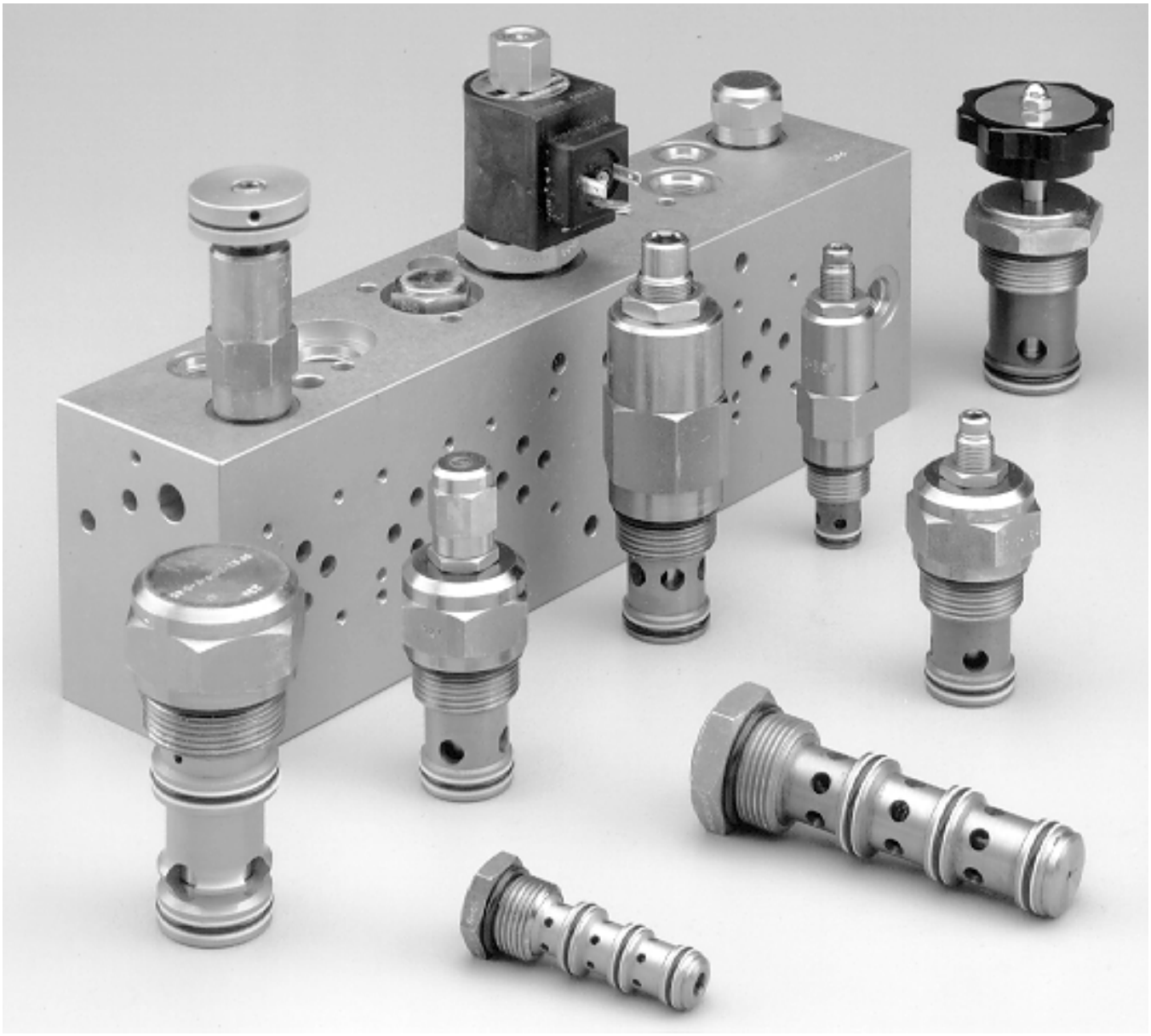
Screw-In Cartridge Valves

For Industrial and Mobile Applications



Introduction

For over seventy years, Vickers has provided its customers with quality products and innovative solutions for all their power and motion control needs.

The products featured in this catalog represent the very best in screw-in cartridge valve technology. We are committed to maintaining this position by offering the most comprehensive range of cartridge valves for industrial and mobile equipment.

This catalog gives basic specifications for the entire line of Vickers screw-in cartridge valves. Its purpose is to provide a quick, convenient reference tool when choosing Vickers cartridge valves or designing a system using these components. It is divided into sections according to valve function.

Our selection of screw-in cartridge valves includes:

- Solenoid operated directional controls
- Directional controls
- Proportional controls
- Pressure controls
- Flow controls
- Check valves
- Logic elements
- Load controls
- Circuit makers

Features and Benefits

Vickers screw-in cartridge valves provide many advantages over traditional hydraulic valves. While offering the same control functions as traditional hydraulic valves, screw-in cartridge valves are compact, reliable, and economical.

The concept of combining multiple cartridge valves in a common manifold offers both the mobile and industrial user substantial cost-saving advantages that cannot be achieved with traditional valving. Here are some of the advantages of Vickers cartridge valves.

- Response times and efficiency gains, by eliminating many of the hoses, tubes and fittings necessary in traditional installations
- Fewer potential leakage points than with conventional valves ensuring cleaner, safer application environments
- Compact and neat assemblies for economy of space and weight
- Increased ability to withstand vibration, giving optimum machine reliability and performance
- Multiple mounting configurations offers maximum design flexibility
- Greater contamination tolerance
- Faster cycle times
- Lower noise levels
- Faster on-sight servicing and troubleshooting
- Resistance to fluid contamination
- Hardened ground steel operating parts

Modular Circuit Designs

Modular Circuit Designs (MCDs) are valve packages containing combinations of screw-in cartridge valves in a manifold block. The package is dedicated to the hydraulic control of a particular application. MCDs can be as extensive as necessary to meet the most complex applications or as simple as two or three cartridges in a basic single manifold.

All MCD packages are designed and manufactured by Vickers to customer specifications. Manifolds can be designed to hold the requisite cartridges, pilot pistons, orifice discs, or any other components needed for individual applications. Vickers standard cavity tooling provides precision machining of standard cartridge cavities.

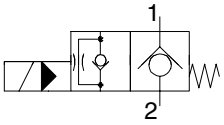
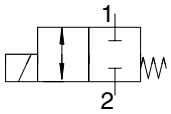
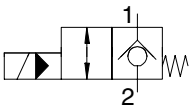
Global Support

Vickers' world-wide distribution and service network is quick, reliable, and responsive to the customer's needs. Our customers can rest assured that no matter where they're located, Vickers will be there with unrivalled products and technical expertise.

Technical Support

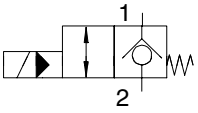
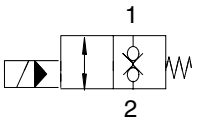
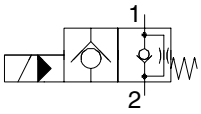
Quality products are only part of Vickers' commitment to our customers. Vickers also provides advisory, planning and design services specifically geared to your application, and backed by on-time delivery.

