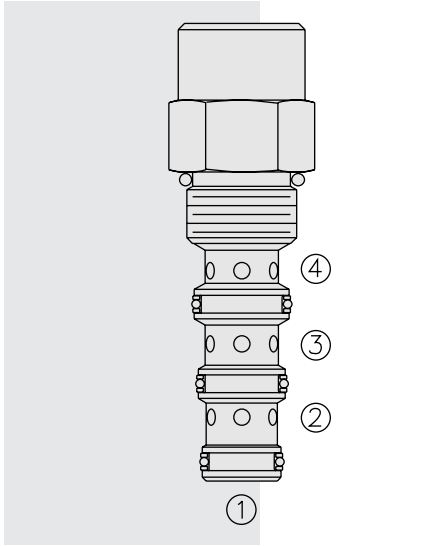


DIRECTIONAL VALVES

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 sus); See Temperature and Oil Viscosity, page 9.060.1

Installation: No restrictions; See page 9.020.1

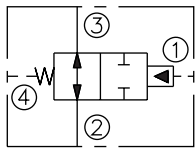
Cavity: VC10-4; See page 9.110.1

Cavity Tool: CT10-4XX; See page 8.600.1

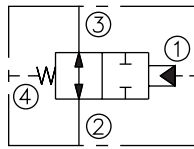
Seal Kit: SK10-4X-MMM; See page 8.650.1

SYMBOLS

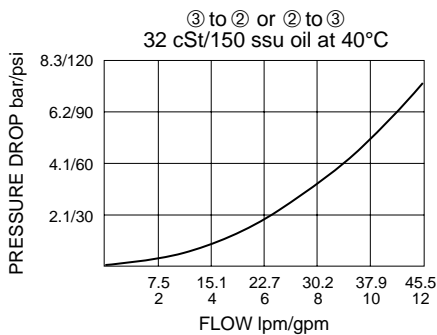
USASI:



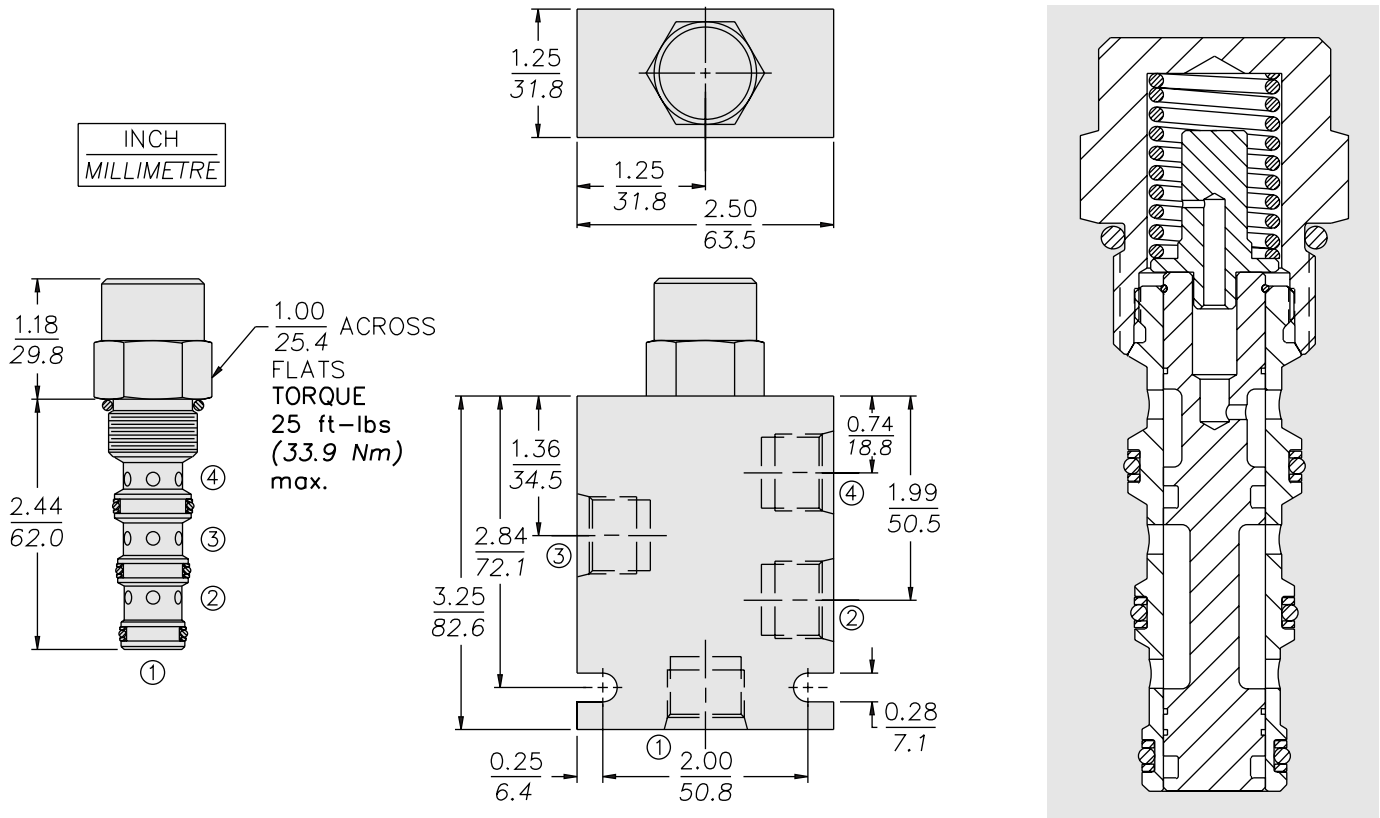
ISO:



PERFORMANCE (Cartridge Only)



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 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.010.1.

TO ORDER

PD10-45 - - -

Porting
 Cartridge Only **0**
 SAE 6 **6T**
 SAE 8 **8T**
 1/4 in. BSP* **2B**
 3/8 in. BSP* **3B**

Bias Spring†
60 4.1 bar (60 psi)
110 7.6 bar (110 psi)
170 11.7 bar (170 psi)

†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**