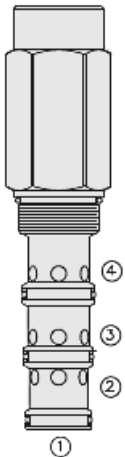




Overview



Description

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

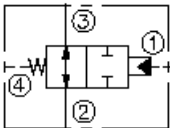
Operation

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) spool 345 bar (5000 psi)

- Note: At zero leakage from port 1 to 2 with sealed

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

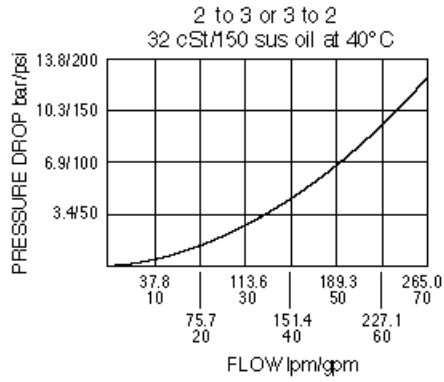
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	20/18/14 per ISO 4406

Properties

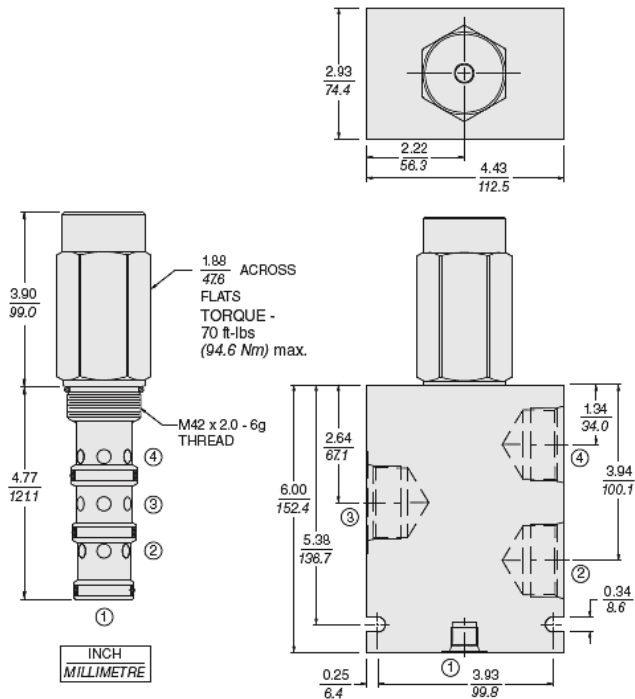
Unit weight	1.8 kg (4.0 lb)
Internal wetted surface area	64516 mm ² (100.0 in ²)



Performance



Dimensions



Installation Specifications

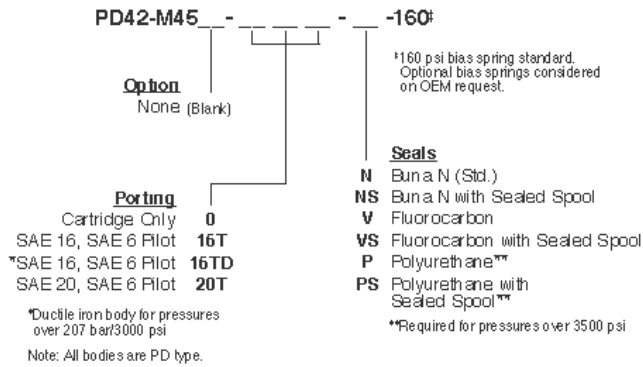
Cavity	VC42-M4
Cartridge installation torque	89 to 102 N-m (65 to 75 ft-lb)
Orientation restriction	None

Accessories

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



Model Options

PD42-M45-H-J-R

H Line Body

CODE	DESCRIPTION
0	No Body
16T	Aluminum SAE 16
20T	Aluminum SAE 20

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
160	160 psi Bias Spring