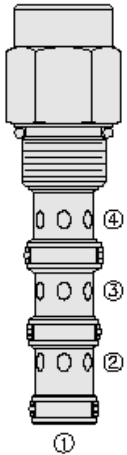




## Overview



### Description

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

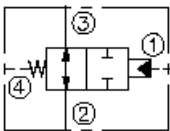
### Operation

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 in<sup>3</sup>/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

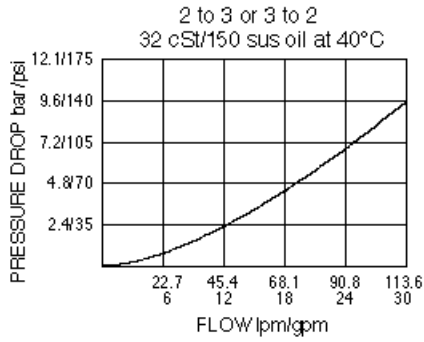
Fluids Mineral based or synthetic hydraulic fluid with lubricating properties  
 Fluid viscosity range 7.4 to 420 cSt  
 Maximum operating contamination level 20/18/14 per ISO 4406

## Properties

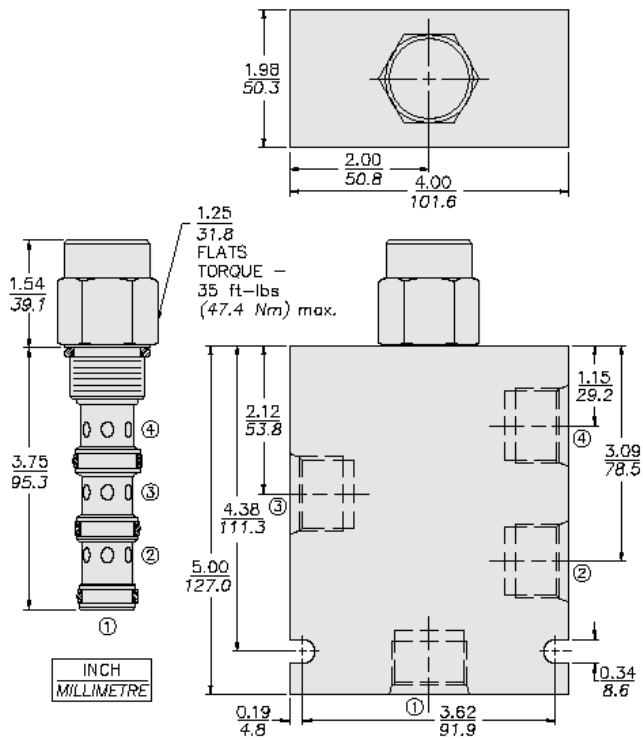
Unit weight 0.42 kg (0.92 lb)  
 Internal wetted surface area 343 cm<sup>2</sup> (53.18 in<sup>2</sup>)



## Performance



## Dimensions



## Installation Specifications

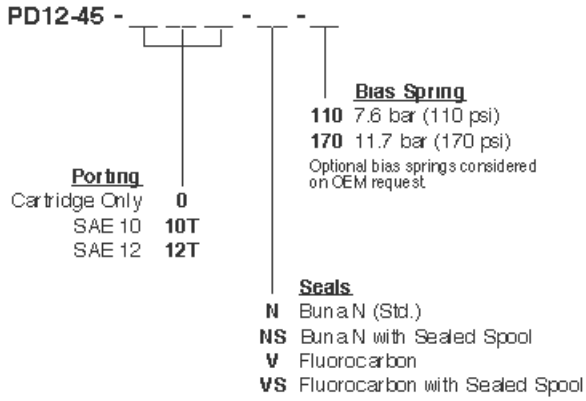
Cavity	VC12-4
Cartridge installation torque	44.7 to 50.2 N-m (33 to 37 ft-lb)
Orientation restriction	None

## Accessories

Seal kit	SK12-4X-MMM	- <b>Note:</b> X = seal option
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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