/16 -12 UNF			\$59.00
Order Code	BSPT Male			List Each
PT-15	R 1/8			\$26.00
PT-16	R 1/4			\$26.00
PT-17	R 3/8			\$26.00
Order Code	37° JIC Female			List Each
PTJ-01	7/16 -20 UNF			\$31.00
PTJ-02	1/2 -20 UNF			\$31.00
PTJ-03	9/16 -18 UNF			\$37.00
PTJ-04	3/4 -15 UNF			\$37.00
PTJ-05	7/8 -14 UNF			\$42.00
PTJ-06	1 1/16 -12 UNF			\$42.00
Order Code	BSPP Male x BSPP Female x Test		Ball Valve sealing relies on the ball at the tip of the fitting that with wear and tear from fitting and removing a test hose allows 'weeps' or 'drips' when disconnected.	List Each
PTD-01	G 1/4			\$81.00
PTD-02	G 3/8			\$81.00
PTD-03	G 1/2			\$93.00
PTD-04	G 3/4			\$98.00
PTD-05	G 1			\$119.00
Order Code	37° JIC Male x 37° JIC Female x Test		Ball Type 	List Each
PTJ37-01	7/16 -20 UNF			\$73.00
PTJ37-02	1/2 -20 UNF			\$73.00
PTJ37-03	9/16 -18 UNF			\$73.00
PTJ37-04	3/4 -15 UNF			\$78.00
PTJ37-05	7/8 -14 UNF			\$83.00
PTJ37-06	1 1/16 -12 UNF			\$88.00
PTJ37-07	1 5/16 -12 UNF			\$93.00
Order Code	37° JIC Male x 37° JIC Male x Test			List Each
PTK-01	7/16 -20 UNF			\$57.00
PTK-02	1/2 -20 UNF			\$58.00
PTK-03	9/16 -18 UNF			\$59.00
PTK-04	3/4 -15 UNF			\$60.00
PTK-05	7/8 -14 UNF			\$62.00
PTK-06	1 1/16 -12 UNF			\$65.00

Test Point & Fittings Specifications

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

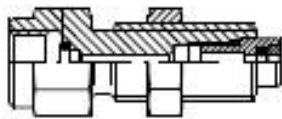
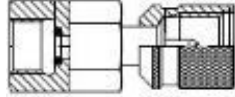
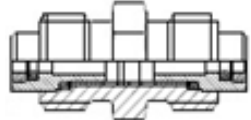
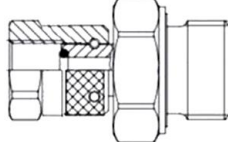
Adaptors - Series 20 (M16 x 2) (No Valve Sealing)


PTA-01 & PTA-02

PTA-03 & PTA-04

PTA-05

PTA-06

Order Code	Thread	Cross Sectional View	List Each
PTA-01	Gauge Adaptor G 1/4 B (DIN16288 / EN 837-1) Gauge x Series 20 Male		\$37.00
PTA-02	Gauge Adaptor G 1/2 B (DIN16288 / EN 837-1) Gauge x Series 20 Male		\$39.00
PTA-03	Gauge Adaptor G 1/4 B (DIN16288 / EN 837-1) Gauge x Series 20 Female		\$39.00
PTA-04	Gauge Adaptor G 1/2 B (DIN16288 / EN 837-1) Gauge x Series 20 Female		\$44.00
PTA-05	Hose Connector Series 20 Male x Series 20 Male		\$29.00
PTA-06	Gauge Adaptor G 1/4 B (DIN16288 / EN 837-1) Gauge x G 1/4 Male		\$33.00
Replacement O Rings for Adaptors - Series 20 & Test Hose Ends			
OR-4.2x1.9-N70	Suits PTA-01, PTA-03, & P300 Test Hose End (Old Design)		\$3.00
OR-4.8x1.9-N70	Suits PTA-01, PTA-03, PTA-06 & P300 Test Hose End (New Design)		\$4.00
OR-6.2x1.9-N70	Suits PTA-02, PTA-04 & P400 Test Hose End		\$5.00

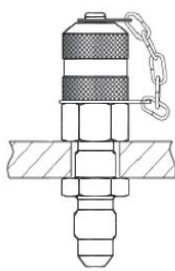
Bulkheads - Series 20 (M16 x 2)



PTG-01, PTG-02, PTG-03



PTG-04

Order Code	Thread	Cross Sectional View	Valve Sealing Type	List Each
PTG-01	7/16 -20 UNF (37° JIC) Male		Ball	\$46.00
PTG-02	1/2 -20 UNF (37° JIC) Male			\$52.00
PTG-03	9/16 -18 UNF (37° JIC) Male			\$58.00
PTG-04	Series 20 Male		Poppet	\$52.00

Test Boxes



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)	\$66.00
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, especially under pressure.

M16 x 2 Female - M16 x 2 Female

Order Code	Length	List Each
HF-H0200-1-H0200-1-2-P63-0500	500 mm	\$37.00
HF-H0200-1-H0200-1-2-P63-1000	1000 mm	\$43.00
HF-H0200-1-H0200-1-2-P63-1500	1500 mm	\$50.00
HF-H0200-1-H0200-1-2-P63-2000	2000 mm	\$56.00
HF-H0200-1-H0200-1-2-P63-2500	2500 mm	\$62.00
HF-H0200-1-H0200-1-2-P63-3000	3000 mm	\$69.00
HF-H0200-1-H0200-1-2-P63-7000	7000 mm	\$114.00
HF-H0200-1-H0200-1-2-P63-8000	8000 mm	\$124.00

M16 x 2 Female - G 1/4 B (DIN16288 / EN 837-1) Gauge Connection

Order Code	Length	List Each
HF-H0200-1-P0300-2-P63-0500	500 mm	\$35.00
HF-H0200-1-P0300-2-P63-1000	1000 mm	\$42.00
HF-H0200-1-P0300-2-P63-1500	1500 mm	\$48.00
HF-H0200-1-P0300-2-P63-2000	2000 mm	\$55.00
HF-H0200-1-P0300-2-P63-2500	2500 mm	\$61.00
HF-H0200-1-P0300-2-P63-3000	3000 mm	\$67.00

M16 x 2 Female - G 1/2 B (DIN16288 / EN 837-1) Gauge Connection

Order Code	Length	List Each
HF-H0200-1-P0400-2-P63-0500	500 mm	\$43.00
HF-H0200-1-P0400-2-P63-1000	1000 mm	\$50.00
HF-H0200-1-P0400-2-P63-1500	1500 mm	\$56.00
HF-H0200-1-P0400-2-P63-2000	2000 mm	\$63.00
HF-H0200-1-P0400-2-P63-2500	2500 mm	\$69.00
HF-H0200-1-P0400-2-P63-3000	3000 mm	\$76.00
HF-H0200-1-P0400-2-P63-7000	7000 mm	\$124.00
HF-H0200-1-P0400-2-P63-7800	7800 mm	\$129.00
HF-H0200-1-P0400-2-P63-8000	8000 mm	\$134.00

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 & Deutsch Plugs	9.13
Coil Dimensions	9.14
Pressure Relief Valves	9.16
Bi-Directional Relief Valves	9.16
Pilot Operated Check Valves	9.16
Flow Divider / Combiner	9.17

Common Cavity Bodies

2 Way Bodies	9.18
3 Way Bodies	9.19
4 Way Bodies	9.19

SUN Cavity Cartridges

Counterbalance Valve – 3 Port Non Vented	9.20
Counterbalance Valve – 3 Port Atmospherically Vented	9.20
Pilot Operated Check Valves	9.21
Mechanically Operated Back-to-Back (Cylinder Phasing) Check Valves	9.21

