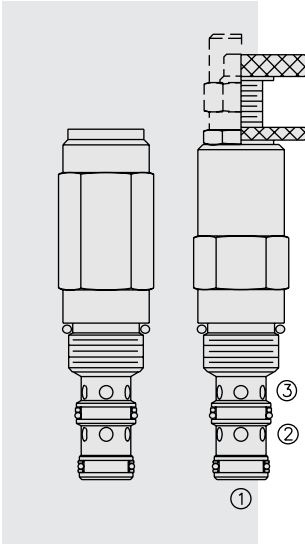


PR50-38 Pressure Reducing/Relieving Spool Valve



DESCRIPTION

A screw-in, cartridge-style, direct-acting, spool-type, hydraulic pressure reducing/relieving valve, with internal spring-chamber drain and spool damping chamber. It is designed to act as a pressure regulating valve for secondary circuits. Port 2 may be protected with a 60 mesh 250 micron rated screen.

OPERATION

In its steady state, the PR50-38 allows flow to pass bidirectionally from port 2 to port 1, with the spring chamber constantly drained at port 3. Upon attainment of a predetermined pressure at 1, the spool shifts to block flow at 2, thereby regulating pressure at 1. In this mode, the valve will also relieve from port 1 to port 3, at a variable value over the set reducing pressure.

FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Optional spring ranges to 227.5 bar (3300 psi).
- Optional 60 mesh, 250 micron screen at port 2.
- Corrosion protection of 960 hours salt spray per ASTM B117.
- Industry common cavity.

RATINGS

Pressure Rating: 345 bar (5000 psi) at ports 1 and 2; 68.9 bar (1000 psi) at port 3; 241 bar (3500 psi) max for F and H adjustment options.
 Optional screen at port 2 adds 1.73 bar (25 psi) @ 22.7 lpm (6 gpm) and 2.41 bar (35 psi) @ 30.31 lpm (8 gpm).

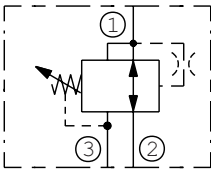
Proof Pressure: 482.6 bar (7000 psi) at ports 1 and 2; 68.9 bar (1000 psi) at port 3

Burst Pressure: 1034 bar (15000 psi)

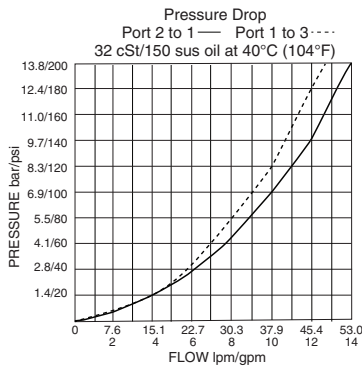
Standard Spring Ranges:

Spring code	-5	-15	-21	-33
Adjustment range	10 to 38 bar 150 to 550 psi	7 to 103 bar 100 to 1500 psi	28 to 145 bar 500 to 2100 psi	55 to 228 bar 800 to 3300 psi
Adjustment per turn (F/H adjuster)	7.5 bar (109 psi)	15.5 bar (225 psi)	27.5 bar (399 psi)	43.5 bar (631 psi)
Adjustment per turn (A/B/C/L adjuster)	6 bar (87 psi)	12.4 bar (180 psi)	22 bar (319 psi)	34.8 bar (505 psi)

ISO SYMBOL



PERFORMANCE (Cartridge Only)



Note: It may be possible to adjust the valve either lower or higher than the nominal ratings shown. If the valve is adjusted beyond the recommended maximum pressure range for F and H style adjuster options, the valve may not open to relieve pressure.

Maximum Rated Flow: See Performance Chart

Maximum Internal Leakage to Port 3: 82 ml per minute (5.0 cu. in. per minute)

Temperature: -40 to 100°C (-40 to 212°F) with standard Buna N seals;
 -26 to 204°C (-15 to 400°F) with fluorocarbon seals;
 -54 to 107°C (-65 to 225°F) with polyurethane and urethane seals

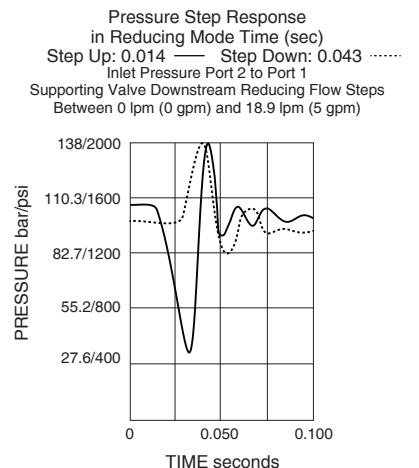
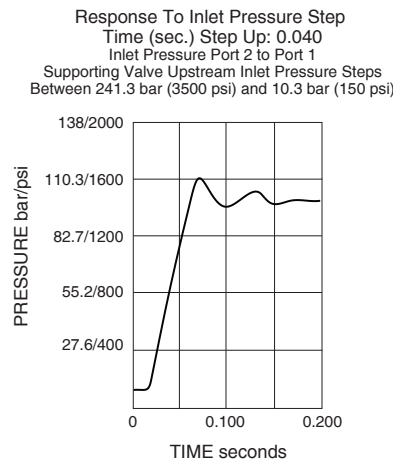
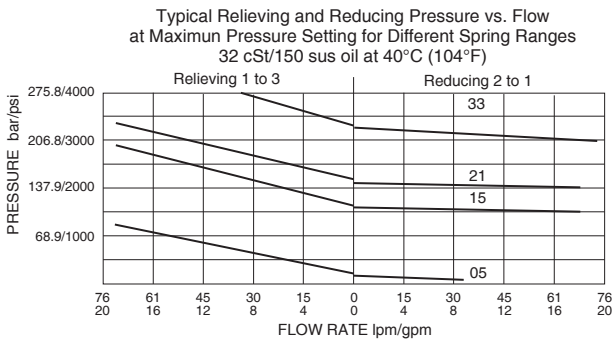
Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

