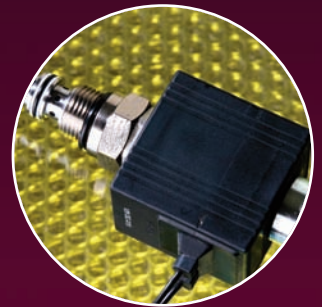




Управление Гидроприводом





DIRECTIONAL CONTROL VALVES

CONTENTS

A range of cartridge solenoid valves with flows up to 100 litres/min (26 US GPM) and pressures up to 350 bar (5000 psi), including a variety of poppet and spool solutions.

SELECTION

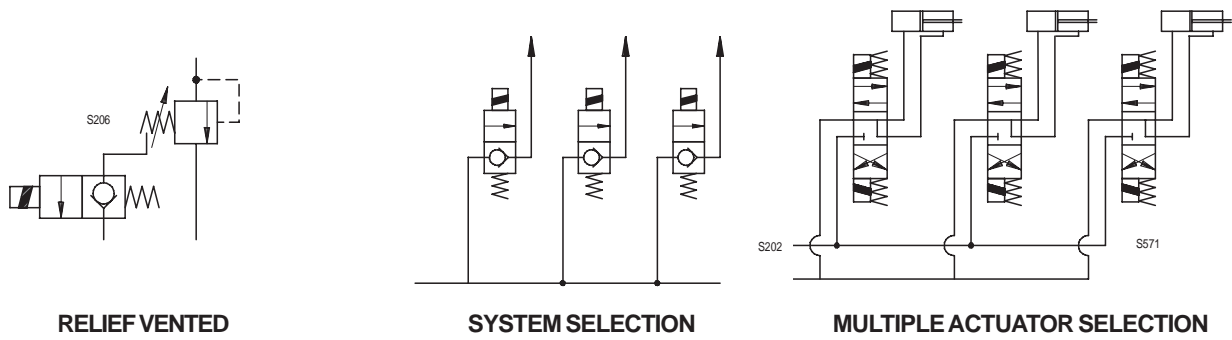
CIRCUIT	SERIES	APPLICATION	RANGE	PAGE
	S201	N.O. 2-way, 2-position poppet	210 bar (3000 psi); 30 litres/min (8 US GPM)	11-1111
	S501	N.O. 2-way, 2-position poppet	210 bar (3000 psi); 60 litres/min (16 US GPM)	11-1211
	S701	N.O. 2-way, 2-position poppet	210 bar (3000 psi); 80 litres/min (20 US GPM)	11-1255
	S901	N.O. 2-way, 2-position poppet	250 bar (3600 psi); 160 litres/min (42 US GPM)	11-1275
	S202	N.C. 2-way, 2-position poppet	210 bar (3000 psi); 30 litres/min (8 US GPM)	11-1111
	S502	N.C. 2-way, 2-position poppet	210 bar (3000 psi); 60 litres/min (16 US GPM)	11-1211
	S702	N.C. 2-way, 2-position poppet	210 bar (3000 psi); 80 litres/min (20 US GPM)	11-1255
	S902	N.C. 2-way, 2-position poppet	250 bar (3600 psi); 160 litres/min (42 US GPM)	11-1275
	S600	N.O. 2-way, 2-position poppet	250 bar (3600 psi); 100 litres/min (26 US GPM)	11-1311
	S609	N.C. 2-way, 2-position poppet	250 bar (3600 psi); 100 litres/min (26 US GPM)	11-1311
	7SP300	N.O. 2-way, 2-position poppet	210 bar (3000 psi); 300 litres/min (80 US GPM)	11-1351
	7SP300	N.C. 2-way, 2-position poppet	210 bar (3000 psi); 300 litres/min (80 US GPM)	11-1351
	SX203	N.O. 2-way, 2-position poppet	280 bar (4000 psi); 20 litres/min (5 US GPM)	11-1431
	SX204	N.C. 2-way, 2-position poppet	350 bar (5000 psi); 20 litres/min (5 US GPM)	11-1431
	S205	N.O. 2-way, 2-position poppet	210 bar (3000 psi); 1 litre/min (0.25 US GPM)	11-1611
	S206	N.C. 2-way, 2-position poppet	210 bar (3000 psi); 1 litre/min (0.25 US GPM)	11-1611
	S207	N.O. 2-way, 2-position poppet	350 bar (5000 psi); 1 litre/min (0.25 US GPM)	11-1711
	S607	N.O. 2-way, 2-position poppet	250 bar (3600 psi); 100 litres/min (26 US GPM)	11-1811
	S608	N.C. 2-way, 2-position poppet	250 bar (3600 psi); 100 litres/min (26 US GPM)	11-1811
	S210	N.O. 2-way, 2-position spool	210 bar (3000 psi); 20 litres/min (5 US GPM)	11-1911
	S510(H)	N.O. 2-way, 2-position spool	210 bar (3000 psi); 25 litres/min (6.5 US GPM)	11-2011
	S211	N.C. 2-way, 2-position spool	210 bar (3000 psi); 20 litres/min (5 US GPM)	11-1911
	S511(H)	N.C. 2-way, 2-position spool	210 bar (3000 psi); 25 litres/min (6.5 US GPM)	11-2011
	S612	N.O. 2-way, 2-position spool	250 bar (3600 psi); 100 litres/min (26 US GPM)	11-1811
	S613	N.C. 2-way, 2-position spool	250 bar (3600 psi); 100 litres/min (26 US GPM)	11-1811
	S215	N.C. 2-way, 2 position poppet	210 bar (3000 psi); 1 litre/min (0.26 US GPM)	11-2051
	S217(H)	N.C. 2-way, 2 position poppet	210 bar (3000 psi); 20 litres/min (5 US GPM)	11-2071
	S217A	N.C. 2-way, 2 position poppet	210 bar (3000 psi); 10 litres/min (2.6 US GPM)	11-2073
	S717	N.C. 2-way, 2 position poppet	350 bar (5000 psi); 90 litres/min (24 US GPM)	11-2091
	S716	N.O. 2-way, 2 position poppet	350 bar (5000 psi); 90 litres/min (24 US GPM)	11-2091
	S220(H)	3-way, 2-position spool	210 bar (3000 psi); 14 litres/min (3.7 US GPM)	11-2111
	S520(H)	3-way, 2-position spool	210 bar (3000 psi); 40 litres/min (10 US GPM)	11-2211
	S221(H)	3-way, 2-position spool	210 bar (3000 psi); 20 litres/min (5 US GPM)	11-2311
	S521(H)	3-way, 2-position spool	210 bar (3000 psi); 44 litres/min (11.5 US GPM)	11-2411



CIRCUIT	SERIES	APPLICATION	RANGE	PAGE
	S222	3-way, 2-position spool	100 bar (1500 psi); 20 litres/min (5 US GPM)	11-2511
	S228	3-way, 2-position spool	50 bar (750 psi); 15 litres/min (4 US GPM)	11-2721
	S229	3-way, 2-position poppet	210 bar (3000 psi); 12 litres/min (3 US GPM)	11-2731
	S525(H)	3-way, 2-position spool	210 bar (3000 psi); 30 litres/min (8 US GPM)	11-2611
	S526	3-way, 2-position spool	210 bar (3000 psi); 35 litres/min (9 US GPM)	11-2711
	S240	4-way, 2-position spool	210 bar (3000 psi); 18 litres/min (4.7 US GPM)	11-2811
	S241	4-way, 2-position spool	210 bar (3000 psi); 20 litres/min (5 US GPM)	11-2911
	S541	4-way, 2-position spool	210 bar (3000 psi); 30 litres/min (8 US GPM)	11-3011
	S242(H)	4-way, 2-position spool	210 bar (3000 psi); 15 litres/min (4 US GPM)	11-3111
	S542	4-way, 2-position spool	210 bar (3000 psi); 35 litres/min (9 US GPM)	11-3211
	S270	4-way, 3-position spool	210 bar (3000 psi); 13 litres/min (3.5 US GPM)	11-3311
	S570	4-way, 3-position spool	210 bar (3000 psi); 35 litres/min (9 US GPM)	11-3411
	S271	4-way, 3-position spool	210 bar (3000 psi); 14 litres/min (3.7 US GPM)	11-3511
	S571	4-way, 3-position spool	210 bar (3000 psi); 34 litres/min (8.7 US GPM)	11-3611
	S272	4-way, 3-position spool	210 bar (3000 psi); 14 litres/min (3.7 US GPM)	11-3711
	S572	4-way, 3-position spool	210 bar (3000 psi); 34 litres/min (8.7 US GPM)	11-3811
	S274	4-way, 3-position spool	210 bar (3000 psi); 14 litres/min (3.7 US GPM)	11-3911
	S574	4-way, 3-position spool	210 bar (3000 psi); 34 litres/min (8.7 US GPM)	11-4011
	S277	4-way, 3-position spool	210 bar (3000 psi); 11.5 litres/min (3.1 US GPM)	11-4111
	S577R	4-way, 3-position spool	210 bar (3000 psi); 27 litres/min (7 US GPM)	11-4211
	PDR21A	Proportional Pressure relief	350 bar (5000 psi) 1.5 litres/min (0.3 US GPM)	11/2-151
	PPD22A(H)	Proportional Pressure reducer	210 bar (3000 psi); 20 litres/min (5.4 US GPM)	11/5-105
	PFR24A	Proportional Flow Control	210 bar (3000 psi); 18 litres/min (4.7 US GPM)	11/9-121

Note. When using these valves in conjunction with a PLC and there is a possibility of a residual voltage please contact the factory with application information to ensure safe operation of the product.

TYPICAL CIRCUIT EXAMPLES



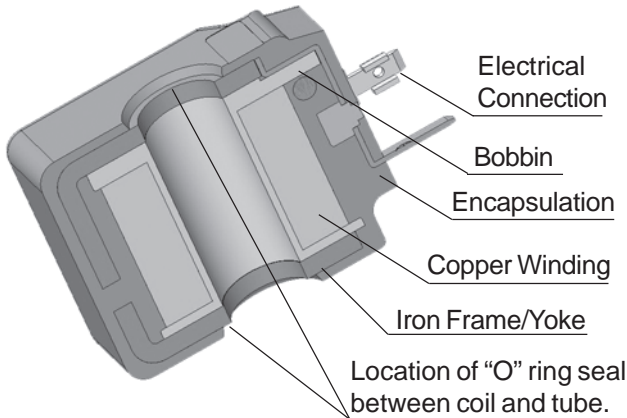
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COIL INFORMATION

C13 and C16 Series



WATTAGE

C13 (for 13 mm tubes) = 14, 22 & 27 Watts
 C16 (for 16 mm tubes) = 19 & 29 Watts

VOLTAGES

Standard

12 VDC 110 VRAC
 24 VDC 220 VRAC

Special/Optional

Other Voltages are available on request

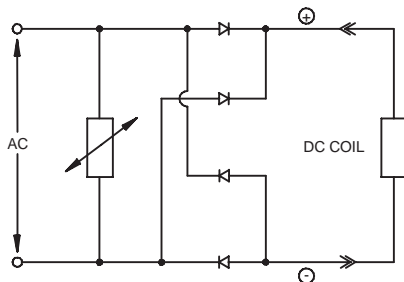
ALTERNATING CURRENT

For AC voltage an ISO4400 rectified connector must be used, as the coils are wound for DC.

The correct connector is available from the factory:

110 VAC = AXP9997-115
 220 VAC = AXP9997-230

VDR is fitted for over-voltage protection.
 Diodes are rated at 1.5 amp.



AC Voltage Connector Circuit Diagram

DUTY RATING

The coil is rated for continuous operation at nominal voltage +/- 10% and a ambient range of -20 to +40.

Note. Coil performance, force produced and power consumed, is effected by the heat of the coil, performance figures given in this catalogue are measured under simulated continuous duty conditions at the coil stabilised temperature. It is important to verify the actual conditions the valve will experience for any given application it should be tested in situ to confirm valve selection.

WIRE INSULATION

The coil winding is copper magnet wire insulation equivalent to class N (200°C).

ENCAPSULATION MATERIAL

C13, 14 Watt coils and C16, 19 Watt coils are black in colour and made from PBT (Black Polybutylene Reinforced) equivalent to Class F (155°C)

C13, 22 & 27 Watt coils and C16, 29 Watt coils are black in colour and made from IXEF (Black Polyarylamide Reinforced) equivalent to Class H (180°C)

INGRESS PROTECTION (IP) BS EN 60529

The coil/tube joint is sealed by "O" rings preventing fluid ingress and the possibility of tube corrosion.

Different electrical connectors offer different levels of protection the minimum being the DIN 43650 connector with a gasket at IP65. Integrated Hydraulics offer a wide range of connector types - details of which are available on request.

CONNECTORS

- H = ISO4400 Standard DIN43650
2 pin and earth
- F = Black Flying Leads 1.5mm² wire
600 mm long, 15 AWG, 2.2 mm diameter,
Teflon FEP covered (DC voltage only)
- DM = Deutsch Moulded 2 way DT04-2P series.
(DC voltage only).

Caution – When handling coils after or during use they maybe hot which can cause burning to the skin. Handle with care and use the appropriate equipment.

We reserve the right to change specifications without notice

Integrated Hydraulics Ltd

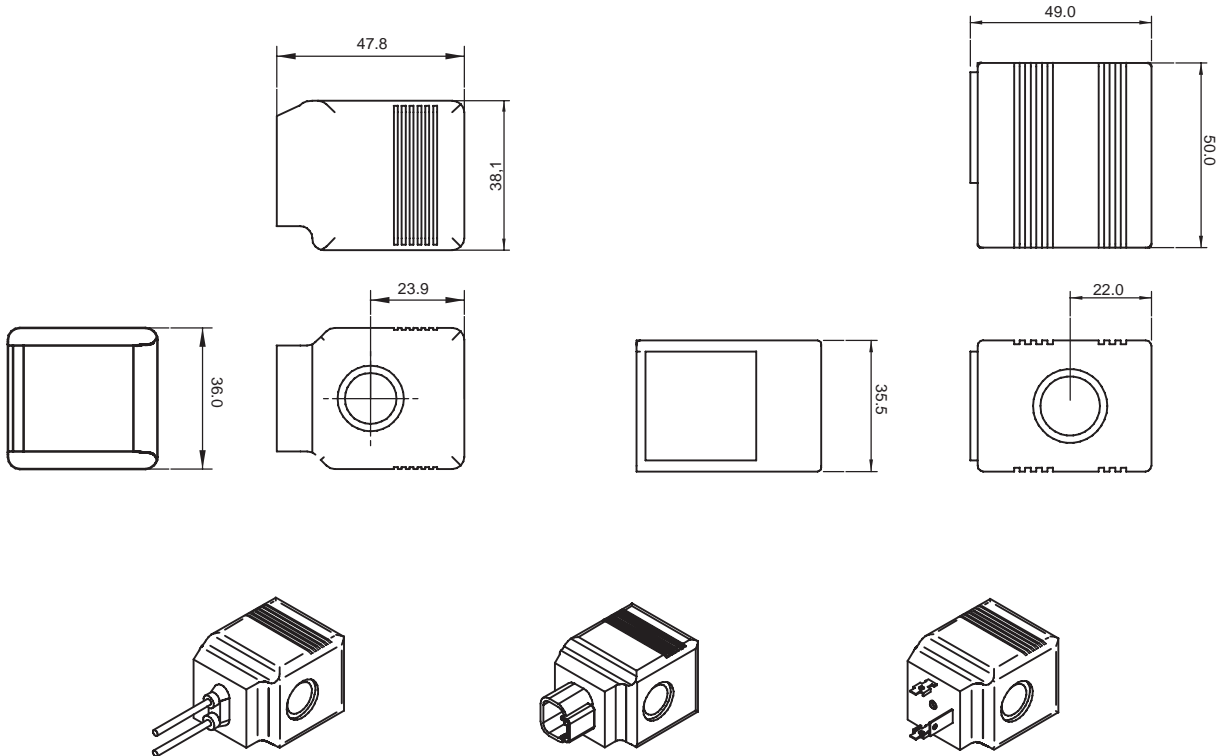
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C13 Coils

C16 Coils



ORDERING CODE EXAMPLE

C16 H 24 19

Coil Series

- 13 = 13 mm tube
- 16 = 16 mm tube

Connection

- H = DIN43650 ISO Standard
 - F = Flying Leads (12 and 24 VDC only)
 - DM = Deutsch Moulded (12 and 24 VDC only)
- (Consult factory for other options)

Wattage

- | | |
|--------------|--------------|
| C13 | C16 |
| 14 = 14 Watt | 19 = 19 Watt |
| 22 = 22 Watt | 29 = 29 Watt |
| 27 = 27 Watt | |

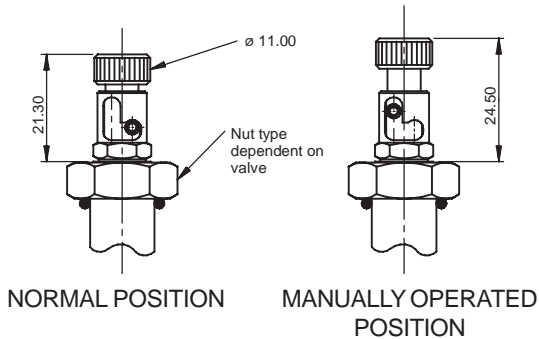
Voltage

- | | |
|-------------|-----------------|
| 12 = 12 VDC | 110 = 110 VRAC |
| 24 = 24 VDC | 220 = 220 VRAC* |
| | *220 to 240 VAC |

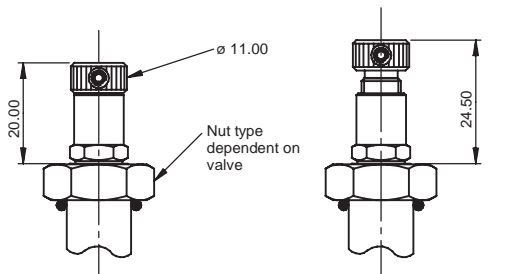
All AC coils must be used with a rectifying connector:-
(AXP9997-115 or AXP9997-230)
(Other voltages available on request)



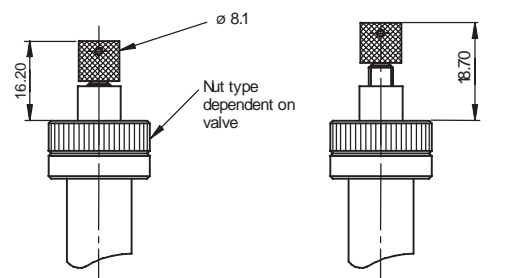
PUSH AND TWIST MANUAL OVERRIDE TYPE 1



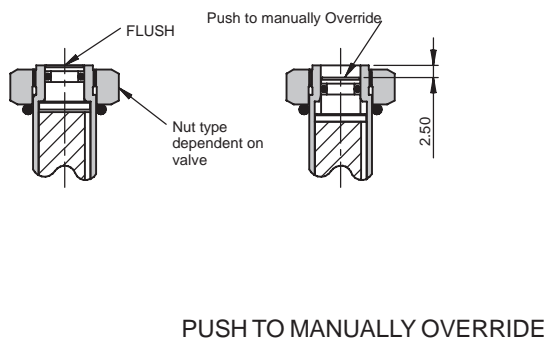
SCREW, NORMALLY OPEN MANUAL OVERRIDE TYPE 2



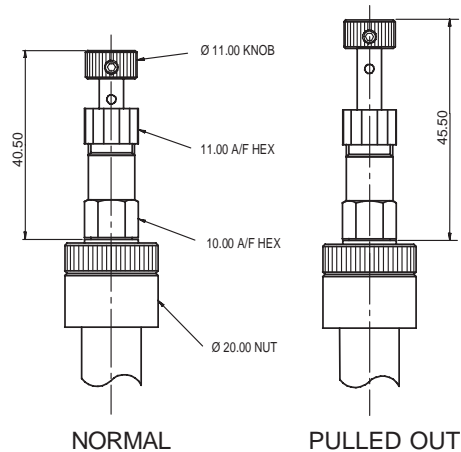
SCREW, NORMALLY CLOSED MANUAL OVERRIDE TYPE 2



PUSH MANUAL OVERRIDE TYPE 3



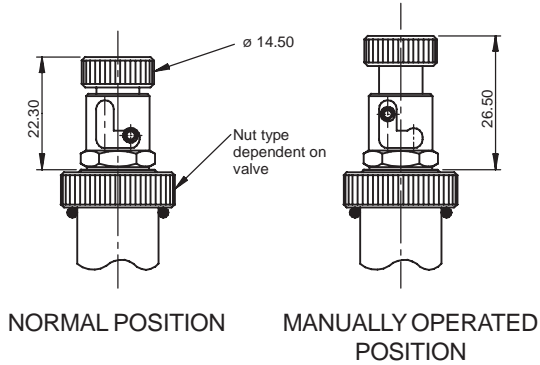
PUSH/PULL MANUAL OVERRIDE TYPE 4



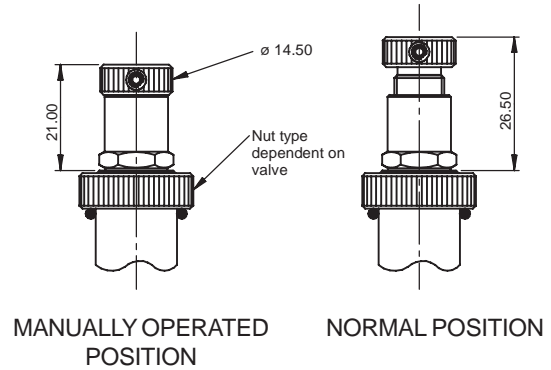
S5 Series

- consult factory for availability

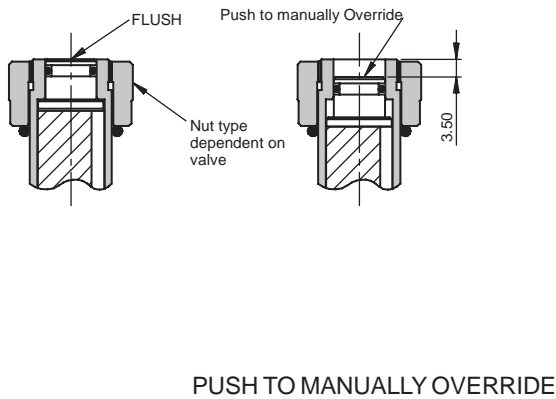
**PUSH AND TWIST MANUAL OVERRIDE
TYPE 1**



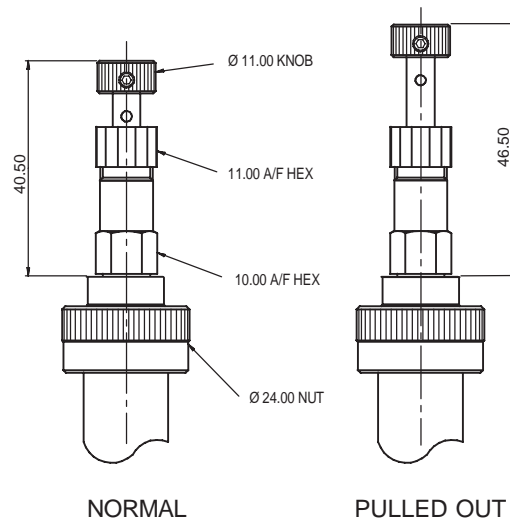
SCREW MANUAL OVERRIDE TYPE 2



PUSH MANUAL OVERRIDE TYPE 3



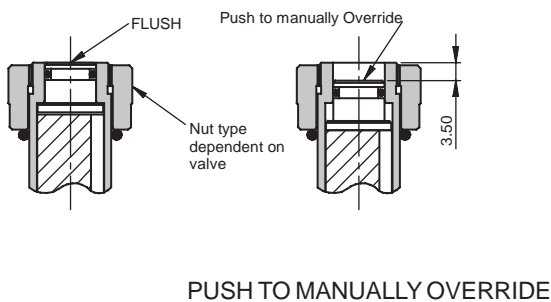
PUSH/PULL MANUAL OVERRIDE TYPE 4



S6Series

- consult factory for availability

PUSH MANUAL OVERRIDE TYPE 3





S201 / S202 Directional Control Valve - 2-Way, 2-Position Poppet

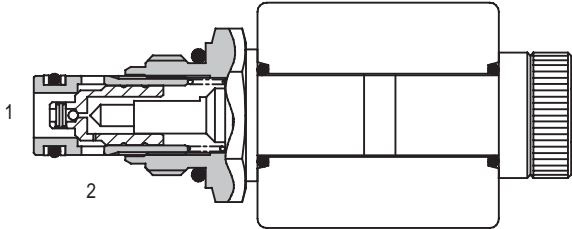
30 litres/min (8 US GPM) • 210 bar (3000 PSI)

S201

**NORMALLY OPEN
(as shown)**

S202

NORMALLY CLOSED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.
- Reversible coil without affecting performance.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*-/14

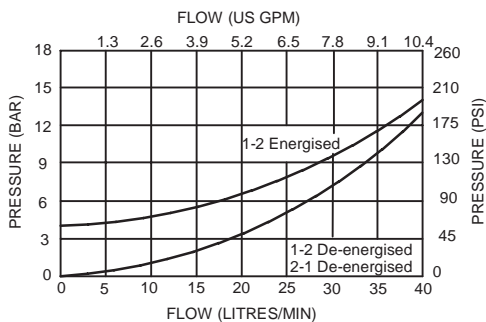
Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

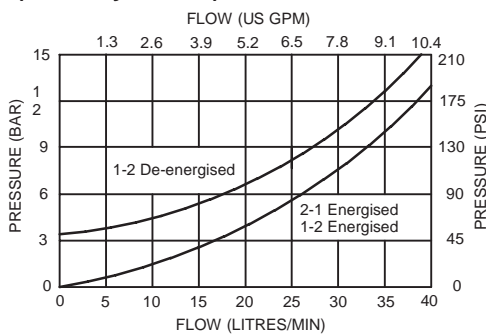
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

S201 (Normally Open)



S202 (Normally Closed)



SPECIFICATIONS

Basic Model Code	S201 (N.O.)	S202 (N.C.)
Symbol		
Max. Working Pressure	210 bar (3000 psi)	
Flow Rating	30 litres/min (8 US GPM)	
Nominal flow (at Delta P = 5 bar (70 psi))	25 litres/min (6.5 US GPM)	
Internal Leakage	0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1043 (Nitrile)	SK1043V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.125 kg (0.28 lbs)	
Coil Weight	0.2 kg (0.4 lbs)	
Cavity Number	A879 (See page 11-441)	
Torque into Cavity	20 Nm (15 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

Integrated Hydraulics Ltd

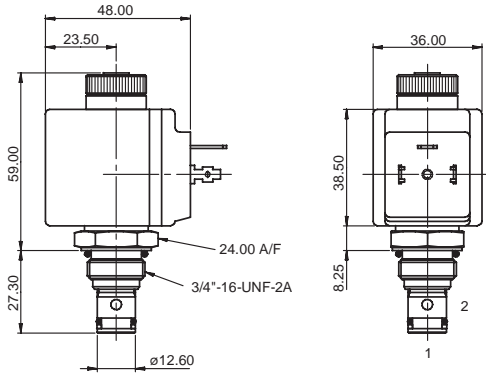
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CARTRIDGE ONLY

BASIC CODE: S201 (Normally Open)

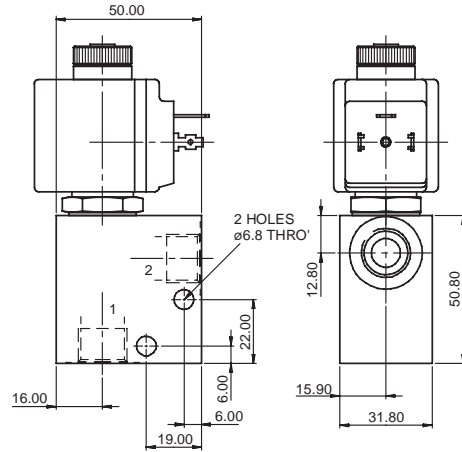


COMPLETE VALVE 1/4" 3/8" PORTS

BASIC CODE: S201 (Normally Open)

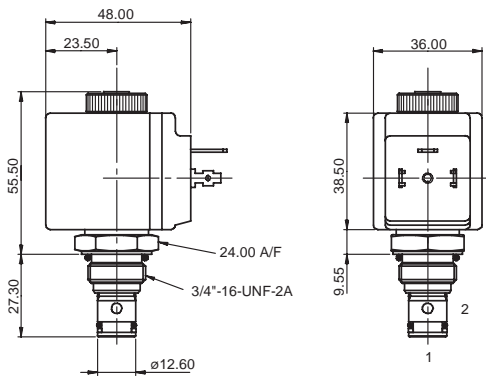
Body ONLY part numbers

BSP, aluminium	SAE, aluminium	BSP, steel	SAE, steel
1/4" A1485			
3/8" A1043	3/8" A15676	3/8" A14175	3/8" A14843



CARTRIDGE ONLY

BASIC CODE: S202 (Normally Closed)

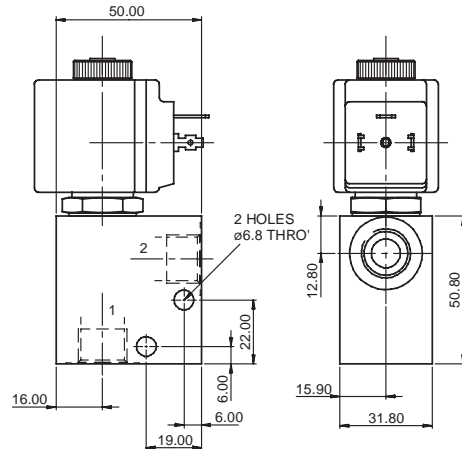


COMPLETE VALVE 1/4" 3/8" PORTS

BASIC CODE: S202 (Normally Closed)

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	BSP, steel	SAE, steel
1/4" A1485			
3/8" A1043	3/8" A15676	3/8" A14175	3/8" A14843



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S201 N H 24 3W

Basic Code

S201 = (normally open)
S202 = (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

1 = Push and twist (S202 Only)
2 = Screw (S201 & S202)

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



S501 / S502 Directional Control Valve - 2-Way, 2-Position Poppet

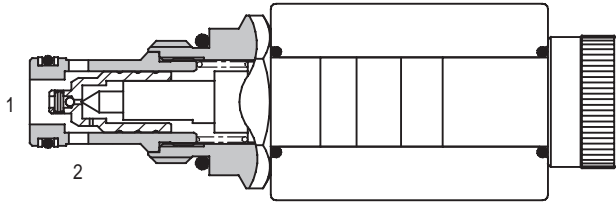
60 litres/min (16 US GPM) • 210 bar (3000 PSI)

S501

NORMALLY OPEN
(as shown)

S502

NORMALLY CLOSED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/*/19

Voltage available: 12, 24 VDC
110, 220 VAC*

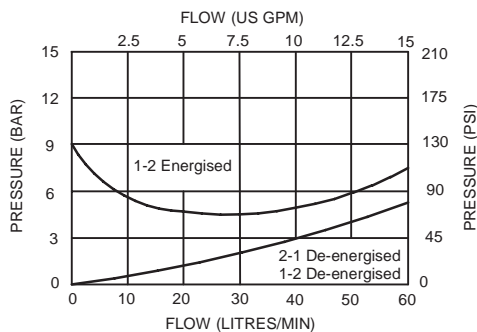
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

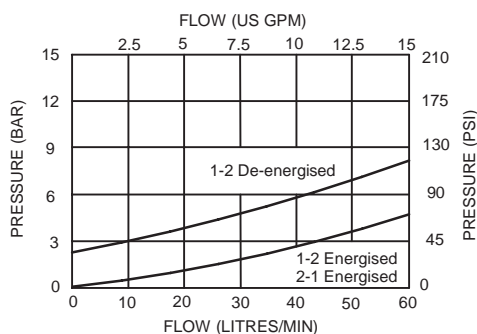
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

S501 (Normally Open)



S502 (Normally Closed)



Basic Model Code	S501 (N.O.)	S502 (N.C.)
Symbol		
Max. Working Pressure	210 bar (3000 psi)	
Flow Rating	60 litres/min (16 US GPM)	
Nominal Flow (at Delta P = 5 bar (70 psi))	60 litres/min (16 US GPM)	
Internal Leakage	0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1028 (Nitrile)	SK1028V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.2 kg (0.4 lbs)	
Coil Weight	0.3 kg (0.6 lbs)	
Cavity Number	A12370 (See Section 17)	
Torque into Cavity	30 Nm (22 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

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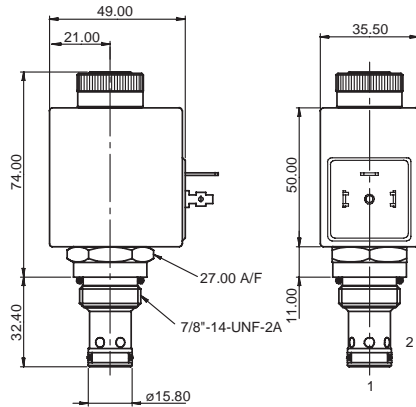
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CARTRIDGE ONLY

BASIC CODE: S501 (Normally Open)