Solenoid Valves

Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
2–way, 2–position normally closed							
	SV5-8-C/CM*	C-8-2	23 (6)	210 (3000)	Poppet type, pilot operated	0,28 (0.62)	727
	SV15-8-C/CM*	C-8-2	37 (10)	350 (5000)	Poppet type, pilot operated	0,11 (0.25)	728
	SV1-10-C CM*/CR*	C-10-2	45 (12)	210 (3000)	Poppet type, pilot operated	0,40 (0.87)	727
	SV2-10-C CM*/CR*	C-10-2	23 (6)	210 (3000)	Poppet type, pilot operated	0,40 (0.87)	727
	SV11-10-C/CM*	C-10-2	45 (12)	350 (5000)	Poppet type, pilot operated	0,18 (0.39)	728
	SV12-10-C/CM*	C-10-2	23 (6)	350 (5000)	Poppet type, pilot operated	0,18 (0.39)	728
	SV4-8-C/CM*	C-8-2	11 (3)	210 (3000)	Spool type, direct acting	0,27 (0.60)	727
	SV14-8-C/CM*	C-8-2	11 (3)	350 (5000)	Spool type, direct acting	0,11 (0.25)	728
	SV4-10-C CM*/CR*	C-10-2	23 (6)	210 (3000)	Spool type, direct acting	0,40 (0.87)	727
	SV14-10-C/CM*	C-10-2	23 (6)	350 (5000)	Spool type, pilot operated	0,18 (0.39)	728
	SV3-10-C CM*/CR*	C-10-2	45 (12)	210 (3000)	Poppet type, pilot operated	0,40 (0.87)	727
	SV13-10-C/CM*	C-10-2	45 (12)	350 (5000)	Poppet type, pilot operated	0,18 (0.39)	728
	SV3-12-C CM*/CR*	C-12-2 C-12-2-U	114 (30)	210 (3000)	Poppet type, pilot operated	0,34 (0.74)	727
	SV13-12-C/CM*	C-12-2	114 (30)	350 (5000)	Poppet type, pilot operated	0,27 (0.60)	728

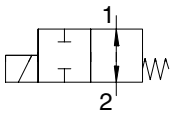
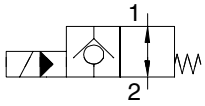
*M=Manual override, * P=Push type manual override, *S=Screw type manual override, * R=Pull type manual override

Solenoid Valves

Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
2–way, 2–position normally closed							
	SV1-16-C CM*/CR*	C-16-2	132 (35)	210 (3000)	Poppet type, pilot operated	1,15 (2.53)	727
	SV2-20-C CM*/CR*	C-20-2	227 (60)	210 (3000)	Poppet type, pilot operated	1,20 (2.70)	727
	SV13-16-C/CM*	C-16-2	132 (35)	350 (5000)	Poppet type, pilot operated	0,39 (0.85)	728
	SV13-20-C/CM*	C-20-2	227 (60)	350 (5000)	Poppet type, pilot operated	0,62 (1.37)	728
Bi-directional, 2–way, 2–position normally closed							
	SBV11-8-C	C-8-2	60 (15)	350 (5000)	Poppet type	0,12 (0.26)	5082.00/ EN/0397/ A
	SBV12-8-C	C-8-2	1,0 (0,25)	350 (5000)	Poppet type, direct acting	0,12 (0.26)	5082.00/ EN/0397/ A
	SBV11-10-C	C-10-2	76 (20)	350 (5000)	Poppet type	0,18 (0.39)	5082.00/ EN/0397/ A
	SBV11-12-C	C-12-2 C-12-2U	114 (30)	350 (5000)	Poppet type	0,27 (0.59)	5082.00/ EN/0397/ A
2–way, 2–position normally open							
	SV5-8-O OP*/OS*	C-8-2	23 (6)	210 (3000)	Poppet type, pilot operated	0,28 (0.62)	727
	SV5-10-O OP*/OS*	C-10-2	45 (12)	210 (3000)	Poppet type, pilot operated	0,40 (0.87)	727
	SV15-8-O OP*/OS*	C-8-2	37 (10)	350 (5000)	Poppet type, pilot operated	0,11 (0.25)	728
	SV15-10-O OP*/OS*	C-10-2	45 (12)	350 (5000)	Poppet type, pilot operated	0,18 (0.39)	728

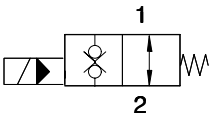
*M=Manual override, * P=Push type manual override, *S=Screw type manual override, * R=Pull type manual override

Solenoid Valves

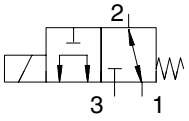
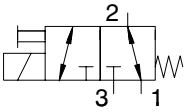
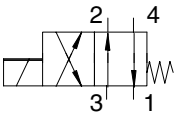
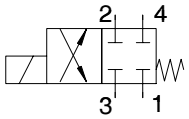
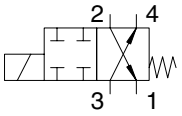
Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
2–way, 2–position normally open							
	SV4-8-O/OM*	C-8-2	13 (4)	210 (3000)	Spool type, direct acting	0,27 (0.60)	727
	SV14-8-O/OM*	C-8-2	13 (4)	350 (5000)	Spool type, direct acting	0,11 (0.25)	728
	SV4-10-O OM*/OR*	C-10-2	23 (6)	210 (3000)	Spool type, direct acting	0,40 (0.87)	727
	SV14-10-O/OM*	C-10-2	23 (6)	350 (5000)	Spool type, direct acting	0,18 (0.39)	728
	SV3-10-O OP*/OS*	C-10-2	45 (12)	210 (3000)	Poppet type, two-stage, high flow	0,40 (0.87)	727
	SV13-10-O OP*/OS*	C-10-2	45 (12)	350 (5000)	Poppet type, pilot operated	0,18 (0.39)	728
	SV13-12-O OP*/OS*	C-12-2	114 (30)	350 (5000)	Poppet type, pilot operated	0,27 (0.59)	728
	SV13-16-O OP*/OS*	C-16-2	132 (35)	350 (5000)	Poppet type, pilot operated	0,39 (0.85)	728
	SV13-20-O OP*/OS*	C-20-2	227 (60)	350 (5000)	Poppet type, pilot operated	0,62 (1.37)	728
	SV3-12-O OP*/OS*	C-12-2 C-12-2U	114 (30)	210 (3000)	Poppet type, pilot operated	0,34 (0.74)	727
	SV3-16-O OP*/OS*	C-16-2	132 (35)	210 (3000)	Poppet type, pilot operated	0,90 (1.98)	727
	SV3-20-O OP*/OS*	C-20-2	227 (60)	210 (3000)	Poppet type, pilot operated	1,20 (2.70)	727

*M=Manual override, * P=Push type manual override, *S=Screw type manual override, * R=Pull type manual override

Bi-directional, 2–way, 2–position normally open

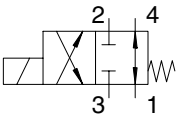
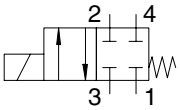
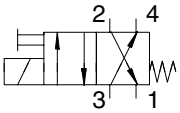
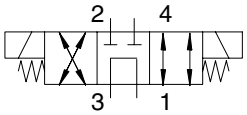
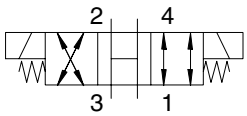
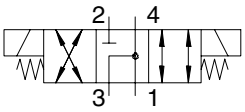
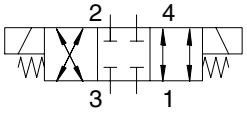
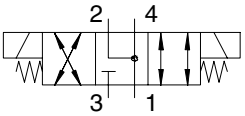
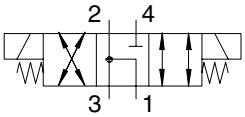
	SBV11-8-O	C-8-2	60 (15)	350 (5000)	Poppet type	0,12 (0.26)	5082.00/ EN/0397/A
	SBV11-10-O	C-10-2	76 (20)	350 (5000)	Poppet type	0,18 (0.39)	5082.00/ EN/0397/A
	SBV11-12-O	C-12-2 C-12-2U	114 (30)	350 (5000)	Poppet type	0,27 (0.59)	5082.00/ EN/0397/A

