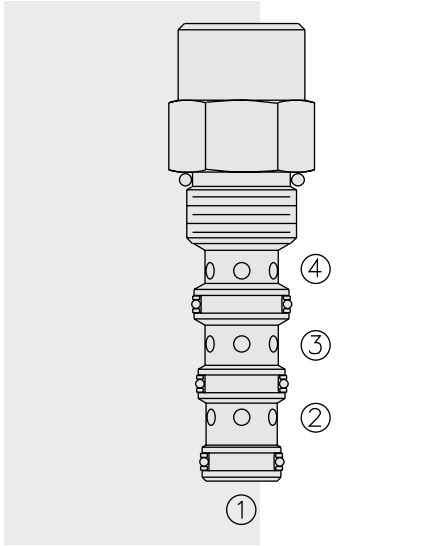


DIRECTIONAL VALVES

PD10-45 Piloted 2-Way Spool



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type, hydraulic directional valve for two-way circuits requiring remote pilot actuation and vented spring chamber.

OPERATION

In neutral (unpiloted), the **PD10-45** allows flow from ③ to ② bidirectionally. The spring chamber is directed to port ④.

On remote pilot signal at ①, the valve shifts to block from ③ to ②, bidirectionally.

Since ④ is common to the spring chamber, pressure on ④ will directly (1:1) affect the pilot pressure required, and must always be added to the bias spring value.

FEATURES

- Hardened spool and cage for long life.
- Industry common cavity.

RATINGS

Operating Pressure: 240 bar (3500 psi)

Flow: See Performance Chart

Internal Leakage: at 207 bar (3000 psi) and 38° C (100° F):

From ③ to ② and ④: 82 cc/minute (5 cu. in./minute) max.

From ① to ②: 164 cc/minute (10 cu. in./minute) max.

Pilot Pressure Required:

To Spool Crossover – 4.1 bar (60 psi) Spring: 4.7 bar (68.2 psi)

7.6 bar (110 psi) Spring: 7.6 bar (110 psi)

To Full Spool Shift – 4.1 bar (60 psi) Spring: 5.2 bar (75 psi)

7.6 bar (110 psi) Spring: 8.6 bar (125 psi)

Oil Volume Required to Full Shift: 0.65 cc (0.04 cu. in.)

Temperature: -40 to 120°C with standard Buna seals

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Installation: No restrictions; See page 9.020.1