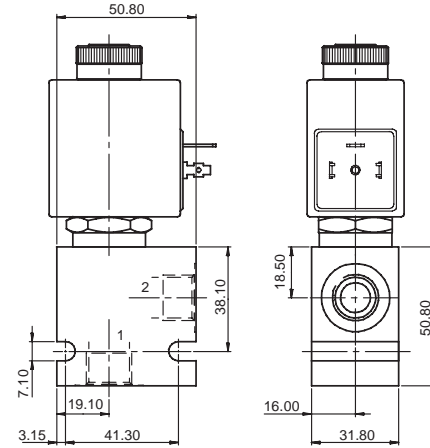
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S501 (Normally Open)

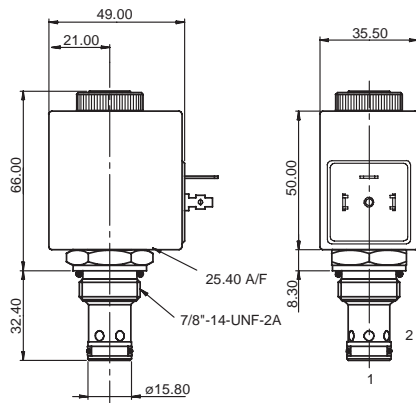
Body ONLY part numbers

<i>BSP, aluminium</i>	<i>SAE, aluminium</i>	<i>SAE, steel</i>
3/8" B19053	1/2" B19402	1/2" B20601
1/2" B19356		



CARTRIDGE ONLY

BASIC CODE: S502 (Normally Closed)



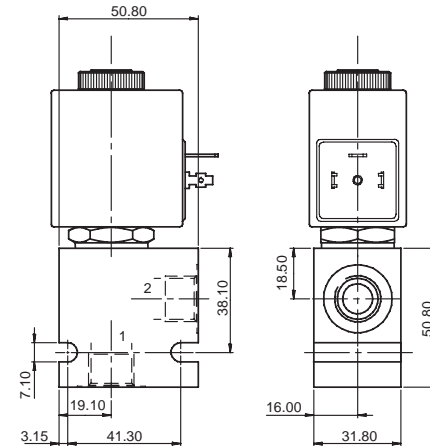
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S502 (Normally Closed)

Body ONLY part numbers

<i>BSP, aluminium</i>	<i>SAE, aluminium</i>	<i>SAE, steel</i>
3/8" B19053	1/2" B19402	1/2" B20601
1/2" B19356		



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S501 N H 24 3W

Basic Code

S501 = (normally open)
S502 = (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

2 = Screw (S501, S502)

Port Sizes

3W = 3/8" BSP
4W = 1/2" BSP
8T = 1/2" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



S701 / S702 Directional Control Valve - 2-Way, 2-Position Poppet

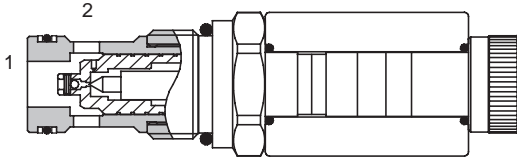
100 litres/min (26 US GPM) • 210 bar (3000 PSI)

S701

NORMALLY OPEN
(as shown)

S702

NORMALLY CLOSED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.
- Reversible coil without affecting performance.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/*/19

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

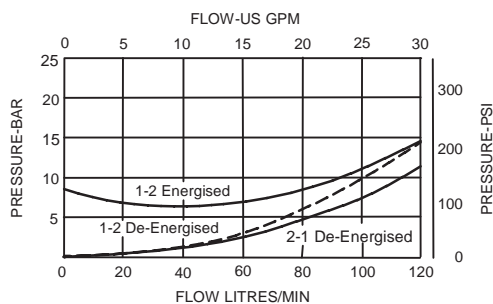
SPECIFICATIONS

Basic Model Code	S701 (N.O.)	S702 (N.C.)
Symbol		
Max. Pressure	210 bar (3000 psi)	
Flow Rating	100 litres/min (26 US GPM)	
Nominal flow (at Delta P = 5 bar (70 psi))	80 litres/min (20 US GPM)	
Internal Leakage	0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 à +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1207(Nitrile)	SK1207V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.3 kg (0.6 lbs)	
Coil Weight	0.3 kg (0.6 lbs)	
Cavity Number	A21473	
Torque into Cavity	60 Nm (44 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

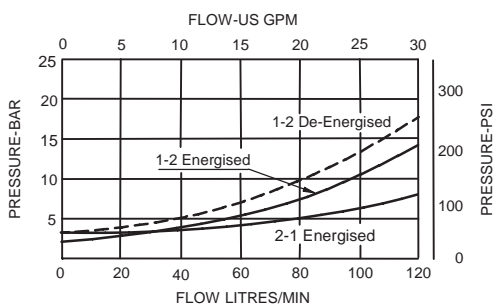
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

S701 (Normally Open)



S702 (Normally Closed)



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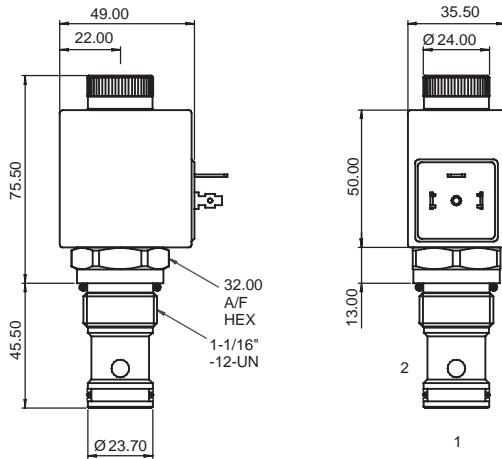
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CARTRIDGE ONLY

BASIC CODE: S701 (Normally Open)

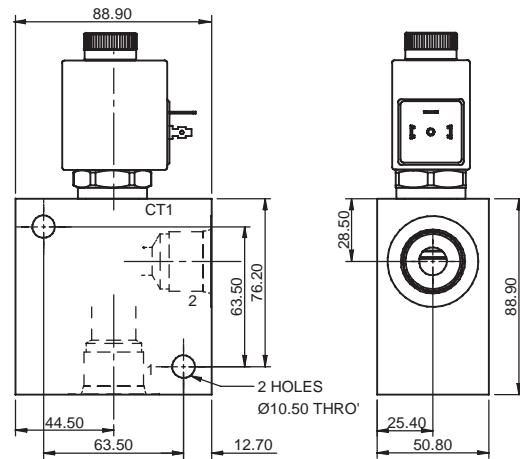


COMPLETE VALVE 3/4" PORTS

BASIC CODE: S701 (Normally Open)

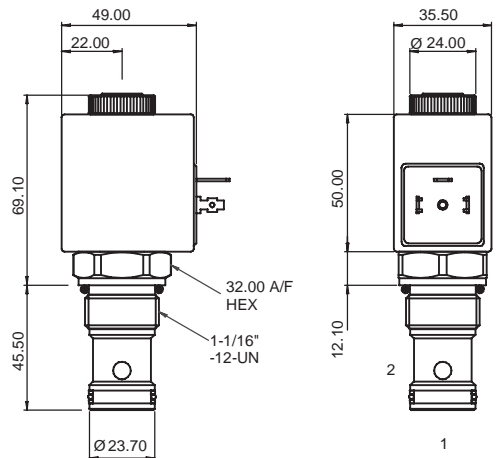
Body ONLY part numbers

BSP, aluminium 3/4" B22258	SAE, aluminium 3/4" B22260	BSP, steel 3/4" B22262	SAE, steel 3/4" B22264
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CARTRIDGE ONLY

BASIC CODE: S702 (Normally Closed)

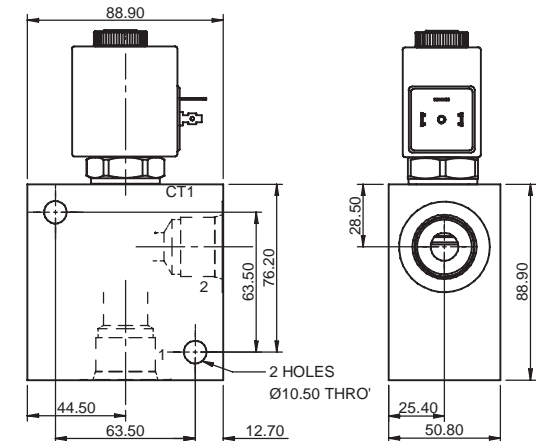


COMPLETE VALVE 3/4" PORTS

BASIC CODE: S702 (Normally Closed)

Body ONLY part numbers

BSP, aluminium 3/4" B22258	SAE, aluminium 3/4" B22260	BSP, steel 3/4" B22262	SAE, steel 3/4" B22264
-------------------------------	-------------------------------	---------------------------	---------------------------



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S701 N H 24 6W

Basic Code

S701 = (normally open)
S702 = (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

1 = Push and twist (S702 Only)
2 = Screw (S701 & S702)

Port Sizes

6W = 3/4" BSP 12T = 3/4" SAE

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded

Other terminations available on request

We reserve the right to change specifications without notice



S901 / S902 Directional Control Valve

2-Way, 2-Position Poppet

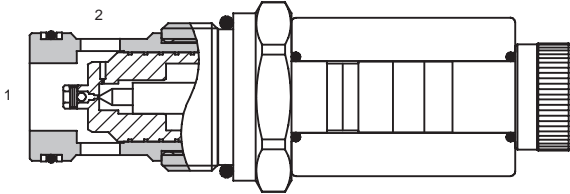
160 litres/min (42 US GPM) • 250bar (3600 PSI)

S901

NORMALLY OPEN
(as shown)

S902

NORMALLY CLOSED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5, S7 and S9 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/19

Voltage available: 12, 24 VDC
110, 220 VAC*

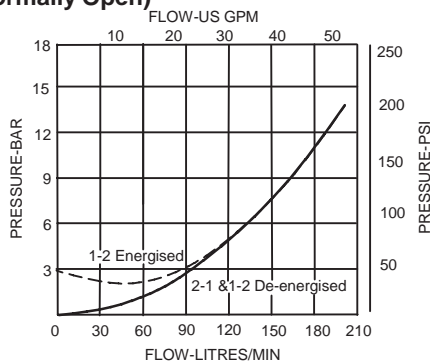
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

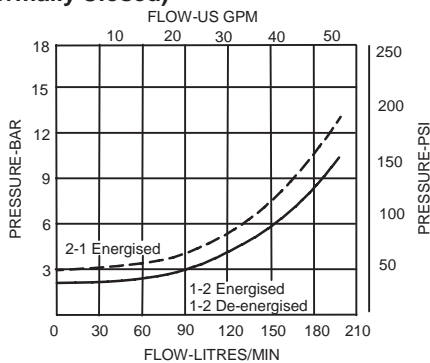
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

S901 (Normally Open)



S902 (Normally Closed)



Basic Model Code	S901 (N.O.)	S902 (N.C.)
Symbol		
Max. Working Pressure	250 bar (3600 psi)	
Flow Rating	160 litres/min (42 US GPM)	
Nominal Flow (at Delta P = 5 bar (70 psi))	130 litres/min (34 US GPM)	
Internal Leakage	0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1160 (Nitrile)	SK1160 (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.4 kg (0.9 lbs)	
Coil Weight	0.3 kg (0.6 lbs)	
Cavity Number	A21616 (See Section 17)	
Torque into Cavity	100 Nm (74 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy (up to 210 bar*)	

*For applications above 210 bar please consult our technical department or use the steel body option.

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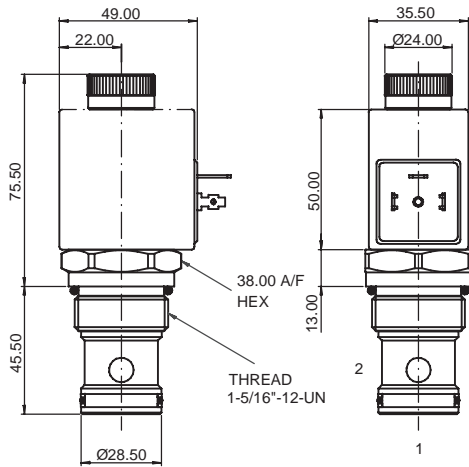
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CARTRIDGE ONLY

BASIC CODE: S901 (Normally Open)

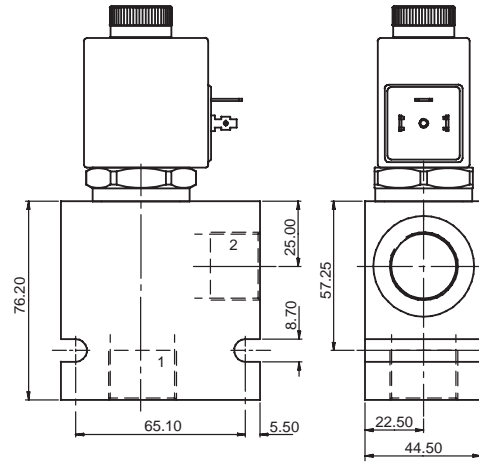


COMPLETE VALVE 3/4" 1" PORTS

BASIC CODE: S901 (Normally Open)

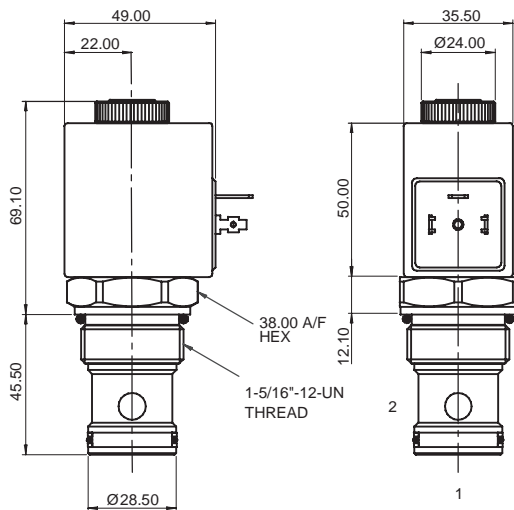
Body ONLY part numbers

BSP, aluminium	SAE, aluminium	SAE, steel
3/4" B19853	1" B23519	1" B23521
1" B19854		



CARTRIDGE ONLY

BASIC CODE: S902 (Normally Closed)

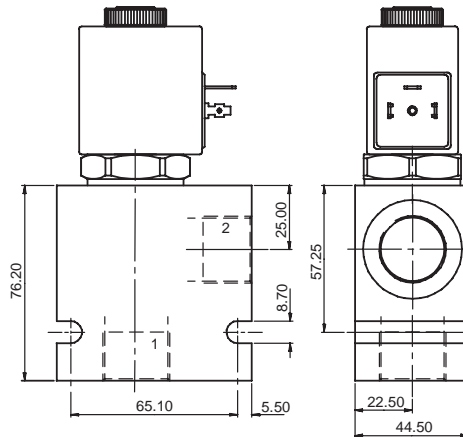


COMPLETE VALVE 3/4" 1" PORTS

BASIC CODE: S902 (Normally Closed)

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	SAE, steel
3/4" B19853	1" B23519	1" B23521
1" B19854		



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S901 N H 24 6W

Basic Code

S901 = (normally open)
S902 = (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

2 = Screw (S902 Only)

Port Sizes

6W = 3/4" BSP
8W = 1" BSP
16T = 1" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



S600 / S609 Directional Control Valve - 2-Way, 2-Position Poppet

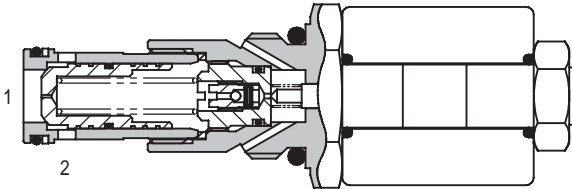
100 litres/min (26 US GPM) • 250 bar (3600 PSI)

S600

**NORMALLY OPEN
(as shown)**

S609

NORMALLY CLOSED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

APPLICATION

To give on-off control of flows up to 100 litres/min (26 US GPM) and pressures up to 250 bar (3600 psi).

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*/14

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

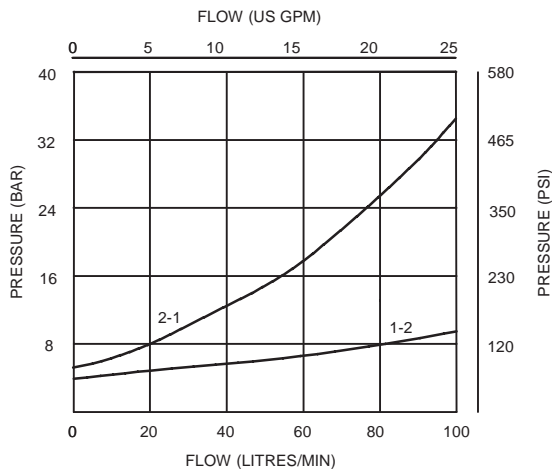
SPECIFICATIONS

Basic Model Code	S600 (N.O.)	S609 (N.C.)
Symbol		
Max. Working Pressure	250 bar (3600 psi)	
Flow Rating	100 litres/min (26 US GPM)	
Nominal Flow (at Delta P = 5 bar (70 psi))	60 litres/min (16 US GPM)	
Internal Leakage	0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK390 (Nitrile)	SK390V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.25 kg (0.55 lbs)	
Coil Weight	0.2 kg (0.4 lbs)	
Cavity Number	A881 (See Section 17)	
Torque into Cavity	60 Nm (44 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy (up to 210 bar*)	

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



*For applications above 210 bar please consult our technical department or use the steel body option.

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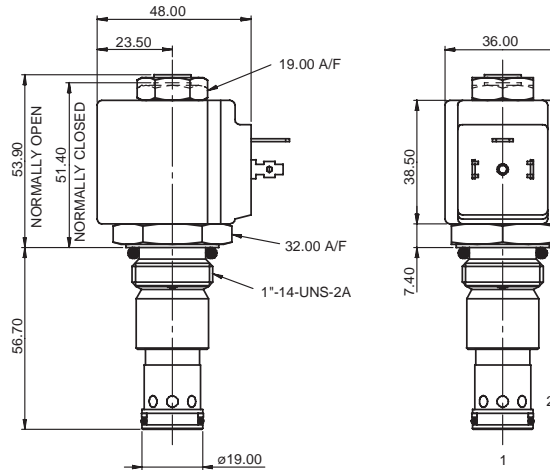
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CARTRIDGE ONLY

**BASIC CODE: S600 (Normally Open)
S609 (Normally Closed)**



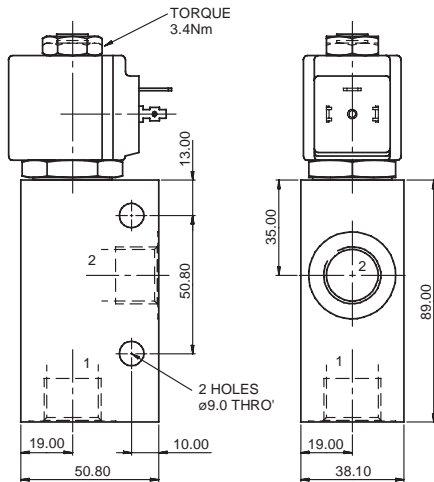
COMPLETE VALVE

1/2" 3/4" PORTS

**BASIC CODE: S600 (Normally Open)
S609 (Normally Closed)**

Body ONLY part numbers

BSP, aluminium	SAE, aluminium
1/2" B4851	1/2" B19403
3/4" B3954	3/4" B19404



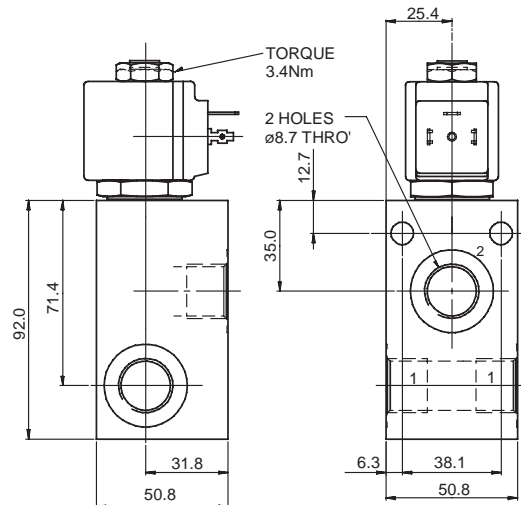
COMPLETE VALVE

3/8" 1/2" 3/4" PORTS

**BASIC CODE: S600T (Normally Open)
S609T (Normally Closed)**

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	BSP, steel	SAE, aluminium
3/8" C1084	3/8" B10784	1/2" C593	
1/2" C1044	1/2" C7140	3/4" C4917	3/4" B10742
3/4" C1086	3/4" B10506		



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S60* **N** **H** **24** **4W** **T**

Basic Code
S600 = (normally open)
S609 = (normally closed)

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
3 = Push (S600 Only)

Body Type
Omit = Standard
T = Through ported

Port Sizes
3W = 3/8" BSP 6T = 3/8" SAE
4W = 1/2" BSP 8T = 1/2" SAE
6W = 3/4" BSP 12T = 3/4" SAE

Voltage
12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination
H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice

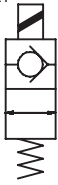


7SP300 DIRECTIONAL CONTROL VALVE

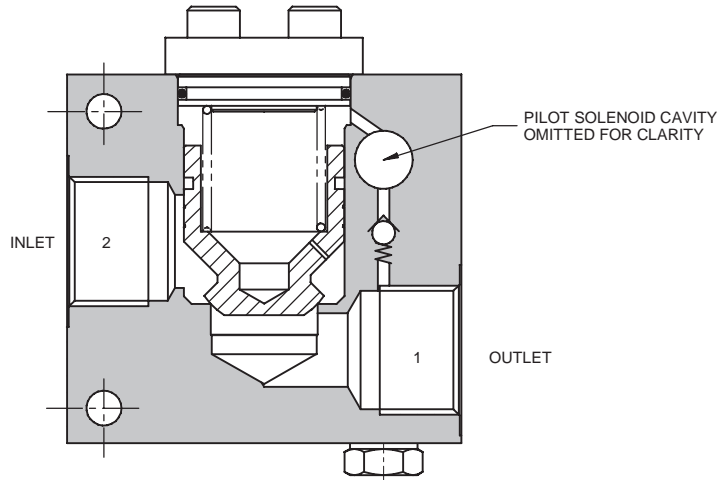
2 WAY POPPET • 300 litres/min (80 US GPM) • 210 bar (3000 psi)

7SP300

NORMALLY OPEN



NORMALLY CLOSED



APPLICATION

To give on-off control of flows of 300 litres/min (80 US GPM) and pressures up to 210 bar (3000 psi) in any hydraulic system. Can also be used as a high capacity, fast acting, dump valve.

OPERATION

The normally open or normally closed pilot cartridge controls the vent flow through the main poppet. When in the open mode, pilot flow passes through the orifice in the poppet and the resultant pressure imbalance causes the main section to open. As the movement of the main poppet or spool is not limited by the solenoid stroke, the valves have a flow capacity of 300 litres/min (80 US GPM) with a low pressure drop.

REVERSE PRESSURE

The valves are normally used for the bidirectional control of flow and the integral check valve ensures that the main section will open and pass reverse flow regardless of the pilot mode. The normally closed valve is typically used in line to an actuator to allow free flow in and control the flow out.

FEATURES

Through port line body construction for ready installation into hydraulic lines. Fast response, high flow capacity. Cartridge pilot section for easy maintenance. A range of coils is available, see the Ordering Code Example for voltage and termination options.

SPECIFICATIONS

Figures based on: Oil Temp = 40°C Viscosity = 40 cSt

Rated Flow	300 litres/min (80 US GPM)
Working Pressure	210 bar (3000 psi)
Cartridge Material	Working parts hardened and ground steel. External surfaces electroless nickel plated.
Body Material	Aluminium
Mounting Position	Line mounted
Weight (exc. coil)	1.90 kg (4.18 lbs)
Seal Kit Number	SK433 (Nitrile) SK433V (Viton)
Recommended Filtration Level	BS5540/4 Class 18/13 (25 micron nominal)
Operating Temp	-20°C to +90°C
Leakage	1 millilitre/min max (15 dpm)
Nominal Viscosity Range	5 to 500 cSt
Pilot Valve	S203 / S204 (See page 11-141)

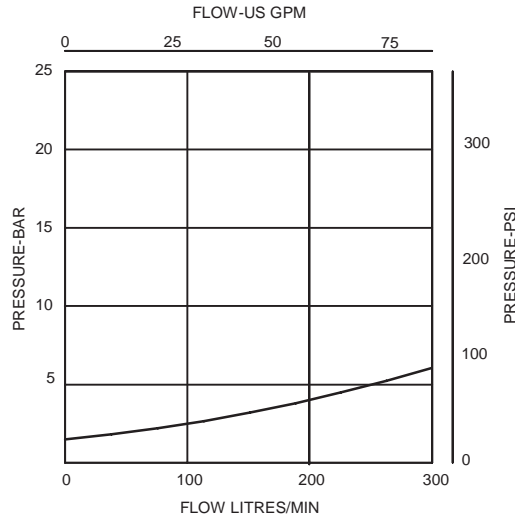
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PRESSURE DROP

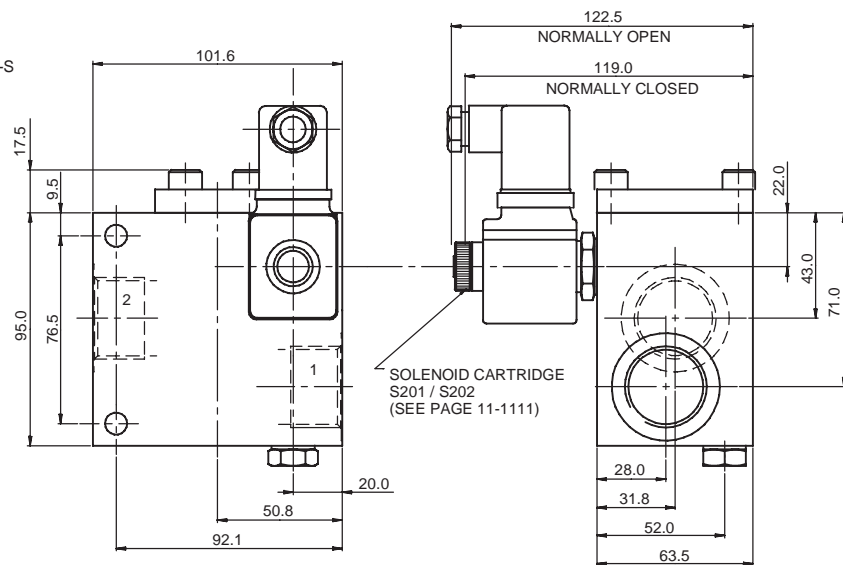


COMPLETE VALVE 3/4" 1" PORTS

BASIC CODE: 7SP300

Sub-assembly part numbers

BSP aluminium	SAE aluminium
3/4" CXP3122-6W-S	
1" CXP3122-8W-S	1" CXP3122-16T-S



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

7SP300 1 6W H 24 S

Basic Code

7SP300 = Complete valve

Solenoid Configuration

1 = Normally open
2 = Normally closed

Port Sizes - Bodied Valves Only

6W = 3/4" BSP
8W = 1" BSP 16T = 1" SAE

Coil Termination

H = ISO4400 (plug included)
F = Flying Leads DC only
DM = Deutsch Moulded
Other terminations available on request

Seals

S = Nitrile (For use with most industrial hydraulic oils)
SV = Viton (For high temperature and most special fluid applications)

Coil Voltage

12 = 12VDC
24 = 24VDC
110 = 110VAC 50 Hz
220 = 220VAC 50 Hz
Other voltages available on request

We reserve the right to change specifications without notice



SX203 / SX204 Directional Control Valve - 2-Way, 2-Position

Poppet

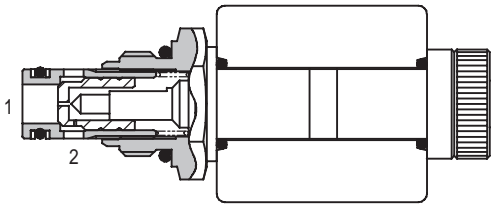
20 litres/min (5 US GPM) • 350 bar (5000 PSI)

SX203

NORMALLY OPEN
(as shown)

SX204

NORMALLY CLOSED



APPLICATION

To give on-off control of flows of 20 litres/min (5 US GPM) and pressures up to 350 bar (5000 psi). Typical usage includes the control of actuators in a hydraulic system.

OPERATION

Normally Open

De-energised; 2 to 1 – full flow, pressure difference through the pilot orifice holds the main poppet open. 1 to 2 – restricted flow, main poppet pressure biased onto its seat, pilot orifice open.

Energised; 2 to 1 - No flow, pilot orifice closed, main poppet pressure biased onto its seat. 1 to 2 – full flow when solenoid force overcome.

Normally Closed

De-energised; 2 to 1 – no flow, pilot orifice closed, main poppet pressure biased onto its seat. 1 to 2 – full flow when spring force overcome.

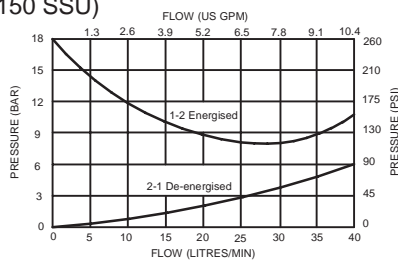
Energised; 2 to 1- full flow, pressure difference through the pilot orifice holds the main poppet open. 1 to 2 – restricted flow, main poppet pressure biased onto its seat, pilot orifice open.

11

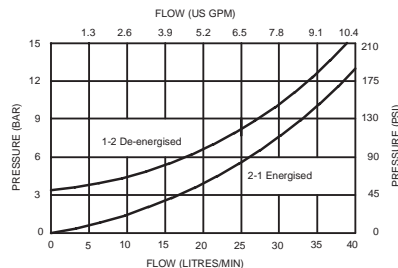
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

SX203 (280 bar) (Normally Open)



SX204 (350 bar) (Normally Closed)



*For applications above 210 bar please consult our technical department or use the steel body option.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*-/22

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	SX203 (N.O.)	SX204 (N.C.)
Basic Model Code		
Max. Working Pressure	SX203: 280bar (4000psi) SX204: 350bar (5000psi)	
Cartridge Material	Working parts hardened and ground steel	
Body Material	Standard aluminium (up to 210 bar*) Add suffix '377' for steel option	
Mounting Position	Unrestricted	
Cavity Number	A879 (See Section 17)	
Torque Cartridge into Cavity	30 Nm (22 lbs ft)	
Weight (exc. coil)	0.08 kg (0.18lbs)	
Seal Kit Number	SK1043 (Nitrile) SK1043V (Viton)	
Recommended Filtration Level	BS5540/4 (25 micron nominal) Class 18/13	
Operating Temp	-20 C to +90 C	
Leakage	0.6 millilitres/min (10 dpm) closed	
Nominal Viscosity Range	5 to 500 cSt	

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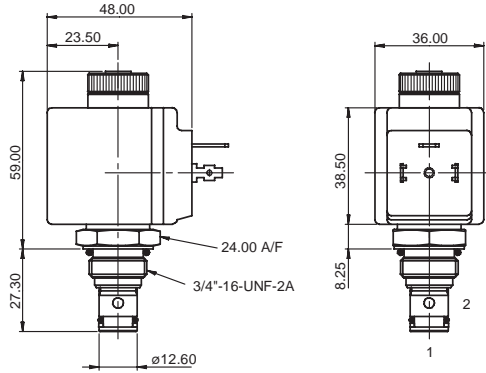
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Tel: (440) 974 3171 Fax: (440) 974 3170
Website: www.integratedhydraulics.com

CARTRIDGE ONLY

BASIC CODE: SX203 (Normally Open) 280 bar



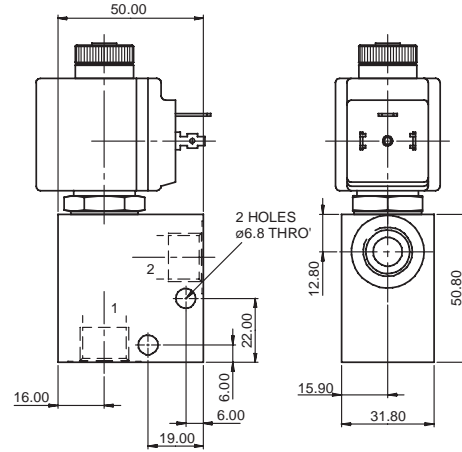
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: SX203 (Normally Open) 280 bar

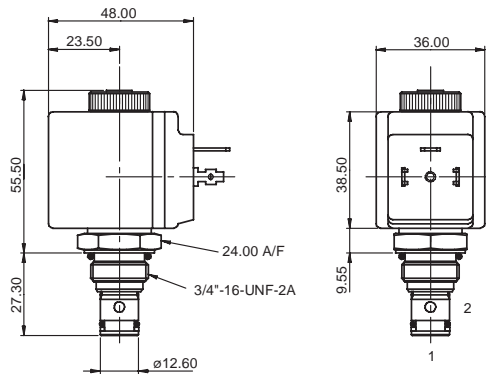
Body ONLY part numbers

BSP, aluminium		SAE, aluminium		BSP, steel		SAE, steel	
1/4"	A1485	3/8"	A15676	3/8"	A14175	3/8"	A14843
3/8"	A1043						



CARTRIDGE ONLY

BASIC CODE: SX204 (Normally Closed) 350 bar



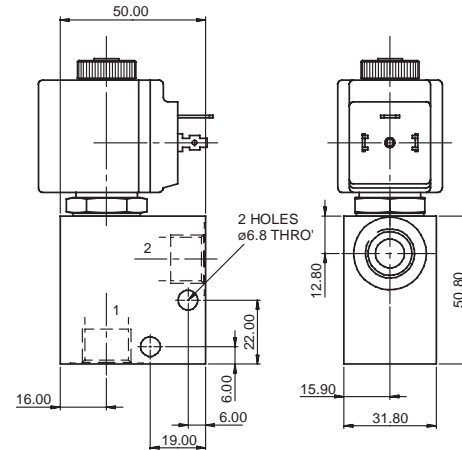
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: SX204 (Normally Closed) 350 bar

Body ONLY part numbers

BSP, aluminium		SAE, aluminium		BSP, steel		SAE, steel	
1/4"	A1485	3/8"	A15676	3/8"	A14175	3/8"	A14843
3/8"	A1043						



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

SX* N H 24 3W**

Basic Code

SX203 = (normally open) 280 bar
SX204 = (normally closed) 350 bar

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



S205 / S206 Directional Control Valve - 2-Way, 2-Position Poppet

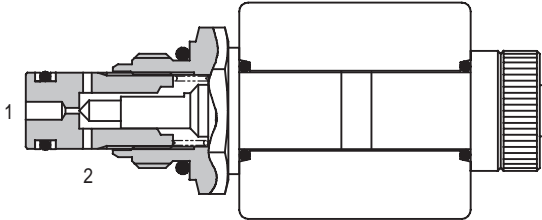
1 litre/min (0.25 US GPM) • 210 bar (3000 PSI)

S205

**NORMALLY OPEN
(as shown)**

S206

NORMALLY CLOSED



FEATURES

- Pilot flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

APPLICATION

To give on-off control of flows up to 1 litre/min (0.25 US GPM) and pressures up to 210 bar (3000 psi). Typical usage includes the control of the pilot or vent flow of another valve, for example a ventable relief valve. (See Section 2).

