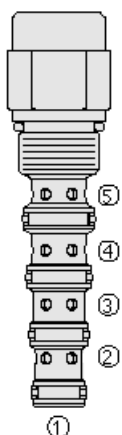




Overview



Description

The PD10-50 is a screw-in, cartridge style, pilot operated, spool-type hydraulic directional valve.

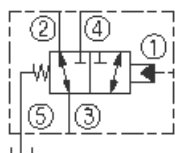
Operation

In 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.

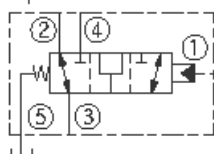
Features

- Hardened spool and cage for long life.
- Industry common cavity.

Symbol



Open Transition:



Ratings

Pressure Ratings

Pressure rating 350 bar (5075 psi)

Flow Ratings

Flow rating 37.9 lpm (10 gpm)

Maximum internal leakage 82 ml/min (5 in³) - **Note:** At 207 bar (3000 psi)
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 viton 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)	

Operating Parameters

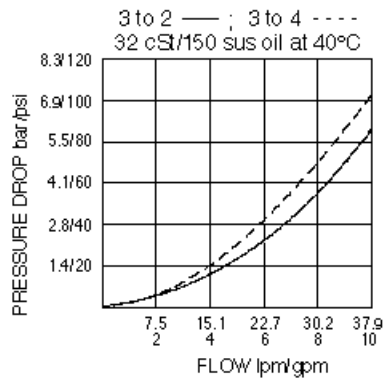
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	20/18/14 per ISO 4406

Properties

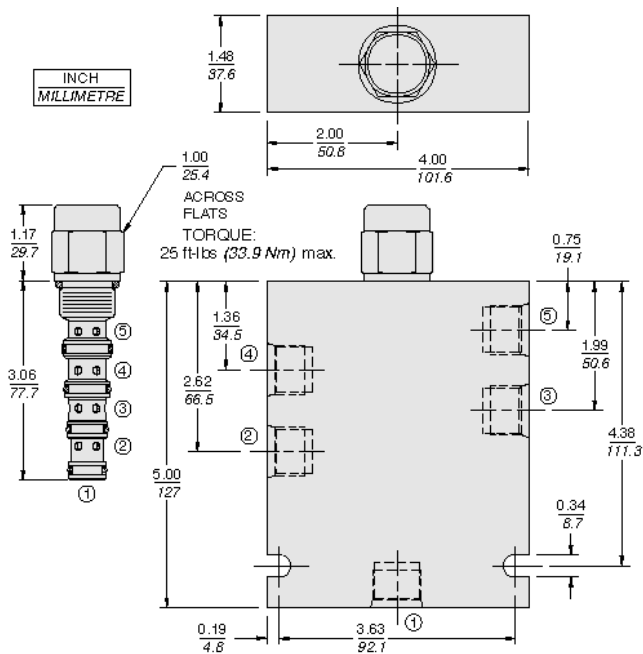
Unit weight	0.20 kg (0.45 lb)
Internal wetted surface area	3355 mm ² (5.2 in ²)



Performance



Dimensions



Installation Specifications

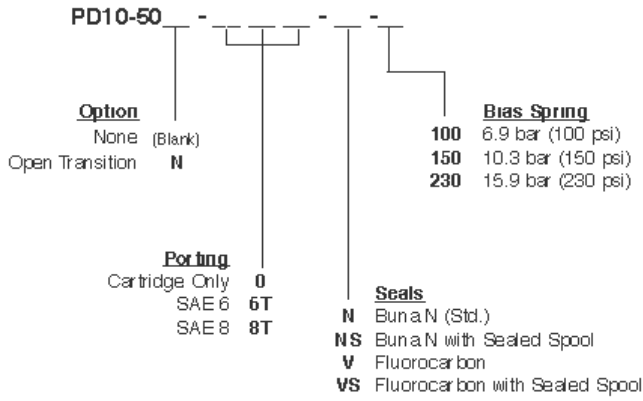
Cavity	VC10-5
Cartridge installation torque	32.5 to 35.3 N-m (24 to 26 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK10-5X-MMMM	- Note: (x= seal option)
Housings		



Order Code



POSITION	CODE	DESCRIPTION
		PD10-50B-H-J-R
B		Spool Option
B	BLANK	Standard
B	N	Normally Open in Transition
H		Line Body
H	0	No Body
H	6T	Aluminum SAE 6
H	8T	Aluminum SAE 8
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	100	100 psi Bias Spring
R	150	150 psi Bias Spring
R	230	230 psi Bias Spring