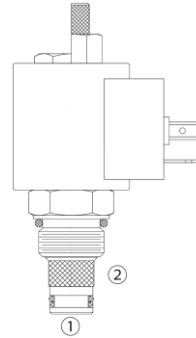
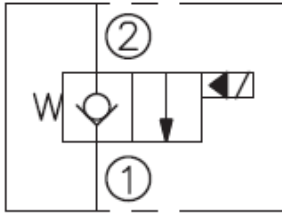
SUN Cavity Bodies

3 Way Bodies	9.22
Cylinder Mount Counterbalance & Pilot Operated Check Valves	9.23
Custom Built Manifolds & Bodies	9.26



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-*#	\$120.00
LSV2-08-2NCP-M				Yes		\$175.00
LSV2-10-2NCP	10-2 (7/8-14 UNF-2B)	60.6		No	LC2-10-C-*#	\$129.00
LSV2-10-2NCP-M				Yes		\$184.00
LSV2-12-2NCP	12-2 (1 1/16-12 UNF-2B)	113.6		No		\$218.00
LSV2-12-2NCP-M				Yes		\$275.00

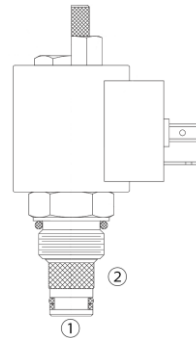
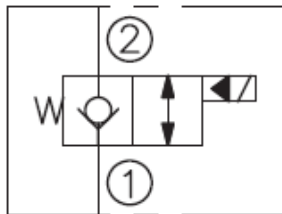
Note:

- Coil & Plug are sold separately.
See [Page 9.12](#) & [Page 9.13](#).

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-*#	\$133.00
LSV2-08-2NCRP-M				Yes		\$187.00
LSV2-10-2NCRP	10-2 (7/8-14 UNF-2B)	56.8		No	LC2-10-C-*#	\$151.00
LSV2-10-2NCRP-M				Yes		\$206.00
LSV2-12-2NCRP	12-2 (1 1/16-12 UNF-2B)	113.6		No		\$233.00
LSV2-12-2NCRP-M				Yes		\$287.00

Note:

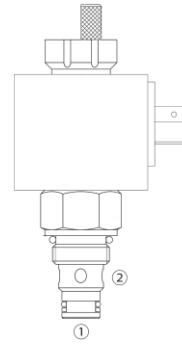
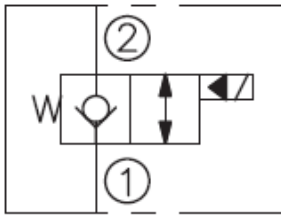
- Coil & Plug are sold separately.
See [Page 9.12](#) & [Page 9.13](#).

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-*#	\$233.00
LSV6-08-2NCRP-M				Yes		\$288.00
LSV6-10-2NCRP	10-2 (7/8-14 UNF-2B)	70.0		No		\$266.00
LSV6-10-2NCRP-M				Yes		\$320.00

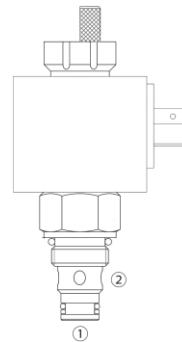
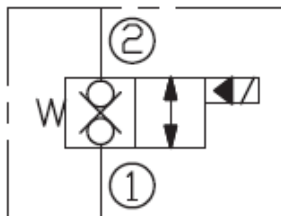
Note:

- Coil & Plug are sold separately. See [Page 9.12](#) & [Page 9.13](#).
- 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-*#	\$306.00
LSV6-08-2NCSP-M				Yes		\$361.00
LSV6-10-2NCSP	10-2 (7/8-14 UNF-2B)	70.0		No		\$343.00
LSV6-10-2NCSP-M				Yes		\$398.00
LSV6-12-2NCSP	12-2 (1 1/16-12 UNF-2B)	150.0		No		\$362.00
LSV6-12-2NCSP-M				Yes		\$416.00

Note:

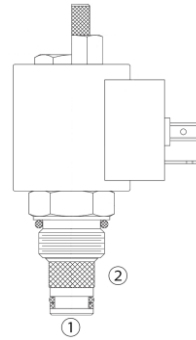
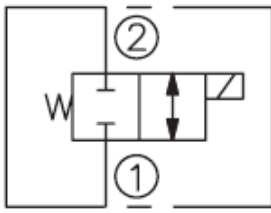
- Coil & Plug are sold separately. See [Page 9.12](#) & [Page 9.13](#).
- The O Ring supplied with the valve is installed between the Coil & Coil Retaining Nut.

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-*#	\$114.00
LSV2-08-2NCS-M				Yes		\$168.00
LSV2-10-2NCS	10-2 (7/8-14 UNF-2B)	37.9		No	LC2-10-C-*#	\$129.00
LSV2-10-2NCS-M				Yes		\$183.00

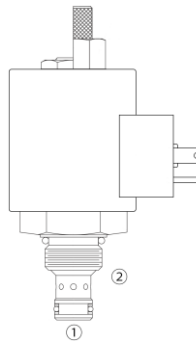
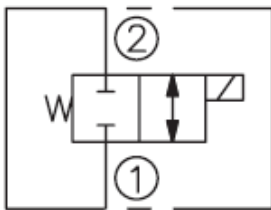
Note:

- Coil & Plug are sold separately. See [Page 9.12](#) & [Page 9.13](#).

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-*#	\$169.00
LSV5-08-2NCS-M				Yes		\$223.00

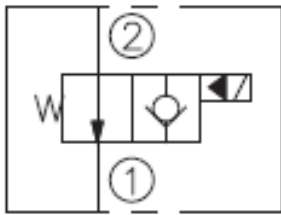
Note:

- Coil & Plug are sold separately. See [Page 9.12](#) & [Page 9.13](#).

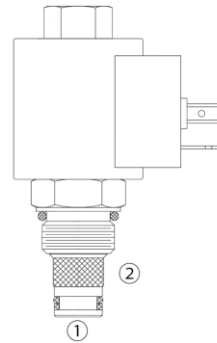
Operation of Locking Manual Override Option:

- 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-*#	\$140.00
LSV2-08-2NOP-M				Yes		\$173.00
LSV2-10-2NOP	10-2 (7/8-14 UNF-2B)	68.1		No	LC2-10-C-*#	\$178.00
LSV2-10-2NOP-M				Yes		\$210.00
LSV2-12-2NOP	12-2 (1 1/16-12 UNF-2B)	113.6		No		\$268.00
LSV2-12-2NOP-M				Yes		\$299.00
Locking Manual Override details on Page 9.07 .						

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

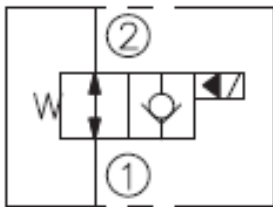
Note:

- Coil & Plug are sold separately.
See [Page 9.12](#) & [Page 9.13](#).