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*-/14

Voltage available: 12, 24 VDC
110, 220 VAC*

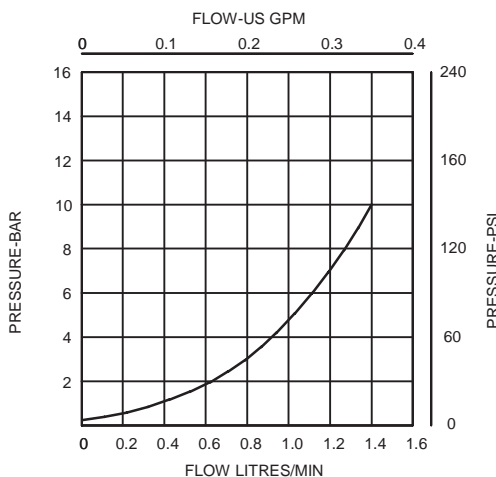
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

Basic Model Code	S205 (N.O.)	S206 (N.C.)
Symbol		
Max. Working Pressure	210 bar (3000 psi)	
Flow Rating	1 litre/min (0.25 US GPM)	
Nominal Flow (at Delta P = 5 bar (70 psi))	1 litre/min (0.25 US GPM)	
Internal Leakage	0.3 ml/min (5 dpm) when closed 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1043 (Nitrile) SK1043V (Viton)	
Mounting Position	Unrestricted	
Cartridge Weight	0.1 kg (0.2 lbs)	
Coil Weight	0.2 kg (0.4 lbs)	
Cavity Number	A879 (See Section 17)	
Torque into Cavity	22 Nm (15 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



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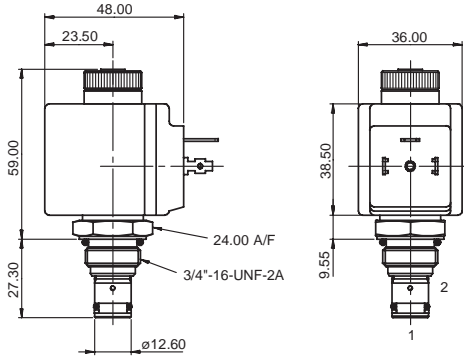
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CARTRIDGE ONLY

BASIC CODE: S205 (Normally Open)



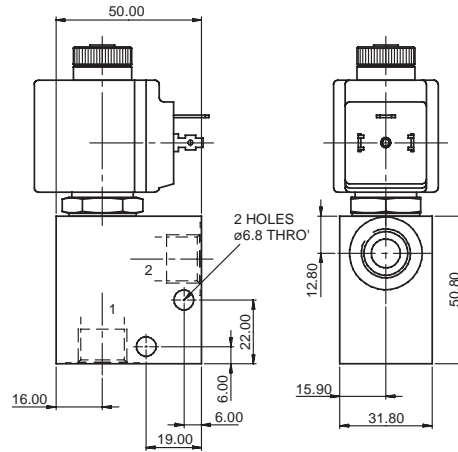
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S205 (Normally Open)

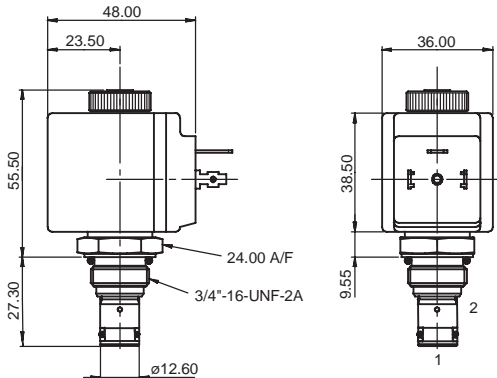
Body ONLY part numbers

BSP, aluminium		SAE, aluminium		BSP, steel		SAE, steel	
1/4"	A1485	3/8"	A15676	3/8"	A14175	3/8"	A14843
3/8"	A1043						



CARTRIDGE ONLY

BASIC CODE: S206 (Normally Closed)



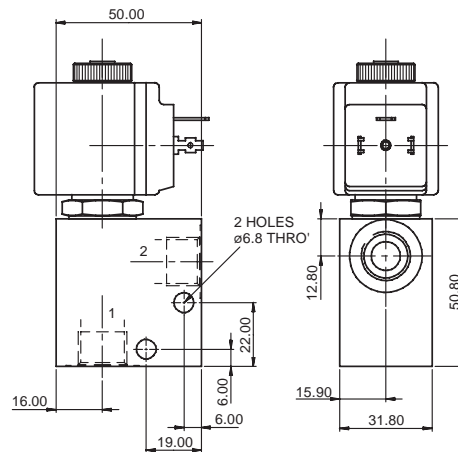
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S206 (Normally Closed)

Body ONLY part numbers

BSP, aluminium		SAE, aluminium		BSP, steel		SAE, steel	
1/4"	A1485	3/8"	A15676	3/8"	A14175	3/8"	A14843
3/8"	A1043						



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S205 N H 24 3W

Basic Code
S205 = (normally open)
S206 = (normally closed)

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
1 = Push and twist (S206 Only)
2 = Screw (S205 & S206)

Port Sizes
2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage
12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination
H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice

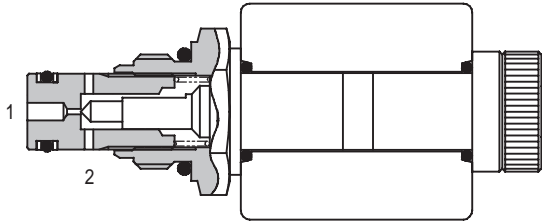


S207 Directional Control Valve - 2-Way, 2-Position Poppet

1 litre/min (0.25 US GPM) • 350 bar (5000 PSI)

S207

NORMALLY OPEN



APPLICATION

To give on-off control of flows up to 1 litre/min (0.25 US GPM) and pressures up to 350 bar (5000 psi). Typical usage includes the control of the pilot or vent flow of another valve, for example a ventable relief valve. (See Section 2).

NOTE: This valve can be used to vent systems at pressures up to 350 bar (5000 psi) on the inlet port but pressure on the outlet port should be limited to 210 bar (3000 psi).

COIL INFORMATION

(See Page 11-1021)

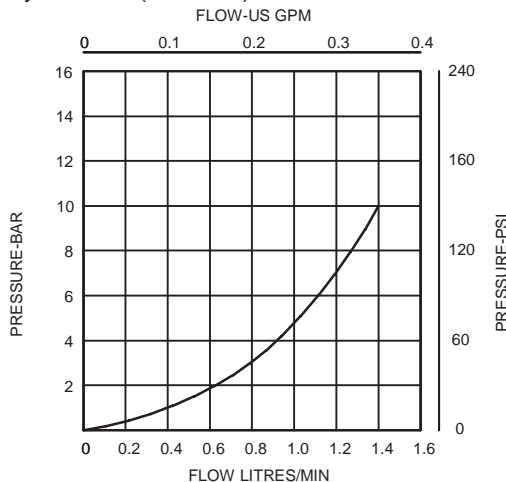
Part Number: C13-*-/22

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



*For applications above 210 bar please consult our technical department or use the steel body option.

FEATURES

- Pilot flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	S207
Symbol	
Max. Working Pressure	210 bar (3000 psi) - Port 2 350 bar (5000 psi) - Port 1
Flow Rating	1 litre/min (0.25 US GPM)
Nominal Flow (at Delta P = 5 bar (70 psi))	1 litre/min (0.25 US GPM)
Internal Leakage	0.3 ml/min (5 dpm) when energised 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1043V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.1 kg (0.2 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A879 (See page 11-441)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy (up to 210 bar*)

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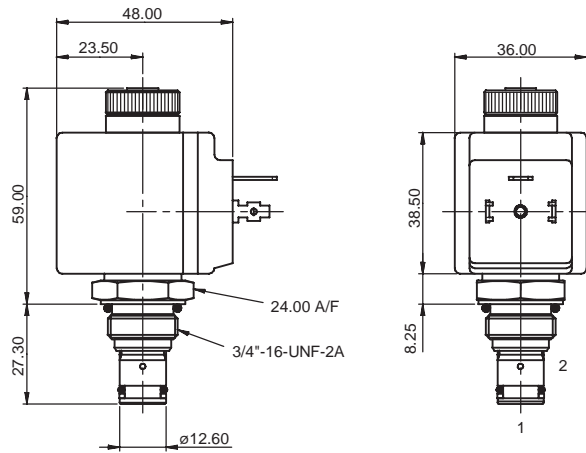
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CARTRIDGE ONLY

BASIC CODE: S207



COMPLETE VALVE

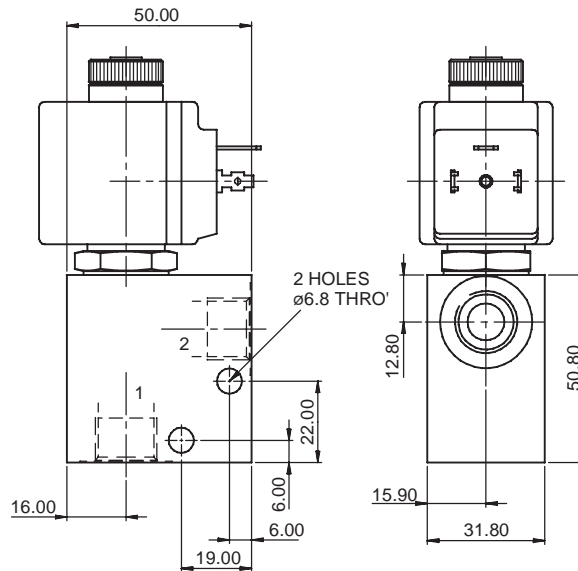
1/4" 3/8" PORTS

BASIC CODE: S207

Body ONLY part numbers

BSP, aluminium	SAE, aluminium
1/4" A1485	3/8" A15676
3/8" A1043	

BSP, steel	SAE, steel
3/8" A14175	3/8" A14843



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S207 **V** **H** **24** **3W**

Basic Code _____
S207 = (normally open)

Seals _____
V = Viton

Port Sizes

2W = 1/4" BSP 6T = 3/8" SAE
3W = 3/8" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



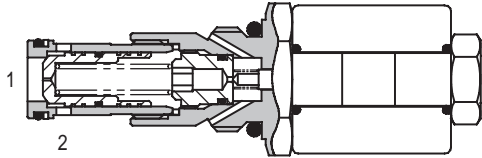
S607 / S608 & S612 / S613 Directional Control Valve

2-Way, 2-Position Poppet/Spool

100 litres/min (26 US GPM) • 250 bar (3600 PSI)

S607

**POPPET TYPE
NORMALLY OPEN
(as shown)**

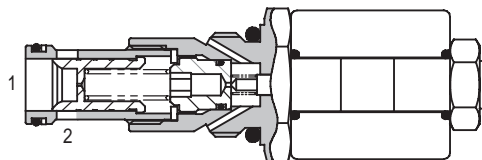


S608

**POPPET TYPE
NORMALLY CLOSED**

S612

**SPOOL TYPE
NORMALLY OPEN
(as shown)**



S613

**SPOOL TYPE
NORMALLY CLOSED**

FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	S607 Poppet Type (N.O.) S608 Poppet Type (N.C.) S612 Spool Type (N.O.) S613 Spool Type (N.C.)
Symbol	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>S607</p> </div> <div style="text-align: center;"> <p>S608</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <p>S612</p> </div> <div style="text-align: center;"> <p>S613</p> </div> </div>
Max. Working Pressure	250 bar (3600 psi)
Flow Rating	100 litres/min (26 US GPM)
Nominal Flow (at Delta P = 5 bar (70 psi))	90 litres/min (23 US GPM)
Internal Leakage	S607/S608: 0.6 ml/min (10 dpm) S612/S613: Less than 60 ml/min 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK390 (Nitrile) SK390V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.25 kg (0.55 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A881 (See Section 17)
Torque into Cavity	60 Nm (44 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy (up to 210 bar*)

APPLICATION

To give on-off control of flows up to 100 litres/min (26 US GPM) and pressures up to 250 bar (3600 psi).

COIL INFORMATION

(See Page 11-1021)

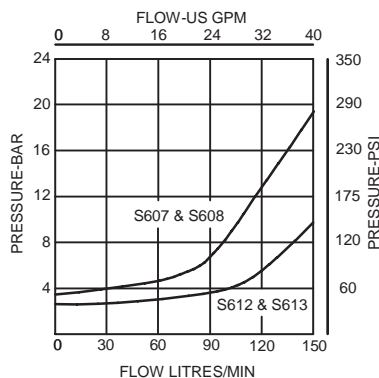
Part Number: C13-*/*/14

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



*For applications above 210 bar please consult our technical department or use the steel body option.

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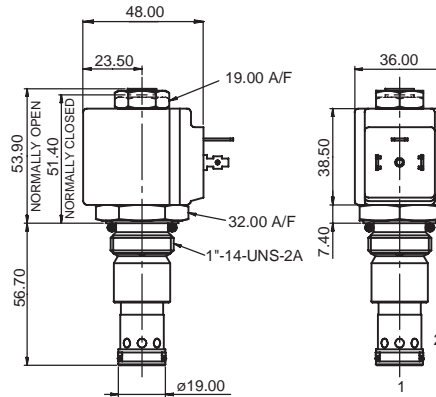
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CARTRIDGE ONLY

BASIC CODE: S607 Poppet Type (N.O.) S612 Spool Type (N.O.)
S608 Poppet Type (N.C.) S613 Spool Type (N.C.)



COMPLETE VALVE 1/2" 3/4" PORTS

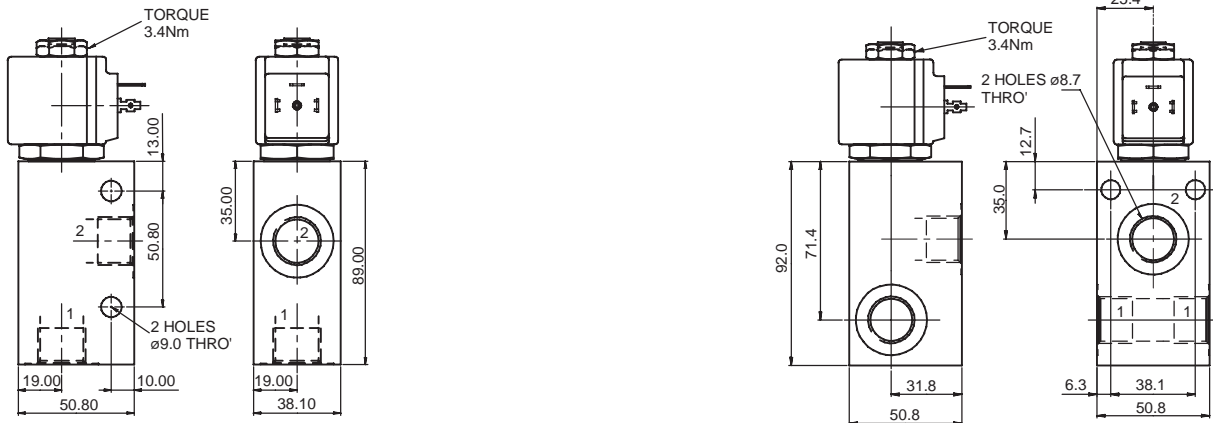
BASIC CODE: S607 Poppet Type (N.O.) S612 Spool Type (N.O.)
S608 Poppet Type (N.C.) S613 Spool Type (N.C.)

Body ONLY part numbers

BSP, aluminium	SAE, aluminium
1/2" B4851	1/2" B19403
3/4" B3954	3/4" B19404

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	BSP, steel	SAE, aluminium
3/8" C1084	3/8" B10784	1/2" C593	3/4" B10742
1/2" C1044	1/2" C7140	3/4" C4917	
3/4" C1086	3/4" B10506		



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S6 N H 24 4W T**

Basic Code

S607 = Poppet Type (normally open)
S608 = Poppet Type (normally closed)
S612 = Spool Type (normally open)
S613 = Spool Type (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

3 = Push (S607 & 612)

Body Type

Omit = Standard
T = Through ported

Port Sizes

3W = 3/8" BSP	6T = 3/8" SAE
4W = 1/2" BSP	8T = 1/2" SAE
6W = 3/4" BSP	12T = 3/4" SAE

Voltage

12 = 12 VDC	110 = 110 VAC
24 = 24 VDC	220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



S210 / S211 Directional Control Valve - 2-Way, 2-Position Spool

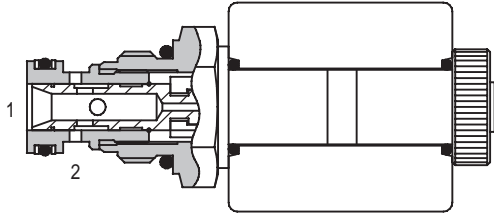
Up to 20 litres/min (5 US GPM) • 210 bar (3000 PSI)

S210

NORMALLY OPEN
(as shown)

S211

NORMALLY CLOSED



COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*/*/14

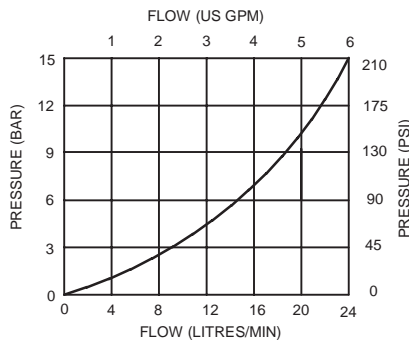
Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

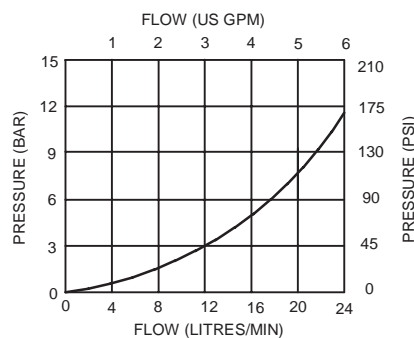
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

S210 (Normally Open)



S211 (Normally Closed)



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	S210 (N.O.)	S211 (N.C.)
Symbol		
Max. Working Pressure	210 bar (3000 psi)	
Flow Rating	See performance graphs	
Nominal Flow (at Delta P = 5 bar (70 psi))	15 litres/min (4 US GPM)	
Internal Leakage	Less than 60 ml/min 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK972 (Nitrile)	SK972V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.125 kg (0.3 lbs)	
Coil Weight	0.2 kg (0.4 lbs)	
Cavity Number	A6701 (See Section 17)	
Torque into Cavity	20 Nm (15 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

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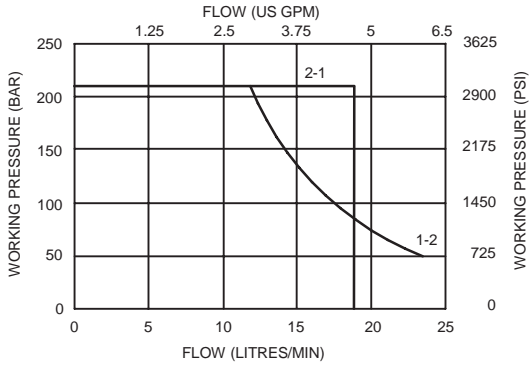
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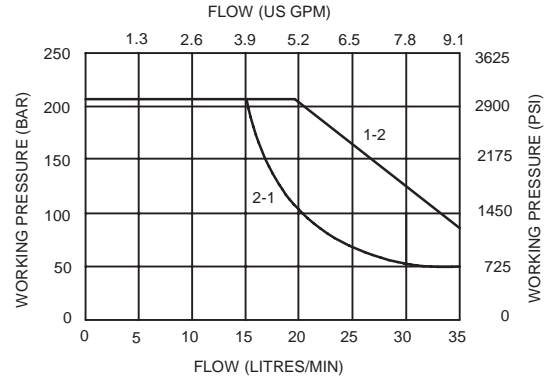
PERFORMANCE

S210 (Normally open)



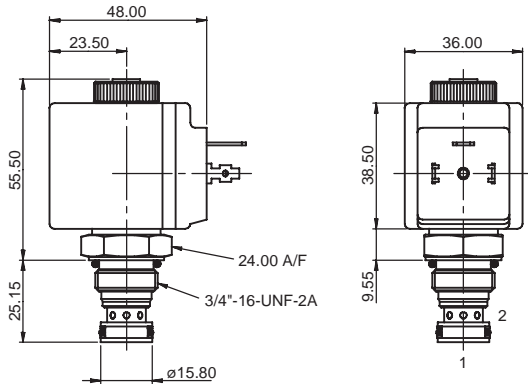
PERFORMANCE

S211 (Normally closed)



CARTRIDGE ONLY

BASIC CODE: S210 (Normally Open)
S211 (Normally Closed)

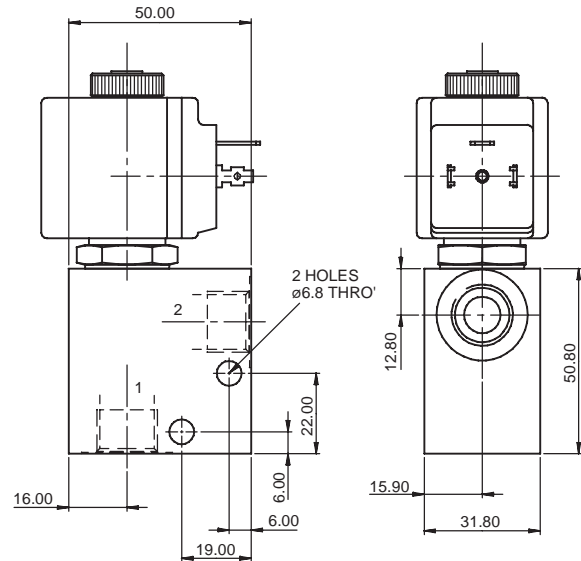


COMPLETE VALVE 1/4" 3/8" PORTS

BASIC CODE: S210 (Normally Open)
S211 (Normally Closed)

Body ONLY part numbers

BSP, aluminium *SAE, aluminium*
1/4" A12592 3/8" A19355
3/8" A7450



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S21* **N** **H** **24** **3W**

Basic Code

S210 = (normally open)
S211 = (normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

1 = Push and twist (S210 & S211)
2 = Screw (S210 & S211)

Port Sizes

2W = 1/4" BSP 6T = 3/8" SAE
3W = 3/8" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



S510(H) / S511(H) Directional Control Valve 2-Way, 2-Position Spool

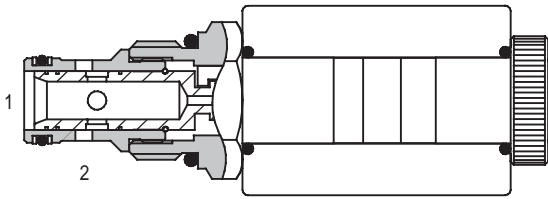
Up to 25 litres/min (6.5 US GPM) • Up to 210 bar (3000 PSI)

S510(H)

NORMALLY OPEN
(as shown)

S511(H)

NORMALLY CLOSED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/19 (S510 / S511)
C16-*/29 (S510H / S511H)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

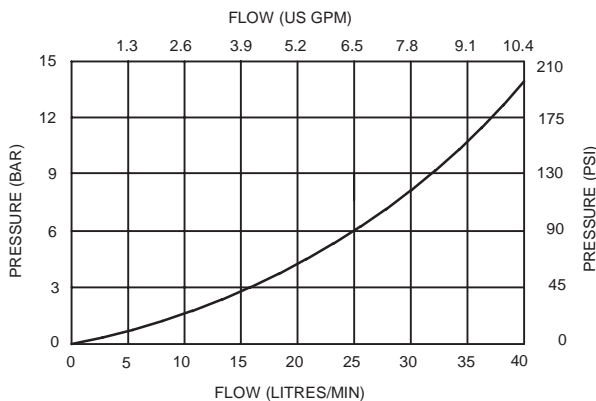
SPECIFICATIONS

Basic Model Code	S510(H) (N.O.)	S511(H) (N.C.)
Symbol		
Max. Working Pressure	210 bar (3000 psi)	
Flow Rating	See performance graphs	
Nominal flow (at Delta P = 5 bar (70 psi))	22 litres/min (6 US GPM)	
Internal Leakage	Less than 120 ml/min 210 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1028 (Nitrile)	SK1028V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.2 kg (0.4 lbs)	
Coil Weight	0.3 kg (0.6 lbs)	
Cavity Number	A12370 (See Section 17)	
Torque into Cavity	30 Nm (22 lbs ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy	

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



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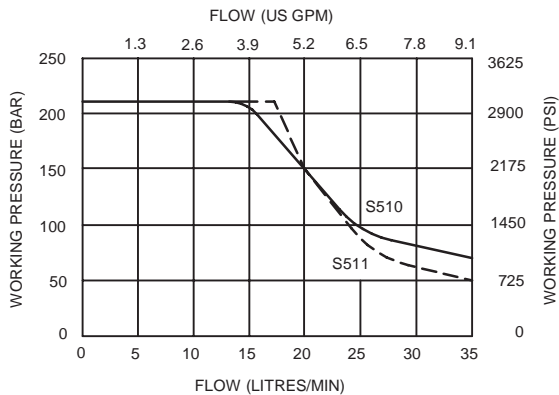
Collins Road, Heathcote Ind. Est., Warwick, CV34 6TF, UK.
Tel: +44 (0) 1926 881171 Fax: +44 (0) 1926 315729
Website: www.integratedhydraulics.com

Integrated Hydraulics Inc

7047 Spinach Drive, Mentor, Ohio 44060, USA
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Website: www.integratedhydraulics.com

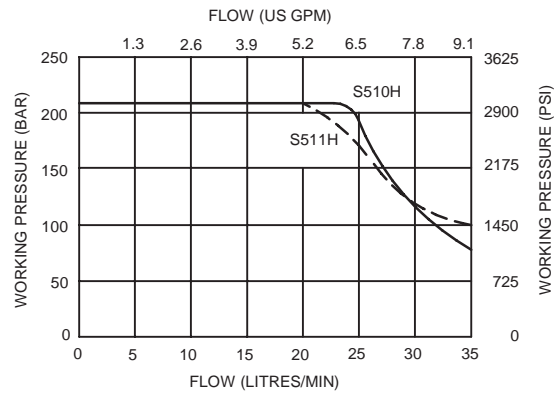
PERFORMANCE

S510 / S511 (Standard valve)



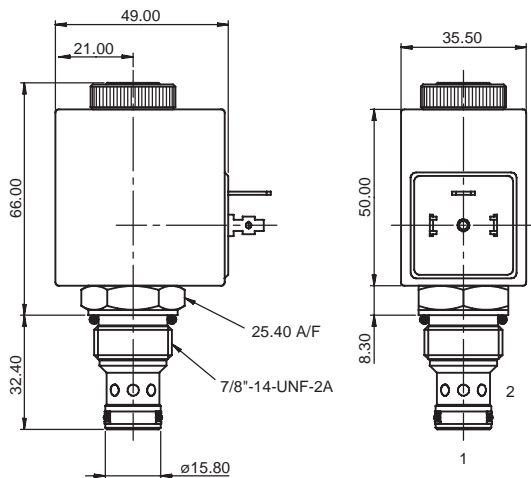
PERFORMANCE

S510H / S511H (Heavy duty valve)



CARTRIDGE ONLY

**BASIC CODE: S510(H) (Normally Open)
S511(H) (Normally Closed)**



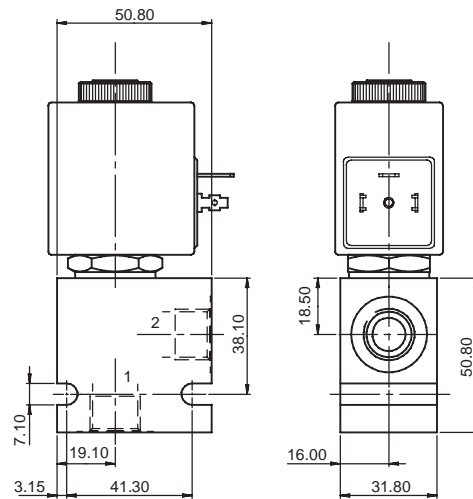
COMPLETE VALVE

3/8" 1/2" PORTS

**BASIC CODE: S510(H) (Normally Open)
S511(H) (Normally Closed)**

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	SAE, steel
3/8" B19053		
1/2" B19356	1/2" B19402	1/2" B20601



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S51 N H 24 3W**

Basic Code

S510 = (normally open - standard valve)
S510H = (normally open - heavy duty valve)
S511 = (normally closed - standard valve)
S511H = (normally closed - heavy duty valve)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

2 = Screw (S510(H) & S511(H))

Port Sizes

3W = 3/8" BSP
4W = 1/2" BSP
8T = 1/2" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice

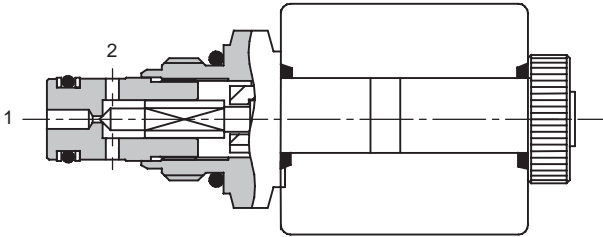


S215 Directional Control Valve 2-Way, 2-Position Bi-Directional Poppet

Up to 1 litre/min (0.26 US GPM) • Up to 210 bar (3000 PSI)

S215

NORMALLY CLOSED



FEATURES

- Very low leakage poppet design.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*-/14

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

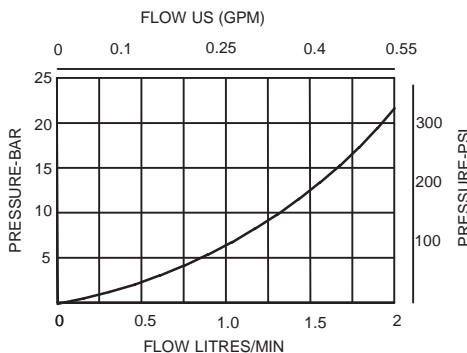
SPECIFICATIONS

Basic Model Code	S215
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	1 litres/min (0.26 US GPM)
Internal Leakage	Less than 0.3 ml/min (5 dpm) 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1043 (Nitrile) SK1043V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.15 kg (0.3 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A879 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



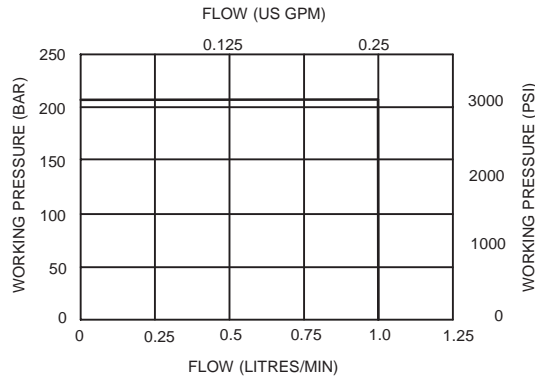
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PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S215

