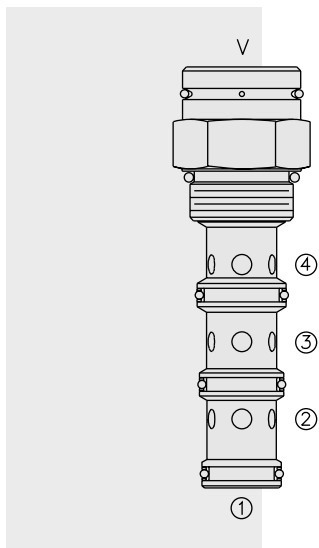


DIRECTIONAL VALVES

PD16-40 Piloted 3-Way Spool, External Vent



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type, hydraulic directional valve for three-way circuits requiring remote pilot actuation.

OPERATION

In neutral (unpiloted), the PD16-40 allows flow passage from ③ to ② bidirectionally, while flow is blocked at ④. V is a spring chamber vent-to-atmosphere, which is internally O-ring sealed from the cartridge flow paths.

On remote pilot signal at ①, the valve shifts to open from ③ to ④, while blocking flow at ②.

The vented spring chamber allows PD16-40 to be fully pressurized at any port without affecting required pilot pressure.

FEATURES

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

RATINGS

Operating Pressure: 240 bar (3500 psi)

Proof Pressure: 350 bar (5075 psi)

Flow: See Performance Chart

Internal Leakage: 164 cc/minute (10 cu. in./minute) max. at 207 bar (3000 psi)

Pilot Pressure Required:

To Spool Crossover: 7.6 bar (110 psi)

To Full Spool Shift: 9.0 bar (130 psi)

Oil Volume Required to Full Shift: 2.5 cc (0.15 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: VC16-4; See page 9.116.1

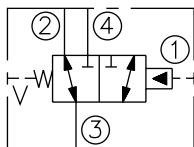
Cavity Tool: CT16-4XX; See page 8.600.1

Seal Kit: SK16-4X-MMM; See page 8.650.1

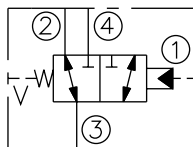
Cap Vent Seal: 6003125

SYMBOLS

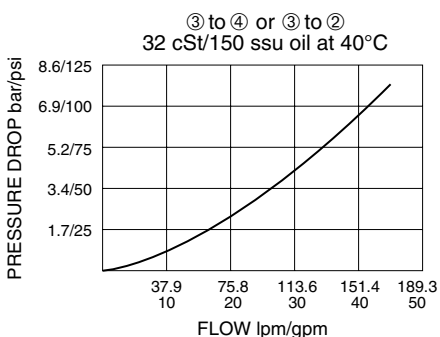
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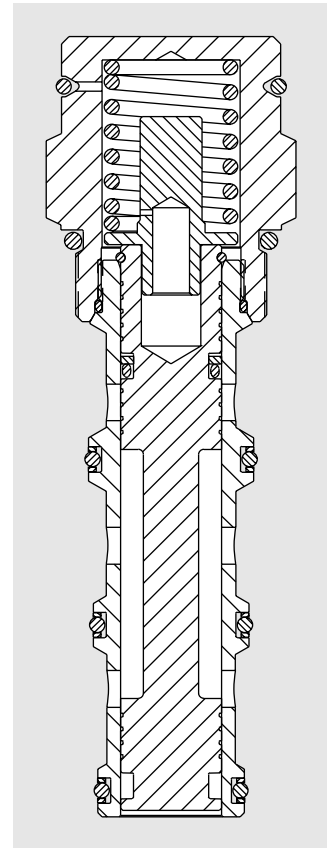
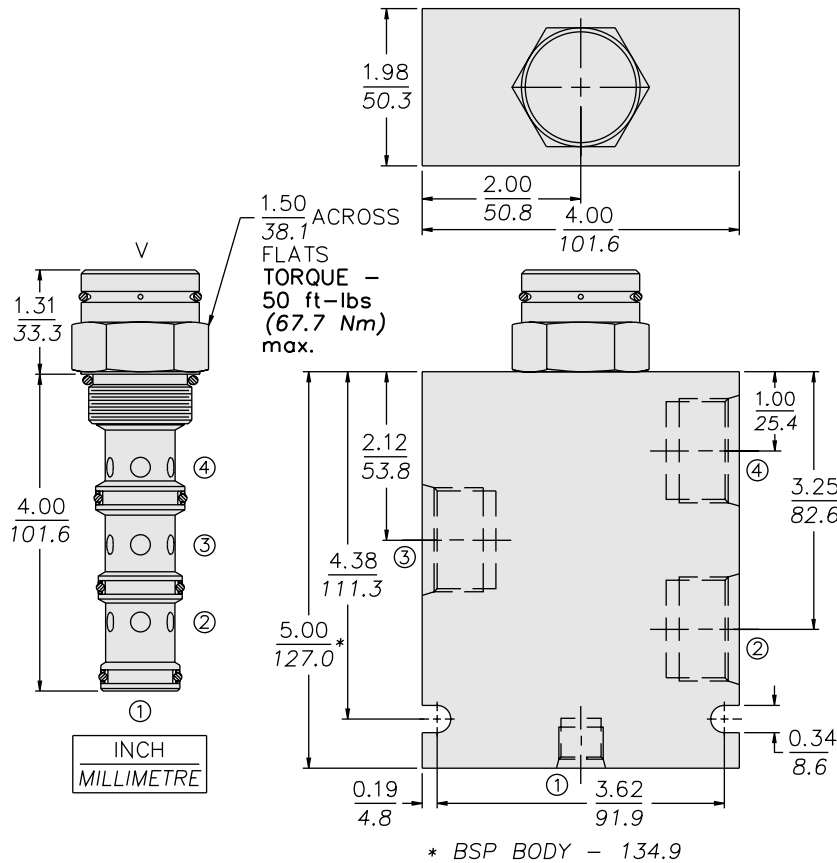


PERFORMANCE (Cartridge Only)



Note: This valve is designed with a dynamic oil-to-atmosphere seal in the vent section. Ambient conditions will cause this vent seal to degrade which will reduce the valve's cycle life. If this could cause a problem, we suggest that a non-vented model be selected, or special seal be used. Consult factory for assistance.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.52 kg. (1.15 lbs.); 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 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.016.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

TO ORDER

PD16-40

Option
None (Blank)
Open Transition **N**

Porting
Cartridge Only **0**
SAE 12, SAE 6 Pilot **12T**
SAE 16, SAE 6 Pilot **16T**

Bias Spring†

60 4.1 bar (60 psi)
80 5.5 bar (80 psi)
110 7.6 bar (110 psi)
170 11.7 bar (170 psi)

Optional bias springs considered on OEM request.

†Note: 110 psi bias spring is the minimum required for use with sealed spool.

Seals

N Buna N (Std.)
NS Buna N with Sealed Spool (110 psi spring minimum required)
V Fluorocarbon
VS Fluorocarbon with Sealed Spool (110 psi spring minimum required)