Solenoid Valves

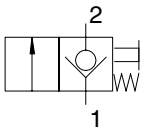
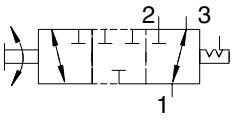
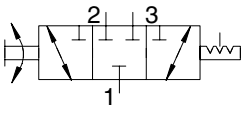
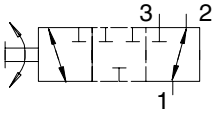
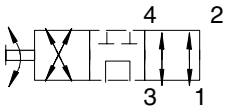
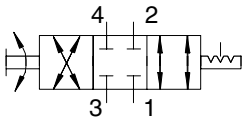
Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
3–way, 2–position							
	SV1-10-3 3M*/3R*	C-10-3	23 (6)	210 (3000)	Spool type	0,42 (0.93)	727
	SV11-10-3/3M*	C-10-3	23 (6)	350 (3000)	Spool type, pilot operated	0,19 (0.42)	728
	SV1-8-3/3M*	C-8-3	11 (3)	210 (3000)	Spool type, direct acting	0,30 (0.66)	727
	SV11-8-3/3M*	C-8-3	11 (3)	350 (5000)	Spool type, direct acting	0,13 (0.28)	728
	SV4-8-3/3M*	C-8-3	13 (4)	210 (3000)	Spool type	0,29 (0.64)	727
	SV4-10-3 3P*/3S*	C-10-3	23 (6)	210† (3000)	Spool type	0,42 (0.93)	727
	† *Port 1 must be vented to tank. Tank pressure not to exceed 13,7 bar (200 psi)*						
4–way, 2–position							
	SV1-8-4/4M*	C-8-4	11 (3)	210 (3000)	Spool type, direct acting	0,31 (0.69)	727
	SV11-8-4/4M*	C-8-4	11 (3)	350 (5000)	Spool type, direct acting	0,14 (0.30)	728
	SV1-10-4 4M*/4R*	C-10-4	23 (6)	210 (3000)	Spool type, selector valve	0,44 (0.96)	727
	SV11-10-4/4M*	C-10-4	23 (6)	350 (5000)	Spool type, pilot operated	0,21 (0.46)	728
	SV2-8-4/4M*	C-8-4	13 (4)	210 (3000)	Spool type, direct acting	0,30 (0.66)	727
	SV12-8-4/4M*	C-8-4	13 (4)	350 (5000)	Spool type, direct acting	0,14 (0.30)	728
	SV2-10-4 4M*/4R*	C-10-4	23 (6)	210 (3000)	Spool type, selector valve	0,44 (0.96)	727
	SV3-10-4 4M*/4R*	C-10-4	23 (6)	210 (3000)	Spool type, selector valve	0,44 (0.96)	727

*M=Manual override, * P=Push type manual override, *S=Screw type manual override, * R=Pull type manual override

Solenoid Valves

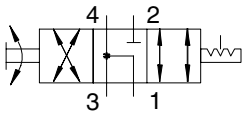
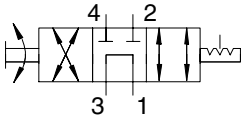
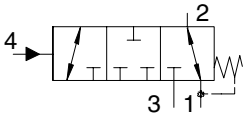
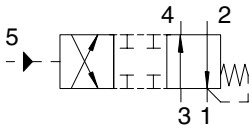
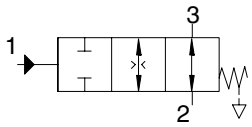
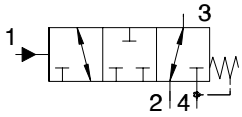
Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
4–way, 2–position							
	SV4-10-4 4M*/4R*	C-10-4	23 (6)	210 (3000)	Spool type, selector valve	0,44 (0.96)	727
	SV5-10-4 4M*/4R*	C-10-4	23 (6)	210 (3000)	Spool type, selector valve	0,44 (0.96)	727
	SV7-10-4 4P*/4S*	C-10-4	17 (5)	210† (3000)	Spool type	0,44 (0.96)	727
	† *Port 1 must be vented to tank. Tank pressure not to exceed 14 bar (200 psi)*						
*M=Manual override, * P=Push type manual override, *S=Screw type manual override, * R=Pull type manual override							
4–way, 3–position							
	SV9-10-A	C-10-4	11 (3)	210 (3000)	Spool type	0,77 (1.70)	727
	SV9-10-B	C-10-4	11 (3)	210 (3000)	Spool type	0,77 (1.70)	727
	SV9-10-D	C-10-4	11 (3)	210 (3000)	Spool type	0,77 (1.70)	727
	SV9-10-E	C-10-4	11 (3)	210 (3000)	Spool type	0,77 (1.70)	727
	SV9-10-F	C-10-4	11 (3)	210 (3000)	Spool type	0,77 (1.70)	727
	SV9-10-G	C-10-4	11 (3)	210 (3000)	Spool type	0,77 (1.70)	727

Directional Controls

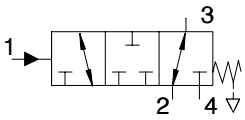
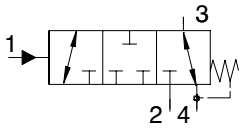
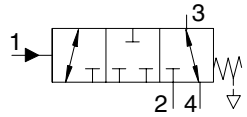
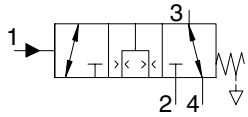
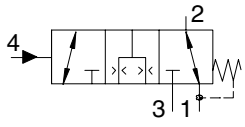
Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Manually operated							
	MPV1-10	C-10-2	45 (12)	210 (3000)*	Pull-to-open, 2-way, 2-position	0,11 (0.24)	721
	MRV3-10-D2/E2	C-10-3	23 (6)	210 (3000)*	Manual rotary, 2-position detent	0,22 (0.48)	721
	MRV3-16-D2	C-16-3	64 (17)	210 (3000)*	Manual rotary, 2-position detent	0,53 (1.16)	721
	MRV3-10-D/E	C-10-3	23 (6)	210 (3000)*	Manual rotary, 3-position detent	0,22 (0.48)	721
	MRV3-16-D	C-16-3	64 (17)	210 (3000)*	Manual rotary, 3-position detent	0,53 (1.16)	721
	MRV3-10-K	C-10-3	23 (6)	210 (3000)*	Manual rotary, 3-way	0,22 (0.48)	721
	MRV3-16-K	C-16-3	64 (17)	210 (3000)*	Manual rotary, 3-way	0,53 (1.16)	721
	MRV4-10-K	C-10-4	11 (3)	210 (3000)	Manual rotary, 4-way	0,17 (0.38)	721
	MRV4-16-K	C-16-4	45 (12)	210 (3000)	Manual rotary, 4-way	0,65 (1.43)	721
	MRV5-10-D/E	C-10-4	11 (3)	210 (3000)	Manual rotary, 4-way, 3-position detented	0,27 (0.59)	721
	MRV5-16-D	C-16-4	45 (12)	210 (3000)	Manual rotary, 4-way, 3-position detented	0,65 (1.43)	721

** Indicates that these models are available for use above 210 bar (3000 psi). However, caution should be taken and a review of the application may be necessary prior to use. Contact your Vickers sales engineer.*