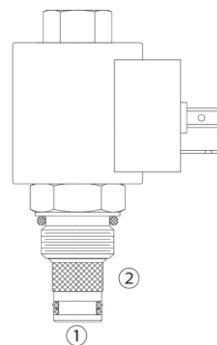
Operation of Locking Manual Override Option:

- 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-*#	\$158.00
LSV2-08-2NORP-M				Yes		\$192.00
LSV2-10-2NORP	10-2 (7/8-14 UNF-2B)	68.1		No	LC2-10-C-*#	\$190.00
LSV2-10-2NORP-M				Yes		\$228.00
LSV2-12-2NORP	12-2 (1 1/16-12 UNF-2B)	113.6		No		\$263.00
LSV2-12-2NORP-M				Yes		\$298.00
LSV6-16-2NORP	16-2 (1 5/16-12 UNF-2B)	190.0	350	No	LC3-10-C-*H or	\$450.00
LSV6-16-2NORP-M				Yes	SC-10-C-*ER	\$483.00
Locking Manual Override details on Page 9.07 .						

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

Note:

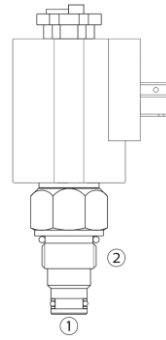
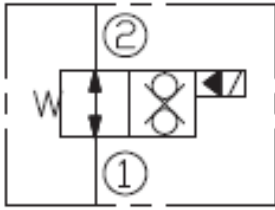
- Coil & Plug are sold separately.
See [Page 9.12](#) & [Page 9.13](#).

Operation of Locking 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	50.0	350	No	LC3-10-C-*H or SC-10-C-*ER	\$361.00
LSV6-08-2NOSP-M	(3/4-16 UNF-2B)			Yes		\$409.00
LSV6-10-2NOSP	10-2	70.0		No		\$429.00
LSV6-10-2NOSP-M	(7/8-14 UNF-2B)			Yes		\$475.00
LSV6-12-2NOSP	12-2	150.0		No		\$450.00
LSV6-12-2NOSP-M	(1 1/16-12 UNF-2B)			Yes		\$498.00

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

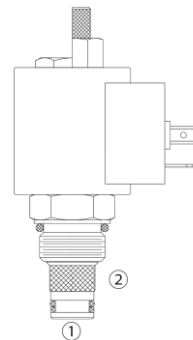
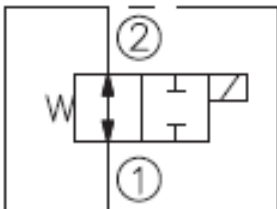
Note:

- Coil & Plug are sold separately. See [Page 9.12](#) & [Page 9.13](#).
- The O Ring supplied with the valve is installed between the Coil & Coil Retaining Nut.

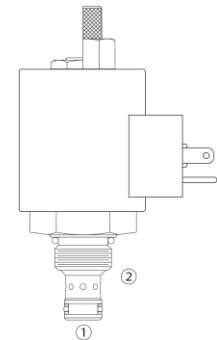
Operation of Manual Override Option:

- 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



LSV2



LSV5

	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
LSV2-08-2NOS	08-2 (3/4-16 UNF-2B)	11.4	207	No	LC2-08-C-*#	\$116.00
LSV2-08-2NOS-M				Yes		\$170.00
LSV2-10-2NOS	10-2 (7/8-14 UNF-2B)	22.7		No	LC2-10-C-*#	\$140.00

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-*#	\$178.00
LSV5-08-2NOS-M				Yes		\$233.00

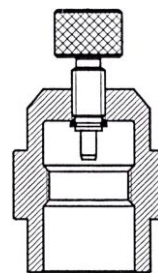
Note:

- Coil & Plug are sold separately. See [Page 9.12](#) & [Page 9.13](#).

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 Locking Manual Overrides



2 Way / 2 Position Cartridge	Order Code	Price
LSV2-08-2NOP-M	L282NOPM-107	\$56.00
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	
LSV6-16-2NORP-M	LSV-08M-3-L-104	

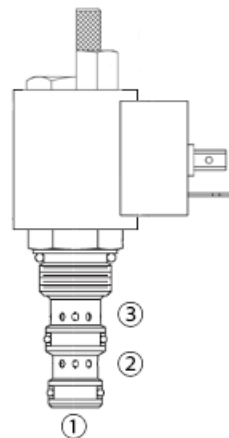
Note: Replace the standard Coil Retaining Nut with the special Coil Retaining Nut.

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
	 LSV2-08-3
	 LSV2-10-3



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-*#	\$135.00
LSV2-08-3-M				Yes		\$164.00
LSV2-10-3	10-3 (7/8-14 UNF-2B)	22.7		No	LC2-10-C-*#	\$166.00
LSV2-10-3-M				Yes		\$205.00

Note:

- Coil & Plug are sold separately. See [Page 9.12](#) & [Page 9.13](#).

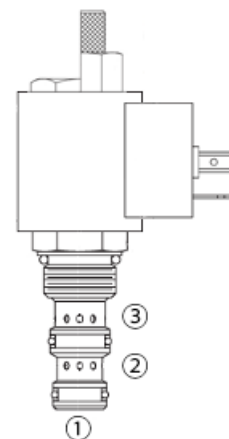
Operation of Locking Manual Override Option:

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

Continued Next Page

3 Way / 2 Position Valves

Basic Symbol	Transient Condition



Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Manual Override	Coil	List Each
LSV2-08-3A	08-3 (3/4-16 UNF-2B)	11.4	207	No	LC2-08-C-*#	\$135.00
LSV2-08-3A-M				Yes		\$174.00

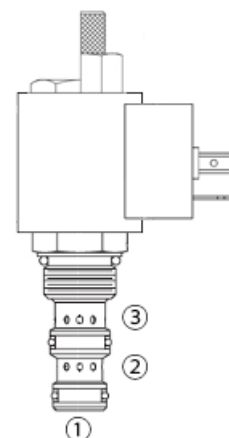
Note:

- Coil & Plug are sold separately.
See [Page 9.12](#) & [Page 9.13](#).

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
LSV2-08-3C	08-3 (3/4-16 UNF-2B)	11.4	207	No	LC2-08-C-*#	\$135.00
LSV2-08-3C-M				Yes		\$174.00

Note:

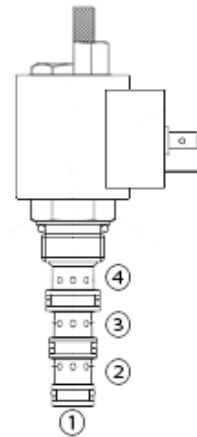
- Coil & Plug are sold separately.
See [Page 9.12](#) & [Page 9.13](#).

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-*#	\$185.00
LSV2-08-4CO-M				Yes		\$224.00
LSV2-10-4CO	10-4 (7/8-14 UNF-2B)	22.7		No	LC2-10-C-*#	\$225.00
LSV2-10-4CO-M				Yes		\$264.00

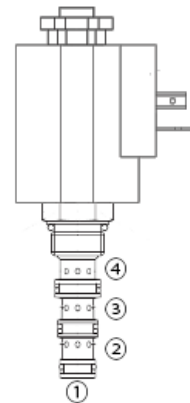
Note:

- Coil & Plug are sold separately.
See [Page 9.12](#) & [Page 9.13](#).

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 or SC-10-C-*ER	\$240.00
L2102NOPM-105	Locking Manual Override					\$56.00

Note:

- Valve cannot operate at maximum flow & pressure when using Coil SC-10-C-*ER.
- Coil & Plug are sold separately. See [Page 9.12](#) & [Page 9.13](#).
- The O Ring supplied with the valve is installed between the Coil & Coil Retaining Nut.
- 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

Basic Symbol	Transient Condition
	 LSV-08-34-C
	 LSV2-10-34-C



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-*#	\$305.00
LSV2-10-34-C	10-4 (7/8-14 UNF-2B)	22.7			LC2-10-C-*#	\$325.00

Note:

- Coils & Plugs are sold separately. Two each required per valve. See [Page 9.12](#) & [Page 9.13](#).
- Flat Washer supplied with valve is installed between the coils.

