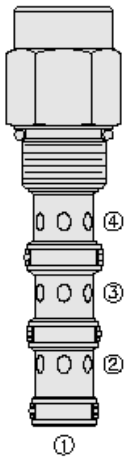




Overview



Description

The PD12-45 is a screw-in, cartridge style, pilot-operated, spool type, hydraulic directional valve.

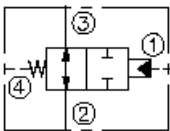
Operation

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.
- Cost-effective cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating 241 bar (3500 psi)

Flow Ratings

Flow rating - **Note:** See performance graph
 Maximum internal leakage 245 ml/min (15 in³/min) - **Note:** At 207 bar (3000 bar)
 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)

Operating Parameters

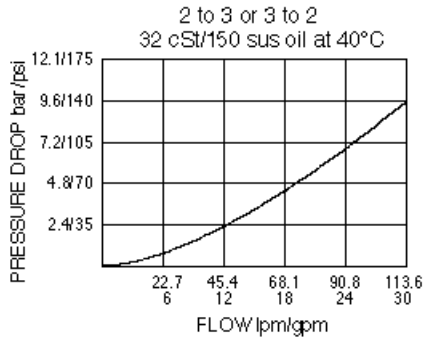
Fluids Mineral based or synthetic hydraulic fluid with lubricating properties
 Fluid viscosity range 7.4 to 420 cSt
 Maximum operating contamination level 20/18/14 per ISO 4406

Properties

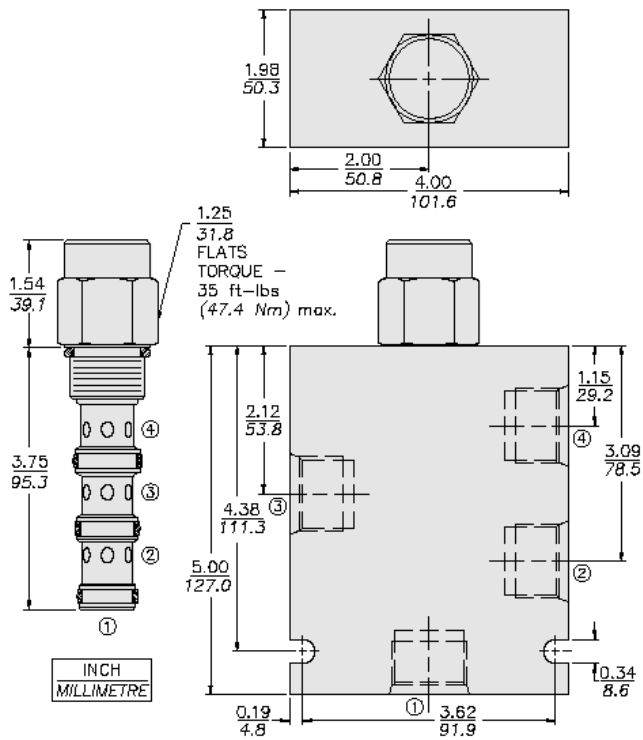
Unit weight 0.42 kg (0.92 lb)
 Internal wetted surface area 343 cm² (53.18 in²)



Performance



Dimensions



Installation Specifications

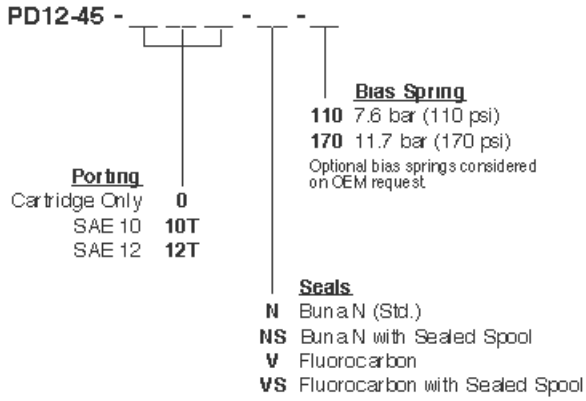
Cavity	VC12-4
Cartridge installation torque	44.7 to 50.2 N-m (33 to 37 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK12-4X-MMM	- Note: X = seal option
----------	-------------	--------------------------------



Order Code



Model Options

PD12-45-H-J-R

H Line Body

CODE	DESCRIPTION
0	No Body
10T	Aluminum SAE 10
12T	Aluminum SAE 12
12TD	Ductile Iron SAE 12

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
110	110 psi Bias Spring
170	170 psi Bias Spring