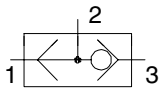
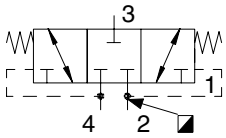
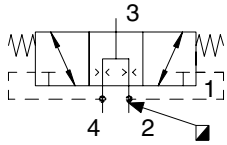
Directional Controls

Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Manually operated							
	MRV6-10-D/E	C-10-4	11 (3)	210 (3000)	Manual rotary, 4-way, 3-position detented	0,27 (0.59)	721
	MRV4-10-D/E	C-10-4	11 (3)	210 (3000)	Manual rotary, 4-way, 3-position detented	0,27 (0.59)	721
	MRV4-16-D	C-16-4	45 (12)	210 (3000)	Manual rotary, 4-way, 3-position detented	0,65 (1.43)	721
	PTS5-10	C-10-3	11 (3)	210 (3000)	External pilot, internal drain	0,14 (0.32)	721
	PTS6-10	C-10-4	23 (6)	210 (3000)	External pilot, internal drain	0,15 (0.33)	721
	PTS7-10	C-10-3	30 (8)	210 (3000)	External pilot, atmospheric vent	0,10 (0.23)	721
	PTS2-10	C-10-4	30 (8)	210 (3000)	External pilot, internal drain	0,14 (0.32)	721
	PTS2-16	C-16-4	132 (35)	210 (3000)	External pilot, internal drain	0,50 (1.12)	721
	PTS2-20	C-20-4	265 (70)	210 (3000)	External pilot, internal drain	0,50 (1.12)	721

Directional Controls

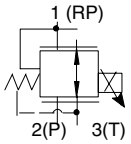
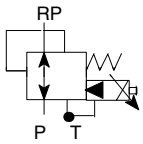
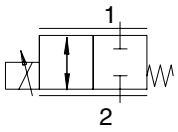
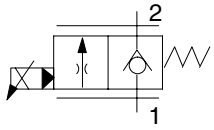
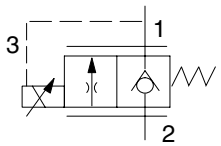
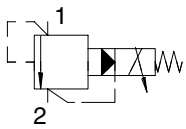
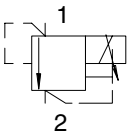
Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Manually operated							
	PTS1-10	C-10-4	30 (8)	210 (3000)	External pilot, atmospheric vent	0,14 (0.32)	721
	PTS1-16	C-16-4	132 (35)	210 (3000)	External pilot, atmospheric vent	0,50 (1.12)	721
	PTS1-20	C-20-4	265 (70)	210 (3000)	External pilot, atmospheric vent	1,10 (2.40)	721
	PTS3-10	C-10-4	30 (8)	210 (3000)	External pilot, internal drain	0,14 (0.32)	721
	PTS3-16	C-16-4	132 (35)	210 (3000)	External pilot, internal drain	0,50 (1.12)	721
	PTS3-20	C-20-4	265 (70)	210 (3000)	External pilot, internal drain	0,50 (1.12)	721
	PTS4-16	C-16-4	132 (35)	210 (3000)	External pilot, atmospheric vent	0,50 (1.12)	721
	PTS5-16	C-16-4	132 (35)	210 (3000)	External pilot, atmospheric vent	0,50 (1.12)	721
	PTS6-16	C-16-4	132 (35)	210 (3000)	External pilot, internal drain	0,50 (1.12)	721

Directional Controls

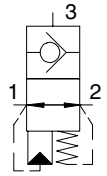
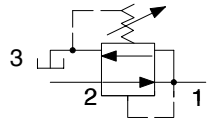
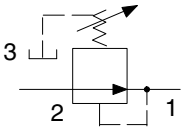
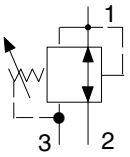
Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Manually operated							
	DSV3-6-B		11 (3)	210 (3000)	Direct acting, ball type	0,10* (0.22) 0,30** (0.66)	721
	DSV2-8-B	C-8-3	23 (6)	240 (3500)	Direct acting, ball type	0,06 (0.14)	721
	DSV3-8-B		25 (7)	210 (3000)	Direct acting, ball type	0,28* (0.62) 0,90** (1.86)	721
	DSV1-10-B	C-10-3	23 (6)	210 (3000)	2-way, 3-position	0,08 (0.18)	721
	DSV3-12-B		90 (24)	210 (3000)	Direct acting, ball type	0,75* (1.65) 2,25** (4.96)	721
	DSV3-16-B		170 (45)	210 (3000)	Direct acting, ball type	1,75* (3.86) 5,25** (11.58)	721
	DSV4-10-C	C-10-4	26 (7)	350 (5000)	Spring centered, hot oil valve with closed or open center	0,14 (0.32)	721
	DSV4-10-O	C-10-4	26 (7)	350 (5000)	Spring centered, hot oil valve with closed or open center	0,14 (0.32)	721

*w/aluminum housing
**w/steel housing

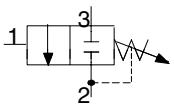
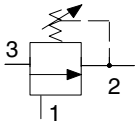
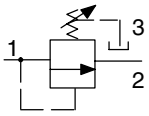
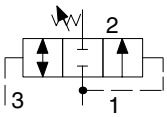
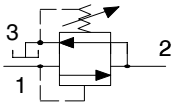
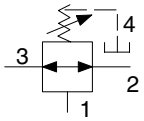
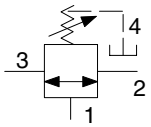
Proportional Controls

Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Electrohydraulic pressure reducing/relieving							
	EPRV2-8	C-8-3	7,6 (2.0)	35 (500)	Electrically operated, sliding spool type	0,29 (0.64)	726
	EPRV1-10	C-10-3	0-8 (0-2)	35 (500)	Internal pilot, spool type	0,44 (0.98)	726
	EPRV1-16	C-16-3	0-38 (0-10)	35 (500)	Internal pilot, spool type	0,90 (2.00)	726
Electrohydraulic proportional flow regulator							
	EPV10	C-10-2	0-30 (0-8)	210 (3000)	2-way 2-position	0,78 (1.72)	726
	EPV16-A	C-16-3S (modified)	0-160 (0-42)	280 (4000)	Nose in, side out	1,00 (2.20)	726
	EPV16-B	C-16-3S (modified)	0-160 (0-42)	280 (4000)	Side in, nose out	1,00 (2.20)	726
Electrohydraulic proportional relief							
	ERV1-10	C-10-2	4-57 (1-15)	210 (3000)	2-stage	0,44 (0.98)	726
	ERV1-16	C-16-2	8-132 (2-35)	210 (3000)	2-stage	0,44 (0.98)	726
	ERV2-10	C-10-2	0-3 (0-0.8)	210 (3000)	Direct acting	0,43 (0.96)	726

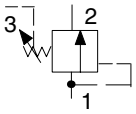
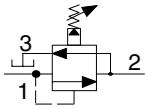
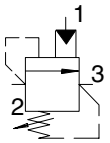
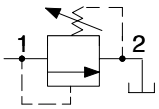
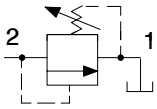
Pressure Controls

Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Accumulator discharge valve							
	ADV1-16	C-16-3S	30 (8)	210 (3000)	External pilot to close 100:1 ratio	0,28 (0.62)	725
Pressure reducing and relieving							
	PRV1-10	C-10-3	15 (4)	165 (2400)	Direct acting	0,24 (0.54)	725
	PRV2-10	C-10-3	38 (10)	240 (3500)	Pilot operated	0,24 (0.54)	725
	PRV2-16	C-16-3	151 (40)	415 (6000)	Pilot operated	0,40 (0.89)	725
	PRV12-12	C-12-3	114 (30)	350 (5000)	Pilot operated	0,40 (0.89)	725
	PRV11-12	C-12-3	114 (30)	350 (5000)	Pilot operated	0,40 (0.89)	725
	PRV12-10	C-10-3	45 (12)	350 (5000)	Pilot operated	0,24 (0.54)	725