Basic Symbol	Transient Condition
	 LSV-08-34-M
	 LSV2-10-34-M



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-*#	\$305.00
LSV2-10-34-M	10-4 (7/8-14 UNF-2B)	22.7			LC2-10-C-*#	\$325.00

Note:

- Coils & Plugs are sold separately. Two each required per valve. See [Page 9.12](#) & [Page 9.13](#).
- Flat Washer supplied with valve is installed between the coils.

Continued Next Page

Basic Symbol	Transient Condition
	 LSV-08-34-O
	 LSV2-10-34-O



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-*	\$305.00
LSV2-10-34-O	10-4 (7/8-14 UNF-2B)	22.7			LC2-10-C-*	\$325.00

Note:

- Coils & Plugs are sold separately. Two each required per valve. See [Page 9.12](#) & [Page 9.13](#).
- Flat Washer supplied with valve is installed between the coils.

Basic Symbol	Transient Condition
	 LSV-08-34-T
	 LSV2-10-34-T



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-*	\$305.00
LSV2-10-34-T	10-4 (7/8-14 UNF-2B)	18.9			LC2-10-C-*	\$325.00

Note:

- Coils & Plugs are sold separately. Two each required per valve. See [Page 9.12](#) & [Page 9.13](#).
- Flat Washer supplied with valve is installed between the coils.

Coils



Order Code	Voltage/Watts	Watts	Coil Connector	List Each
LC2-08-C-1H	12V DC	17	DIN	\$42.00
LC2-08-C-2H	24V DC			
LC2-08-C-3H	110V AC			\$50.00
LC2-08-C-4H	220V AC			
LC2-10-C-1H	12V DC	20		\$57.00
LC2-10-C-2H	24V DC			
LC2-10-C-3H	110V AC			\$64.00
LC2-10-C-4H	220V AC			
LC3-10-C-1H	12V DC	26		\$57.00
LC3-10-C-2H	24V DC			
LC3-10-C-3H	110V AC			\$62.00
LC3-10-C-4H	220V AC			
LC6-08-S-1H	12V DC	21		\$57.00
LC6-08-S-2H	24V DC			
LC6-08-S-3H	110V AC			\$62.00
LC6-08-S-4H	220V AC			
LC2-08-C-1ER	12V DC	17	Deutsch	\$59.00
LC2-08-C-2ER	24V DC			
LC2-10-C-1ER	12V DC	20		\$70.00
LC2-10-C-2ER	24V DC			
SC-10-C-1ER	12V DC	22		\$70.00
SC-10-C-2ER	24V DC			
LC6-08-S-1ER	12V DC	21		\$70.00
LC6-08-S-2ER	24V DC			

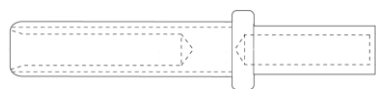
Note:

- 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 the coils.
- Din Plugs & Deutsch Plugs are sold separately. See next page.

DIN & Deutsch Plugs

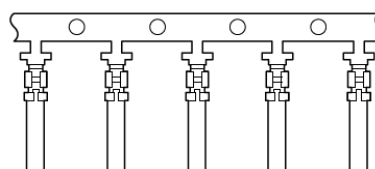


Order Code	Voltage	Description	List Each
C01010001-N	DC	DIN Light Plug - DC	\$16.00
C01010004-N	AC	DIN Light Plug - AC	
DT06-2S-0462	DC	Deutsch Plug - Male (Includes 2 pcs Solid Socket)	\$15.00
0462-209-16141x10	N/A	Deutsch Plug Solid Socket (Female Pins) - Pack of 10 pcs (Spare Parts)	\$50.00



Solid Socket

(Manufactured by a cold heading process of solid copper alloys or machined. Better for vibration.)

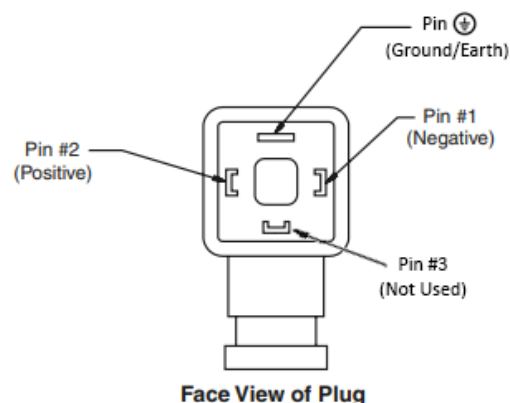


Stamped & Formed Sockets

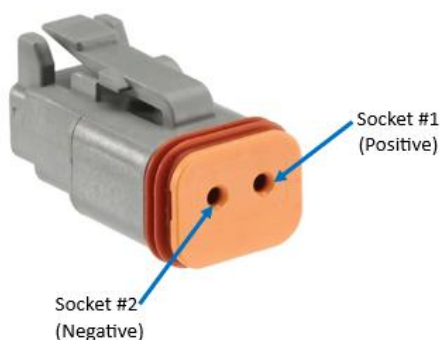
(Stamped out of a sheet of flat metal and then formed to the required shape. Lower cost.)

DIN Plug Wiring Information

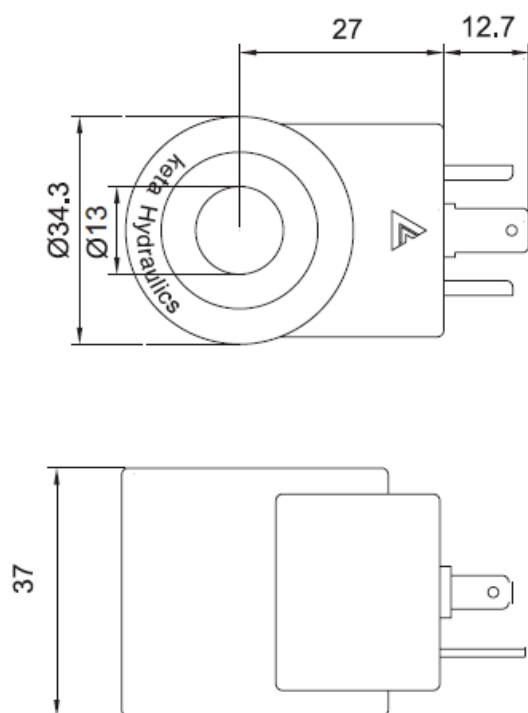
Note: For AC Voltage Pin $\oplus$ (Ground/Earth) must be connected.
Not required for DC Voltage.



