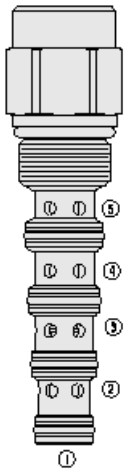




Overview



Description

The PD10-51 is a screw-in, cartridge style, pilot operated, spool-type hydraulic directional valve.

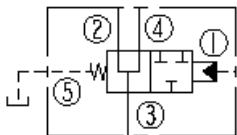
Operation

In the neutral position flow is allowed between ports 2, 3 and 4. On remote pilot signal at port 1 the valve's spool shifts to block all ports. 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.
- 150 and 250 psi bias springs available.

Symbol



Ratings

Pressure Ratings

Pressure rating 241 bar (3500 psi)

Flow Ratings

Maximum internal leakage 164 ml/min (10 in³/min) - **Note:** At zero leakage from port 1 to 2 and from port 4 to 5 with sealed spool 241 bar (3500 psi)

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 90 °C (-40 to 196 °F)	

Operating Parameters

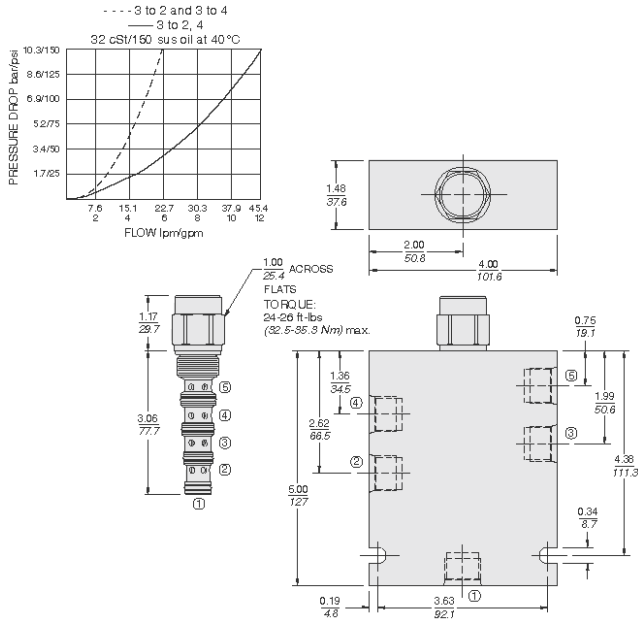
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	20/18/14 per ISO 4406

Properties

Unit weight	0.21 kg (0.46 lb)
Internal wetted surface area	210 cm ² (32.6 in ²)



Performance



Installation Specifications

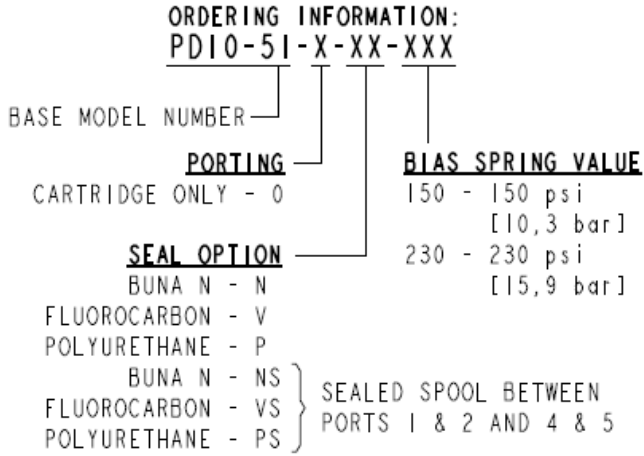
Cavity	VC10-5
Cartridge installation torque	32.5 to 35.3 N-m (24 to 26 ft-lb)
Orientation restriction	None
Note	Ns, VS and PS seal option require 230 psi [15,9 bar] bias spring

Accessories

Seal kit	SK10-5X-MMMM	- Note: X = seal option
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Order Code



NOTE: NS, VS AND PS SEAL OPTION REQUIRE 230 psi [15,9 bar] BIAS SPRING.

Model Options

PD10-51-H-J-R

H Line Body

CODE	DESCRIPTION
0	No Body
6T	Aluminum SAE 6
8T	Aluminum SAE 8

J Seal

CODE	DESCRIPTION
N	Buna-N
NS	Buna-N with a Sealed Spool
V	Fluorocarbon
VS	Fluorocarbon with a Sealed Spool
P	Polyurethane
PS	Polyurethane with a Sealed Spool
U	PPDI Urethane
US	PPDI Urethane with a Sealed Spool

R Spring

CODE	DESCRIPTION
150	150 psi Bias Spring
230	230 psi Bias Spring