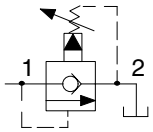
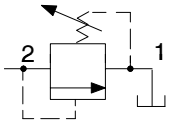
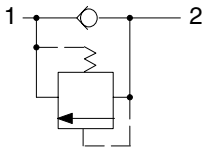
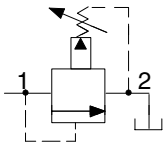
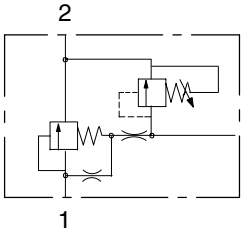
Pressure Controls

Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Pressure sequence valves							
	PSV2-8	C-8-3	23 (6)	210 (3000)	External pilot, sliding spool direct acting	0,21 (0.47)	725
	PSV4-8	C-8-3	15 (4)	350 (5000)	External pilot, sliding spool direct acting	0,21 (0.47)	725
	PSV2-10	C-10-3	23 (6)	165 (2400)	External pilot, direct acting	0,24 (0.53)	725
	PSV4-10	C-10-3	15 (4)	380 (5500)	External pilot, direct acting	0,24 (0.53)	725
	PSV7-10	C-10-3	23 (6)	125 (1800)	Internal pilot, direct acting	0,24 (0.53)	725
	PSV3-10	C-10-3	23 (6)	165 (2400)	Internal pilot, direct acting	0,24 (0.53)	725
	PSV1-10	C-10-3	23 (6)	165 (2400)	Internal pilot, direct acting	0,24 (0.53)	725
	PSV5-10	C-10-3	8 (2)	380 (5500)	Internal pilot, direct acting	0,24 (0.53)	725
	PSV8-10	C-10-4	23 (6)	165 (2400)	External pilot, direct acting	0,27 (0.60)	725
	PSV10-10	C-10-4	23 (6)	165 (2400)	External pilot, direct acting, external drain	0,27 (0.60)	725

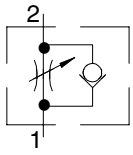
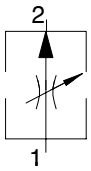
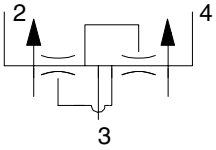
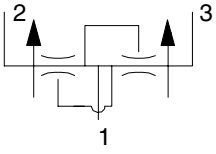
Pressure Controls

Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Pressure sequence valves							
	PSV11-12	C-12-3S	114 (30)	350 (5000)	Pilot operated, spool-type, adjustable	0,40 (0.89)	725
	PSV1-16	C-16-3	95 (25)	415 (6000)	Internal pilot, pilot operated	0,24 (0.53)	725
Pressure unloading valve							
	PUV3-10	C-10-3	4 (1)	210 (3000)	Internal pilot, cartridge-type	0,15 (0.33)	725
Relief valves							
	RV1-8	C-8-2	15 (4)	350 (5000)	Poppet, direct acting	0,20 (0.43)	725
	RV1-10	C-10-2	30 (8)	210 (3000)	Poppet, direct acting	0,22 (0.48)	725
	RV6-10	C-10-2	15 (4)	350 (5000)	Low flow, ball type	0,22 (0.48)	725
	RV10-10	C-10-2	38 (10)	70 (1000)	Poppet, low pressure, direct acting	0,22 (0.48)	725
	RV8-8	C-8-2	30 (8)	350 (5000)	Poppet, differential area	0,20 (0.43)	725
	RV8-10	C-10-2	76 (20)	350 (5000)	Poppet, high pressure, differ. area	0,22 (0.48)	725

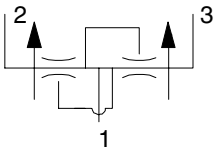
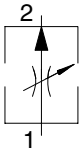
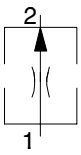
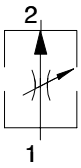
Pressure Controls

Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Relief valves							
	RV2-10	C-10-2	114 (30)	350 (5000)	Poppet, pilot operated, free reverse flow	0,22 (0.48)	725
	RV3-10	C-10-2	76 (20)	250 (3600)	Poppet type, differential area	0,22 (0.48)	725
	RV3-16	C-16-2	303 (80)	350 (5000)	Poppet type, differential area	0,71 (1.57)	725
	RV4-10	C-10-2	45 (12)	350 (5000)	Poppet type, direct acting	0,11 (0.25)	725
	RV5-10	C-10-2	114 (30)	350 (5000)	Spool, pilot operated	0,22 (0.48)	725
	RV11-12	C-12-2 C-12-2U	114 (30)	350 (5000)	Spool, pilot operated	0,30 (0.68)	725
	RV5-16	C-16-2	303 (80)	415 (6000)	Sliding spool, pilot operated	0,71 (1.57)	725
	VRV11-12	C-12-3S	114 (30)	210 (3000)	Vented spool, pilot operated	0,40 (0.89)	725

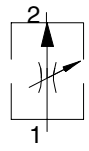
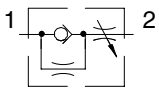
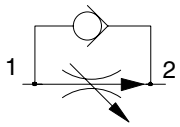
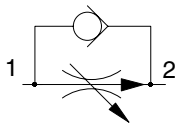
Flow Controls

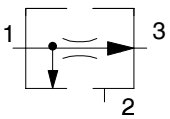
Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Flow control							
	FCV7-10-FF	C-10-2	45 (12)	210 (3000)	Needle type with reverse flow check	0,11 (0.25)	723
	FCV7-10-(10)	C-10-2	6,6 (1.75)	210 (3000)	Slotted spool with reverse flow check	0,11 (0.25)	723
	FCV7-10-(20)	C-10-2	14 (3.75)	210 (3000)	Slotted spool with reverse flow check	0,11 (0.25)	723
	FCV7-10-(40)	C-10-2	27 (7.25)	210 (3000)	Slotted spool with reverse flow check	0,11 (0.25)	723
	FCV7-10-(NV)	C-10-4	45 (12)	210 (3000)	Needle type	0,11 (0.25)	723
	FCV7-10-(NVF)	C-10-4	38 (10)	210 (3000)	Needle type, fine adj.	0,11 (0.25)	723
	FCV11-12	C-12-2 C-12-2U	114 (30)	350 (5000)	Needle type, adjustable	0,24 (0.54)	723
	FCV6-16	C-16-2	208 (55)	210 (3000)	Flow control	0,37 (0.81)	723
	FDC1-10	C-10-4	68 (18)	210 (3000)	Flow divider/ combiner	0,10 (0.22)	723
	FDC3-10	C-10-4	68 (18)	210 (3000)	Positive traction valve	0,10 (0.22)	723
	FDC1-16	C-16-4	178 (47)	210 (3000)	Flow divider/ combiner	0,35 (0.78)	723
	FDC3-16	C-16-4	178 (47)	210 (3000)	Positive traction valve	0,35 (0.78)	723
	FDC1-20		378 (100)	210 (3000)	Flow divider/ combiner, manifold assy	2,6 (5.75)	723