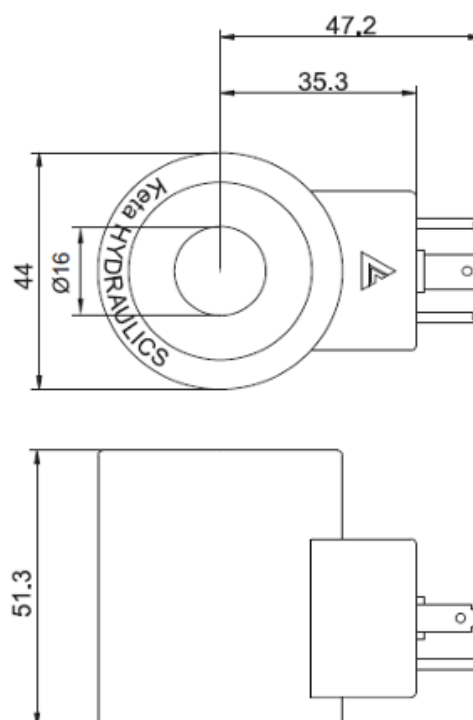
Deutsch Plug Wiring Information



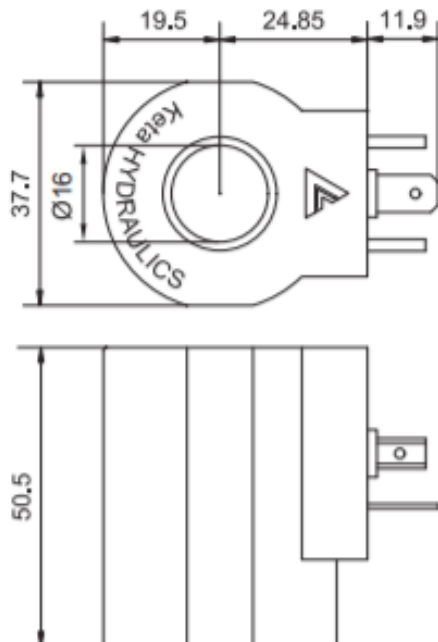
Coil Dimensions – Hirschmann (DIN Connector)



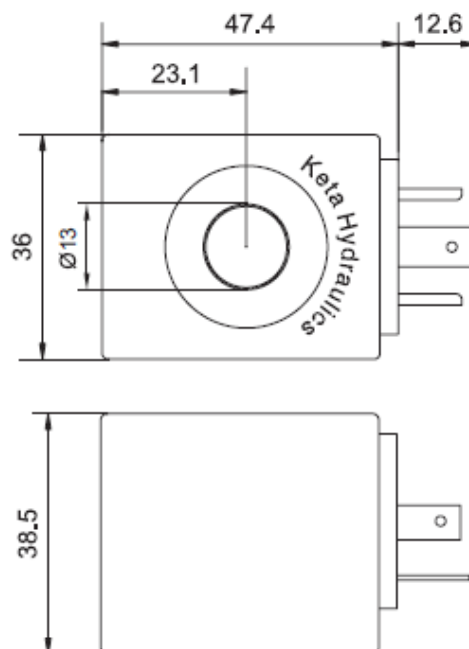
LC2-08-C-*H



LC2-10-C-*H



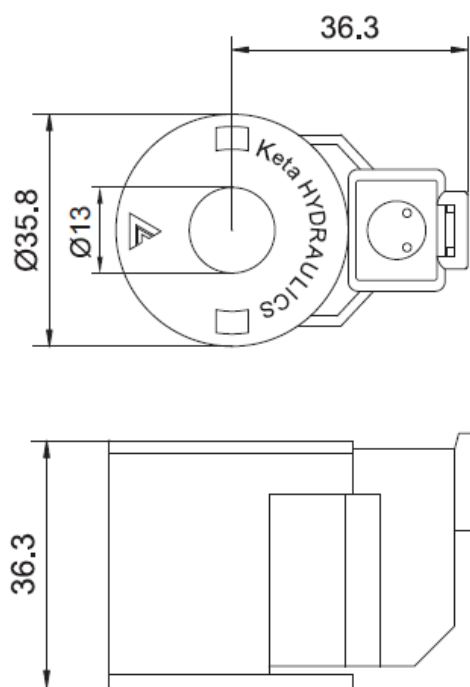
LC3-10-C-*H



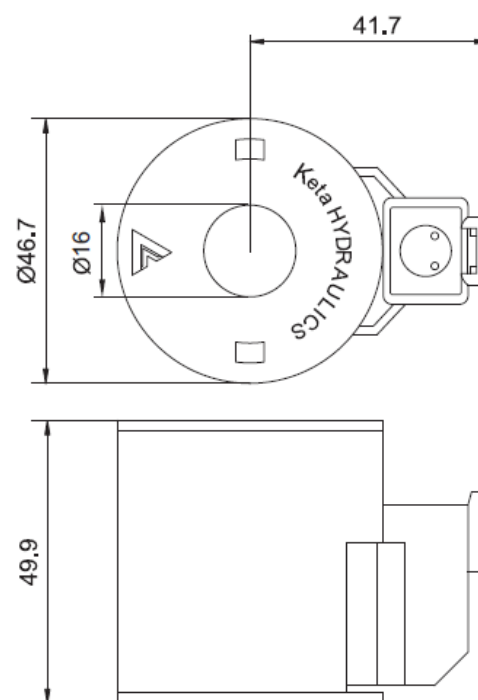
LC6-08-S-*H

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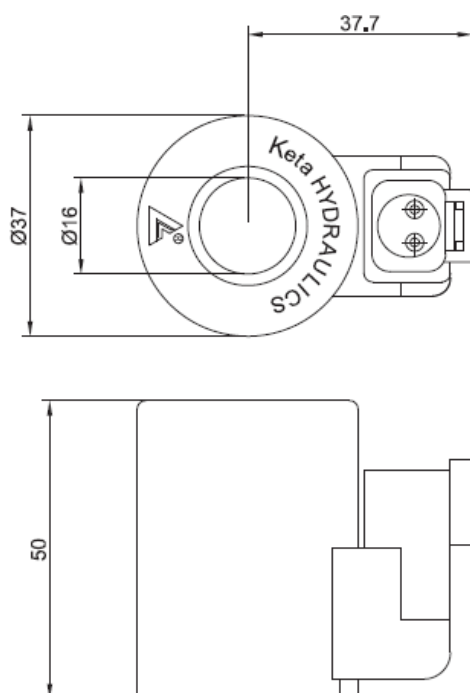
Coil Dimensions - Deutsch Connector



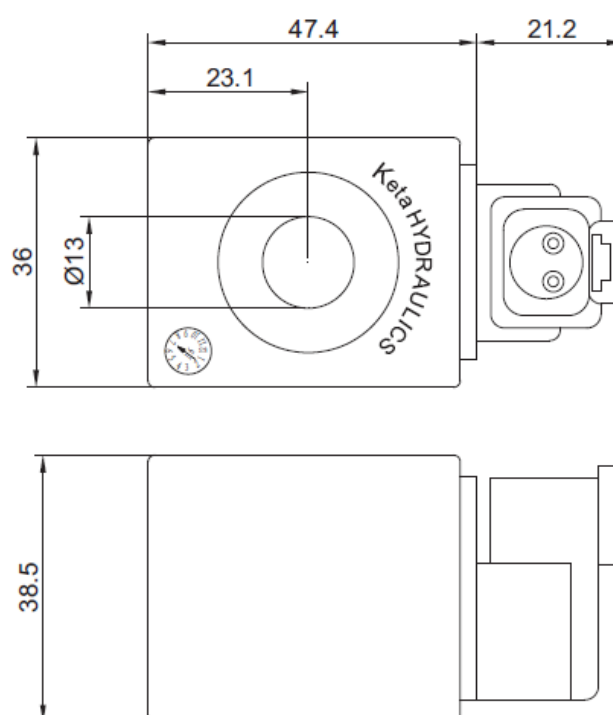
LC2-08-C-*ER



LC2-10-C-*ER

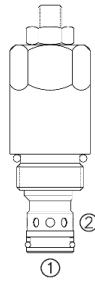
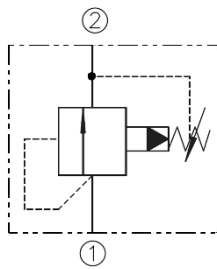