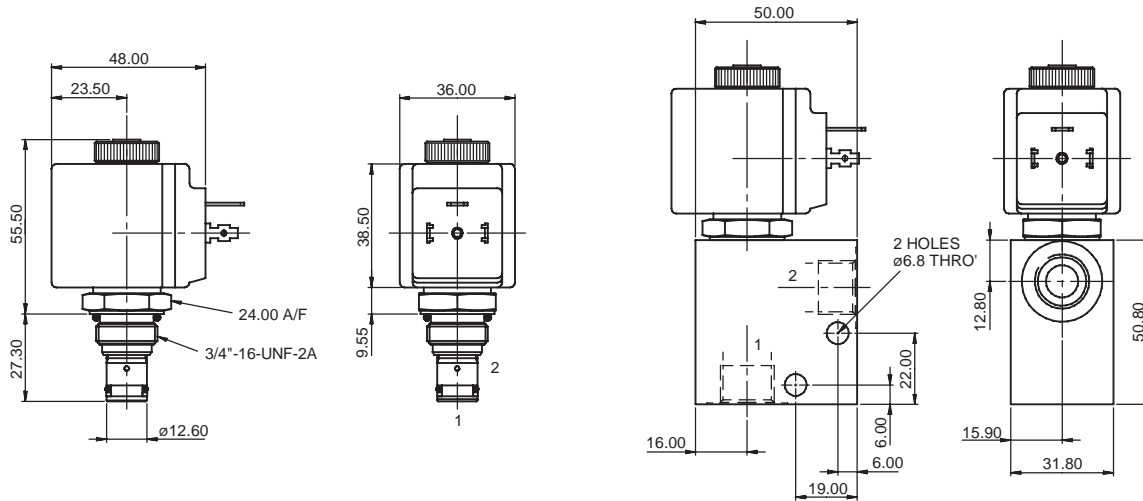
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S215

Body ONLY part numbers

<i>BSP, aluminium</i>	<i>SAE, aluminium</i>	<i>BSP, steel</i>	<i>SAE, steel</i>
1/4" A1485	3/8" A15676	3/8" A14175	3/8" A14843
3/8" A1043			



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S215 N H 24 3W

Basic Code
S215

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
1 = Push and Twist
2 = Screw

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice

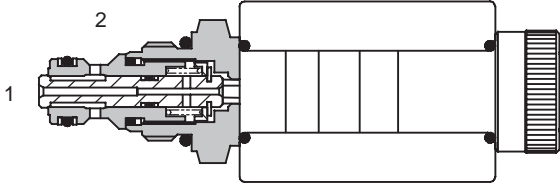


S217(H) Directional Control Valve 2-Way, 2-Position Bi-Directional Poppet

Up to 20 litres/min (5 US GPM) • Up to 210 bar (3000 PSI)

S217(H)

NORMALLY CLOSED



FEATURES

- Very low leakage poppet design.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

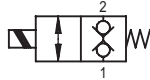
(See Page 11-1021)

Part Number: C16-*/19 (S217)
C16-*/29 (S217H)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

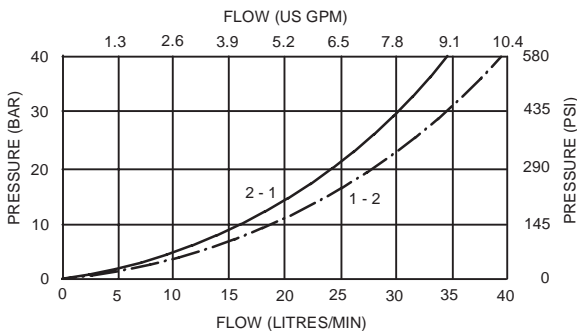
SPECIFICATIONS

Basic Model Code	S217(H)
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	20 litres/min (5 US GPM)
Internal Leakage	Less than 0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1157 (Nitrile) SK1157V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.17 kg (0.37 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A879 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



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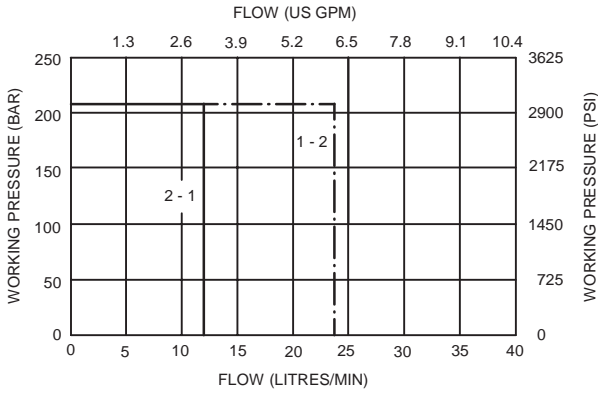
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Website: www.integratedhydraulics.com

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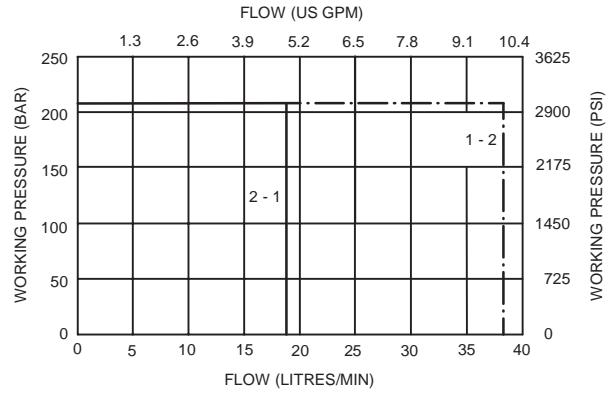
PERFORMANCE

S217 (standard valve)



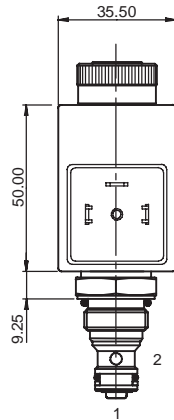
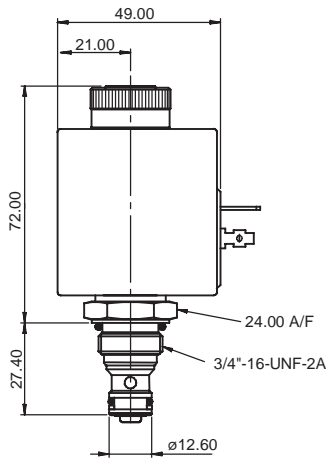
PERFORMANCE

S217H (Heavy duty valve)



CARTRIDGE ONLY

BASIC CODE: S217(H)



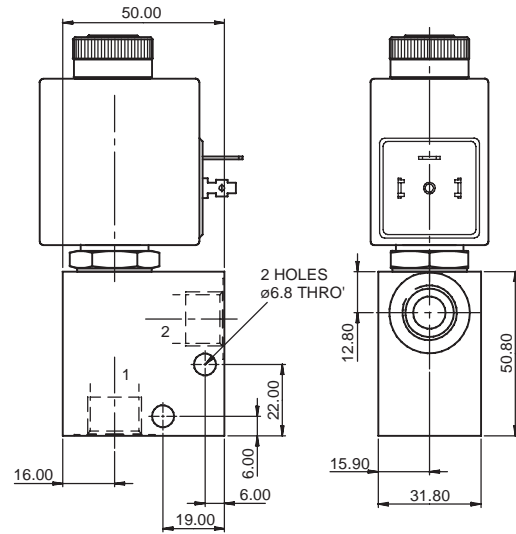
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S217(H)

Body ONLY part numbers

BSP, aluminium	SAE, aluminium	BSP, steel	SAE, steel
1/4" A1485			
3/8" A1043	3/8" A15676	3/8" A14175	3/8" A14843



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S217* N H 24 3W

Basic Code

S217 = (standard valve)
S217H = (heavy duty valve)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

2 = Screw
3 = Push

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



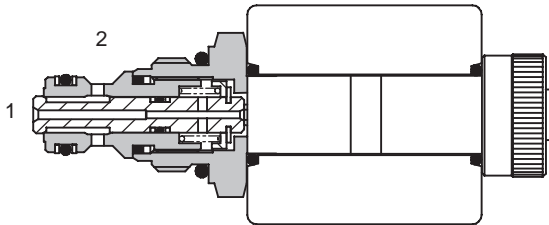
S217A Directional Control Valve

2-Way, 2-Position Bi-Directional Poppet

Up to 10 litres/min (2.6 US GPM) • Up to 210 bar (3000 PSI)

S217A

NORMALLY CLOSED



FEATURES

- Very low leakage poppet design.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

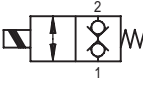
(See Page 11-1021)

Part Number: C13-*-/27

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

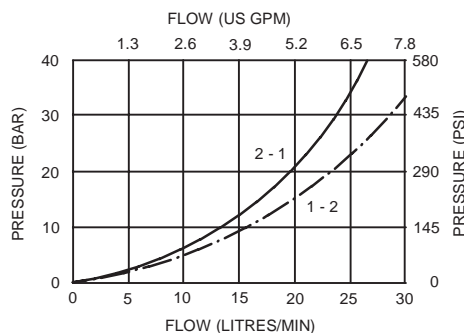
SPECIFICATIONS

Basic Model Code	S217A
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	10 litres/min (2.6 US GPM)
Internal Leakage	Less than 0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1043 (Nitrile) SK1043V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.2 kg (0.4 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A879 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



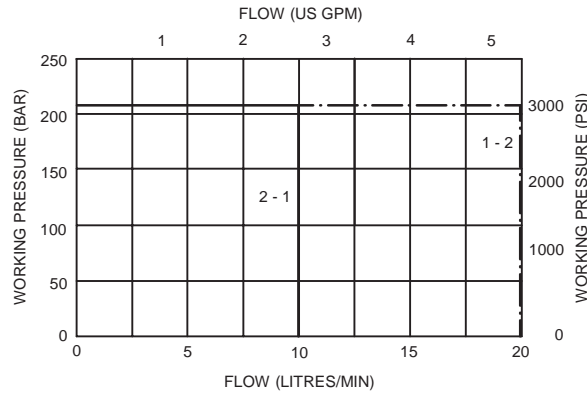
Integrated Hydraulics Ltd

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Website: www.integratedhydraulics.com

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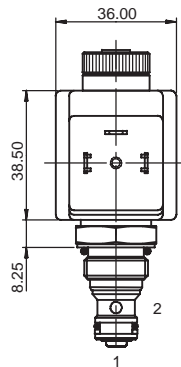
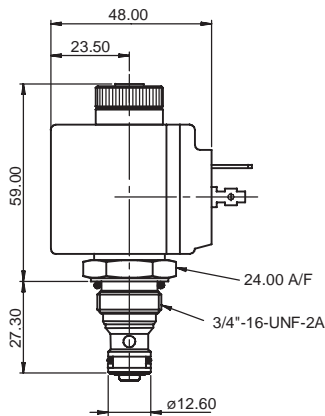
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PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S217A



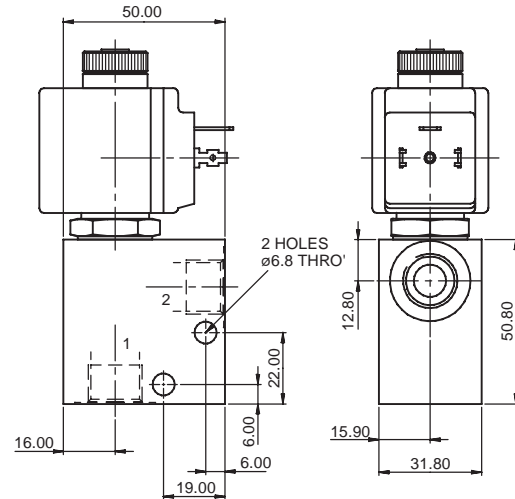
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S217A

Body ONLY part numbers

<i>BSP, aluminium</i>	<i>SAE, aluminium</i>	<i>BSP, steel</i>	<i>SAE, steel</i>
1/4" A1485	3/8" A15676	3/8" A14175	3/8" A14843
3/8" A1043			



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S217A N H 24 3W

Basic Code
S217A

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
2 = Screw
3 = Push

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice



S716 / S717 Directional Control Valve 2-Way, 2-Position Bi-Directional Poppet

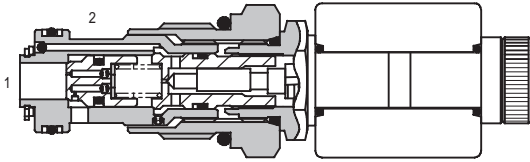
Up to 90 litres/min (24 US GPM) • Up to 350 bar (5000 PSI)

S716

NORMALLY OPEN

S717

**NORMALLY CLOSED
(as shown)**



FEATURES

- Very low leakage poppet design.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*/*/22

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

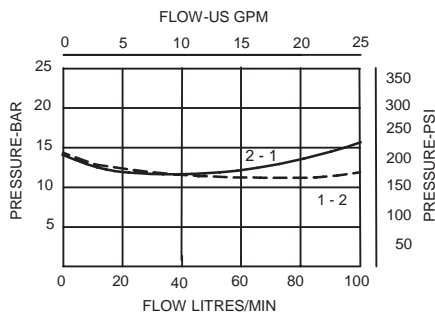
SPECIFICATIONS

Basic Model Code	S716 (N.O.)	S717 (N.C.)
Symbol		
Max. Working Pressure	S716: 280 bar (4060 psi) S717: 350 bar (5000 psi)	
Flow Rating	See performance graphs	
Nominal flow	90 litres/min (24 US GPM)	
Internal Leakage	Less than 2.7 ml/min (40 dpm) 350 bar differential at 32 centistokes	
Temperature Range	-20 to +120°C (-4 to +248°F)	
Nominal Viscosity Range	15 to 250 centistokes	
Recommended Filtration	BS5540/4 18/13 (25 micron or better)	
Fluid	Compatible with most general purpose hydraulic fluids	
Seal Material	Standard nitrile with PTFE back up rings	
Seal Kit Number	SK1225 (Nitrile)	SK1225V (Viton)
Mounting Position	Unrestricted	
Cartridge Weight	0.17 kg (0.37 lbs)	
Coil Weight	0.2 kg (0.4 lbs)	
Cavity Number	A21473 (See Section 17)	
Torque into Cavity	110 Nm (81 ft)	
Electrical Data	See coil data sheet	
Line Body Material	Aluminium Alloy / Steel for pressures above 210 bar.	

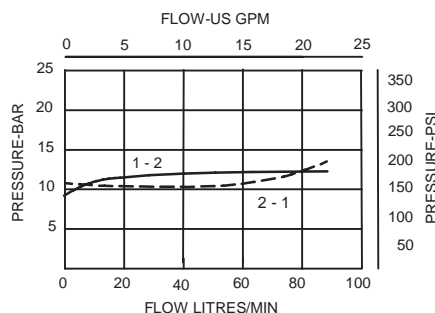
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

S716 (Normally Open)



S717 (Normally Closed)



***For applications above 210 bar please consult our technical department or use the steel body option.**

Integrated Hydraulics Ltd

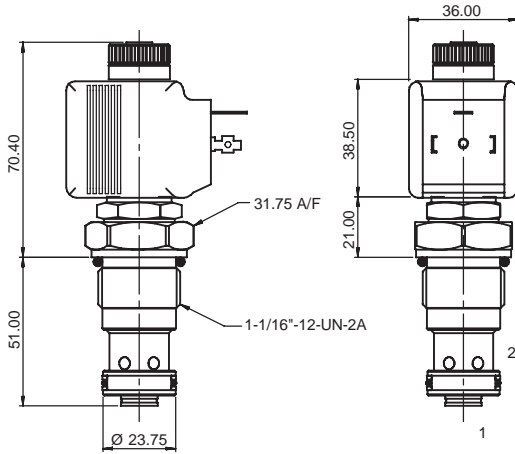
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CARTRIDGE ONLY

BASIC CODE: S716 (Normally Open)



COMPLETE VALVE

3/4" PORTS

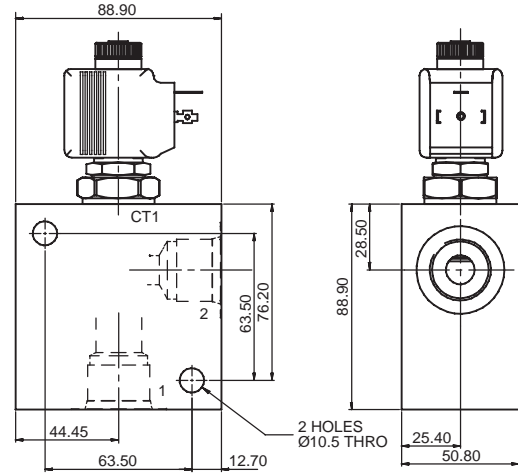
BASIC CODE: S716

Body ONLY part numbers

BSP, aluminium	SAE, aluminium
3/4" B22258	3/4" B22260

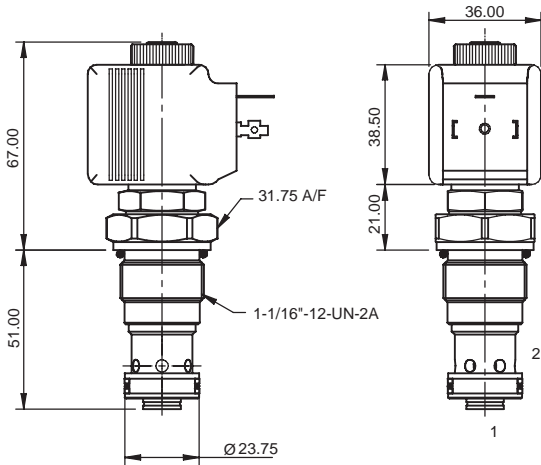
BSP, steel
3/4" B22262

SAE, steel
3/4" B22264



CARTRIDGE ONLY

BASIC CODE: S717 (Normally Closed)



COMPLETE VALVE

3/4" PORTS

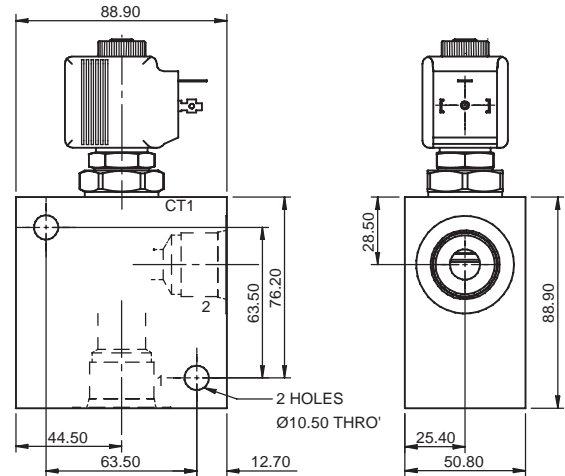
BASIC CODE: S717

Body ONLY part numbers

BSP, aluminium	SAE, aluminium
3/4" B22258	3/4" B22260

BSP, steel
3/4" B22262

SAE, steel
3/4" B22264



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S717 N H 24 6W

Basic Code

S716 = (Normally open)
S717 = (Normally closed)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

2 = Screw (S717 only)

Port Sizes

6W = 3/4" BSP **12T** = 3/4" SAE

Voltage

12 = 12 VDC **110** = 110 VAC
24 = 24 VDC **220** = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

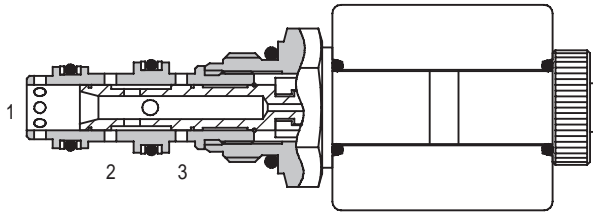
We reserve the right to change specifications without notice



S220(H) Directional Control Valve - 3-Way, 2-Position Spool

Up to 14 litres/min (3.7 US GPM) • Up to 210 bar (3000 PSI)

S220(H)



APPLICATION

NORMALLY CLOSED (Pressure at Port 3)	NORMALLY OPEN (Pressure at Port 2)	SELECTOR (Pressure at Port 1)

COIL INFORMATION

(See Page 11-1021)

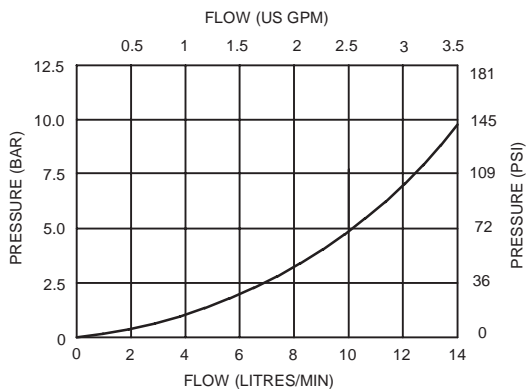
Part Number: C13-*/14 (S220)
C13-*/27 (S220H)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	S220 (std) / S220H (heavy duty)
Symbol	
Actuator Port Location	Port 1
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	11 litres/min (3 US GPM)
Internal Leakage	Less than 60 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK973 (Nitrile) SK973V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.13 kg (0.3 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A3531 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

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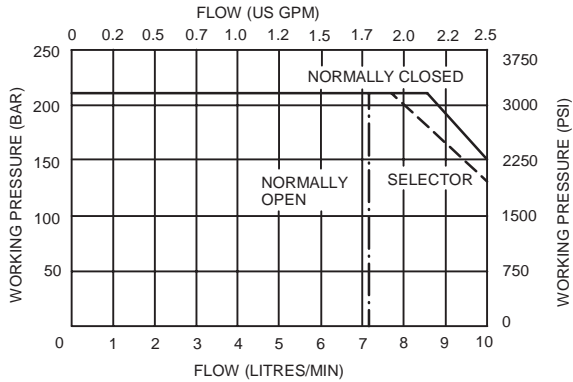
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7047 Spinach Drive, Mentor, Ohio 44060, USA
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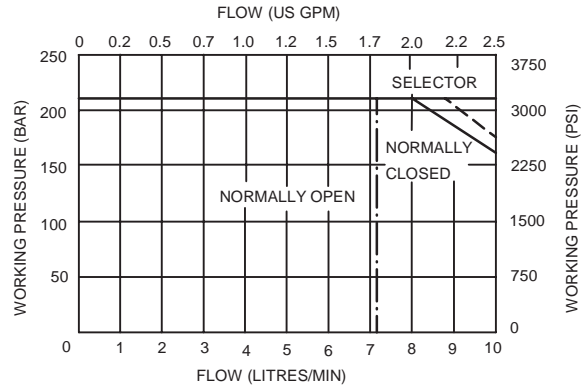
PERFORMANCE

S220 (Standard valve)



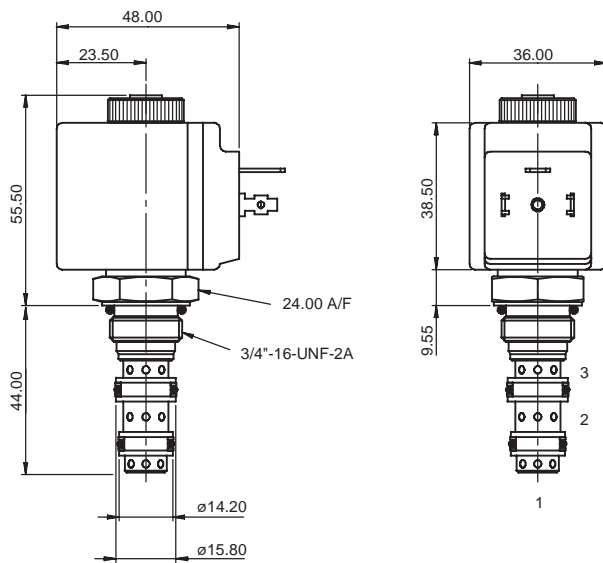
PERFORMANCE

S220H (Heavy duty valve)



CARTRIDGE ONLY

BASIC CODE: S220 / S220H



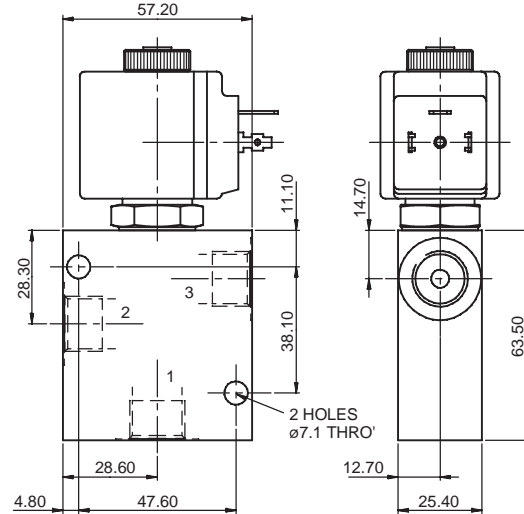
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S220 / S220H

Body ONLY part numbers

BSP, aluminium SAE, aluminium
1/4" B7724 3/8" B6516
3/8" B6684



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S220* **N** **H** **24** **3W**

Basic Code

S220 = (standard valve)
S220H = (heavy duty valve)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

1 = Push and twist
2 = Screw

Port Sizes

2W = 1/4" BSP 6T = 3/8" SAE
3W = 3/8" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

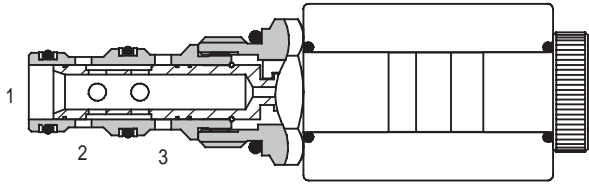
We reserve the right to change specifications without notice



S520(H) Directional Control Valve - 3-Way, 2-Position Spool

Up to 40 litres/min (10 US GPM) • Up to 210 bar (3000 PSI)

S520(H)



APPLICATION

NORMALLY CLOSED (Pressure at Port 3)	NORMALLY OPEN (Pressure at Port 2)	SELECTOR (Pressure at Port 1)

COIL INFORMATION

(See Page 11-1021)

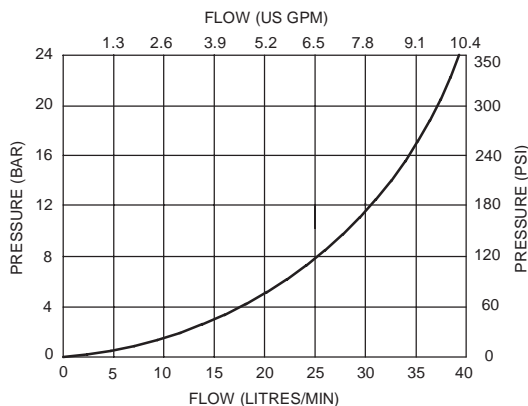
Part Number: C16-*/19 (S520)
C16-*/29 (S520H)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	S520 (std) / S520H (heavy duty)
Symbol	
Actuator Port Location	Port 1
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	22 litres/min (6 US GPM)
Internal Leakage	Less than 120 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1030 (Nitrile) SK1030V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.2 kg (0.4 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A12743 (See Section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

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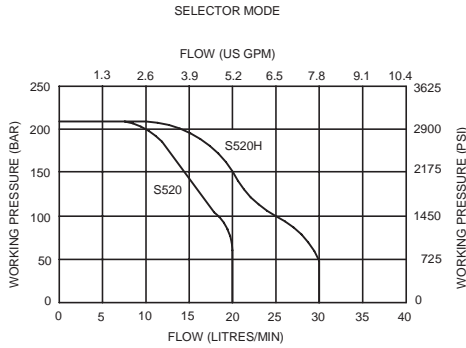
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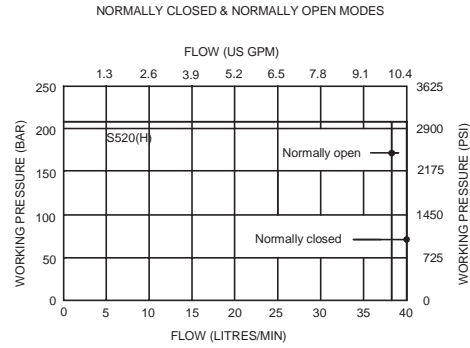
PERFORMANCE

SELECTOR MODE



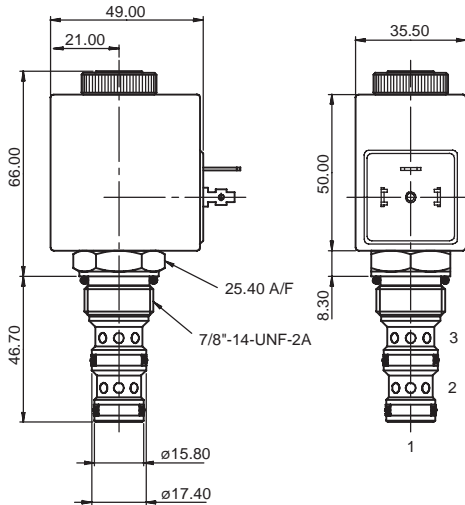
PERFORMANCE

NORMALLY CLOSED & NORMALLY OPEN MODES



CARTRIDGE ONLY

BASIC CODE: S520(H)



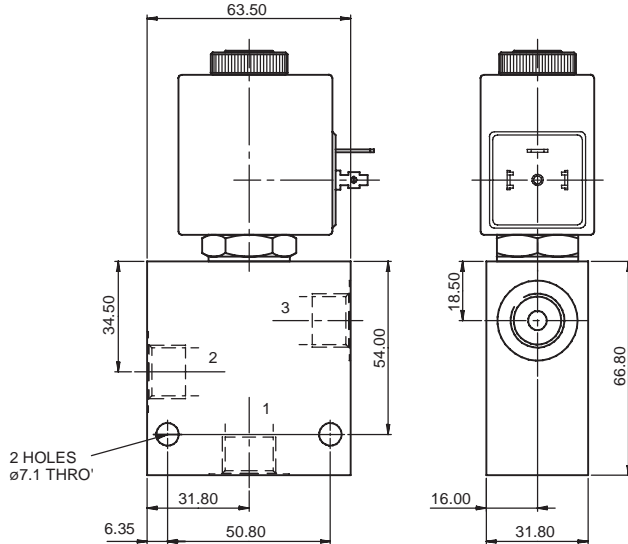
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S520(H)

Body ONLY part numbers

BSP, aluminium	SAE, aluminium
3/8" B18982	1/2" B19360
1/2" B19358	



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S520* N H 24 3W

Basic Code

S520 = (standard valve)
S520H = (heavy duty valve)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

2 = Screw

Port Sizes

3W = 3/8" BSP
4W = 1/2" BSP
8T = 1/2" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

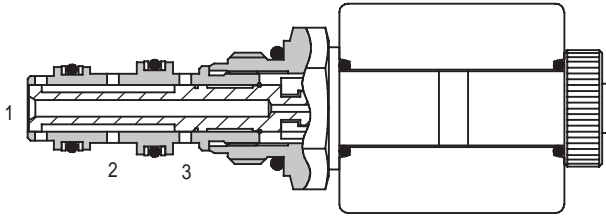
We reserve the right to change specifications without notice



S221(H) Directional Control Valve - 3-Way, 2-Position Spool

Up to 20 litres/min (5 US GPM) • Up to 210 bar (3000 PSI)

S221(H)



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

APPLICATION

NORMALLY CLOSED (Pressure at Port 3)	NORMALLY OPEN (Pressure at Port 1)	SELECTOR (Pressure at Port 2)

COIL INFORMATION

(See Page 11-1021)

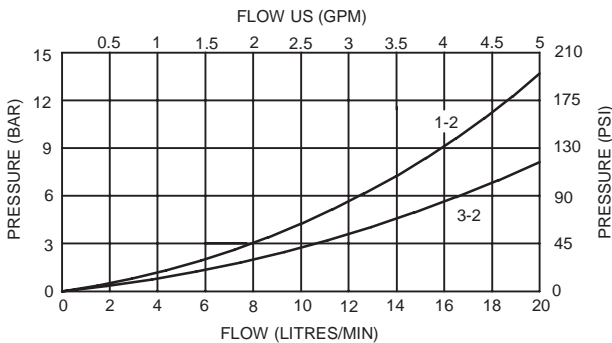
Part Number: C13-*/14 (S221)
C13-*/27 (S221H)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



SPECIFICATIONS

Basic Model Code	S221(std) / S221H (heavy duty)
Symbol	
Actuator Port Location	Port 2
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal Flow (at Delta P = 5 bar (70 psi))	11 litres/min (3 US GPM)
Internal Leakage	Less than 60 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK973 (Nitrile) SK973V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.13 kg (0.3 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A3531 (See section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

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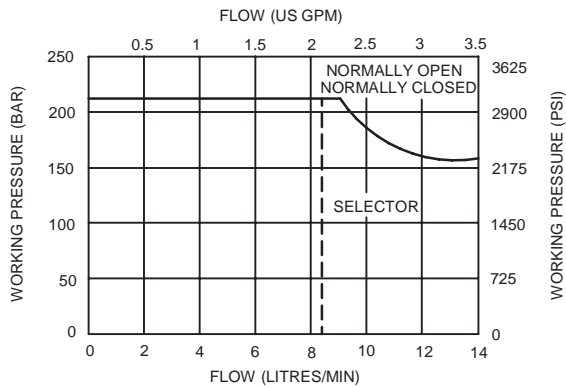
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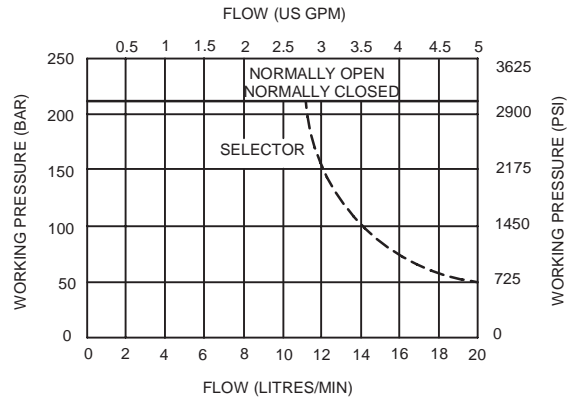
PERFORMANCE

S221 (Standard valve)