Flow Controls

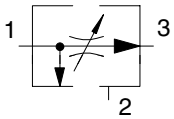
Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Flow control							
	FDC3-20		567 (150)	210 (3000)	Positive traction valve, manifold assy	2,6 (5.75)	723
	FR2-10	C-10-2	38 (10)	210 (3000)	Two-way, adjustable flow regulator	0,22 (0.48)	723
	FR2-16	C-16-2	113 (30)	210 (3000)	Two-way, adjustable flow regulator	0,71 (1.57)	723
	FR5-8	C-8-2	10 (2.5)	350 (5000)	Two-way, pre-set flow	0,05 (0.12)	723
	FR5-10	C-10-2	23 (6)	350 (5000)	Two-way, pre-set flow	0,12 (0.26)	723
	FR1-16	C-16-2	113 (30)	210 (3000)	Two-way, pre-set flow	0,33 (0.72)	723
	FR1-20	C-20-2	227 (60)	210 (3000)	Two-way, pre-set flow	0,82 (1.80)	723
Flow restrictors, knob/lever operated							
	MRV2-10-K	C-10-2	60 (15)	210 (3000)	Manual rotary	0,11 (0.24)	723
	MRV2-10 -B/E/D/L	C-10-2	60 (15)	210 (3000)	Manual lever	0,20 (0.45)	723
	MRV2-16-K	C-16-2	170 (45)	210 (3000)	Manual rotary	0,32 (0.71)	723
	MRV2-16 -B/E/D/L	C-16-2	170 (45)	210 (3000)	Manual lever	0,79 (1.74)	723

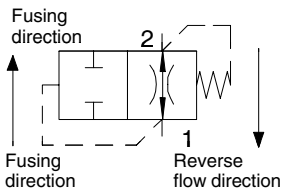
Flow Controls

Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Flow restrictors, adjustable							
	NV1-8	C-8-2	45 (12)	350 (5000)	Needle valve, direct acting	0,07 (0.15)	723
	NV1-10	C-10-2	45 (12)	210 (3000)	Needle valve	0,11 (0.24)	723
	NV1-16	C-16-2	151 (40)	210 (3000)	Needle valve, restricted reverse flow	0,34 (0.76)	723
	NV1-20	C-20-2	265 (70)	210 (3000)	Needle valve, restricted reverse flow	0,59 (1.30)	723
	FAR1-10	C-10-2	1–38 (25–10)	350 (5000)	Pressure compensated flow regulator	“S” 0,02 (0.44) “K” 0,23 (0.51) “H” 0,26 (0.59)	723
	FAR1-12	C-12-2 C-12-2U	1,5–94,5 (0,44–25)	350 (5000)	Pressure compensated flow regulator	“S” 0,43 (0.98) “K” 0,46 (1.00) “H” 0,49 (1.10)	723

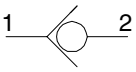
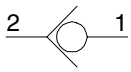
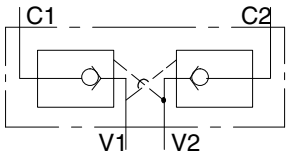
Functional Symbol	Model	Cavity	Max Reg. Flow lpm (USgpm)	Max Inlet Flow lpm (psi)	Typical Pressure bar (psi	Description	Weight kg (lbs)	Catalog
Pressure compensated, pre–set and adjustable								
	PFR5-8	C-8-3	10 (2.5)	15 (4)	350 (5000)	3-way priority flow regulator	0,07 (0.15)	723
	PFR5-10	C-10-3	23 (6)	60 (15)	350 (5000)	3-way priority flow regulator	0,13 (0.28)	723
	PFR1-16	C-16-3	114 (30)	151 (40)	210 (3000)	3-way priority flow regulator	0,38 (0.84)	723

Flow Controls

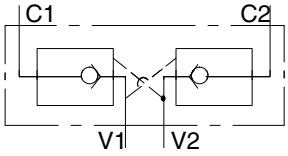
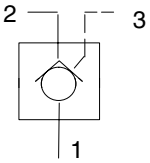
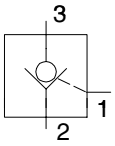
Functional Symbol	Model	Cavity	Max Reg. Flow lpm (USgpm)	Max Inlet Flow lpm (psi)	Typical Pressure bar (psi	Description	Weight kg (lbs)	Catalog
Pressure compensated, pre–set and adjustable								
	PFR2-10	C-10-3	38 (10)	60 (15)	210 (3000)	3-way priority flow regulator, 50% adj.	0,25 (0.54)	723
	PFR2-16	C-16-3	114 (30)	151 (40)	210 (3000)	3-way priority flow regulator, 50% adj.	0,43 (0.95)	723

Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Velocity fuses							
	VF1-10	C-10-2	23 (6)	210 (3000)	Factory set	0,11 (0.25)	723
	VF1-16	C-16-2	114 (30)	210 (3000)	Factory set	0,33 (0.72)	723
	VF1-20	C-20-2	227 (60)	210 (3000)	Factory set	0,82 (1.82)	723

Check Valves

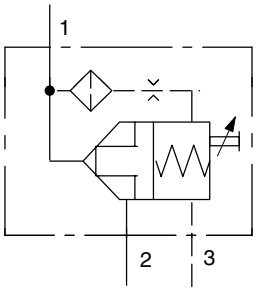
Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Direct operated							
	CV3-8	C-8-2	30 (8)	350 (5000)	Direct acting, poppet type	0,05 (0.12)	720
	CV1-10-B	C-10-2	45 (12)	210 (3000)	Direct acting, poppet type manifold assembly	0,08 (0.17)	720
	CV1-10-P	C-10-2	45 (12)	210 (3000)	Direct acting, poppet type manifold assembly	0,08 (0.17)	720
	CV3-10	C-10-2	76 (20)	210 (3000)	Direct acting, poppet type manifold assembly	0,08 (0.17)	720
	CV11-12	C-12-2 C-12-2U	114 (30)	350 (5000)	Direct acting, poppet type	0,24 (0.54)	720
	CV1-16	C-16-2	151 (40)	210 (3000)	Direct acting poppet type	0,26 (0.58)	720
	CV2-20	C-20-2	227 (60)	210 (3000)	Direct acting, poppet type	0,49 (1.09)	720
	CV16-10	C-10-2	76 (20)	350 (5000)	Direct acting, poppet type	0,08 (0.17)	720
Pilot operated, double acting							
	DPC1-10		45 (12)	210 (3000)	Direct poppet 4:1 ratio, manifold assembly	1,83 (4.03)	720

Check Valves

Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Pilot operated, double acting							
	DPC1-16		151 (40)	210 (3000)	Direct poppet, 4:1 ratio, manifold assembly	2,61 (5.75)	720
	DPC1-20		227 (60)	210 (3000)	Direct poppet, 4:1 ratio, manifold assembly	4,45 (9.8)	720
Pilot operated, single acting							
	POC1-10	C-10-3S	57 (15)	350 (5000)	Pilot–to–open 3:1 ratio	0,10 (0.23)	720
	POC1-12	C-12-3S	114 (30)	350 (5000)	Pilot–to–open 3:1 ratio	0,26 (0.58)	720
	SPC2-8	C-8-3	19 (5)	240 (3500)	Pilot operated, 3:1 ratio	0,07 (0.15)	720
	SPC1-10		45 (12)	210 (3000)	Direct poppet, 4:1 ratio, manifold assembly	0,52 (1.14)	720
	SPC2-10	C-10-3	23 (6)	210 (3000)	Direct poppet, 4:1 ratio	0,08 (0.18)	720
	SPC1-16		151 (40)	210 (3000)	Direct poppet, 4:1 ratio, manifold assembly	1,83 (4.03)	720
	SPC1–20		227 (60)	210 (3000)	Direct poppet, 4:1 ratio, manifold assembly	3,17 (6.98)	720