SC-10-C-*ER



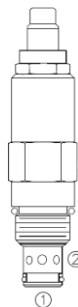
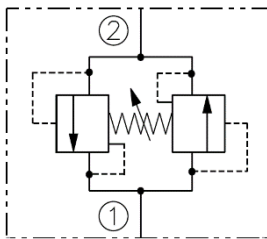
LC6-08-S-*ER

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



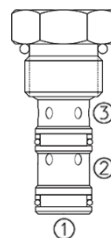
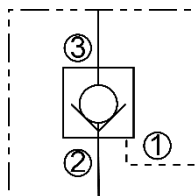
Order Code	Cavity	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
LPSRV2-08-15	08-2 (3/4-16 UNF-2B)	37.8	3.5 - 103	31	350	\$123.00
LPSRV2-08-30			3.5 - 207	65.5		
LPSRV2-08-50			3.5 - 350	103		
LPSRV2-10-8	10-2 (7/8-14 UNF-2B)	113.6	7 - 55	47	420	\$129.00
LPSRV2-10-20			35 - 140	48		
LPSRV2-10-40			70 - 280	88		
LPSRV2-10-60			140 - 420	140		\$140.00

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



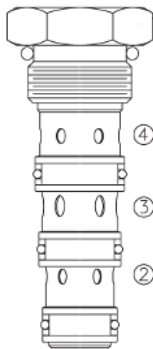
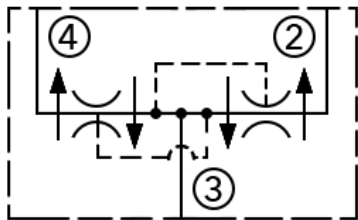
Order Code	Cavity	Max. Flow (L/min)	Adjustable Pressure (bar)	Factory Set (bar)	Max. Pressure (bar)	List Each
LBRV2-10-24/0138	10-2 (7/8-14 UNF-2B)	60	20 - 168	138	240	\$275.00
LBRV2-10-30/0138			100 - 210			

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	\$98.00

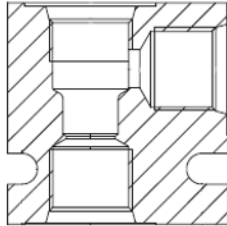
Flow Divider / Combiner



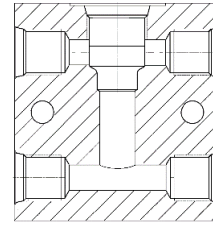
Order Code	Cavity	Max. Inlet Flow at ③ (L/min)	Ratio	Max. Pressure (bar)	List Each
LFD-10-3.0	10-4 (7/8-14 UNF-2B) (Use Body P/N LB10-4-A-*G/S)	11.4	50 : 50	240	\$235.00
LFD-10-6.0		22.7			
LFD-10-12.0		45.4			
LFD-10-16.0		60.6			

Common Cavity Bodies

2 Way Aluminium (6061T6)



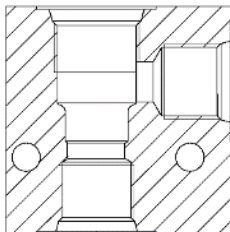
LB-2-A-****



LB10-2-A-4G4

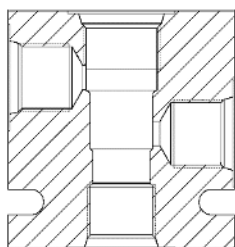
Order Code	Cavity	Port Size	Max. Pressure (bar)	List Each
LB08-2-A-2G	08-2 (3/4-16 UNF-2B)	G 1/4	210	\$53.00
LB08-2-A-3G		G 3/8		
LB10-2-A-4G	10-2 (7/8-14 UNF-2B)	G 1/2		\$59.00
LB10-2-A-8T		SAE 8 (3/4" UNO)		
LB10-2-A-4G4		G 1/2		\$155.00
LB12-2-A-6G	12-2 (1 1/16-12 UNF-2B)	G 3/4		\$99.00
LB12-2-A-8G		G 1		
LB16-2-A-8G	16-2 (1 5/16-12 UNF-2B)	G 1		\$132.00

2 Way Steel (Black Oxide)



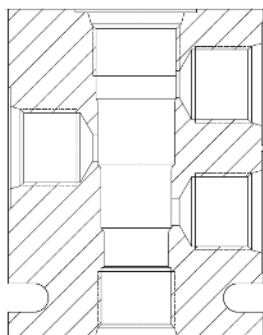
Order Code	Cavity	Port Size	Max. Pressure (bar)	List Each
LB08-2-S-3G	08-2 (3/4-16 UNF-2B)	G 3/8	350	\$78.00
LB10-2-S-4G	10-2 (7/8-14 UNF-2B)	G 1/2		\$89.00
LB12-2-S-6G	12-2 (1 1/16-12 UNF-2B)	G 3/4		\$149.00
LB12-2-S-8G		G 1		
LB16-2-S-8G	16-2 (1 5/16-12 UNF-2B)	G 1		\$198.00

3 Way Aluminium (6061T6)

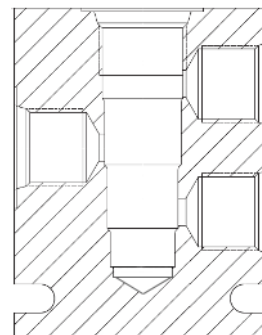


Order Code	Cavity	Port Size	Max. Pressure (bar)	List Each
LB08-3-A-2G	08-3 (3/4-16 UNF-2B)	G 1/4	210	\$74.00
LB08-3-A-3G		G 3/8		
LB10-3-A-3G	10-3 (7/8-14 UNF-2B)	G 3/8		\$80.00
LB10-3-A-4G		G 1/2		

4 Way Aluminium (6061T6)



LB-4-A-*G**

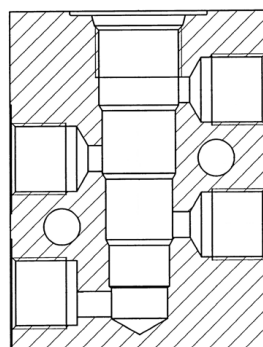


LB10-4-A-*G/S

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	\$99.00
LB08-4-A-3G		G 3/8		
LB10-4-A-3G	10-4 (7/8-14 UNF-2B)	G 3/8		\$112.00
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.

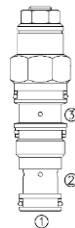
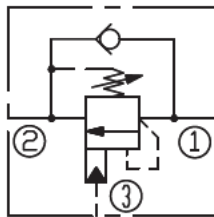
4 Way Steel (Black Oxide)



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 - 3 Port Non Vented

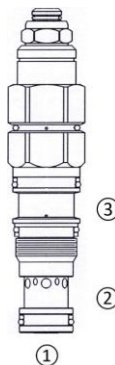
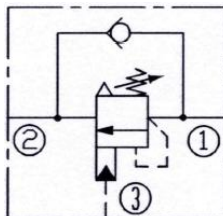


Order Code	Cavity	Max. Flow (L/min)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Adjustable Pressure (bar)	Factory Set (bar)	List Each
LCBCA-LAN	T-11A	60	3 : 1	0.3	70 - 280	210	\$165.00
LCBCA-LHN			3 : 1	1.7	70 - 280	210	\$165.00
LCBCA-LIN			3 : 1	1.7	25 - 105	70	\$165.00
LCBCH-LJN			10 : 1	1.7	140 - 350	210	\$178.00
LCBEA-LHN	T-2A	120	3 : 1	1.7	70 - 280	210	\$246.00

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 and 1.5 times when valve is set below 140 bar.