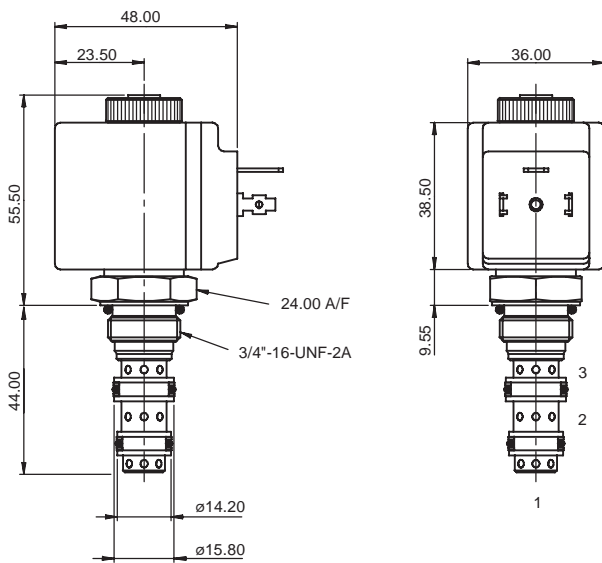
PERFORMANCE

S221H (Heavy duty valve)



CARTRIDGE ONLY

BASIC CODE: S221 / S221H



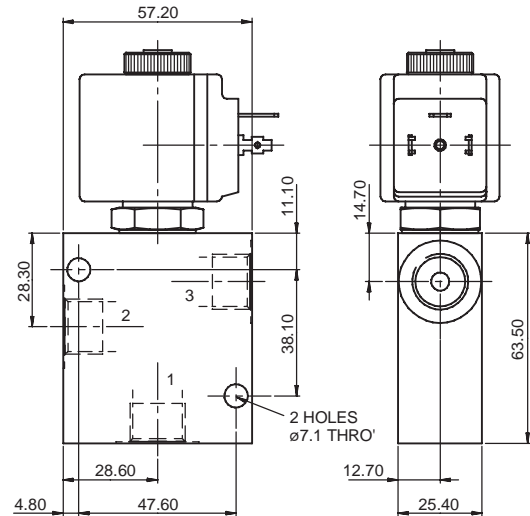
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S221 / S221H

Body ONLY part numbers

BSP, aluminium SAE, aluminium
1/4" B7724 3/8" B6516
3/8" B6684



Where measurements are critical request certified drawings

11

ORDERING CODE EXAMPLE

S221* **N** **H** **24** **3W**

Basic Code

S221 = (standard valve)
S221H = (heavy duty valve)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

1 = Push and twist
2 = Screw

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

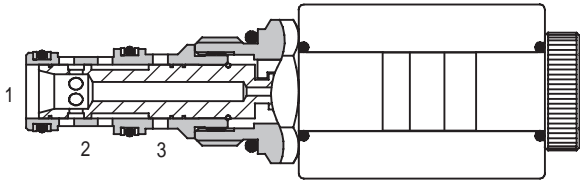
We reserve the right to change specifications without notice



S521(H) Directional Control Valve - 3-Way, 2-Position Spool

Up to 44 litres/min (11.5 US GPM) • Up to 210 bar (3000 PSI)

S521(H)



APPLICATION

NORMALLY CLOSED (Pressure at Port 3)	NORMALLY OPEN (Pressure at Port 1)	SELECTOR (Pressure at Port 2)

COIL INFORMATION

(See Page 11-1021)

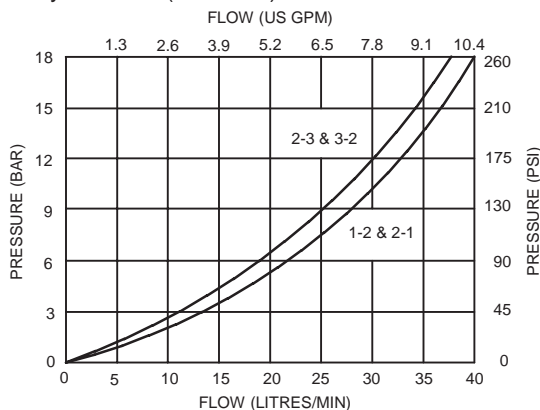
Part Number: C16-*/*/19 (S521)
C16-*/*/29 (S521H)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	S521 / S521H
Symbol	
Actuator Port Location	Port 2
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	17 l/min
Internal Leakage	Less than 120 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1030 (Nitrile) SK1030V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.2 kg (0.4 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A12743 (See section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

11

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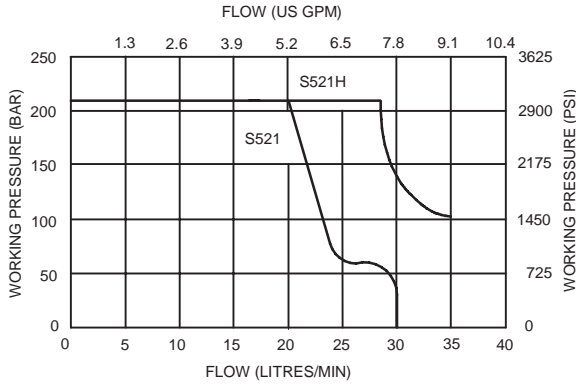
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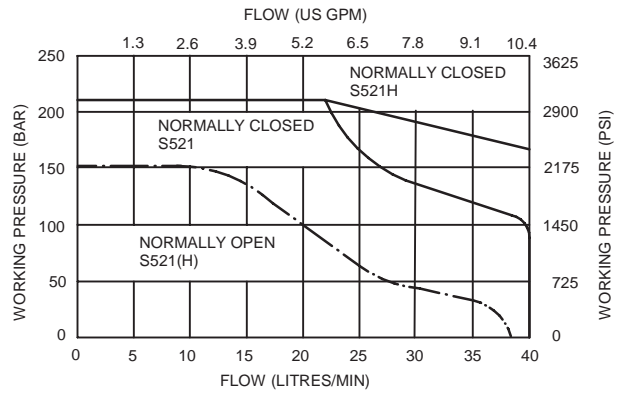
PERFORMANCE

SELECTOR MODE



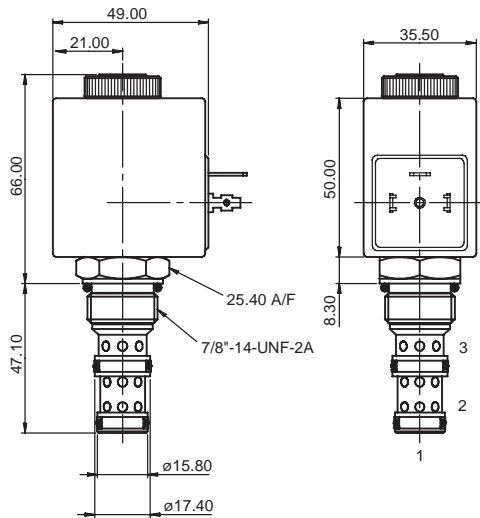
PERFORMANCE

NORMALLY CLOSED & NORMALLY OPEN MODES



CARTRIDGE ONLY

BASIC CODE: S521(H)



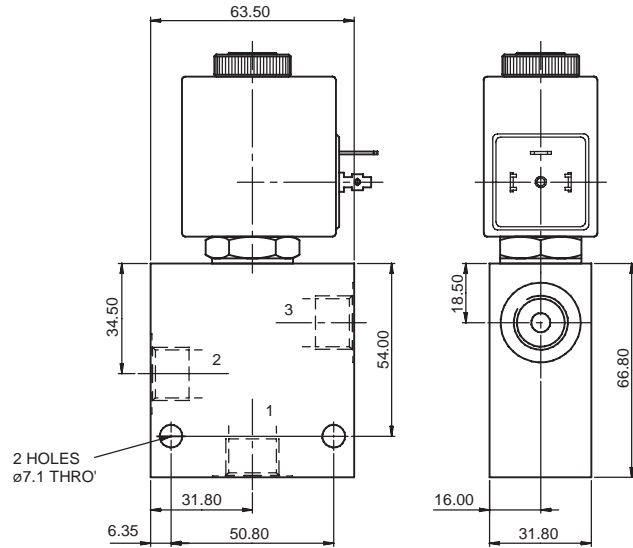
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S521(H)

Body ONLY part numbers

BSP, aluminium 3/8" B18982 1/2" B19358
SAE, aluminium 1/2" B19360



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S521* N H 24 3W

Basic Code

S521 = (standard valve)

S521H = (heavy duty valve)

Seals

N = Nitrile

V = Viton

Manual Override (consult factory for availability)

2 = Screw

Port Sizes

3W = 3/8" BSP

4W = 1/2" BSP

8T = 1/2" SAE

Voltage

12 = 12 VDC

110 = 110 VAC

24 = 24 VDC

220 = 220 VAC

Coil Termination

H = DIN43650

F = Flying Leads

DM = Deutsch Moulded

Other terminations available on request

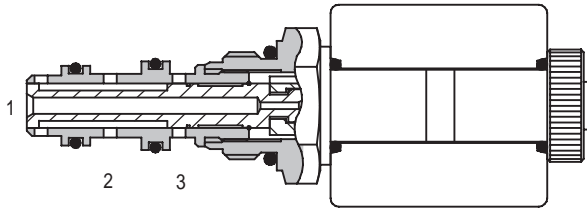
We reserve the right to change specifications without notice



S222 Directional Control Valve - 3-Way, 2-Position Spool

20 litres/min (5 US GPM) • Up to 100 bar (1500 PSI)

S222

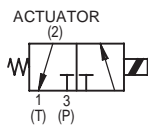


FEATURES

- Increased flow capacity with low pressure drop.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

APPLICATION

NORMALLY CLOSED
(Pressure at Port 3)



SPECIFICATIONS

Basic Model Code	S222
Symbol	
Actuator Port Location	Port 2
Max. Working Pressure	100 bar (1500 psi)
Flow Rating	20 litres/min (5 US GPM)
Nominal Flow (at Delta P = 5 bar (70 psi))	17 litres/min (4.5 US GPM)
Internal Leakage	Less than 40 ml/min 100 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK975 (Nitrile) SK975V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.13 kg (0.3 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A18333 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

COIL INFORMATION

(See Page 11-1021)

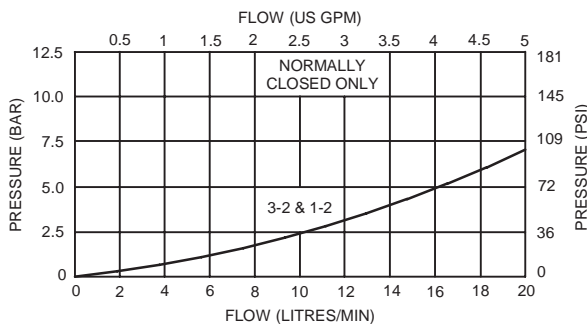
Part Number: C13-*/14

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



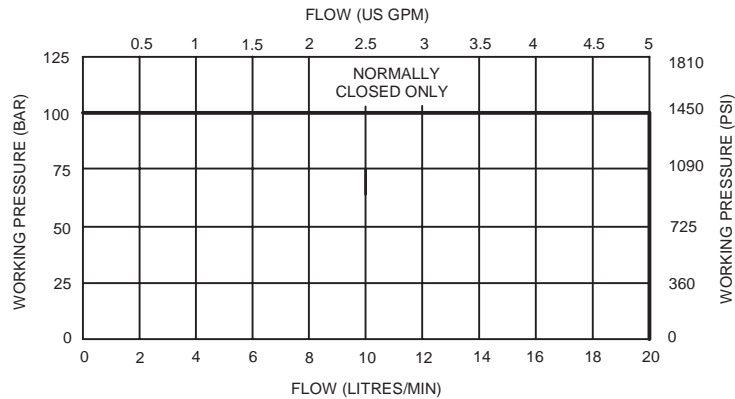
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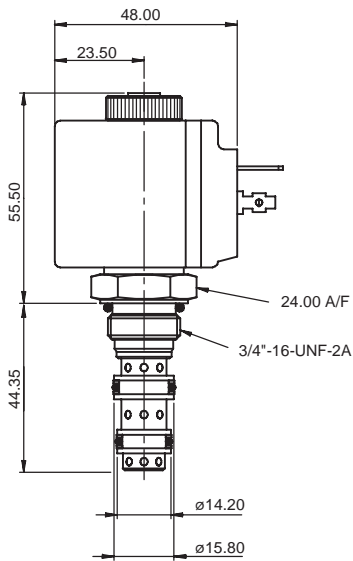
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PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S222



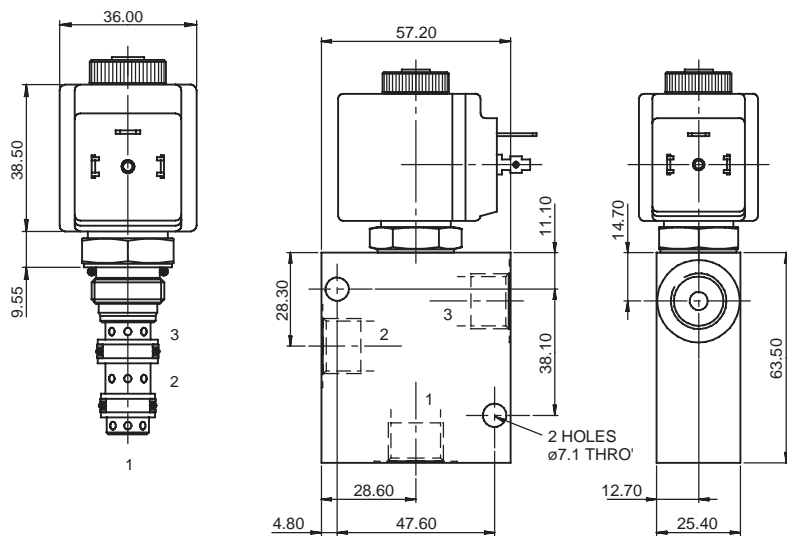
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S222

Body ONLY part numbers

BSP, aluminium SAE, aluminium
 1/4" B7724 3/8" B6516
 3/8" B6684 3/8" B6516



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S222 N H 24 3W

Basic Code
S222

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
1 = Push and twist
2 = Screw

Port Sizes

2W = 1/4" BSP 6T = 3/8" SAE
 3W = 3/8" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
 24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
 F = Flying Leads
 DM = Deutsch Moulded
 Other terminations available on request

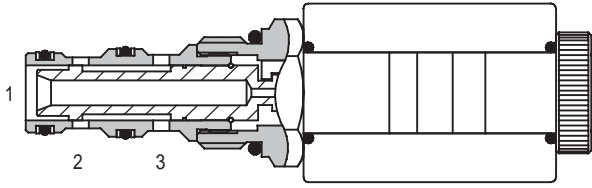
We reserve the right to change specifications without notice



S525(H) Directional Control Valve - 3-Way, 2-Position Spool

Up to 30 litres/min (8 US GPM) • Up to 210 bar (3000 PSI)

S525(H)



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

APPLICATION

NORMALLY CLOSED (Pressure at Port 1)	NORMALLY OPEN (Pressure at Port 3)	SELECTOR (Pressure at Port 2)

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/19 (S525)
C16-*/29 (S525H)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

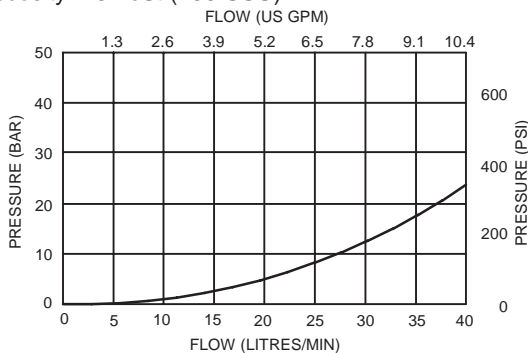
SPECIFICATIONS

Basic Model Code	S525 (std) / S525H (heavy duty)
Symbol	
Actuator Port Location	Port 2
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal Flow (at Delta P = 5 bar (70 psi))	25 litres/min (6.5 US GPM)
Internal Leakage	Less than 120 ml/min 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1030 (Nitrile) SK1030V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.2 kg (0.4 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A12743 (See Section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



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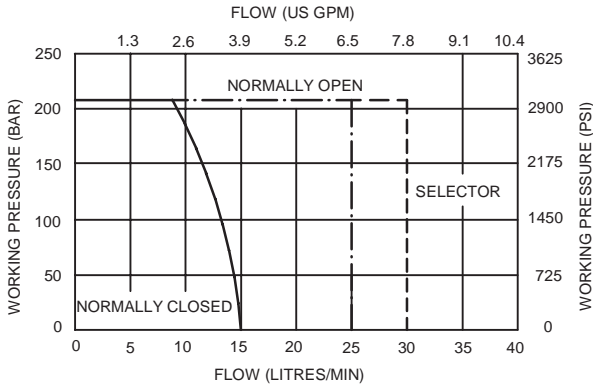
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Tel: +44 (0) 1926 881171 Fax: +44 (0) 1926 315729
Website: www.integratedhydraulics.com

Integrated Hydraulics Inc

7047 Spinach Drive, Mentor, Ohio 44060, USA
Tel: (440) 974 3171 Fax: (440) 974 3170
Website: www.integratedhydraulics.com

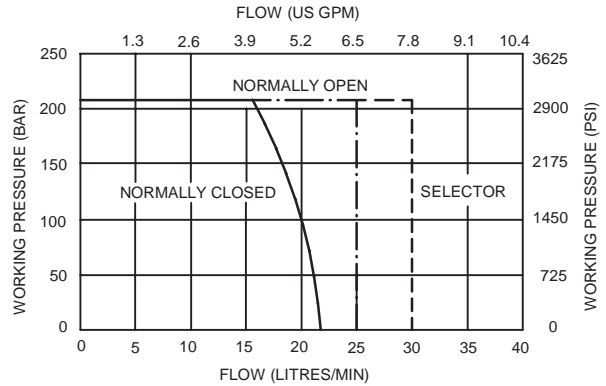
PERFORMANCE

S525 (Standard valve)



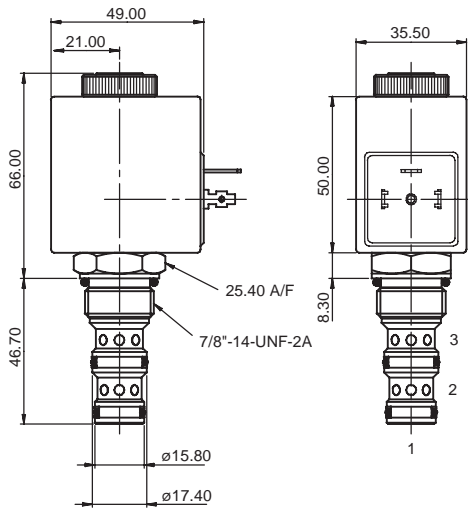
PERFORMANCE

S525H (Heavy duty valve)



CARTRIDGE ONLY

BASIC CODE: S525 / S525H



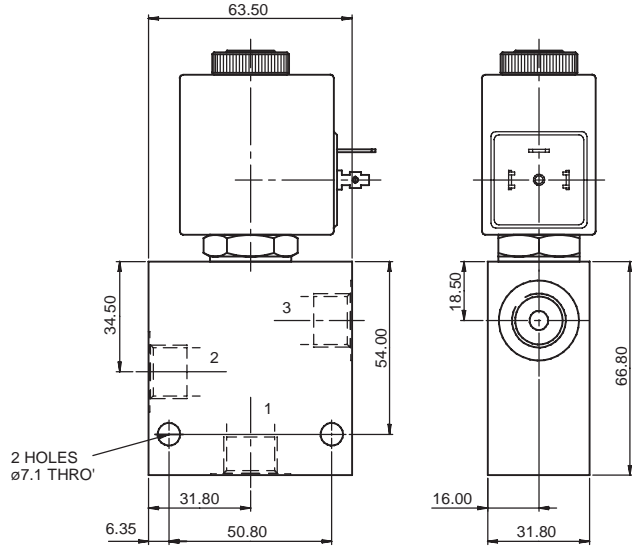
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S525 / S525H

Body ONLY part numbers

BSP, aluminium SAE, aluminium
3/8" B18982 1/2" B19360
1/2" B19358



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S525* **N** **H** **24** **3W**

Basic Code

S525 = (standard valve)
S525H = (heavy duty valve)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

2 = Screw

Port Sizes

3W = 3/8" BSP
4W = 1/2" BSP
8T = 1/2" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

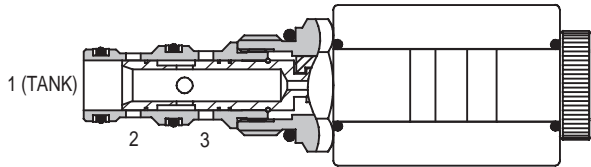
We reserve the right to change specifications without notice



S526 Directional Control Valve - 3-Way, 2-Position Spool

Up to 35 litres/min (9 US GPM) • Up to 210 bar (3000 PSI)

S526



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/19

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

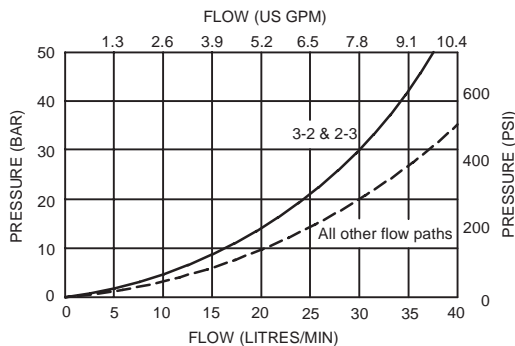
SPECIFICATIONS

Basic Model Code	S526
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal Flow (at Delta P = 5 bar (70 psi))	11 litres/min (3 US GPM)
Internal Leakage	Less than 120 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1030 (Nitrile) SK1030V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.2 kg (0.4 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A12743 (See Section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



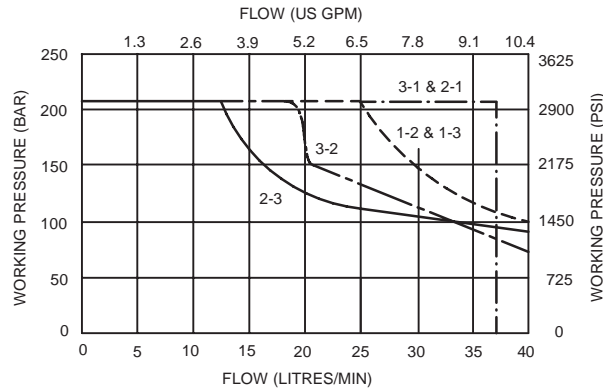
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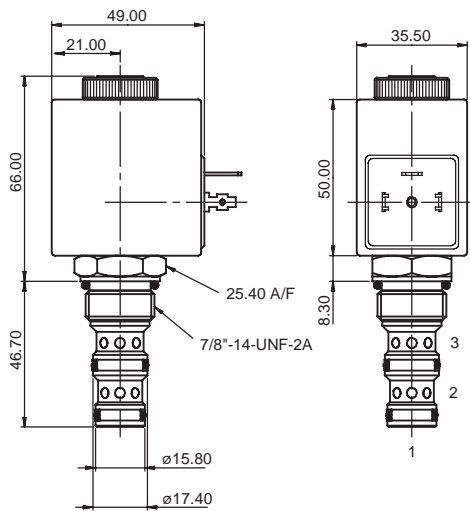
7047 Spinach Drive, Mentor, Ohio 44060, USA
Tel: (440) 974 3171 Fax: (440) 974 3170
Website: www.integratedhydraulics.com

PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S526



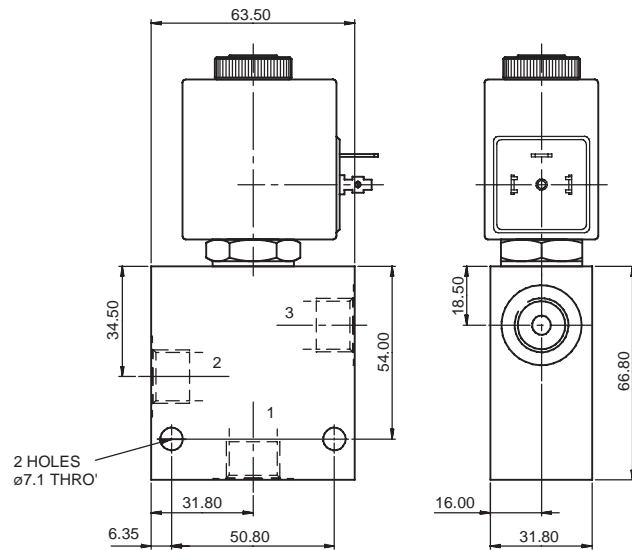
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S526

Body ONLY part numbers

BSP, aluminium *SAE, aluminium*
3/8" B18982 1/2" B19360
1/2" B19358



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S526 N H 24 3W

Basic Code
S526

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
2 = Screw

Port Sizes

3W = 3/8" BSP 8T = 1/2" SAE
4W = 1/2" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

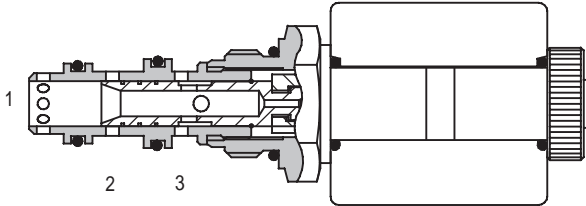
We reserve the right to change specifications without notice



S228 Directional Control Valve - 3-Way, 2-Position Spool

15 litres/min (4 US GPM) • Up to 50 bar (725 PSI)

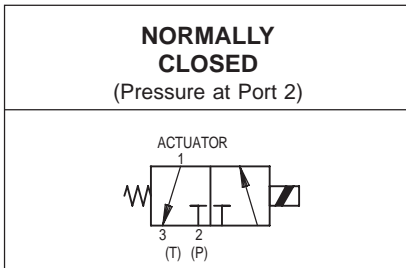
S228



FEATURES

- Increased flow capacity with low pressure drop.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

APPLICATION



SPECIFICATIONS

Basic Model Code	S228
Symbol	
Actuator Port Location	Port 1
Max. Working Pressure	50 bar (750 psi)
Flow Rating	15 litres/min (4 US GPM)
Nominal Flow (at Delta P = 5 bar (70 psi))	15 litres/min (4 US GPM)
Internal Leakage	Less than 60 ml/min 50 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK975 (Nitrile) SK975V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.13 kg (0.3 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A18333 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

COIL INFORMATION

(See Page 11-1021)

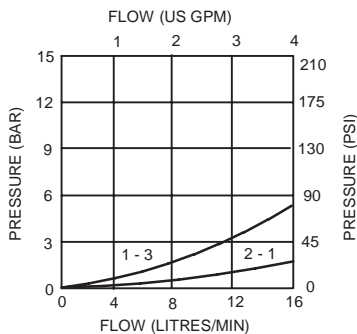
Part Number: C13-*/14

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



11

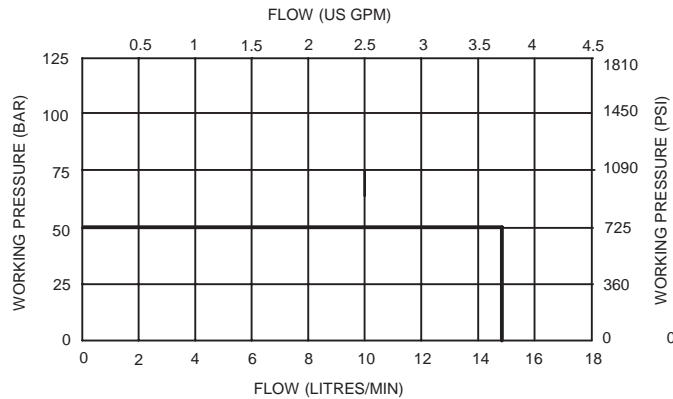
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Website: www.integratedhydraulics.com

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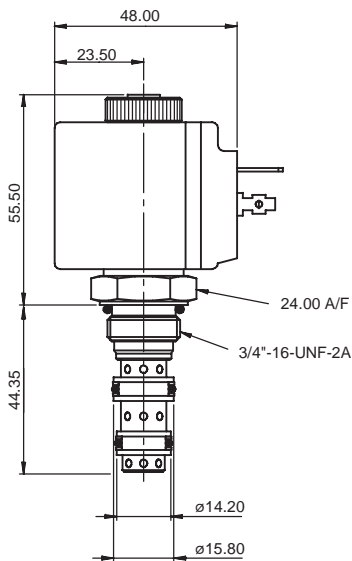
7047 Spinach Drive, Mentor, Ohio 44060, USA
Tel: (440) 974 3171 Fax: (440) 974 3170
Website: www.integratedhydraulics.com

PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S228



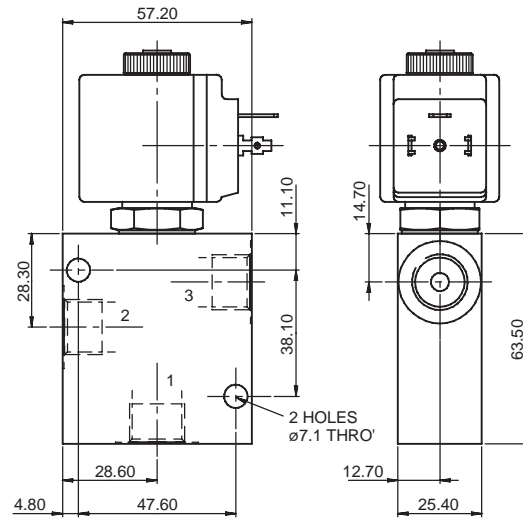
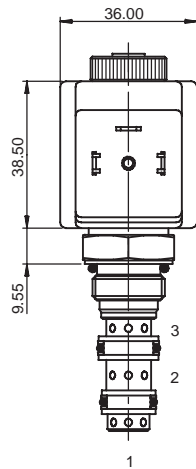
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S228

Body ONLY part numbers

<i>BSP, aluminium</i>	<i>SAE, aluminium</i>
1/4" B7724	3/8" B6516
3/8" B6684	



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S228 N H 24 3W

Basic Code
S228

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

We reserve the right to change specifications without notice

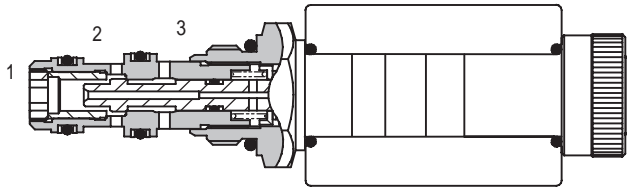


S229 Directional Control Valve - 3-Way, 2-Position Poppet

Up to 12 litres/min (3 US GPM) • Up to 210 bar (3000 PSI)

S229

FEATURES



- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

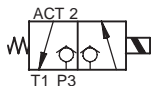
(See Page 11-1021)

Part Number: C16-*-/29

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

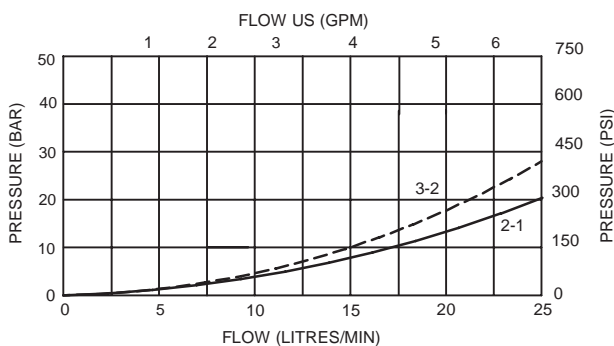
SPECIFICATIONS

Basic Model Code	S229
Symbol	
Actuator Port Location	Port 2
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal Flow (at Delta P = 5 bar (70 psi))	10 litres/min (2.6 US GPM)
Internal Leakage	Less than 0.6 ml/min (10 dpm) 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK119 (Nitrile) SK119V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.13 kg (0.3 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A3531 (See section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



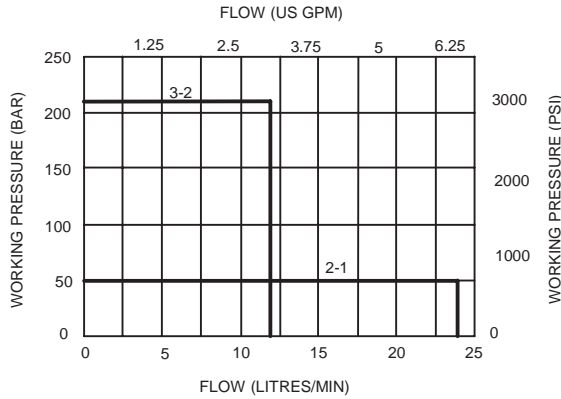
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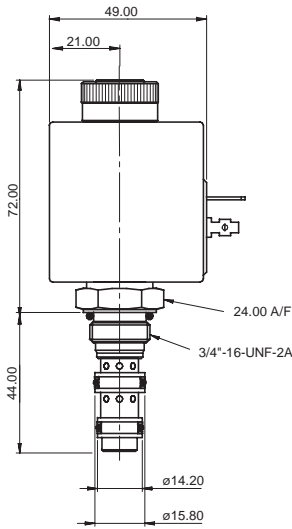
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PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S229



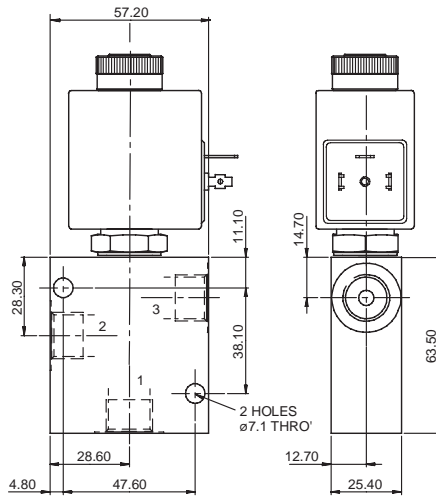
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S229

Body ONLY part numbers

BSP, aluminium SAE, aluminium
1/4" B7724 3/8" B6516
3/8" B6684



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S229 N H 24 3W

Basic Code
S229

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
2 = Screw
3 = Push

Port Sizes
2W = 1/4" BSP 6T = 3/8" SAE
3W = 3/8" BSP

Voltage
12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination
H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

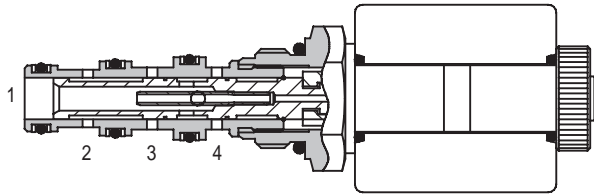
We reserve the right to change specifications without notice



S240 Directional Control Valve - 4-Way, 2-Position Spool

Up to 18 litres/min (4.7 US GPM) • Up to 210 bar (3000 PSI)

S240



COIL INFORMATION

(See Page 11-1021)

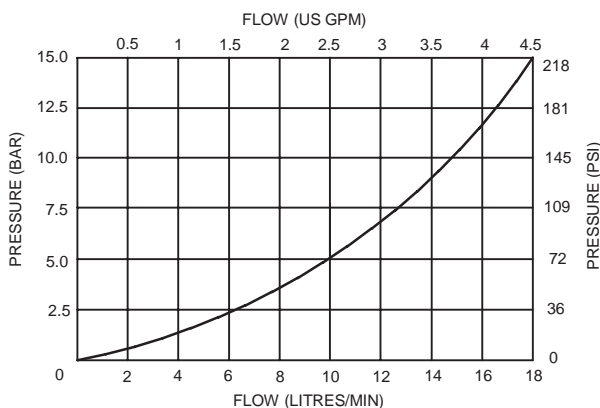
Part Number: C13-*/*/14

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.
- Reversible coil without affecting performance.