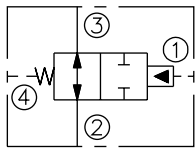
Cavity: VC10-4; See page 9.110.1

Cavity Tool: CT10-4XX; See page 8.600.1

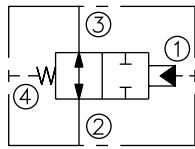
Seal Kit: SK10-4X-MMM; See page 8.650.1

SYMBOLS

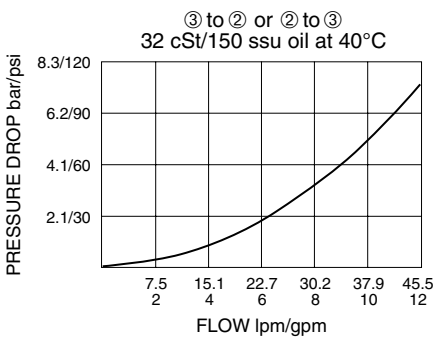
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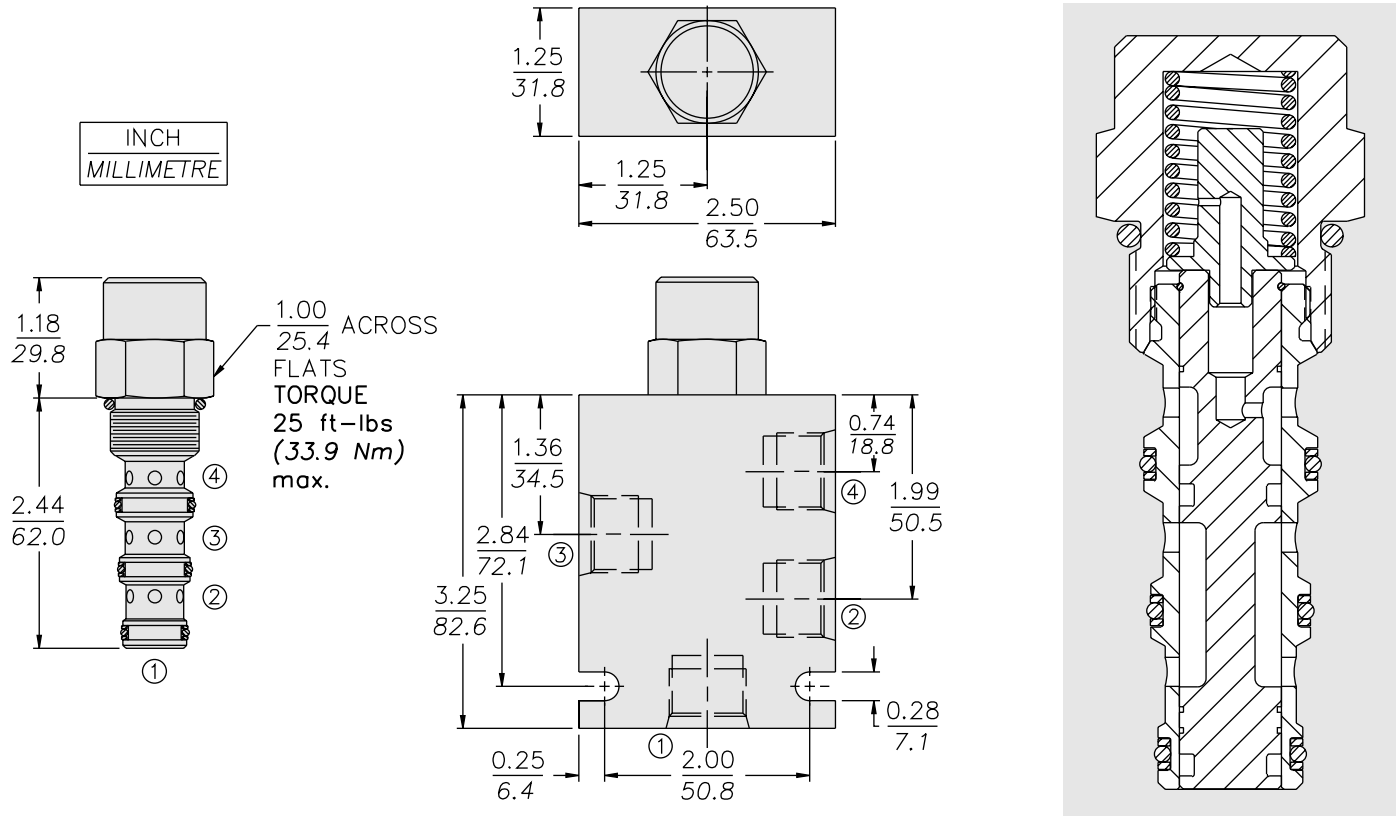


PERFORMANCE (Cartridge Only)



PD10-45

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.16 kg. (0.35 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight: 0.34 kg. (0.75 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); see page 8.010.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

TO ORDER

PD10-45 -		Bias Spring†	
Porting		60	4.1 bar (60 psi)
Cartridge Only	0	110	7.6 bar (110 psi)
SAE 6	6T	170	11.7 bar (170 psi)
SAE 8	8T		
1/4 in. BSP*	2B		
3/8 in. BSP*	3B		
*BSP Body U.K. Mfr. Only			†Note: 110 psi bias spring is the minimum required for use with sealed spool.
Seals			
Buna N (Std.)	N		
Buna N with Sealed Spool	NS		
Fluorocarbon	V		
Fluorocarbon with Sealed Spool	VS		