Counterbalance Valve - 3 Port Atmospherically Vented



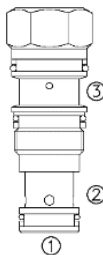
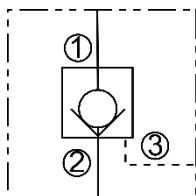
Order Code	Cavity	Max. Flow (L/min)	Pilot Ratio	Free Flow Cracking Pressure (bar)	Adjustable Pressure (bar)	Factory Set (bar)	List Each
LCACA-LHN	T-11A	60	3 : 1	2.8	70 - 280	210	\$240.00

Note:

- Counterbalance valves should be set at least 1.3 times the maximum load induced pressure and 1.5 times when valve is set below 140 bar.

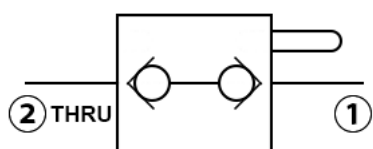
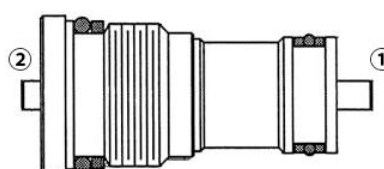
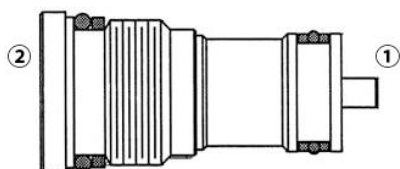
Maximum Recommended Load Induced Pressure at Maximum Setting (bar)	
LCBCA-LAN	215
LCBCA-LHN	215
LCBCA-LIN	80
LCBCH-LJN	270
LCBEA-LHN	215
LCACA-LHN	215

Pilot Operated Check Valves

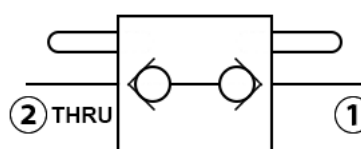


Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Pilot Ratio	Pilot Piston Seal	Free Flow Cracking Pressure (bar)	List Each
LCKBB-XCN	T-163A	30	350	3 : 1	No	2.0	\$100.00
LCKCB-XCN	T-11A	60			No		\$123.00
LCKCD-XCN	T-11A	60			Yes		\$123.00

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



LCDAP-MCN

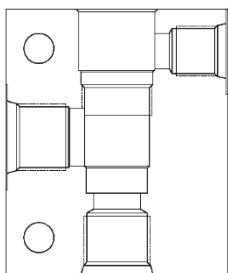


LCDAQ-MCN

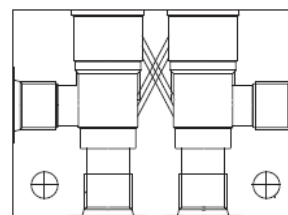
Order Code	Cavity	Max. Flow (L/min)	Max. Pressure (bar)	Free Flow Cracking Pressure (bar)	Function	List Each
LCDAP-MCN	T-162DP	4.7	350	2.0	Single	\$170.00
LCDAQ-MCN					Double	\$195.00

SUN Cavity Bodies

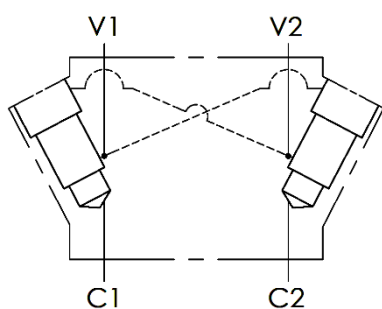
3 Way Bodies



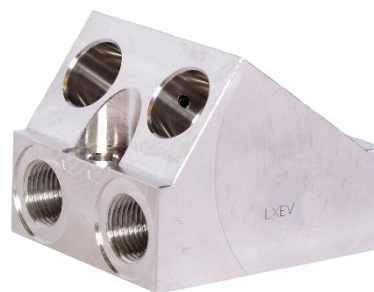
LECV / LBCW



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 x 1	Aluminium (6061T6)	G 1/2	G 1/4	210	\$87.00
LBCW		T-2A x 1		G 3/4			\$117.00
LXEV	4 Port Body	T-11A x 2		G 1/2	N/A		\$216.00
LYEV		T-11A x 2		G 1/2			\$150.00
LYAW		T-2A x 2		G 3/4			\$235.00

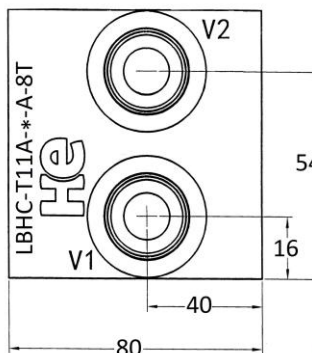
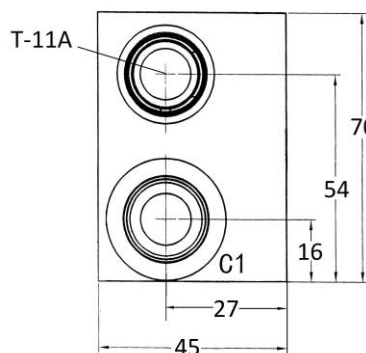
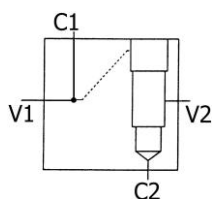
Cylinder Mount Counterbalance & Pilot Operated Check Valves



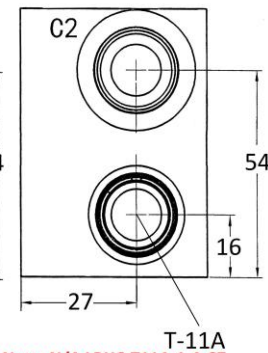
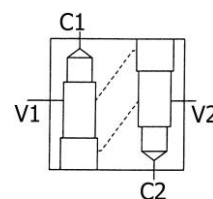
Order Code	Cavity	Ports	Material	Max. Pressure (bar)	List Each
LBHC-T11A-1-A-8T	T-11A x 1	3/4" UNO	Aluminium (6061T6)	210	\$134.00
LBHC-T11A-2-A-8T	T-11A x 2				\$160.00
LBHC-T2A-1-A-12T	T-2A x 1	1 1/16" UNO			\$182.00
LBHC-T2A-2-A-12T	T-2A x 2				\$210.00

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

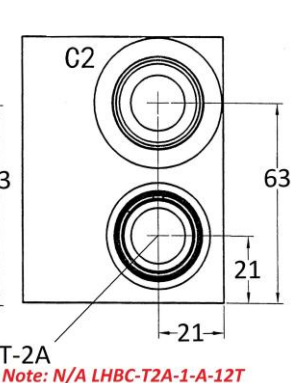
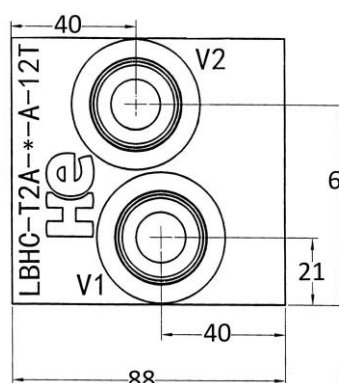
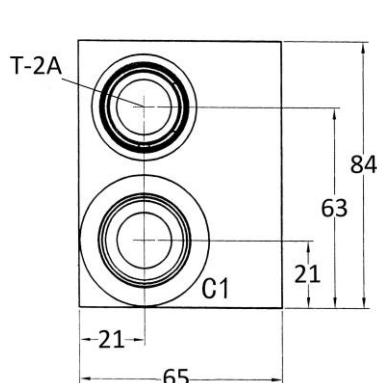
LBHC-T*A-1-A-*T



