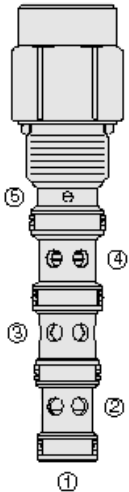




Overview



Description

The PD12-S50X is a screw-in, cartridge style, pilot operated, spool type, hydraulic directional valve

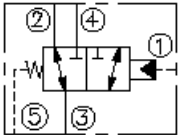
Operation

In the neutral position flow is allowed between ports 2 and 3, while blocking flow at port 4. On remote pilot signal at port 1 the valve shifts to allow flow between ports 3 and 4, while blocking flow at port 2. The spring chamber is vented to the tank through port 5. The vented spring chamber allows the valve to be fully pressurized at ports 1, 2, 3 and 4 without affecting required pilot pressure. Pressure at port 5 will affect required pilot pressure

Features

- Hardened spool and cage for long life.
- Optional sealed pilot and spring chamber.

Symbol



Ratings

Pressure Ratings

Pressure rating 241 bar (3500 psi)

Flow Ratings

Flow rating - **Note:** See performance graph
 Maximum internal leakage 328 ml/min (20 in³/min) - **Note:** At 207 bar (3000 bar)
 0 lpm (0 gpm) - **Note:** From port 1 to 2 with sealed spool

Temperature Ratings

Operating fluid temperature -40 to 100 °C (-40 to 212 °F) - **Note:** With buna N seals
 -26 to 204 °C (-15 to 400 °F) - **Note:** With fluorocarbon seals
 -54 to 107 °C (-65 to 225 °F) - **Note:** With polyurethane seals
 Storage temperature -40 to 70 °C (-40 to 160 °F)
 Ambient temperature -40 to 70 °C (-40 to 160 °F)

Other Ratings

Corrosion protection 960 hr salt spray per astmb117 (gpd12-41x)

Operating Parameters

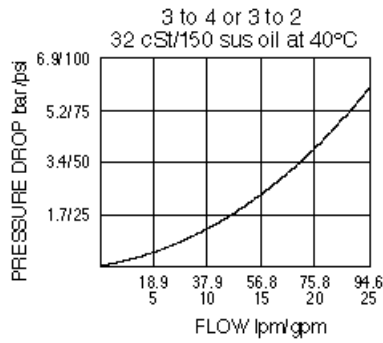
Fluids Mineral based or synthetic hydraulic fluid with lubricating properties
 Fluid viscosity range 7.4 to 420 cSt
 Maximum operating contamination level 20/18/14 per ISO 4406

Properties

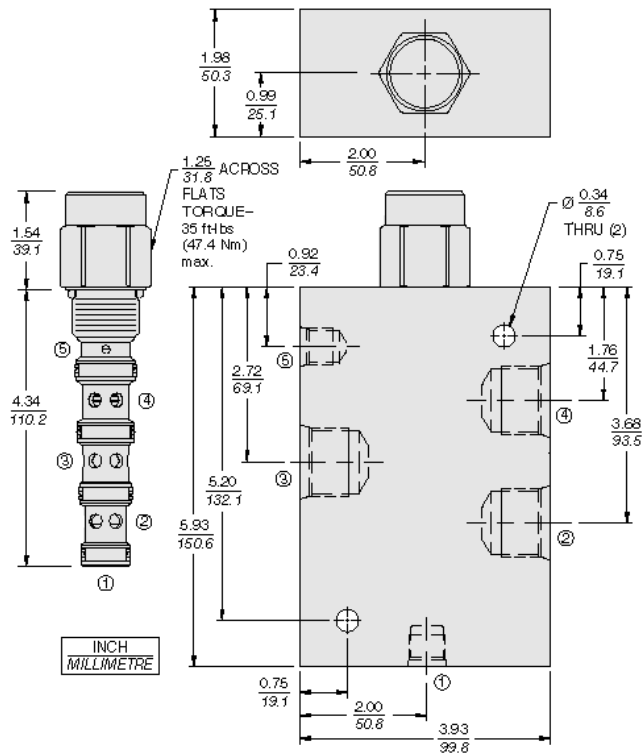
Unit weight 0.44 kg (0.97 lb)
 Internal wetted surface area 335.5 cm² (52 in²)



Performance



Dimensions



Materials

Materials

Cartridge: Weight: 0.375 kg (0.83 lb); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight: 1.5 kg (3.3 lb); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.

Installation Specifications

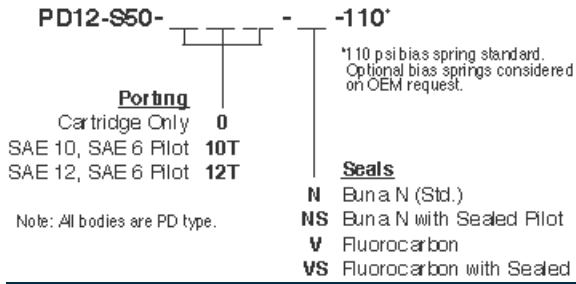
Cavity	VC12-5
Cartridge installation torque	44.7 to 50.2 N-m (33 to 37 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK12-S5X-MMMM	- Note: (x = seal option)
Housings		



Order Code



POSITION	CODE	DESCRIPTION
		PD12-S50B-H-J-R
B		Spool Option
B	BLANK	Standard
B	N	Normally Open in Transition
H		Line Body
H	0	No Body
H	10T	Aluminum SAE 10
J		Seal
J	N	Buna-N
J	NS	Buna-N with a Sealed Spool
J	V	Fluorocarbon
J	VS	Fluorocarbon with a Sealed Spool
J	P	Polyurethane
J	PS	Polyurethane with a Sealed Spool
J	U	PPDI Urethane
J	US	PPDI Urethane with a Sealed Spool
R		Spring
R	110	110 psi Bias Spring
R	215	215 psi Bias Spring