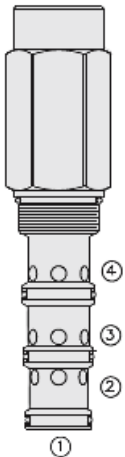




Overview



Description

The PD42-M45 is a screw-in, cartridge style, pilot operated, spool-type hydraulic directional valve

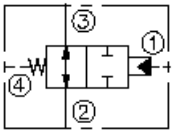
Operation

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

- Rated for 345 bar (5000 psi) operating pressure (polyurethane seals required).
- Hardened spool and cage for long life.
- Optional sealed pilot
- Industry-common ISO cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating	345 bar (5000 psi)
Proof pressure	690 bar (10000 psi)
Burst pressure	1034 bar (15000 psi)

Flow Ratings

Flow rating	265 lpm (70 gpm)	
Maximum internal leakage	245 ml/min (15 in ³ /min) bar (5000 psi)	- Note: At zero leakage from port 1 to 2 with sealed spool 345

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

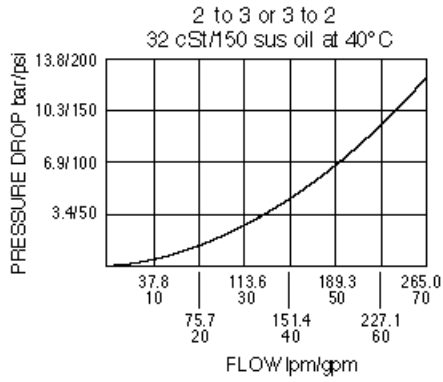
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	20/18/14 per ISO 4406

Properties

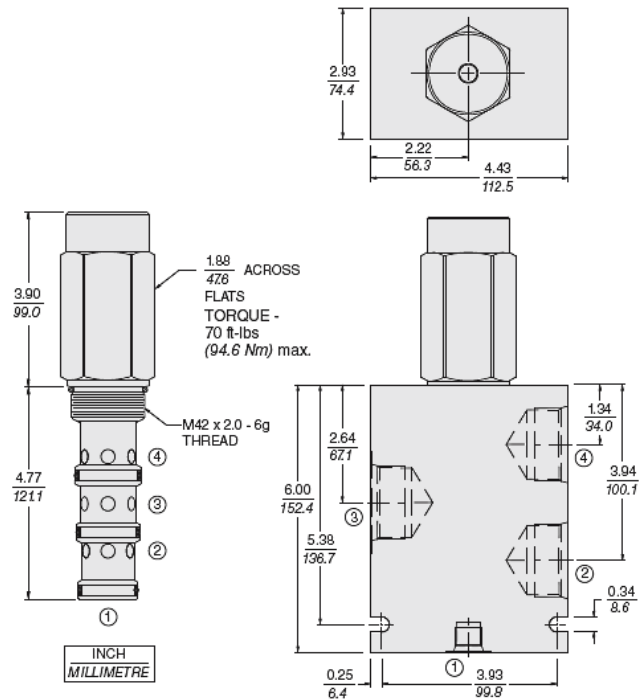
Unit weight	1.8 kg (4.0 lb)
Internal wetted surface area	64516 mm ² (100.0 in ²)



Performance



Dimensions



Materials

Materials

Cartridge: Weight: 0.52 kg. (1.15 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight: 2.8 kg. (6.2 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.

Installation Specifications

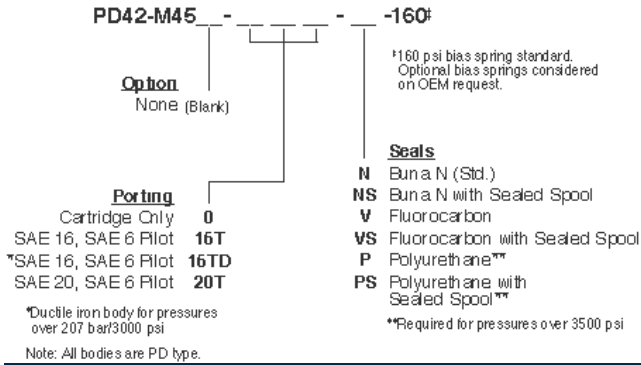
Cavity	VC42-M4
Cartridge installation torque	89 to 102 N-m (65 to 75 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK42-4X-MMM	- Note: (x = seal option)
Housings		



Order Code



POSITION	CODE	DESCRIPTION
		PD42-M45-H-J-R
H		Line Body
H	0	No Body
H	16T	Aluminum SAE 16
H	20T	Aluminum SAE 20
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	160	160 psi Bias Spring