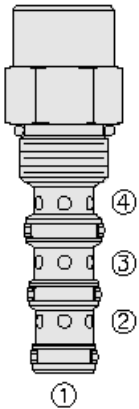




Overview



Description

The PD10-45 is a screw-in, cartridge style, pilot-operated, spool type, hydraulic directional valve.

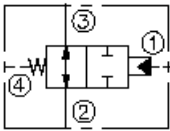
Operation

In neutral position the valve allows flow from port 2 to 3 bidirectionally. On remote pilot signal at port 1, the valve's spool shifts to block flow from port 2 to 3. The spring chamber is vented to port 4 which is internally o-ring sealed from the cartridge flow paths. Pressure on port 4 will directly (1:1) affect the pilot pressure required and must be added to the bias spring value.

Features

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

Symbol



Ratings

Pressure Ratings

Pressure rating 241 bar (3500 psi)

Flow Ratings

Flow rating - **Note:** See performance graph
 Maximum internal leakage 82 ml/min (5 in³/min) - **Note:** From port 1 to 2 or port 2 to 3 (when shifted) at 207 bar (3500 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

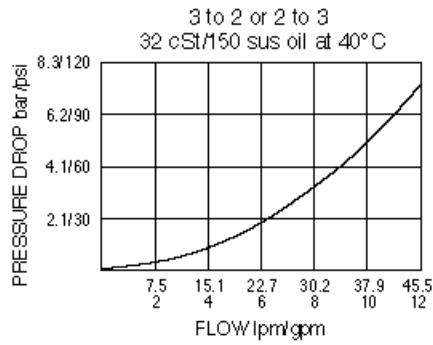
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	20/18/14 per ISO 4406

Properties

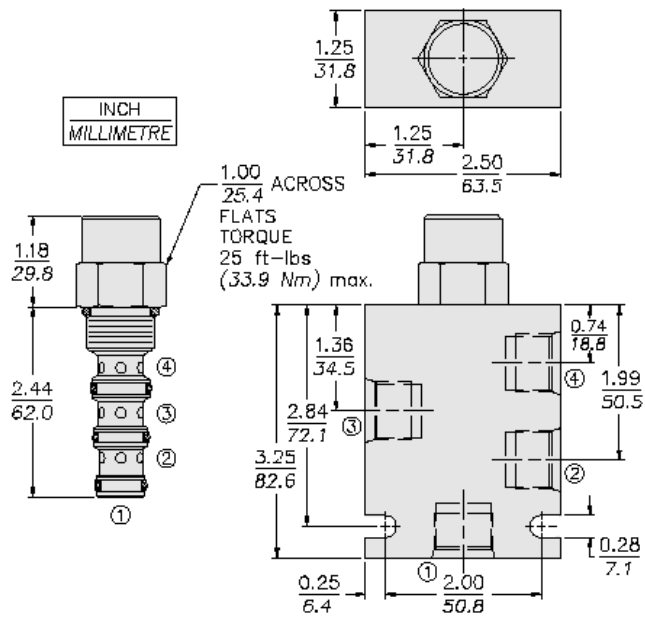
Unit weight	0.20 kg (0.43 lb)
Internal wetted surface area	191 cm ² (29.6 in ²)



Performance



Dimensions



Installation Specifications

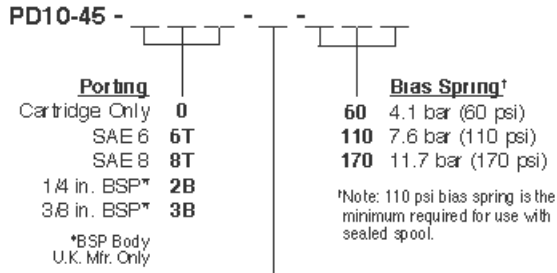
Cavity	VC10-4
Cartridge installation torque	32.5 to 35.3 N-m (24 to 26 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK10-4N-MMM	- Note: Buna N
	SK10-4V-MMM	- Note: Viton
	SK10-4HV-MMM	- Note: Viton
	SK10-4P-MMM	- Note: Polyurethane
Housings		



Order Code



Seals

Buna-N (Std.)	N
Buna-N with Sealed Spool	NS
Fluorocarbon	V
Fluorocarbon with Sealed Spool	VS

POSITION	CODE	DESCRIPTION
		PD10-45-H-J-R
H		Line Body
H	0	No Body
H	6T	Aluminum SAE 6
H	8T	Aluminum SAE 8
H	6TD	Ductile Iron SAE 6
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	60	60 psi Bias Spring
R	110	110 psi Bias Spring
R	130	130 psi Bias Spring
R	170	170 psi Bias Spring