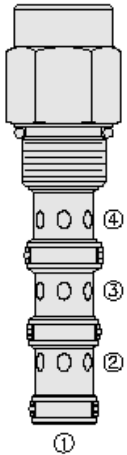




## Overview



### Description

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

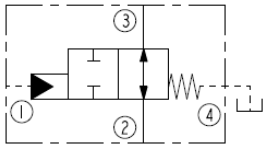
### Operation

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	345 bar (5000 psi)	- <b>Note:</b> Ports 2 and 3
	207 bar (3000 psi)	- <b>Note:</b> Port 1
	34 bar (500 psi)	- <b>Note:</b> Port 4

### Flow Ratings

Flow rating	- <b>Note:</b> See performance graph	
Maximum internal leakage	245 ml/min (15 in <sup>3</sup> /min)	- <b>Note:</b> At 207 bar (3000 bar)
	Zero leakage from port 1 to 2 with sealed spool	

### Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- <b>Note:</b> With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> With viton seals
	-54 to 107 °C (-65 to 225 °F)	- <b>Note:</b> With polyurethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	

## Operating Parameters

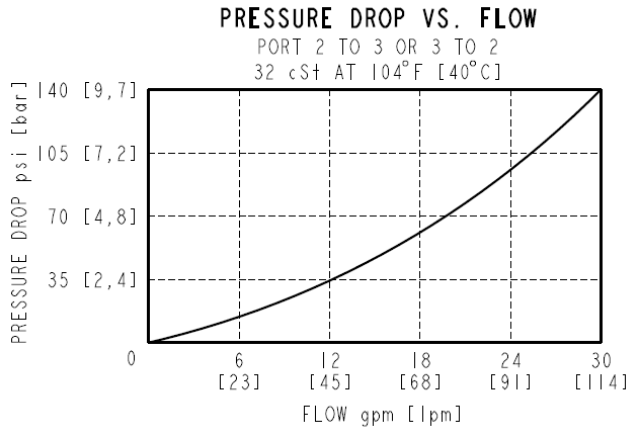
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	20/18/14 per ISO 4406

## Properties

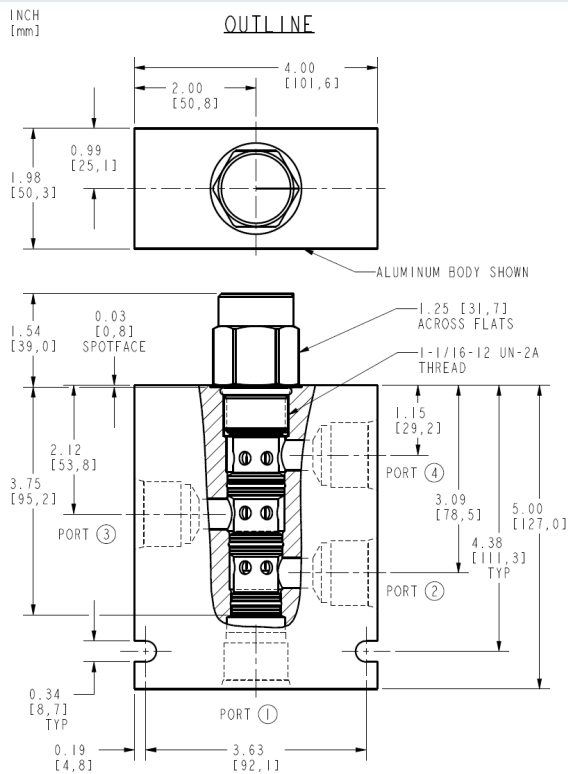
Unit weight	0.42 kg (0.92 lb)
Internal wetted surface area	343 cm <sup>2</sup> (53.18 in <sup>2</sup> )



## Performance



## Dimensions



ALL DIMENSIONS ARE FOR REFERENCE ONLY.

## Installation Specifications

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

## Accessories

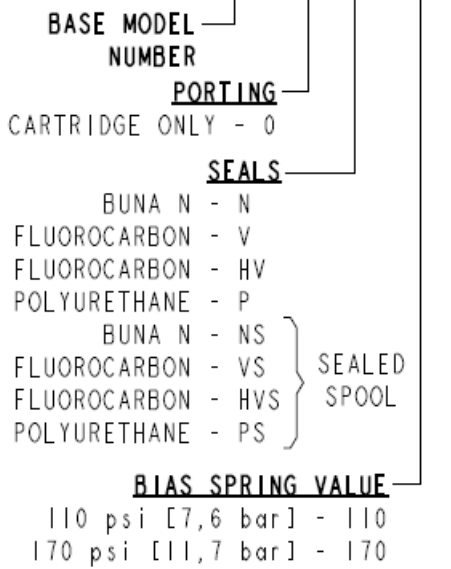
Seal kit	SK12-4X-MMM	- Note: X = seal option
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Order Code

ORDERING INFORMATION:

PD12-45-X-XX-XXX



(CONSULT FACTORY OR CATALOG FOR OTHER AVAILABLE OPTIONS)

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