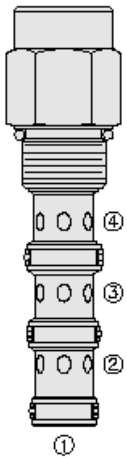




## Overview



### Description

The PD12-41X is a screw-in, cartridge style, pilot operated, spool-type hydraulic directional valve

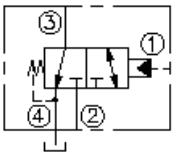
### Operation

In neutral position the valve allows flow from port 3 to 4 bidirectionally, while port 2 is blocked. On remote pilot signal at port 1 the valve shifts to open from 3 to 2, while blocking flow to port 4. Since port 4 is common to the spring chamber, pressure on port 4 will directly (1:1) affect the pilot pressure required and must be added to the bias spring value

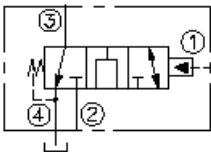
### Features

- Hardened spool and cage for long life.
- Cost-effective cavity.

## Symbol



Open Transition:



## 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)  
 Ambient temperature -40 to 70 °C (-40 to 160 °F)

### Other Ratings

Corrosion protection 960 hr salt spray per astmb117 (gpd12-41x)

## Operating Parameters

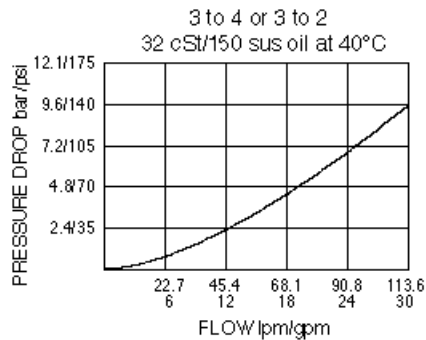
Fluids Mineral based or synthetic hydraulic fluid with lubricating properties  
 Fluid viscosity range 7.4 to 420 cSt  
 Maximum operating contamination level 20/18/14 per ISO 4406



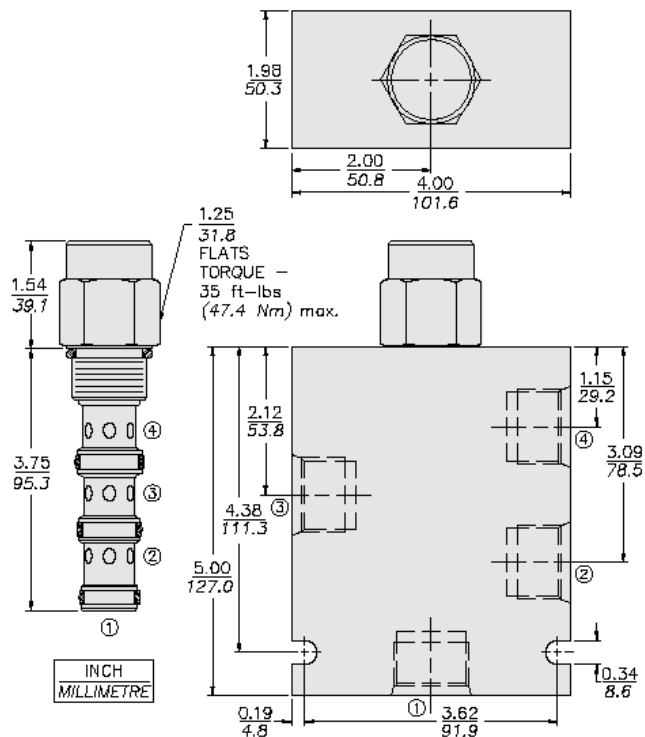
## Properties

Unit weight	0.41 kg (0.91 lb)
Internal wetted surface area	310 cm <sup>2</sup> (48.0 in <sup>2</sup> )

## Performance



## Dimensions



## Materials

### Materials

**Cartridge:** Weight: 0.28 kg (0.61 lb); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and polyester elastomer back-ups standard.

**Standard Ported Body:** Weight: 1.5 kg (3.3 lb); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.

## Installation Specifications

Cavity	VC12-4
Cartridge installation torque	44.7 to 50.2 N-m (33 to 37 ft-lb)
Maximum allowable torque	102 N-m (75 ft-lb)
Orientation restriction	None. (reference all sheets) all dimensions are for reference only. D:3.3 m:3.3 1-1/16-12 un-2a thread 1.25 31,7 [ ] across flats aluminum body shown inch [mm]



Accessories

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

Order Code

POSITION	CODE	DESCRIPTION
		PD12-41B-H-J-R
B		Spool Option
B	BLANK	Standard
B	N	Normally Open in Transition
H		Line Body
H	0	No Body
H	10T	Aluminum SAE 10
H	12T	Aluminum SAE 12
H	12TD	Ductile Iron SAE 12
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	170	170 psi Bias Spring