Installation: No restrictions; See page 9.020.1

Cavity: VC10-3; See page 9.110.1 **Cavity Tool:** CT10-3XX; See page 8.600.1

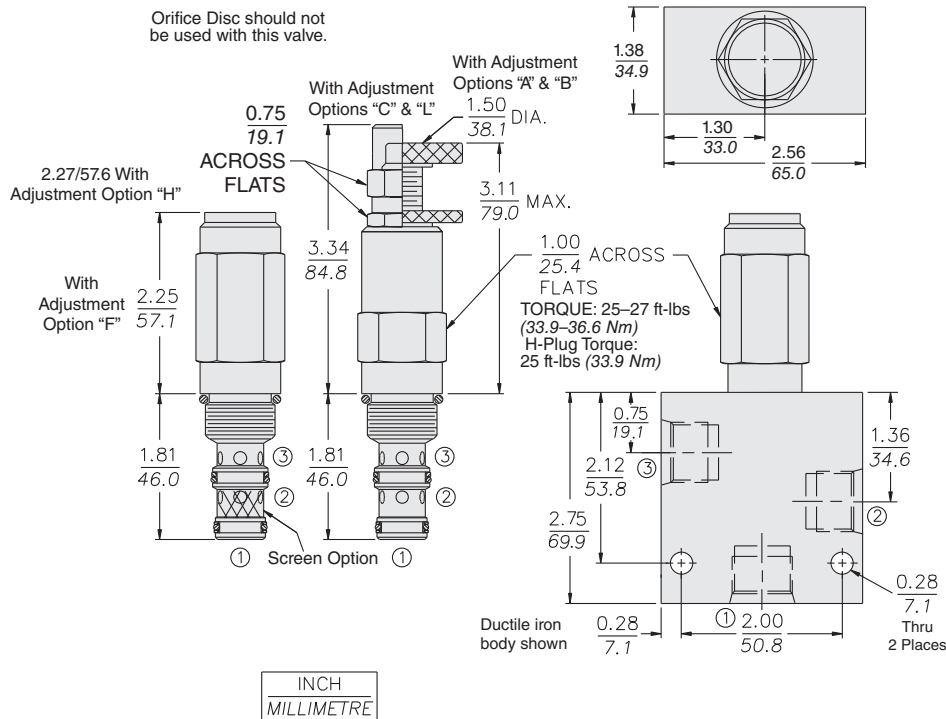
Seal Kit: SK10-3X-BM; See page 8.650.1



Damped, Direct-Acting

PR50-38

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.27 to 0.31 kg (0.59 to 0.69 lb) depending on adjustment type. Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard. Anodized aluminum knobs and caps.

Standard Ported Body: Ductile iron (code D) bodies are required for operation over 207 bar (3000 psi). Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi) also available, dimensions may differ; consult factory. See page 8.010.1

TO ORDER

PR50-38 - - - /

<p>Adjustment Option</p> <p>1/4 in. Hex Allen Head A</p> <p>1-1/2 in. Dia. Alum. Knob B</p> <p>Option A w/Cover Cap C</p> <p>Factory Preset Non-Adj. F*</p> <p>Factory Preset Hidden Adj. (See page 6.003.1) H*</p> <p>Option C w/Lockwire Holes L</p>	<p>Screen</p> <p>No Screen (blank)</p> <p>250 Micron Screen S</p>	<p>Porting</p> <p>Cartridge Only 0</p> <p>SAE 6 6T</p> <p>SAE 6 6TD</p> <p>SAE 8 8T</p> <p>SAE 8 8TD</p> <p>1/4 in. BSP* 2B</p> <p>1/4 in. BSP* 2BD</p> <p>3/8 in. BSP* 3B</p> <p>3/8 in. BSP* 3BD</p>	<p>Seals</p> <p>Buna N (Std.) N</p> <p>Fluorocarbon V</p> <p>Polyurethane P</p> <p>Urethane U</p>	<p>Setting in bar</p> <p>(Blank)[†] for Adjustable, or Specify, for example:</p> <p>M25 25 bar</p> <p>M100 100 bar</p> <p>Setting in psi</p> <p>(Blank)[†] for Adjustable, or Specify, for example:</p> <p>9.0 900 psi</p> <p>21.5 2150 psi</p>	<p>Spring Range</p> <p>05 10.3 to 37.9 bar (150 to 550 psi)</p> <p>15 6.9 to 103 bar (100 to 1500 psi)</p> <p>21 27.6 to 144.8 bar (500 to 2100 psi)</p> <p>33* 55.2 to 227.5 bar (800 to 3300 psi)</p>
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[†] Adjustable valves will be pre-set to approx. 50% of spring max. potential.

Note: Polyurethane or urethane seals are required for operation over 241 bar (3500 psi).

*BSP Body; U.K. Mfr Only

* 241 bar (3500 psi) max for F and H Adjustment options.