Logic Elements

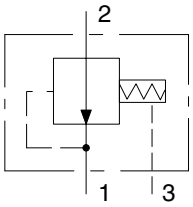
Differential pressure sensing



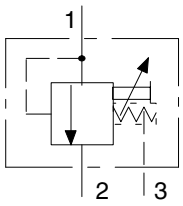
Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
DPS2-10	C-10-3S	57 (15)	†290 (4200)* ‡240 (3500)*	Differential pressure sensing	0,14 (0.30)	724
DPS2-16	C-16-3S	190 (50)	†290 (4200)* ‡240 (3500)*	Differential pressure sensing	0,35 (0.78)	724
DPS2-20	C-20-3S	303 (80)	†290 (4200)* ‡240 (3500)*	Differential pressure sensing	0,81 (1.78)	724

†*Spool type*
‡*Poppet type*
** Indicates that these models are available for use above 210 bar (3000 psi). However, caution should be taken and a review of the application may be necessary prior to use. Contact your Vickers sales engineer.*

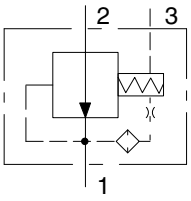
Functional symbols



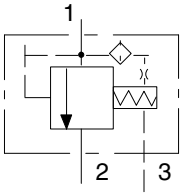
DPS2–**(V)–F
Spool, flow control, normally open



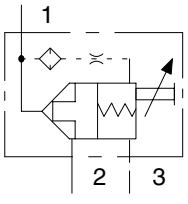
DPS2–**(V)–P
Spool, normally closed



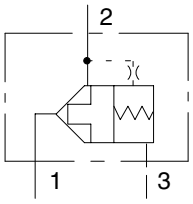
DPS2–**(V)–R
Spool, pressure reducing, normally open



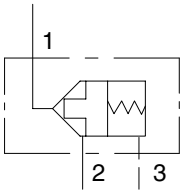
DPS2–**(V)–V
Spool, normally closed



DPS2–**(V)–B
Poppet, vent to open, normally closed

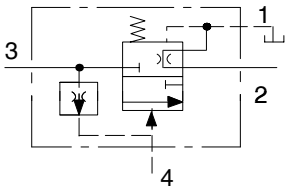
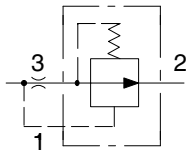
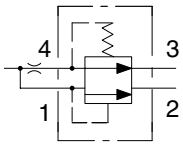


DPS2–**(V)–S
Poppet, vent to open, normally closed

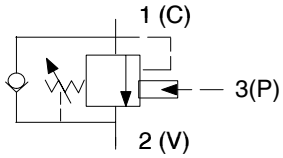
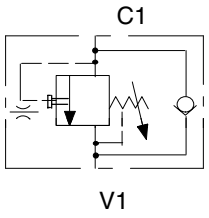
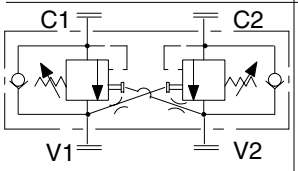
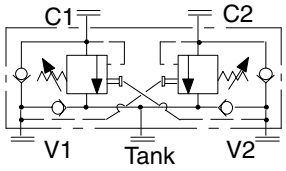
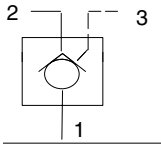
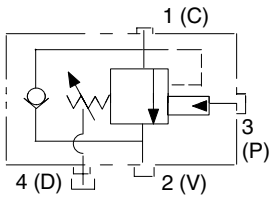


DPS2–**(V)–T
Poppet, bi-directional pilot to close, 2:1 ratio, normally closed

Logic Elements

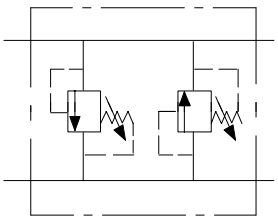
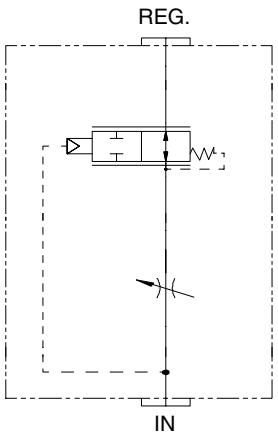
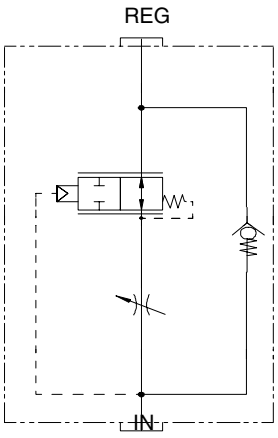
Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Spool type modulating orifice cartridges							
	MOS1-10	C-10-4	38 (10)	210 (3000)	Manual override option	0,50 (1.12)	724
	MOS1-16	C-16-4	132 (35)	210 (3000)	Manual override option	0,52 (1.14)	724
Hydrostats, 2–way							
	PCS3-10	C-10-3	38 (10)	210 (3000)	Compensator spool element, restrictive type	0,12 (0.26)	724
	PCS3-16	C-16-3	114 (30)	210 (3000)	Compensator spool element, restrictive type	0,38 (0.84)	724
	PCS3-20	C-20-3	189 (50)	210 (3000)	Compensator spool element, restrictive type	0,88 (1.94)	724
Hydrostats, 3-way							
	PCS4-10	C-10-4	38 (10)	210 (3000)	Compensator spool element, priority type	0,14 (0.32)	724
	PCS4-16	C-16-4	114 (30)	210 (3000)	Compensator spool element, priority type	0,50 (1.12)	724
	PCS4-20	C-20-4	189 (50)	210 (3000)	Compensator spool element, priority type	0,50 (1.12)	724

Load Controls

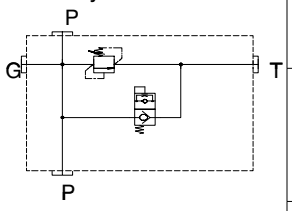
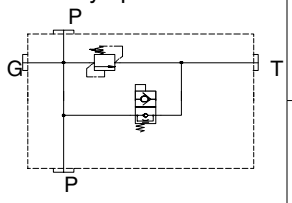
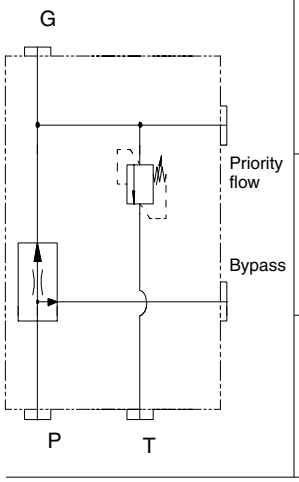
Functional Symbol	Model	Cavity	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Weight kg (lbs)	Catalog
Counterbalance valves							
	CBV1-10 CBV2-10	C-10-3S	60 (15)	350 (5000)	Counterbalance, 4:1 pilot ratio 10:1 pilot ratio	0,23 (0.50)	722
	CBV7–10 CBV8-10 CBV9-10	CMM–10–3	60 (15)	280 (4060) 350 (5000)	Counterbalance 3:1 pilot ratio 4.5:1 pilot ratio 10:1 pilot ratio	0,15 (0.34)	722
	CBV1-12 CBV2-12	C-12-3S	114 (30)	350 (5000)	Counterbalance 4:1 pilot ratio 10:1 pilot ratio	0,36 (0.79)	722
	MCV1-16		151 (40)	210 (3000)*	Inline housing type counterbalance, 11:1 ratio with manifold assembly	4,50 (10.0)	722
	MCV1-20		190 (50)	210 (3000)*	Inline housing type counterbalance, 10:1 ratio with manifold ass'y	5,40 (12.0)	722
	MCV2-20		190 (50)	210 (3000)*	Inline housing type counterbalance, 10:1 ratio with manifold ass'y	10,0 (21.5)	722
	MCV4-16		151 (40)	210 (3000)*	Dual counter-balance, 11:1 ratio with anti-cavitation checks, manifold assembly	8,0 (18.0)	722
	POC1-10	C-10-3S	60 (15)	350 (5000)	Pilot-to-open 3:1 ratio	0,10 (0.23)	722
	POC1-12	C-12-3S	114 (30)	350 (5000)	Pilot-to-open 3:1 ratio	0,26 (0.58)	722
	VCB1-10	C-10-4 C-10-4U	60 (15)	350 (5000)	Counterbalance with separate vent 4:1 pilot ratio	0,36 (0.79)	722
	VCB1-12	C-12-4 C-12-4U	114 (30)	350 (5000)	Counterbalance with separate vent 4:1 pilot ratio	0,37 (0.81)	722