SPECIFICATIONS

Basic Model Code	S240
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	18 litres/min (4.7 US GPM)
Nominal flow (at Delta P = 5 bar (70 psi))	10 litres/min (2.5 US GPM)
Internal Leakage	Less than 60 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Viton with PTFE back up rings
Seal Kit Number	SK974 (Nitrile) SK974V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.13 kg (0.3 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A6951 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

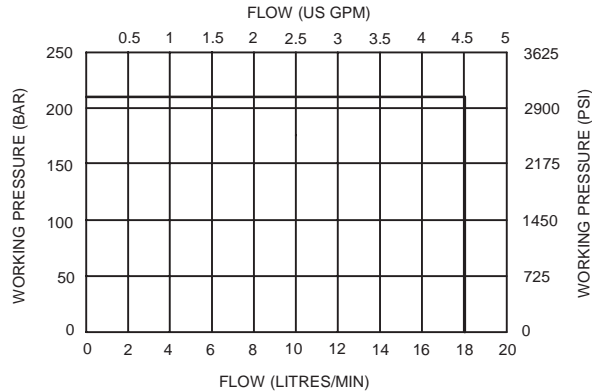
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Website: www.integratedhydraulics.com

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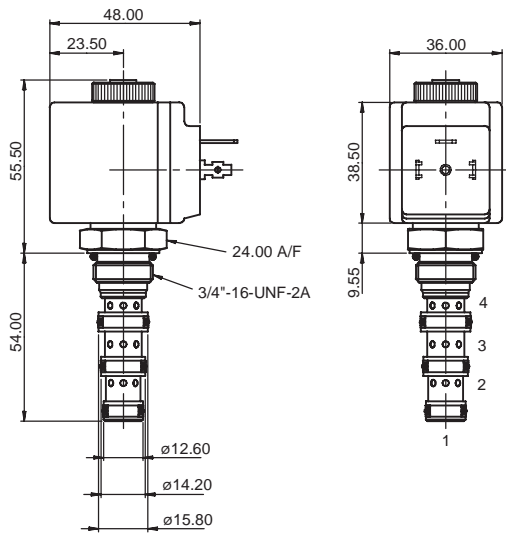
PERFORMANCE



ALL FLOW PATHS

CARTRIDGE ONLY

BASIC CODE: S240



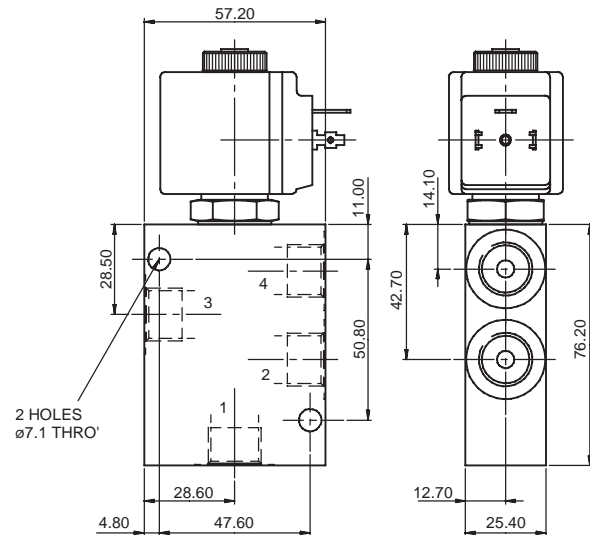
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S240

Body ONLY part numbers

BSP, aluminium SAE, aluminium
1/4" B13383 3/8" B19362
3/8" B7498



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S240 N H 24 3W

Basic Code
S240

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
1 = Push and twist
2 = Screw

Port Sizes

2W = 1/4" BSP 6T = 3/8" SAE
3W = 3/8" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

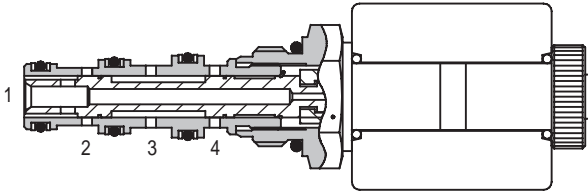
We reserve the right to change specifications without notice



S241 Directional Control Valve - 4-Way, 2-Position Spool

Up to 20 litres/min (5 US GPM) • Up to 210 bar (3000 PSI)

S241



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.
- Reversible coil without affecting performance.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*/14

Voltage available: 12, 24 VDC
110, 220 VAC*

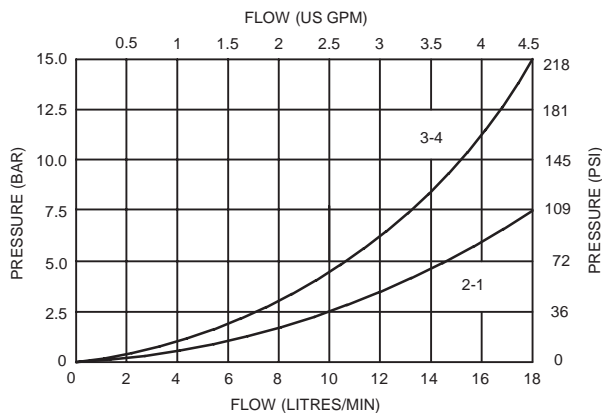
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

Basic Model Code	S241
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	11 litres/min (3 US GPM)
Internal Leakage	Less than 60 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Viton with PTFE back up rings
Seal Kit Number	SK974 (Nitrile) SK974V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.13 kg (0.3 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A6951 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



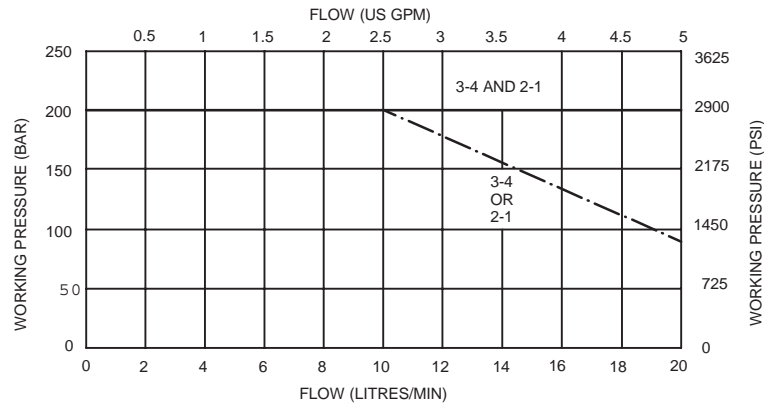
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Tel: +44 (0) 1926 881171 Fax: +44 (0) 1926 315729
Website: www.integratedhydraulics.com

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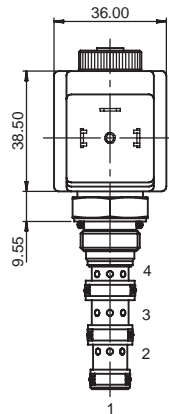
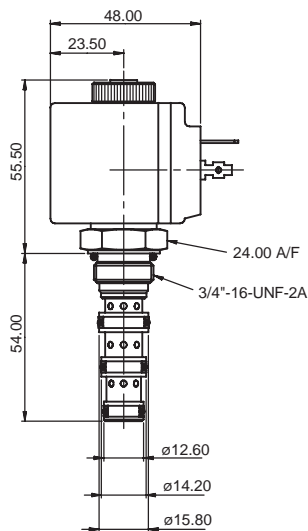
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Website: www.integratedhydraulics.com

PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S241



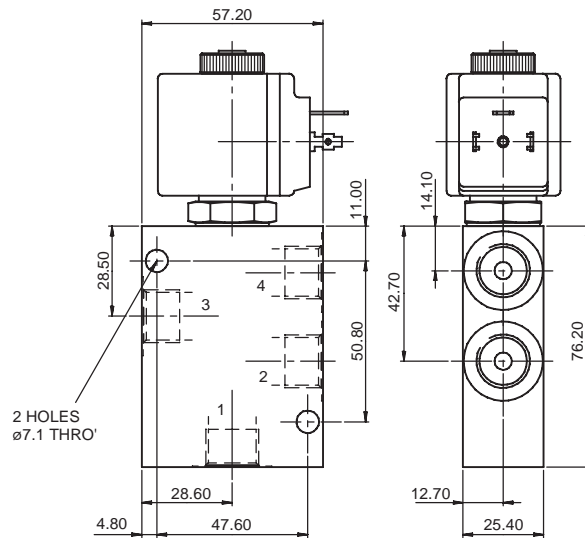
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S241

Body ONLY part numbers

BSP, aluminium SAE, aluminium
1/4" B13383 3/8" B19362
3/8" B7498



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S241 N H 24 3W

Basic Code
S241

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
1 = Push and twist
2 = Screw

Port Sizes

2W = 1/4" BSP 6T = 3/8" SAE
3W = 3/8" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

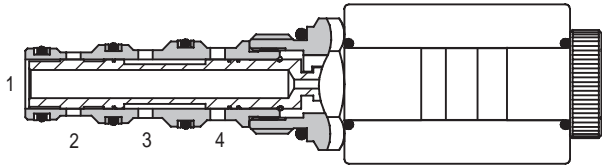
We reserve the right to change specifications without notice



S541 Directional Control Valve - 4-Way, 2-Position Spool

Up to 30 litres/min (8 US GPM) • Up to 210 bar (3000 PSI)

S541



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.
- Reversible coil without affecting performance.

COIL INFORMATION

(See Page 11-1021)

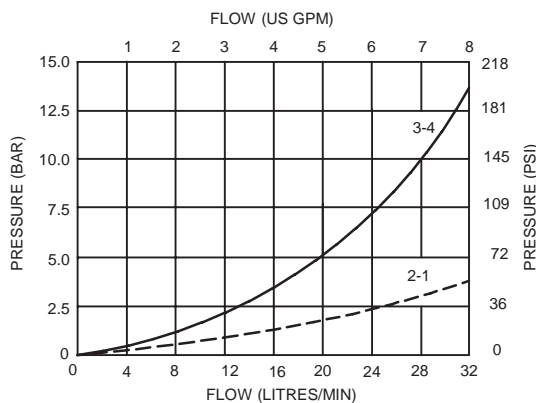
Part Number: C16-*/19

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



SPECIFICATIONS

Basic Model Code	S541
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	20 litres/min (5 US GPM)
Internal Leakage	Less than 120 ml/min 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Viton with PTFE back up rings
Seal Kit Number	SK1031 (Nitrile) SK1031V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.13 kg (0.3 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A12744 (See page 11-441)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

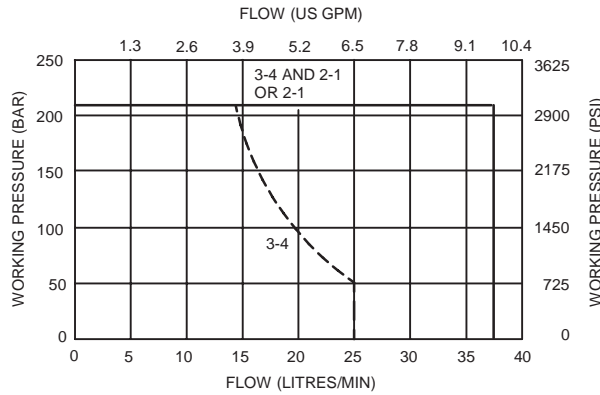
Integrated Hydraulics Ltd

Collins Road, Heathcote Ind. Est., Warwick, CV34 6TF, UK.
Tel: +44 (0) 1926 881171 Fax: +44 (0) 1926 315729
Website: www.integratedhydraulics.com

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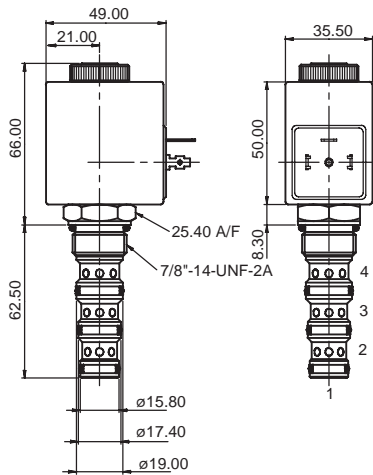
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Tel: (440) 974 3171 Fax: (440) 974 3170
Website: www.integratedhydraulics.com

PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S541



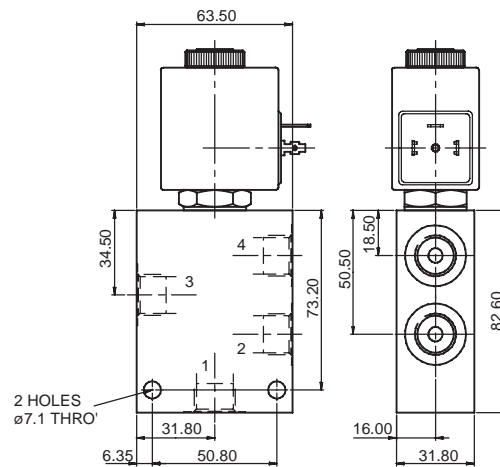
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S541

Body ONLY part numbers

BSP, aluminium SAE, aluminium
3/8" B19240 1/2" B19229
1/2" B19228 1/2" B19229



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S541 N H 24 3W

Basic Code
S541

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
1 = Push and twist
2 = Screw

Port Sizes

3W = 3/8" BSP 8T = 1/2" SAE
4W = 1/2" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

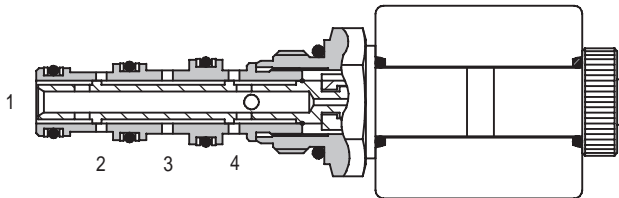
We reserve the right to change specifications without notice



S242(H) Directional Control Valve - 4-Way, 2-Position Spool

Up to 15 litres/min (4 US GPM) • Up to 210 bar (3000 PSI)

S242(H)



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.
- Reversible coil without affecting performance.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*-/14 (S242)
C13-*-/27 (S242H)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

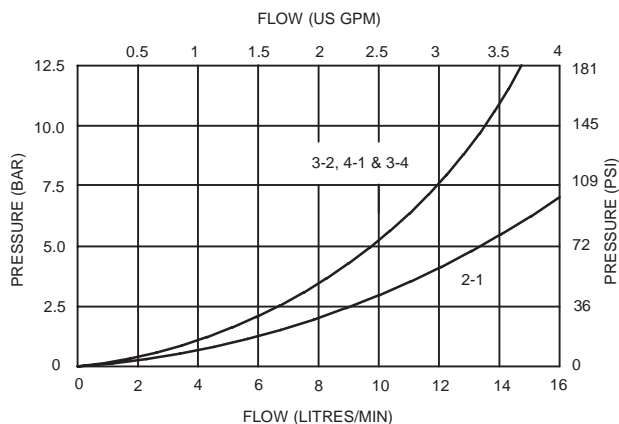
SPECIFICATIONS

Basic Model Code	S242 (std) / S242H (heavy duty)
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal Flow (at Delta P = 5 bar (70 psi))	11 litres/min (3 US GPM)
Internal Leakage	Less than 60 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK974 (Nitrile) SK974V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.13 kg (0.3 lbs)
Coil Weight	0.2 kg (0.4 lbs)
Cavity Number	A6951 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

11

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



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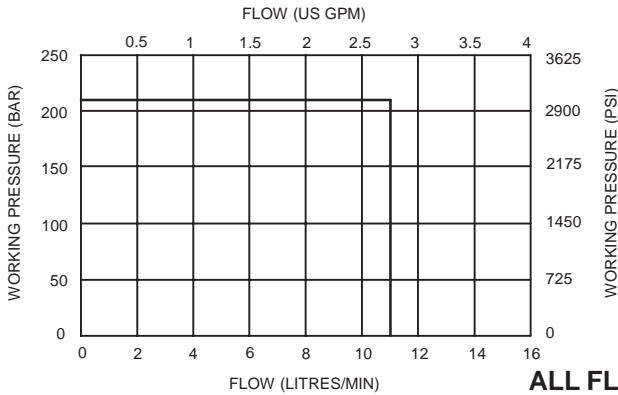
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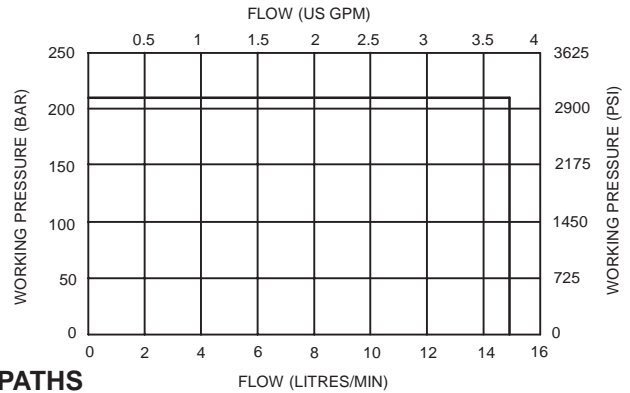
PERFORMANCE

S242 (Standard valve)



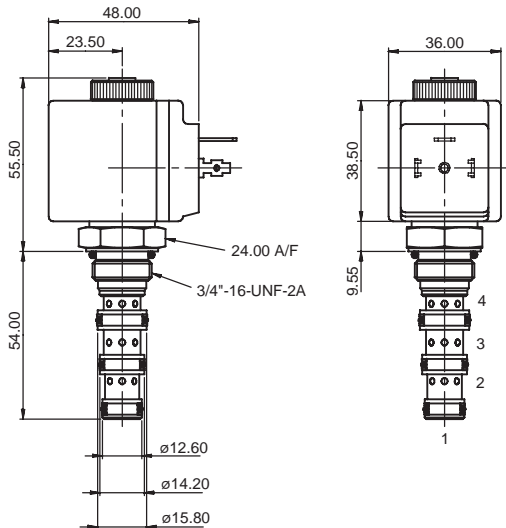
PERFORMANCE

S242H (Heavy duty valve)



CARTRIDGE ONLY

BASIC CODE: S242 / S242H

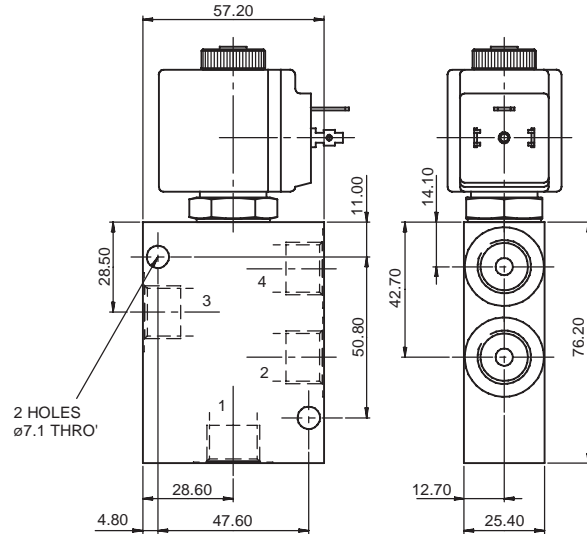


COMPLETE VALVE

BASIC CODE: S242 / S242H 1/4" 3/8" PORTS

Body ONLY part numbers

BSP, aluminium SAE, aluminium
1/4" B13383 3/8" B19362
3/8" B7498



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S242* N H 24 3W

Basic Code

S242 = (standard valve)
S242H = (heavy duty valve)

Seals

N = Nitrile
V = Viton

Manual Override (consult factory for availability)

1 = Push and twist
2 = Screw

Port Sizes

2W = 1/4" BSP **6T** = 3/8" SAE
3W = 3/8" BSP

Voltage

12 = 12 VDC **110** = 110 VAC
24 = 24 VDC **220** = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

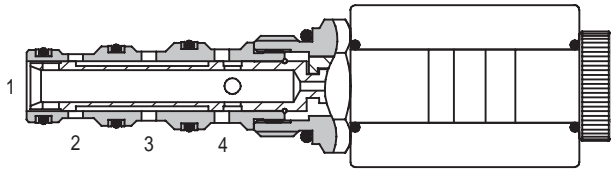
We reserve the right to change specifications without notice



S542 Directional Control Valve - 4-Way, 2-Position Spool

Up to 35 litres/min (9 US GPM) • Up to 210 bar (3000 PSI)

S542



COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/*/19

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

FEATURES

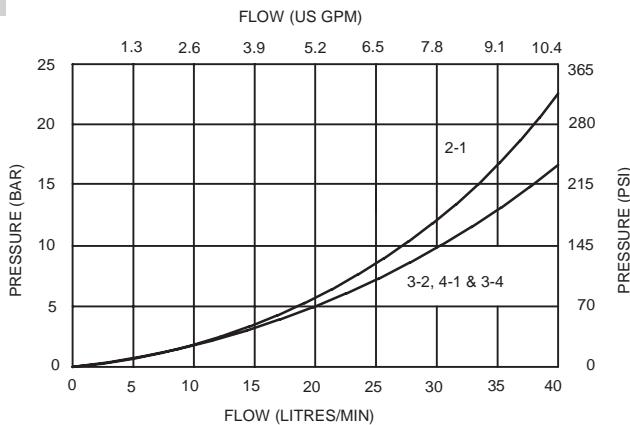
- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.
- Reversible coil without affecting performance.

SPECIFICATIONS

Basic Model Code	S542
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	20 litres/min (5 US GPM)
Internal Leakage	Less than 120 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1031 (Nitrile) SK1031V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.205 kg (0.45 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A12744 (See Section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



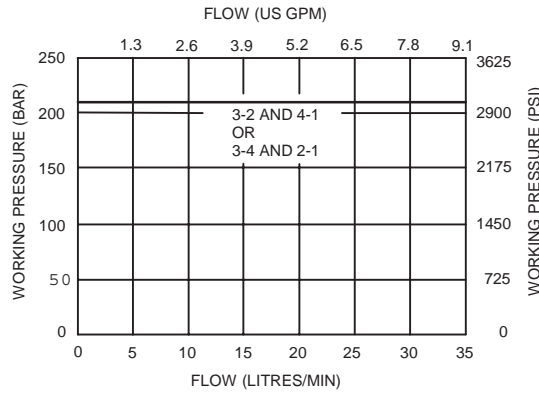
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PERFORMANCE

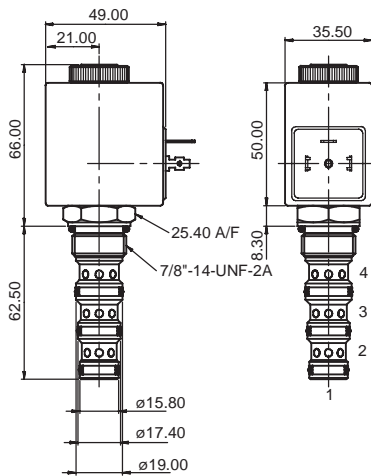


NOTE:

For applications where unbalanced pressure and return flows are encountered the flow rate of this valve should be reduced, please contact our sales office for details.

CARTRIDGE ONLY

BASIC CODE: S542



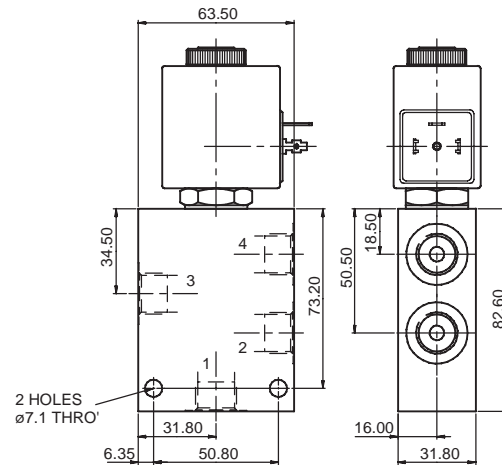
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S542

Body ONLY part numbers

<i>BSP, aluminium</i>		<i>SAE, aluminium</i>	
3/8"	B19240	1/2"	B19229
1/2"	B19228		



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S542 N H 24 3W

Basic Code
S542

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
2 = Screw

Port Sizes

3W = 3/8" BSP
4W = 1/2" BSP
8T = 1/2" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

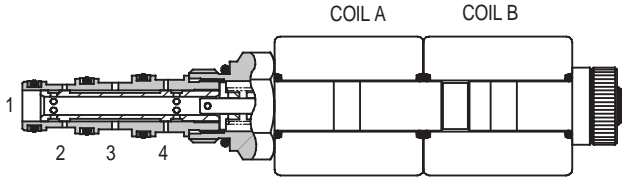
We reserve the right to change specifications without notice



S270 Directional Control Valve - 4-Way, 3-Position Spool

Up to 13 litres/min (3.5 US GPM) • Up to 210 bar (3000 PSI)

S270



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

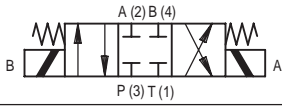
(See Page 11-1021)

Part Number: C13-*/22 (two per valve)

Voltage available: 12, 24 VDC
110, 220 VAC*

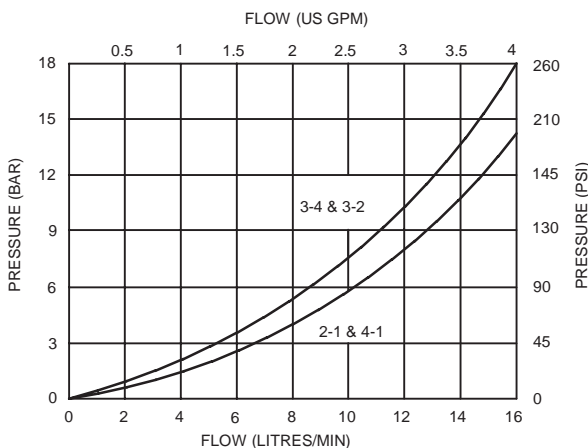
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

Basic Model Code	S270
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	13 litres/min (3.5 US GPM)
Nominal Flow (at Delta P = 5 bar (70 psi))	8 litres/min (2 US GPM)
Internal Leakage	Less than 100 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK974 (Nitrile) SK974V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.16 kg (0.35 lbs)
Coil Weight	0.2 kg (0.4 lbs) - two per valve
Cavity Number	A6951 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



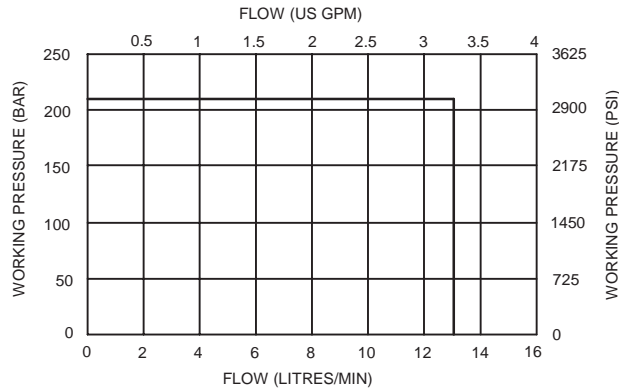
Integrated Hydraulics Ltd

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Website: www.integratedhydraulics.com

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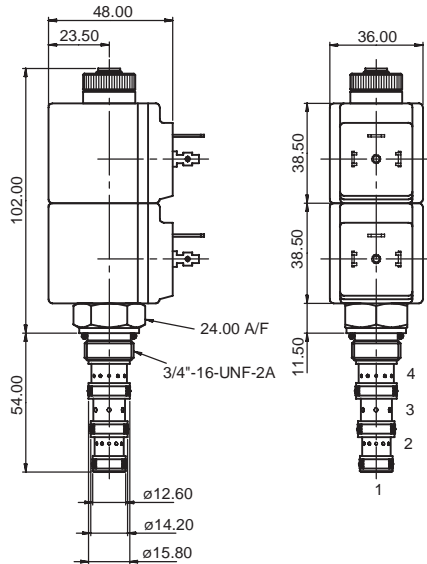
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Website: www.integratedhydraulics.com

PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S270



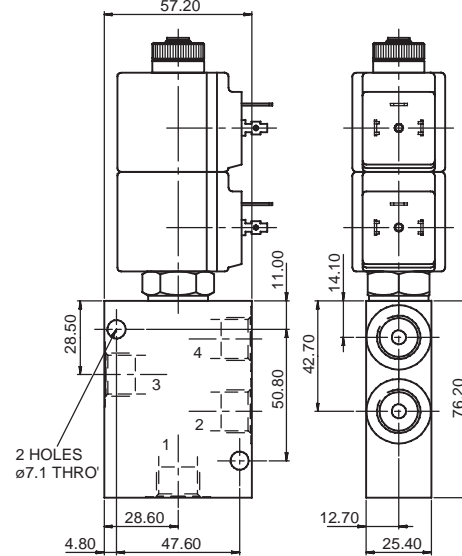
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S270

Body ONLY part numbers

BSP, aluminium SAE, aluminium
1/4" B13383 3/8" B19362
3/8" B7498



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S270 N H 24 3W

Basic Code
S270

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
4 = Push/Pull

Port Sizes

2W = 1/4" BSP

3W = 3/8" BSP

6T = 3/8" SAE

Voltage

12 = 12 VDC

24 = 24 VDC

110 = 110 VAC

220 = 220 VAC

Coil Termination

H = DIN43650

F = Flying Leads

DM = Deutsch Moulded

Other terminations available on request

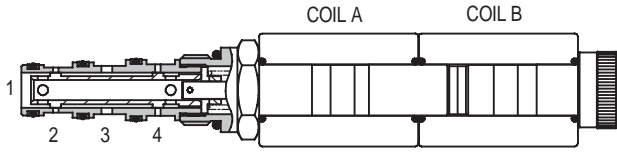
We reserve the right to change specifications without notice



S570 Directional Control Valve - 4-Way, 3-Position Spool

Up to 35 litres/min (9 US GPM) • Up to 210 bar (3000 PSI)

S570



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

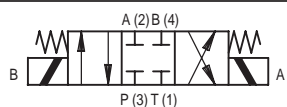
(See Page 11-1021)

Part Number: C16-*/19 (two per valve)

Voltage available: 12, 24 VDC
110, 220 VAC*

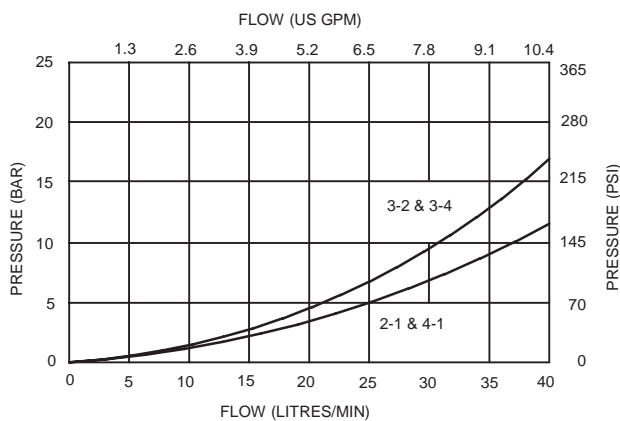
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