LBHC-T*A-2-A-*T



Note: N/A LBHC-T11A-1-A-8T



Note: N/A LBHC-T2A-1-A-12T

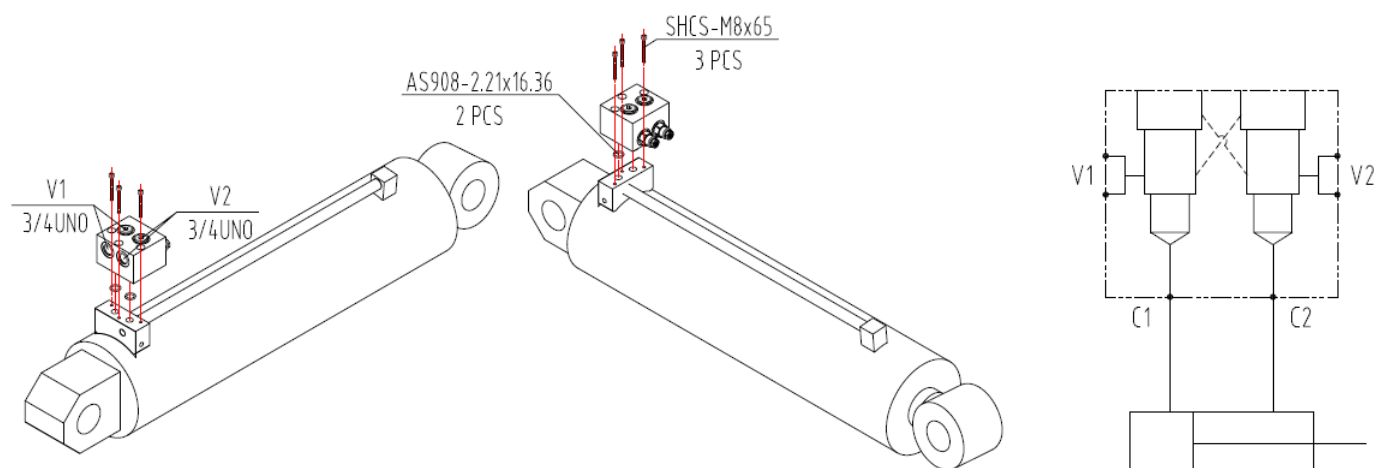
Continued Next Page

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"	\$31.00
6807-08-08-NWO	3/4" UNO x 3/4" UNO	2.5" - 5.0"	

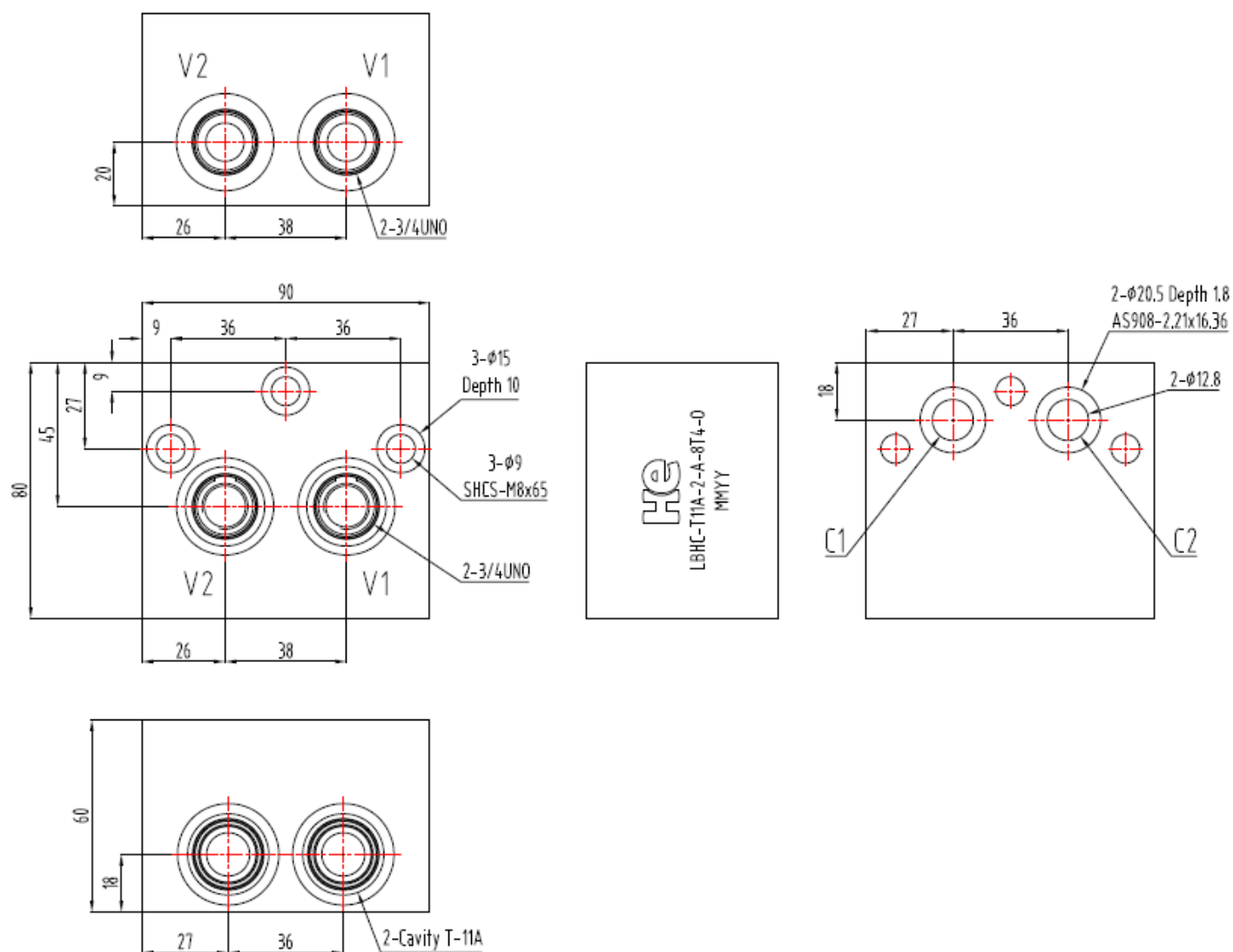
- Note:**
- Elbow Fitting allows direct mounting of body to cylinder port. Not available for LBHC-T2A-*A-12T.
 - Tube & Fittings from body to the other cylinder port are not supplied.
 - LBHC-T*A-1-A -*T (single cavity body), load is held on port C2.



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	\$208.00

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	\$7.00
PLUG-SAE8-S	3/4" UNO - Steel Port Plug	\$8.00

G (BSPP) Plugs



Order Code	Description	List Each
PLUG-G1/4-S	G 1/4 - Steel Port Plug	\$6.00
PLUG-G3/8-S	G 3/8 - Steel Port Plug	\$7.00
PLUG-G1/2-S	G 1/2 - Steel Port Plug	\$8.00
PLUG-G3/4-S	G 3/4 - Steel Port Plug	\$12.00
PLUG-G1-S	G 1 - Steel Port Plug	\$24.00



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.