** Indicates that these models are available for use above 210 bar (3000 psi). However, caution should be taken and a review of the application may be necessary prior to use. Contact your Vickers sales engineer.*

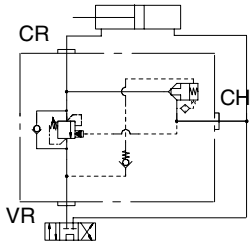
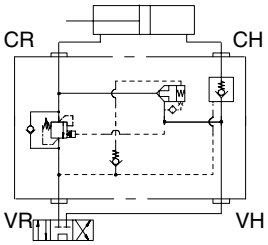
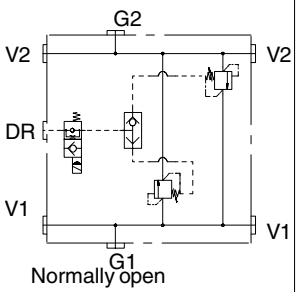
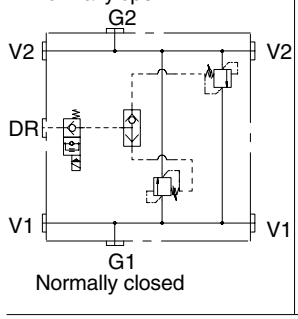
Circuit Makers

Functional Symbol	Model	Flow Rating lpm (USgpm)	Typ. Pressure bar (psi)	Description	Catalog
Screw in cartridge valve packages					
	CRV-10	76 (20)	17 - 210 (250 - 3000)	Cross port relief valve	737
	CRV-16	303 (80)	17 - 172 (250 - 2500)	Cross port relief valve	737
	FC-1	36 (9)	210 (3000)	Full range adjustable flow control package	737
	FC-2	60 (15)	210 (3000)	Full range adjustable flow control package	737
	FC-3	114 (30)	210 (3000)	Full range adjustable flow control package	737
	FC-4	190 (50)	210 (3000)	Full range adjustable flow control package	737
	FRC-1	36 (9)	210 (3000)	Full range adjustable pressure compensated flow regulating package	737
	FRC-2	60 (15)	210 (3000)	Full range adjustable pressure compensated flow regulating package	737
	FRC-3	114 (30)	210 (3000)	Full range adjustable pressure compensated flow regulating package	737
	FRC-4	190 (50)	210 (3000)	Full range adjustable pressure compensated flow regulating package	737

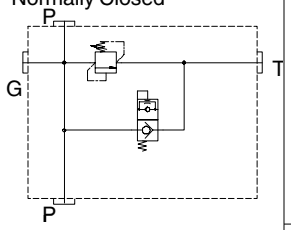
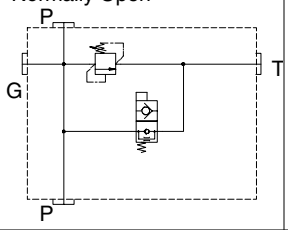
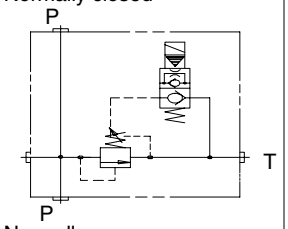
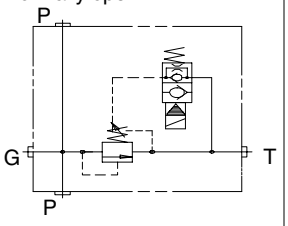
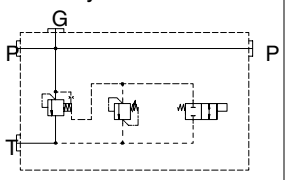
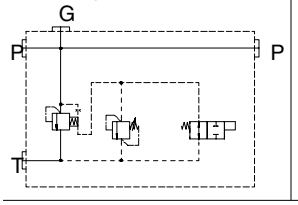
Circuit Makers

Functional Symbol	Model	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Description	Catalog
Screw in cartridge valve packages					
Normally closed 	PCC1-12	114 (30)	5 - 210 (75 - 3000)	Pump control manifold for single pump circuits	737
	PCC1-16	228 (60)	10 - 210 (150 - 3000)	Pump control manifold for single pump circuits	737
Normally open 	PCC2-12	114 (30)	5 - 210 (75 - 3000)	Pump control manifold for multiple pump circuits	737
	PCC2-16	228 (60)	10 - 210 (150 - 3000)	Pump control manifold for multiple pump circuits	737
	PFRR-8	15 (4)	7 - 210 (100 - 3000)	Fixed priority flow control with relief on priority flow port	737
	PFRR-10	60 (15)	7 - 210 (100 - 3000)	Fixed priority flow control with relief on priority flow port	737
	PFRR-16	152 (40)	7 - 210 (100 - 3000)	Fixed priority flow control with relief on priority flow port	737

Circuit Makers

Functional Symbol	Model	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Typical Vented ΔP bar (psi)	Description	Catalog
Screw in cartridge valve packages						
	RGV-10	60 (15)	210 (3000)		Pressure sensitive regenerative	737
	RGV-12	114 (30)	210 (3000)		Pressure sensitive regenerative	737
	RLV-10	60 (15)	210 (3000)		Pressure sensitive regenerative w/load locking	737
	RLV-12	114 (30)	210 (3000)		Pressure sensitive regenerative w/load locking	737
 	SCR-1	114 (30)	210 (3000)		Cross port relief w/shuttle and solenoid vent	737

Circuit Makers

Functional Symbol	Model	Flow Rating lpm (USgpm)	Typical Pressure bar (psi)	Typical Vented ΔP bar (psi)	Description	Catalog
Screw in cartridge valve packages						
Normally Closed 	SRV-8	23 (6)	210 (3000)	4 (60)	Solenoid actuated relief valve	737
Normally Open 	SRV-10	60 (15)	210 (3000)	7 (100)	Solenoid actuated relief valve	737
Normally closed  Normally open 	SRV-12	114 (30)	210 (3000)	10 (150)	Solenoid actuated relief valve	737
Normally closed 	SRV-16	225 (60)	210 (3000)	8 (120)	Solenoid actuated relief valve	737
Normally open 	SRV-20	300 (80)	210 (3000)	9 (135)	Solenoid actuated relief valve	737

Master Index

Master Index