Basic Model Code	S570
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	22 litres/min (5.8 US GPM)
Internal Leakage	Less than 120 ml/min 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Viton with PTFE back up rings
Seal Kit Number	SK1034 (Nitrile) SK1034V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.25 kg (0.55 lbs)
Coil Weight	0.3 kg (0.6 lbs) - two per valve
Cavity Number	A12744 (See Section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



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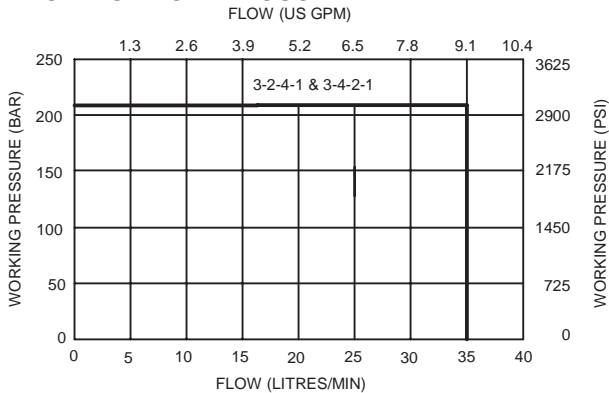
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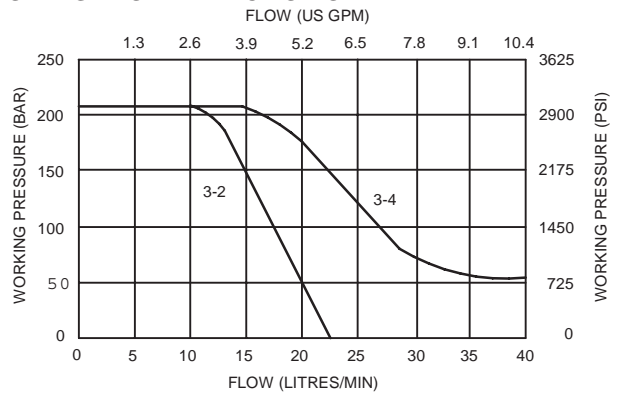
PERFORMANCE

FLOWING BACK THROUGH THE VALVE



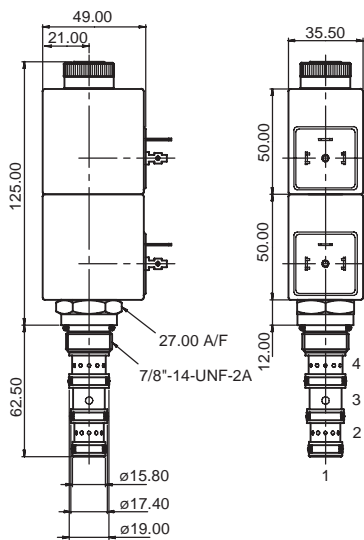
PERFORMANCE

FLOWING IN ONE DIRECTION ONLY



CARTRIDGE ONLY

BASIC CODE: S570



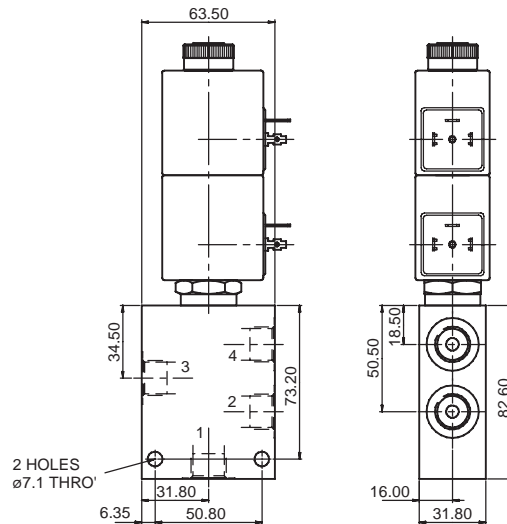
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S570

Body ONLY part numbers

BSP, aluminium SAE, aluminium
3/8" B19240 1/2" B19229
1/2" B19228



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S570 N H 24 3W

Basic Code
S570

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
4 = Push/Pull

Port Sizes

3W = 3/8" BSP 8T = 1/2" SAE
4W = 1/2" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

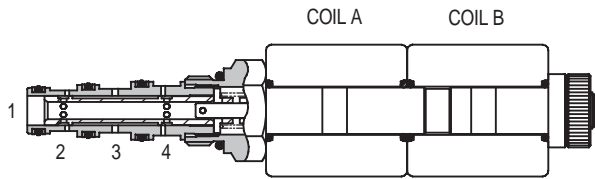
We reserve the right to change specifications without notice



S271 Directional Control Valve - 4-Way, 3-Position Spool

Up to 14 litres/min (3.7 US GPM) • Up to 210 bar (3000 PSI)

S271



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*/22 (two per valve)

Voltage available: 12, 24 VDC
110, 220 VAC*

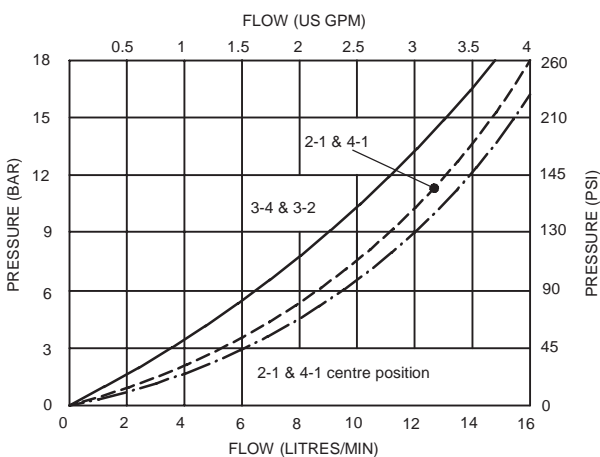
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

Basic Model Code	S271
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	14 litres/min (3.7 US GPM)
Nominal Flow (at Delta P = 5 bar (70 psi))	8 litres/min (2 US GPM)
Internal Leakage	Less than 100 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK974 (Nitrile) SK974V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.16 kg (0.35 lbs)
Coil Weight	0.2 kg (0.4 lbs) - two per valve
Cavity Number	A6951 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



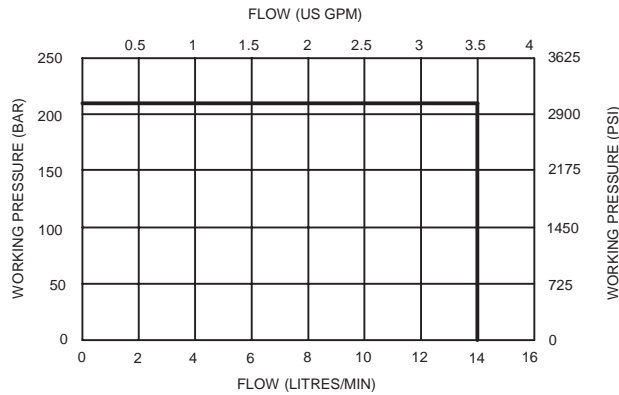
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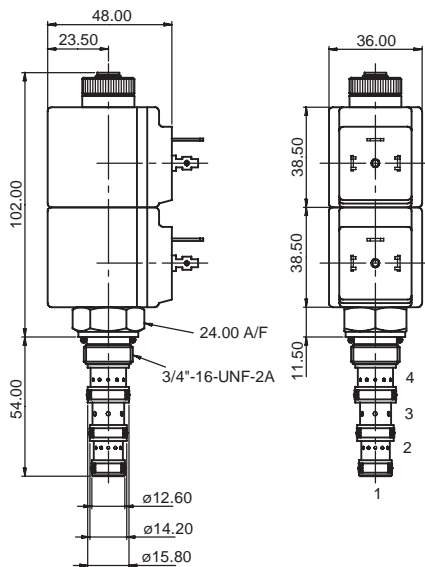
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PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S271



COMPLETE VALVE

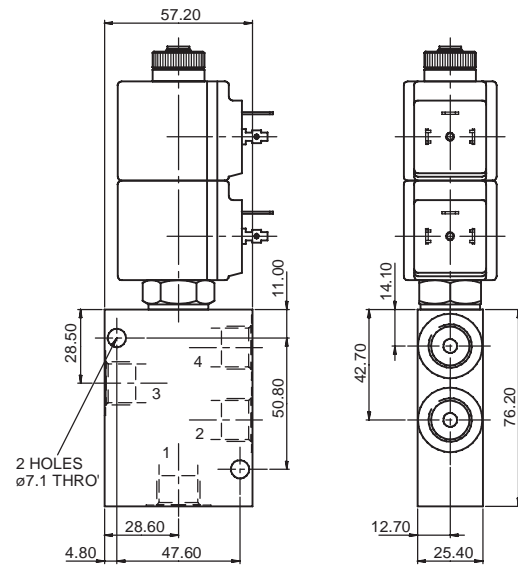
1/4" 3/8" PORTS

BASIC CODE: S271

Body ONLY part numbers

BSP, aluminium 1/4" B13383
3/8" B7498

SAE, aluminium 3/8" B19362



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S271 N H 24 3W

Basic Code
S271

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
4 = Push/Pull

Port Sizes

2W = 1/4" BSP

3W = 3/8" BSP

6T = 3/8" SAE

Voltage

12 = 12 VDC

24 = 24 VDC

110 = 110 VAC

220 = 220 VAC

Coil Termination

H = DIN43650

F = Flying Leads

DM = Deutsch Moulded

Other terminations available on request

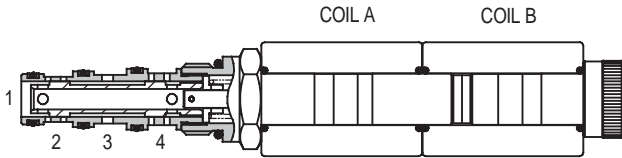
We reserve the right to change specifications without notice



S571 Directional Control Valve - 4-Way, 3-Position Spool

Up to 34 litres/min (8.7 US GPM) • Up to 210 bar (3000 PSI)

S571



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/19 (two per valve)

Voltage available: 12, 24 VDC
110, 220 VAC*

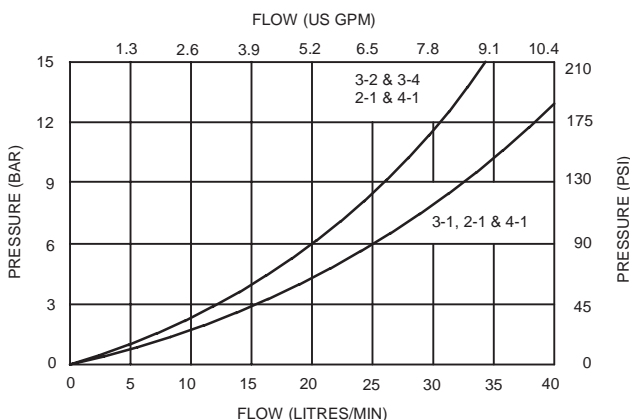
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

Basic Model Code	S571
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal Flow (at Delta P = 5 bar (70 psi))	18 litres/min (4.7 US GPM)
Internal Leakage	Less than 120 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1034 (Nitrile) SK1034V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.25 kg (0.5 lbs)
Coil Weight	0.3 kg (0.6 lbs) - two per valve
Cavity Number	A12744 (See Section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



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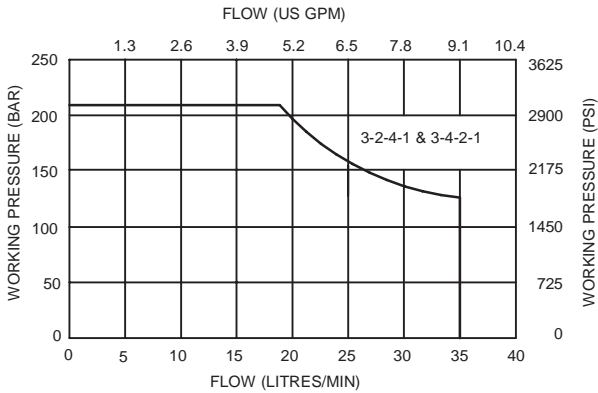
Collins Road, Heathcote Ind. Est., Warwick, CV34 6TF, UK.
Tel: +44 (0) 1926 881171 Fax: +44 (0) 1926 315729
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7047 Spinach Drive, Mentor, Ohio 44060, USA
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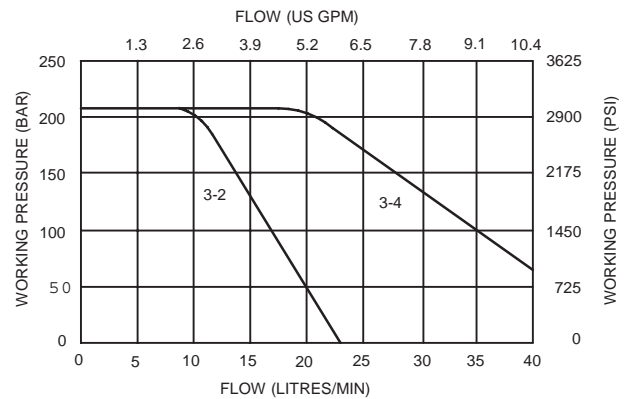
PERFORMANCE

FLOWING BACK THROUGH THE VALVE



PERFORMANCE

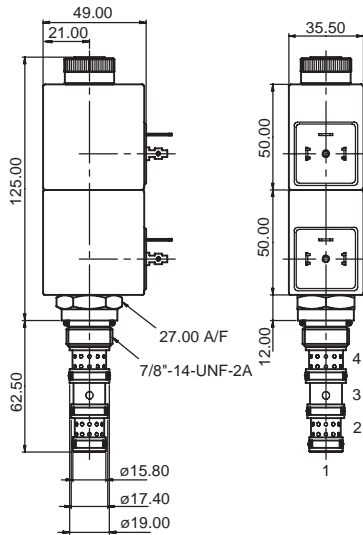
FLOWING IN ONE DIRECTION ONLY



NOTE: Higher flows available on request

CARTRIDGE ONLY

BASIC CODE: S571



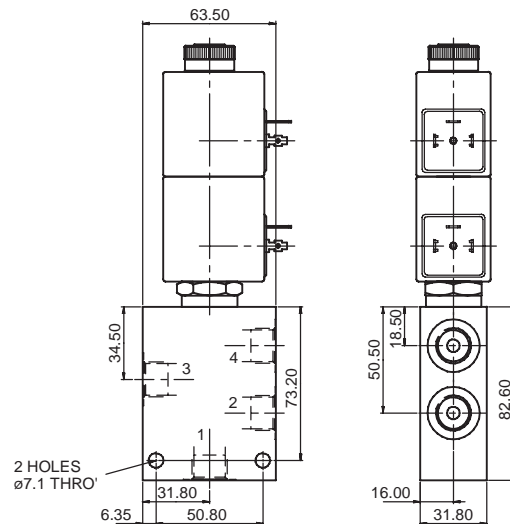
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S571

Body ONLY part numbers

BSP, aluminium	SAE, aluminium
3/8" B19240	1/2" B19229
1/2" B19228	



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S571 N H 24 3W

Basic Code
S571

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
4 = Push/Pull

Port Sizes

3W = 3/8" BSP
4W = 1/2" BSP
8T = 1/2" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

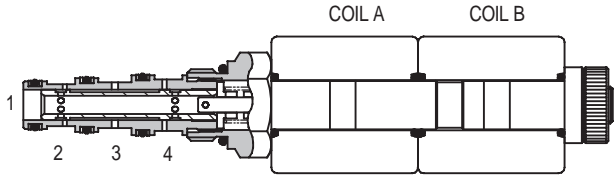
We reserve the right to change specifications without notice



S272 Directional Control Valve - 4-Way, 3-Position Spool

Up to 14 litres/min (3.7 US GPM) • Up to 210 bar (3000 PSI)

S272



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*/22 (two per valve)

Voltage available: 12, 24 VDC
110, 220 VAC*

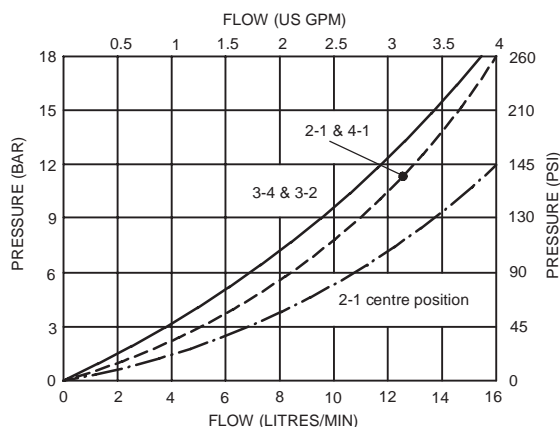
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

Basic Model Code	S272
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	14 litres/min (3.7 US GPM)
Nominal flow (at Delta P = 5 bar (70 psi))	8 litres/min (2 US GPM)
Internal Leakage	Less than 60 ml/min 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK974 (Nitrile) SK974V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.16 kg (0.35 lbs)
Coil Weight	0.2 kg (0.4 lbs) - two per valve
Cavity Number	A6951 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



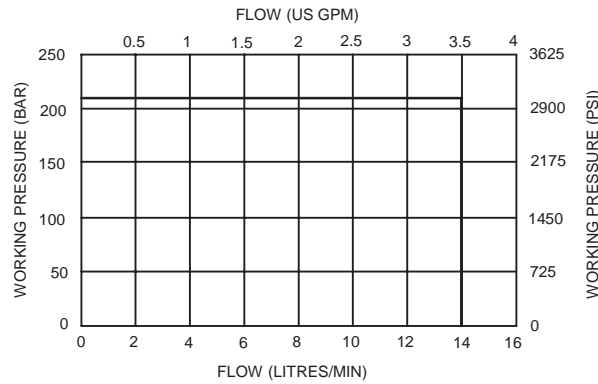
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Website: www.integratedhydraulics.com

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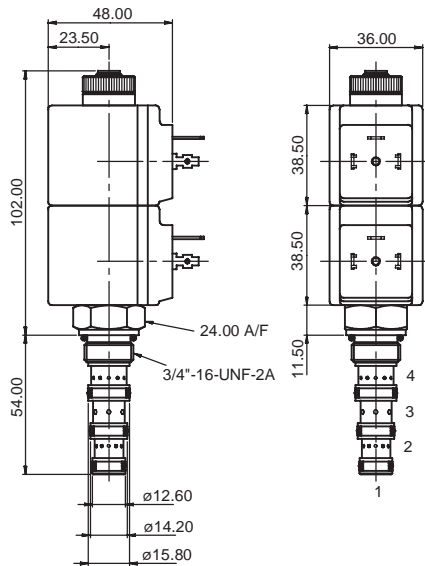
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Website: www.integratedhydraulics.com

PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S272



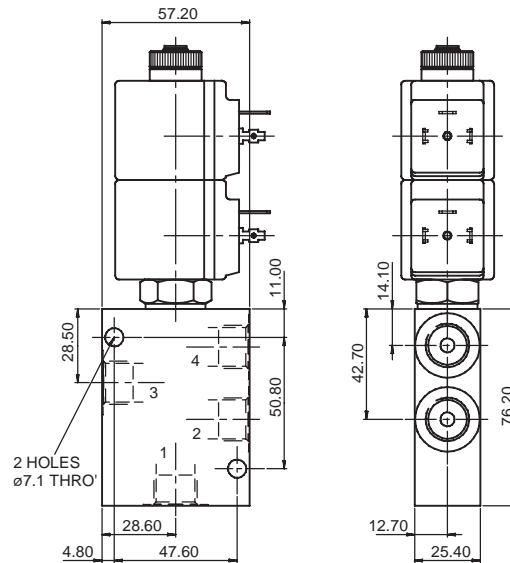
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S272

Body ONLY part numbers

BSP, aluminium *SAE, aluminium*
1/4" B13383
3/8" B7498 3/8" B19362



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S272 N H 24 3W

Basic Code
S272

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
4 = Push/Pull

Port Sizes

2W = 1/4" BSP 6T = 3/8" SAE
3W = 3/8" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded

Other terminations available on request

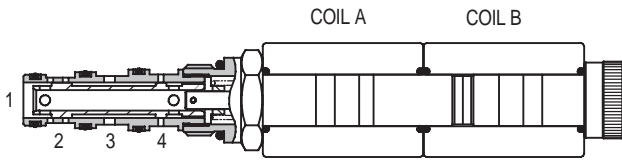
We reserve the right to change specifications without notice



S572 Directional Control Valve - 4-Way, 3-Position Spool

Up to 34 litres/min (8.7 US GPM) • Up to 210 bar (3000 PSI)

S572



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/19 (two per valve)

Voltage available: 12, 24 VDC
110, 220 VAC*

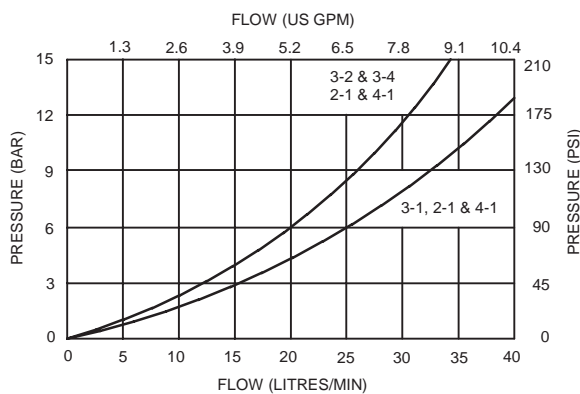
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

Basic Model Code	S572
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	See performance graphs
Nominal flow (at Delta P = 5 bar (70 psi))	18 litres/min (4.7 US GPM)
Internal Leakage	Less than 120 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1034 (Nitrile) SK1034V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.25 kg (0.5 lbs)
Coil Weight	0.3 kg (0.6 lbs) - two per valve
Cavity Number	A12744 (See Section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



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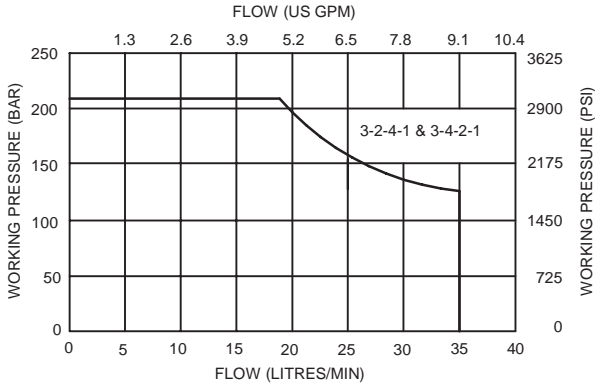
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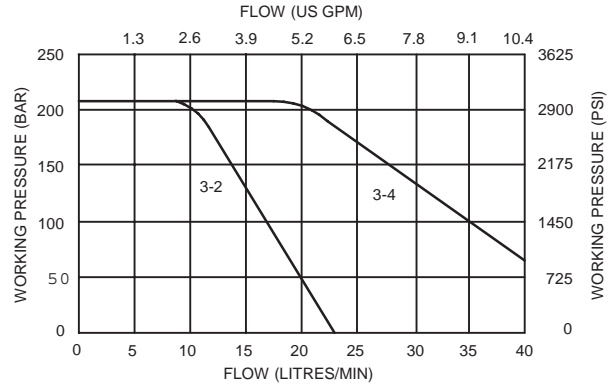
PERFORMANCE

FLOWING BACK THROUGH THE VALVE



PERFORMANCE

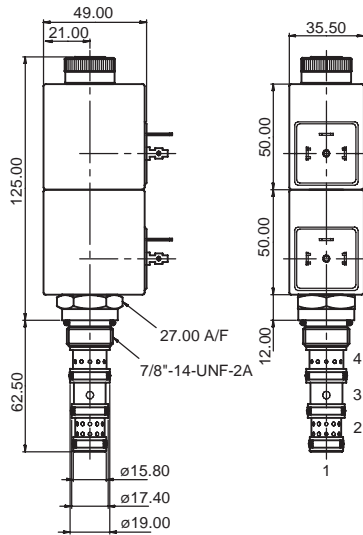
FLOWING IN ONE DIRECTION ONLY



NOTE: Higher flows available on request

CARTRIDGE ONLY

BASIC CODE: S572



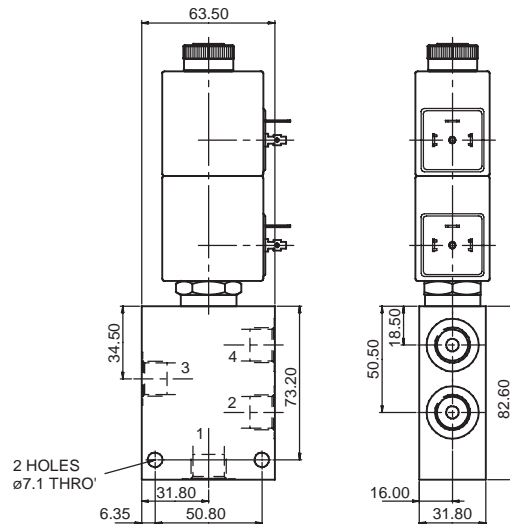
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S572

Body ONLY part numbers

BSP, aluminium SAE, aluminium
3/8" B19240
1/2" B19228



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S572 N H 24 3W

Basic Code
S572

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
4 = Push/Pull

Port Sizes

3W = 3/8" BSP 8T = 1/2" SAE
4W = 1/2" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

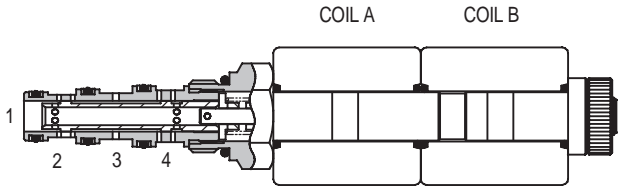
We reserve the right to change specifications without notice



S274 Directional Control Valve - 4-Way, 3-Position Spool

14 litres/min (3.7 US GPM) • Up to 210 bar (3000 PSI)

S274



COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*-/22 (two per valve)

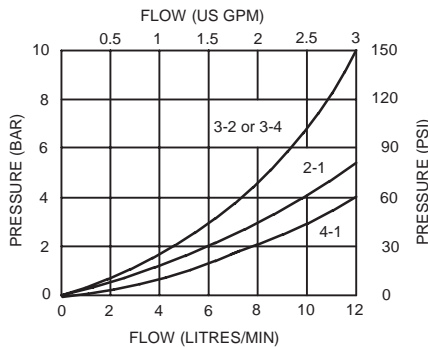
Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

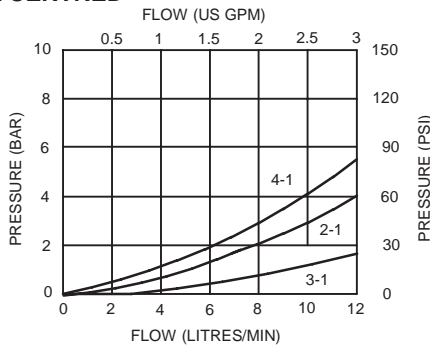
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

SPOOL SHIFTED



SPOOL CENTRED



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	S274
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	14 litres/min (3.7 US GPM)
Nominal flow (at Delta P = 5 bar (70 psi))	12 litres/min (3.2 US GPM)
Internal Leakage	Less than 60 ml/min 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK974 (Nitrile) SK974V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.16 kg (0.35 lbs)
Coil Weight	0.2 kg (0.4 lbs) - two per valve
Cavity Number	A6951 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

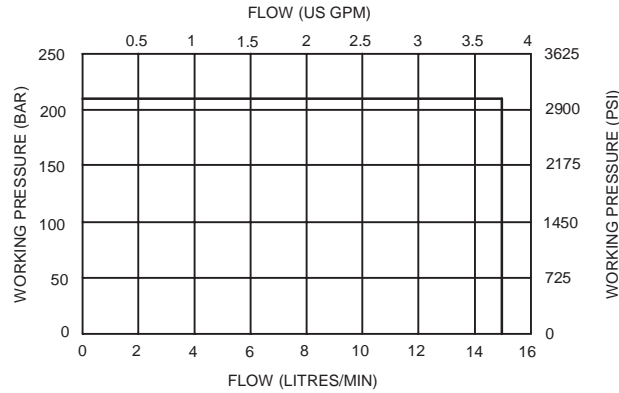
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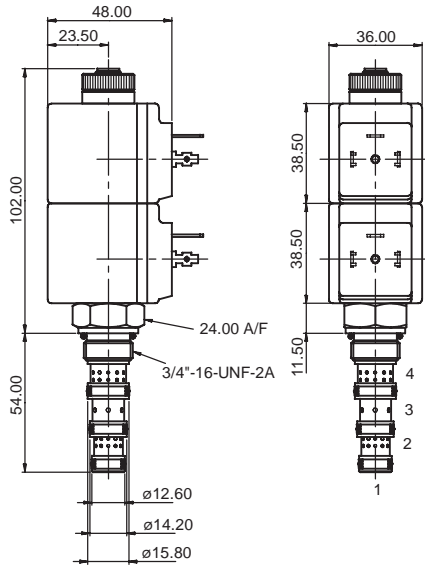
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PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S274



COMPLETE VALVE

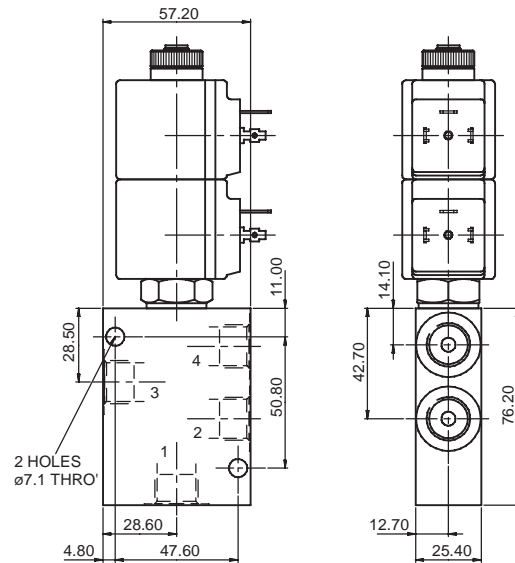
1/4" 3/8" PORTS

BASIC CODE: S274

Body ONLY part numbers

BSP, aluminium 1/4" B13383
3/8" B7498

SAE, aluminium 3/8" B19362



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S274 N H 24 3W

Basic Code
S274

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
4 = Push/Pull

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP
6T = 3/8" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

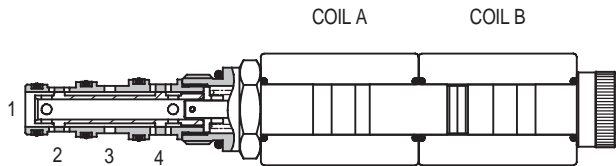
We reserve the right to change specifications without notice



S574 Directional Control Valve - 4-Way, 3-Position Spool

Up to 34 litres/min (8.7 US GPM) • Up to 210 bar (3000 PSI)

S574



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/19 (two per valve)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

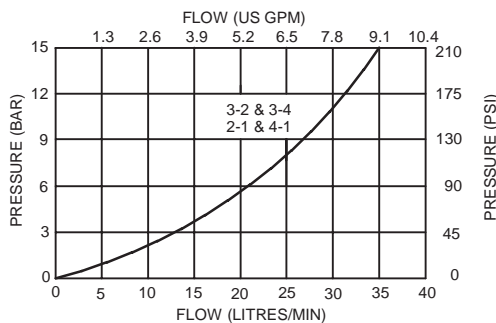
SPECIFICATIONS

Basic Model Code	S574
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	34 litres/min (8.7 US GPM)
Nominal flow (at Delta P = 5 bar (70 psi))	20 litres/min (5 US GPM)
Internal Leakage	Less than 120 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1034 (Nitrile) SK1034V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.25 kg (0.5 lbs)
Coil Weight	0.3 kg (0.6 lbs) - two per valve
Cavity Number	A12744 (See Section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

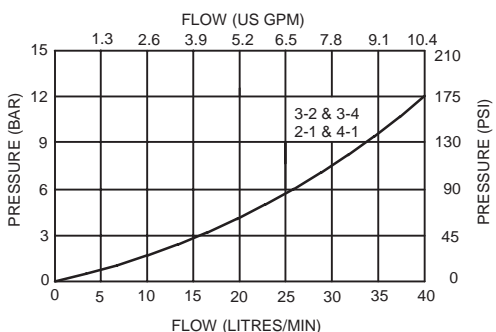
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

SPOOL SHIFTED



SPOOL CENTRED



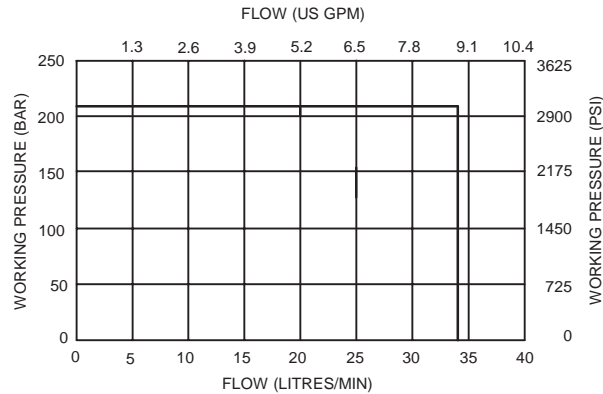
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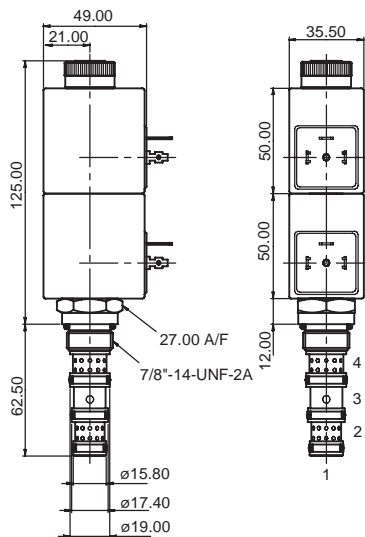
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Website: www.integratedhydraulics.com

PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S574

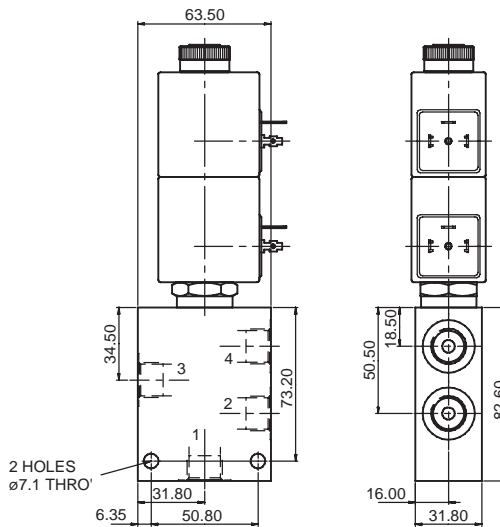


COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S574

Body ONLY part numbers
 BSP, aluminium 3/8" B19240
 SAE, aluminium 1/2" B19229



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S574 N H 24 3W

Basic Code
S574

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
4 = Push/Pull

Port Sizes

3W = 3/8" BSP
4W = 1/2" BSP
8T = 1/2" SAE

Voltage

12 = 12 VDC
24 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

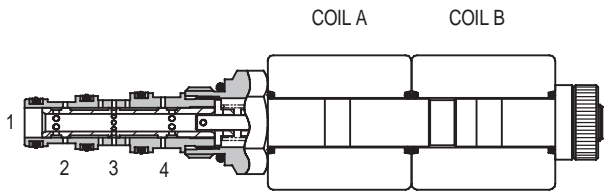
We reserve the right to change specifications without notice



S277 Directional Control Valve - 4-Way, 3-Position Spool

Up to 11.5 litres/min (3.1 US GPM) • Up to 210 bar (3000 PSI)

S277



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S2 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C13-*-/22 (two per valve)

Voltage available: 12, 24 VDC
110, 220 VAC*

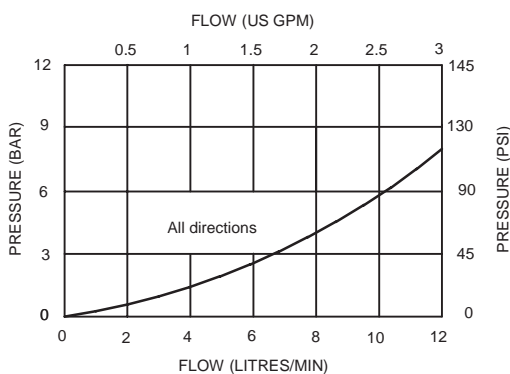
* AC coils must be used with a rectifying connector.

SPECIFICATIONS

Basic Model Code	S277
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	11.5 litres/min (3.1 US GPM)
Nominal flow (at Delta P = 5 bar (70 psi))	8 litres/min (2 US GPM)
Internal Leakage	Less than 100 ml/min past each land 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK974 (Nitrile) SK974V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.16 kg (0.35 lbs)
Coil Weight	0.2 kg (0.4 lbs) - two per valve
Cavity Number	A6951 (See Section 17)
Torque into Cavity	20 Nm (15 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)



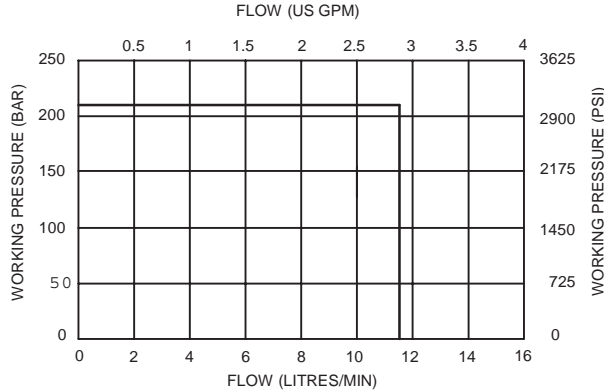
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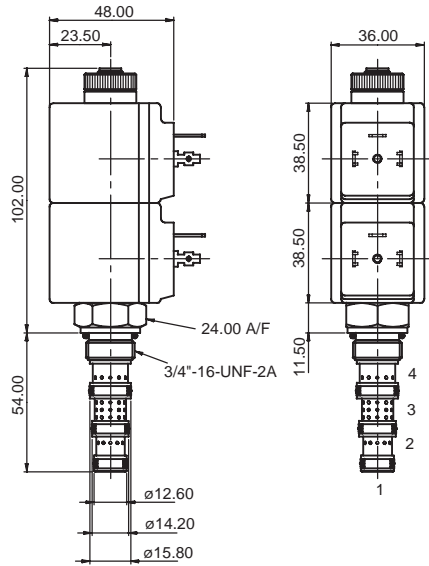
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PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S277



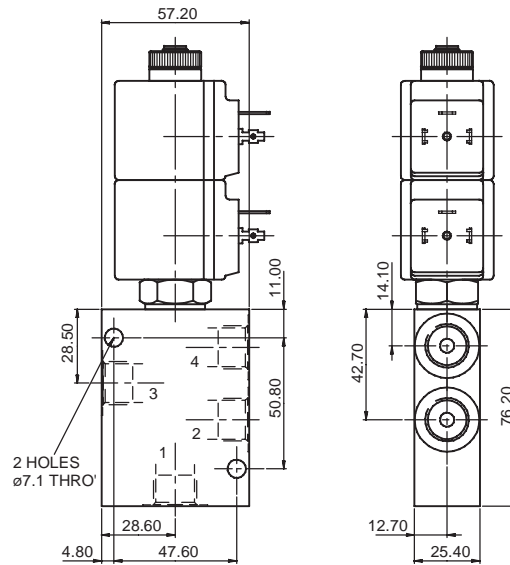
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: S277

Body ONLY part numbers

BSP, aluminium SAE, aluminium
1/4" B13383
3/8" B7498 3/8" B19362



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S277 N H 24 3W

Basic Code
S277

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
4 = Push/Pull

Port Sizes

2W = 1/4" BSP
3W = 3/8" BSP 6T = 3/8" SAE

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

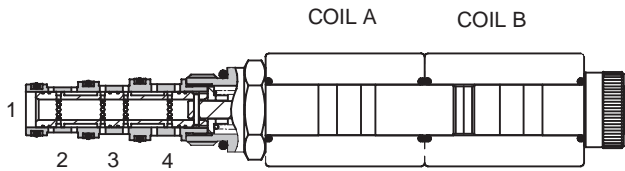
We reserve the right to change specifications without notice



S577R Directional Control Valve - 4-Way, 3-Position Spool

23 litres/min (7 US GPM) • Up to 210 bar (3000 PSI)

S577R



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/*/19 (two per valve)

Voltage available: 12, 24 VDC
110, 220 VAC*

* AC coils must be used with a rectifying connector.

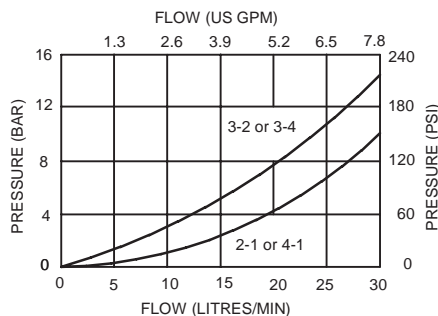
SPECIFICATIONS

Basic Model Code	S577R
Symbol	
Max. Working Pressure	210 bar (3000 psi)
Flow Rating	23 litres/min (7 US GPM)
Nominal flow (at Delta P = 5 bar (70 psi))	20 litres/min (5 US GPM)
Internal Leakage	Less than 100 ml/min 210 bar differential at 32 centistokes
Temperature Range	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1034 (Nitrile) SK1034V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.25 kg (0.5 lbs)
Coil Weight	0.3 kg (0.6 lbs) - two per valve
Cavity Number	A12744 (See page 11-441)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

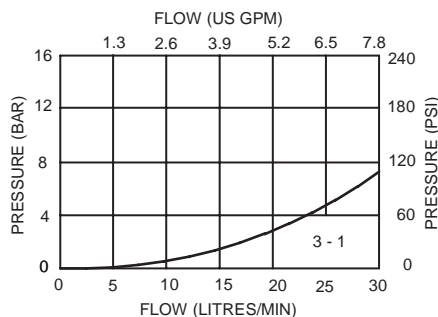
PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

SPOOL SHIFTED



SPOOL CENTRED



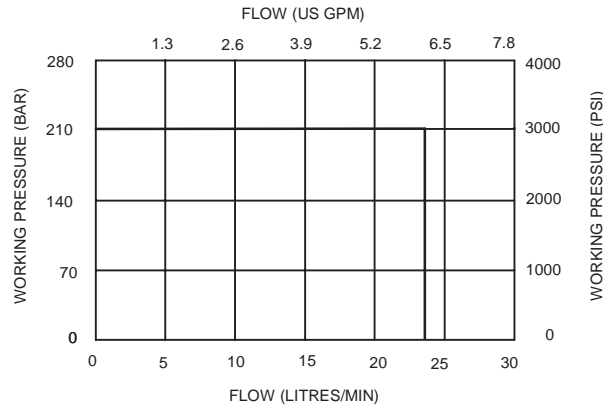
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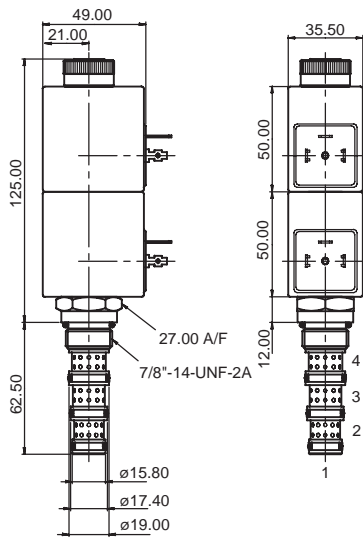
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PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: S577R



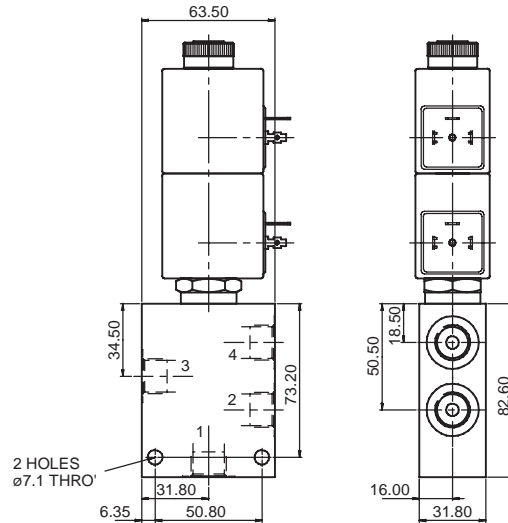
COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: S577R

Body ONLY part numbers

BSP, aluminium SAE, aluminium
3/8" B19240 1/2" B19229
1/2" B19228



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

S577R **N** **H** **24** **3W**

Basic Code
S577R

Seals
N = Nitrile
V = Viton

Manual Override (consult factory for availability)
4 = Push/Pull

Port Sizes

3W = 3/8" BSP 8T = 1/2" SAE
4W = 1/2" BSP

Voltage

12 = 12 VDC 110 = 110 VAC
24 = 24 VDC 220 = 220 VAC

Coil Termination

H = DIN43650
F = Flying Leads
DM = Deutsch Moulded
Other terminations available on request

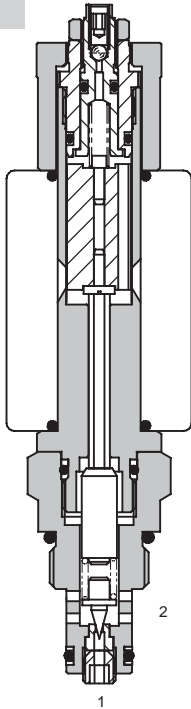
We reserve the right to change specifications without notice



PDR2 Pressure Relief Valve

1.5 litres/min (0.3 US GPM) • 350 bar (5000 PSI)

PDR2



DESCRIPTION

This valve can be infinitely adjusted within a prescribed range by a varying electrical control signal. Pressure output is directly proportional to changes in DC current input.

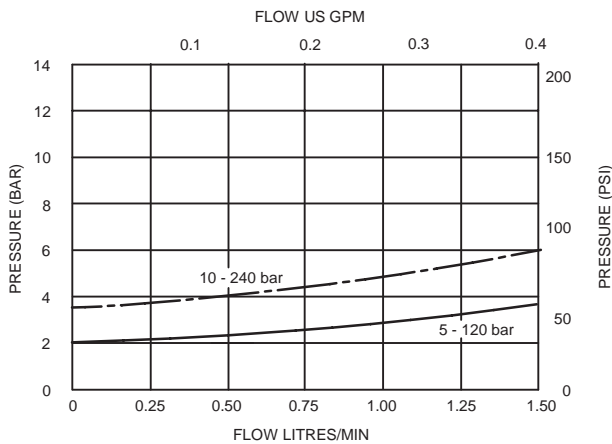
COIL INFORMATION

(See Page 11-1021)

Part Number: C16-*/19

Voltage available: 12, 24 VDC

PRESSURE DROP



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	PDR2
Symbol	
Max. Inlet Pressure	350 bar (5000 psi)
Pressure Ranges up to 75% of Max Current	10 = 5 - 120 bar (72 - 1740 psi) 20 = 10 - 240 bar (145 - 3480 psi)
Max Press Port 2	100 bar (1450 psi)
Max. Flow	1.5 litres/min (0.3 US GPM)
Typ. Hydraulic Hysteresis	<12.5% without PWM
Response times	10 = 2 - 193 ms 20 = 3 - 395 ms
Dead Band	10% approx
Internal Leakage	< 5 ml/min
Temp' Range (oil)	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1119 (Nitrile) SK1119V (Viton)
Mounting Position	For best results mount below reservoir oil level. If this is not feasible mount horizontally.
Cartridge Weight	0.25 kg (0.55 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A879 (See Section 17)
Torque into Cavity	40 Nm (29.5 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Standard Aluminium (up to 210 bar) Add suffix "377" for steel option

*For applications above 210 bar please consult our technical department or use the steel body option.

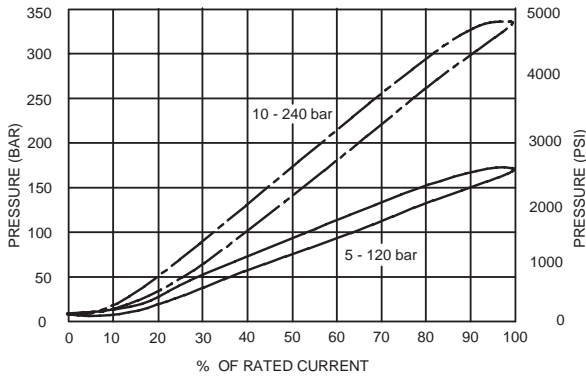
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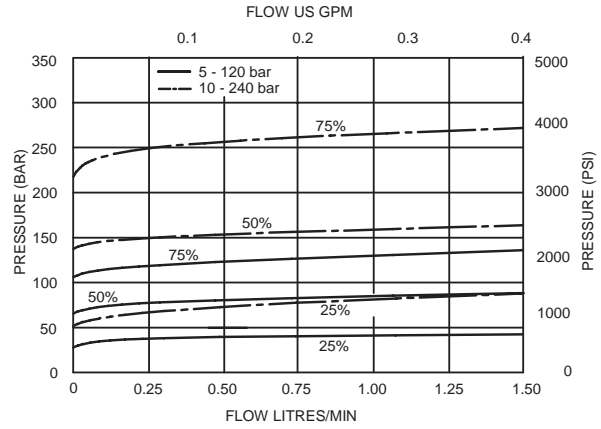
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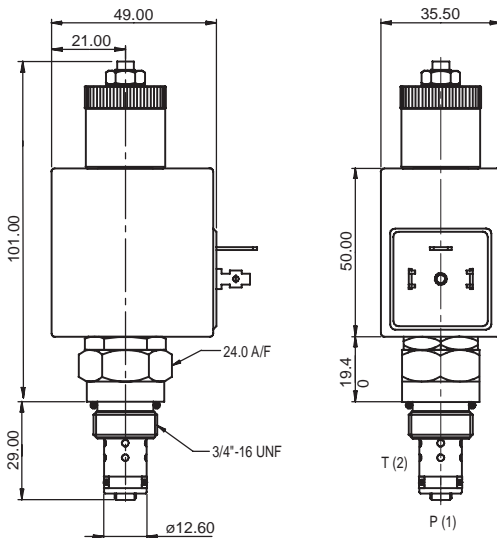


Relief Pressure vs Input Current (24 Vdc)



CARTRIDGE ONLY

BASIC CODE: PDR2



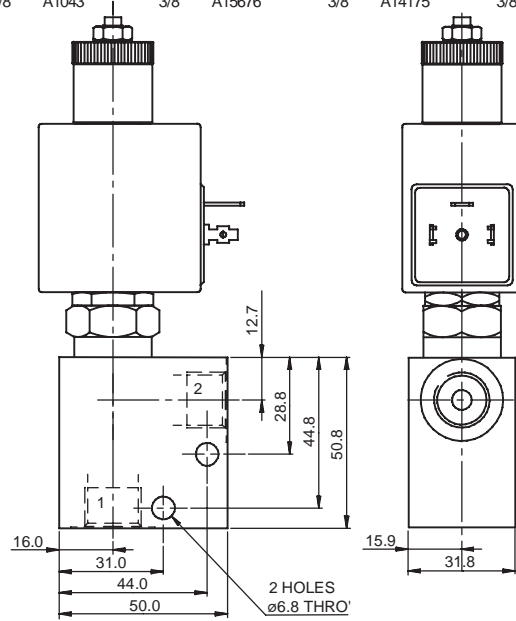
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: PDR2

Body ONLY part numbers

BSP, aluminium		SAE, aluminium		BSP, steel		SAE, steel	
1/4"	A1485	1/4"	A14842	1/4"	A14128	1/4"	A14128
3/8"	A1043	3/8"	A15676	3/8"	A14175	3/8"	A14843



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

PDR21A N 20 6 H 24 3W

Basic Code

PDR21A = Normally Open

Seals

N = Nitrile

V = Viton

Pressure Range

10 = 5 to 120 bar

20 = 10 to 240 bar

Manual Override

6 = Screw

Port Sizes

2W = 1/4" BSP

3W = 3/8" BSP

4T = 1/4" SAE

6T = 3/8" SAE

Voltage

12 = 12 VDC

24 = 24 VDC

Coil Termination

H = DIN43650

F = Flying Leads

DM = Deutsch Moulded

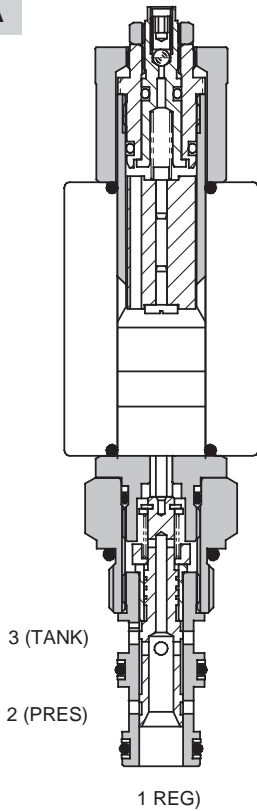
Other terminations available on request

We reserve the right to change specifications without notice



PPD2 2A/H Pressure Reducing Valve
3-Way, 2-Position
 20 litres/min (5.4 US GPM) • 210 bar (3000 PSI)

PPD2 2A



COIL INFORMATION

(See Page 11-431)

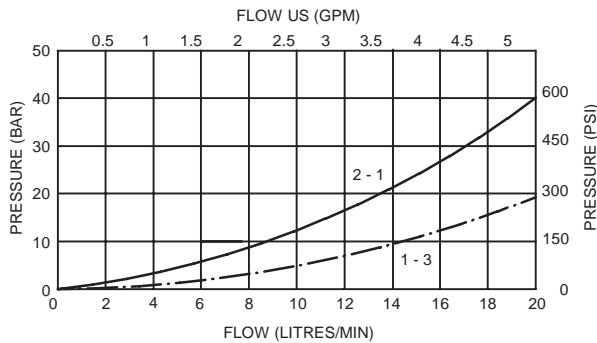
Part Number: C16-*/19 (PPD2 2A)
 C16-*/29 (PPD2 2AH)

Voltage available: 12, 24 VDC

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

PPD2 2A



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	PPD22
Symbol	
Max. Inlet Pressure	210 bar (3000 psi)
Max. Regulated Pres	19 watt coil 24 Bar 29 watt coil 28 Bar
Max Regulated Flow	18.6 litres/min (5 US GPM) 19 W coil 20 litres/min (5.4 US GPM) 29 W coil
Hysteresis preferred PWM	16% Maximum without PWM
Frequency	200 Hz
Dead Band	19% of rated current
Internal Leakage	Up to 50 ml/min 210 bar differential at 32 centistokes
Temp' Range (oil)	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 18/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1119 (Nitrile) SK1119V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.25 kg (0.55 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A3531 (See Section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

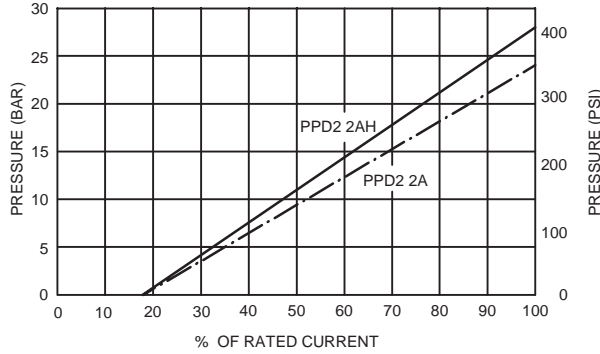
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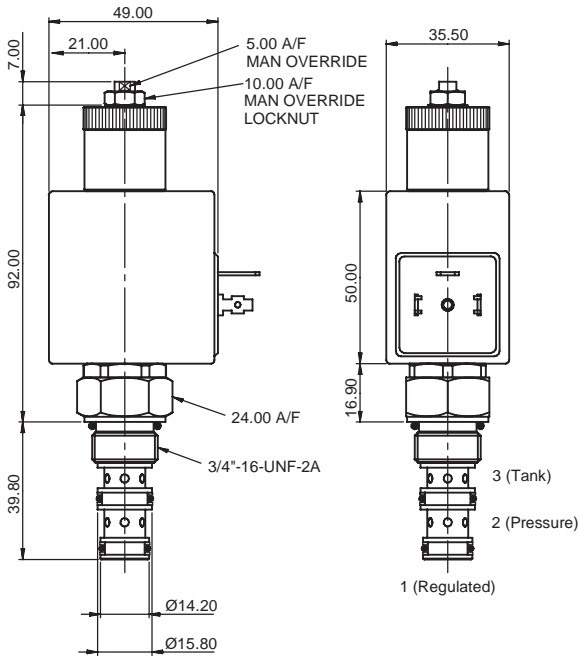
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PERFORMANCE



CARTRIDGE ONLY

BASIC CODE: PPD2 2A/H

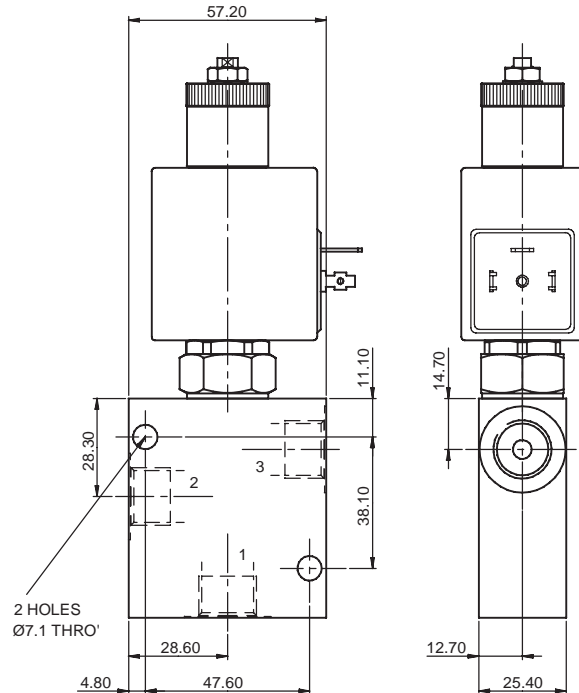


COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: PPD2 2A/H

Body ONLY part numbers
 BSP, aluminium SAE, aluminium
 1/4" B7724 3/8" B6516



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

PPD2 2A N 6 H 24 3W

Basic Code

PPD2 2A = (standard valve)
 PPD2 2AH = (heavy duty valve)

Seals

N = Nitrile
 V = Viton

Manual Override

6 = Screw

Port Sizes

2W = 1/4" BSP
 3W = 3/8" BSP
 6T = 3/8" SAE

Voltage

12 = 12 VDC
 24 = 24 VDC

Coil Termination

H = DIN43650
 F = Flying Leads
 DM = Deutsch Moulded
 Other terminations available on request

We reserve the right to change specifications without notice

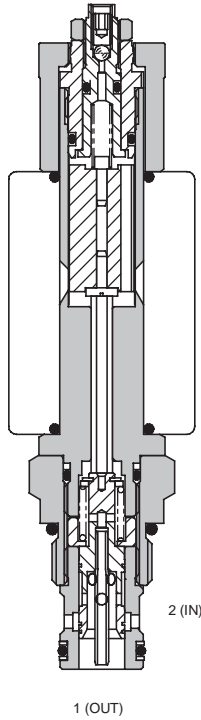


PFR2 4A Flow Control Valve

2 Port Restrictive Pressure Compensated

18 litres/min (4.7 US GPM) • 210 bar (3000 PSI)

PFR2 4A



COIL INFORMATION

(See Page 11-1021)

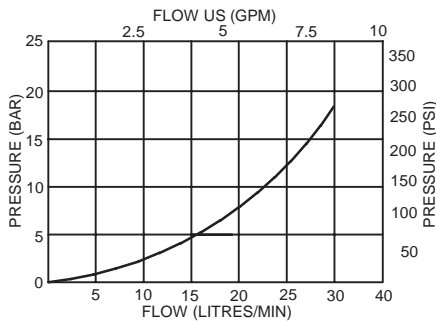
Part Number: C16-*/-19

Voltage available: 12, 24 VDC

PRESSURE DROP v's FLOW

Viscosity = 32 cSt (150 SSU)

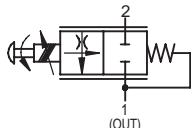
PFR2 4A @ 100%



FEATURES

- High flow capacity with reduced space requirements.
- No dynamic seals.
- Standard valve bodies and common cavities.
- One-piece encapsulated coil with minimal amperage draw.
- Oil immersed armature solenoid.
- Various coil terminals and voltages.
- Coil interchangeability with all Series S5 valves.
- Manual override, seal variations and other options available.
- Sealed coil arrangement to protect stem from corrosion.

SPECIFICATIONS

Basic Model Code	PFR2 4A
Symbol	
Max. Inlet Pressure	210 bar (3000 psi)
*Max Regulated Flow at rated current @ 30 bar	28 litres/min @ 100%, 23 litres/min @ 85%, 18 litres @ 75%
Hysteresis	8% Maximum without PWM 4% Maximum with PWM
Frequency	200 Hz to 400 Hz - 200 recommended
Dead Band	25-35% of rated current
Response Time	300 ms
Internal Leakage	Up to 200 ml/min 210 bar differential at 32 centistokes
Temp' Range (oil)	-20 to +120°C (-4 to +248°F)
Nominal Viscosity Range	15 to 250 centistokes
Recommended Filtration	BS5540/4 16/13 (25 micron or better)
Fluid	Compatible with most general purpose hydraulic fluids
Seal Material	Standard nitrile with PTFE back up rings
Seal Kit Number	SK1138 (Nitrile) SK1138V (Viton)
Mounting Position	Unrestricted
Cartridge Weight	0.2 kg (0.44 lbs)
Coil Weight	0.3 kg (0.6 lbs)
Cavity Number	A6701 (See Section 17)
Torque into Cavity	30 Nm (22 lbs ft)
Electrical Data	See coil data sheet
Line Body Material	Aluminium Alloy

* Based on a saturated inlet with an increasing signal.

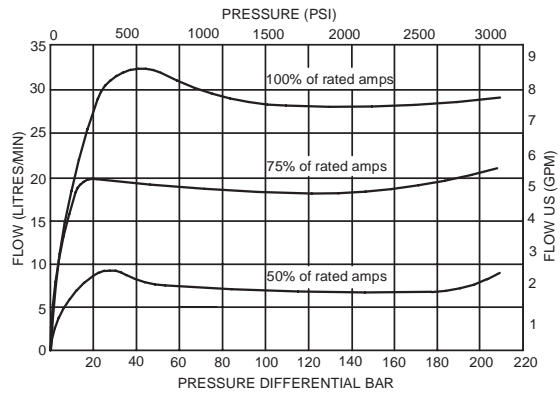
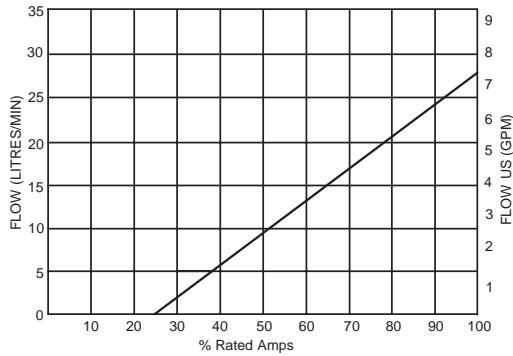
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BASIC CODE: PFR2 4A

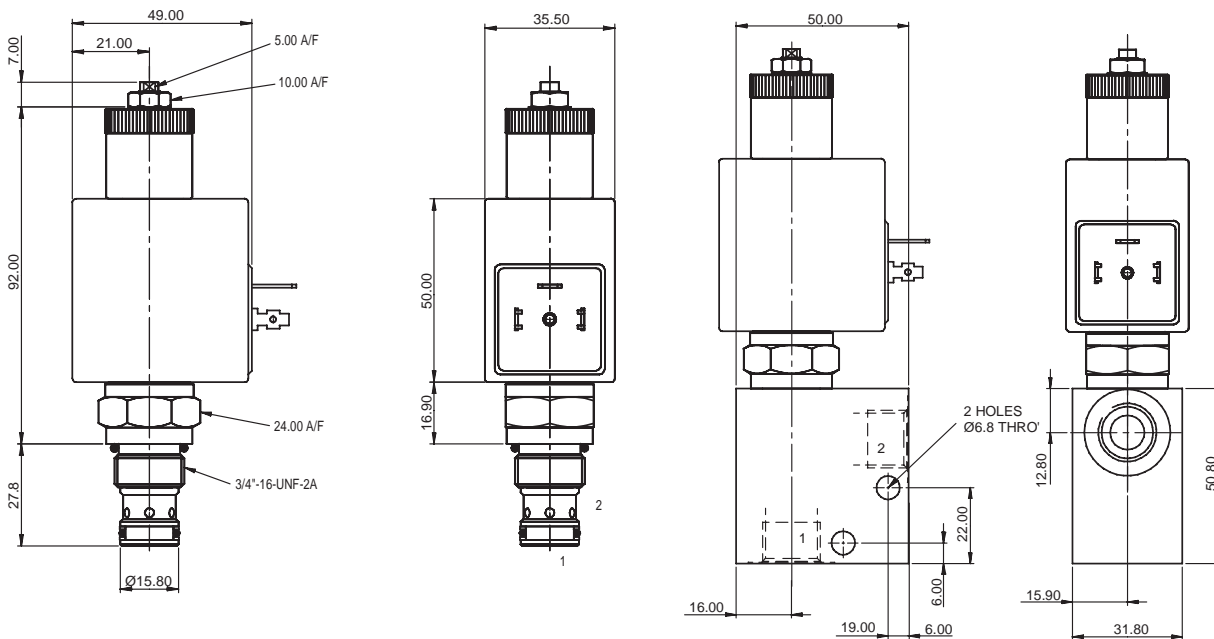
COMPLETE VALVE

1/4" 3/8" PORTS

BASIC CODE: PFR2 4A

Body ONLY part numbers

BSP, aluminium SAE, aluminium
1/4" A12592
3/8" A7450 3/8" A19355



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

PFR2 4A N 6 H 24 3W

Basic Code

PFR2 4A

Seals

N = Nitrile

V = Viton

Manual Override

6 = Screw

Port Sizes

2W = 1/4" BSP

3W = 3/8" BSP

6T = 3/8" SAE

Voltage

12 = 12 VDC

24 = 24 VDC

Coil Termination

H = DIN43650

F = Flying Leads

DM = Deutsch Moulded

Other terminations available on request

We reserve the right to change specifications without notice