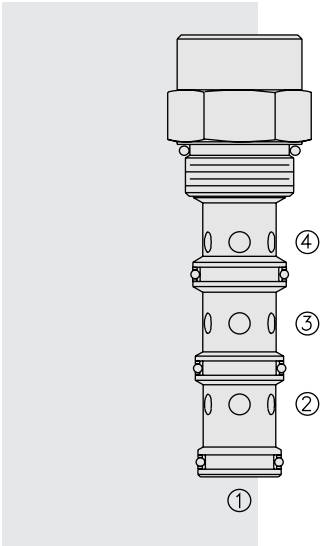


# PD16-41 Piloted 3-Way Spool, Internal Vent



**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 **PD16-41** allows flow from ③ to ④ while ② is blocked. On remote pilot signal at ①, the valve shifts to open from the ③ to ② flow path, while blocking flow to ④.

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

**Note:** Consult factory for applications where bi-directional flow is required when the valve is in the normal or spring-offset position.

**FEATURES**

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

**RATINGS**

**Operating Pressure:** 240 bar (3500 psi)

**Proof Pressure:** 420 bar (6090 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 sus); See Temperature and Oil Viscosity, page 9.060.1

**Installation:** No restrictions; See page 9.020.1

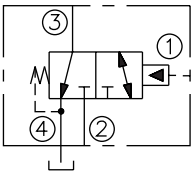
**Cavity:** VC16-4; See page 9.116.1

**Cavity Tool:** CT16-4XX; See page 8.600.1

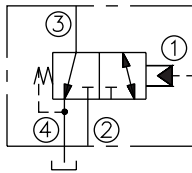
**Seal Kit:** SK16-4X-MMM; See page 8.650.1

**SYMBOLS**

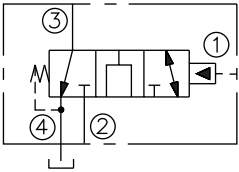
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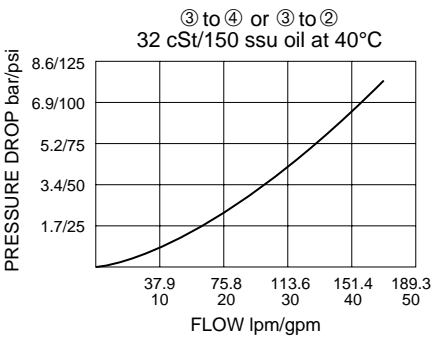
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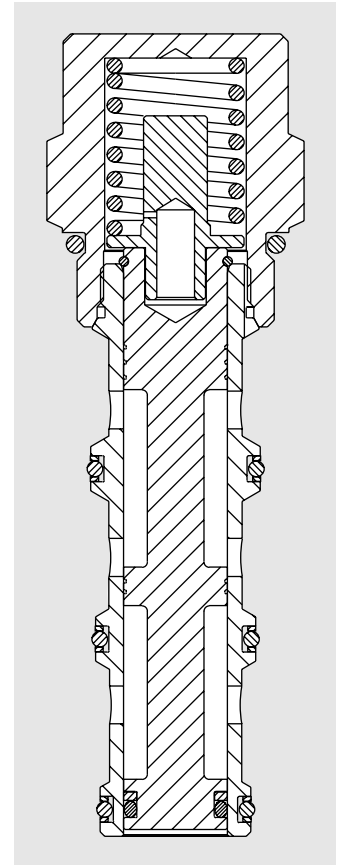
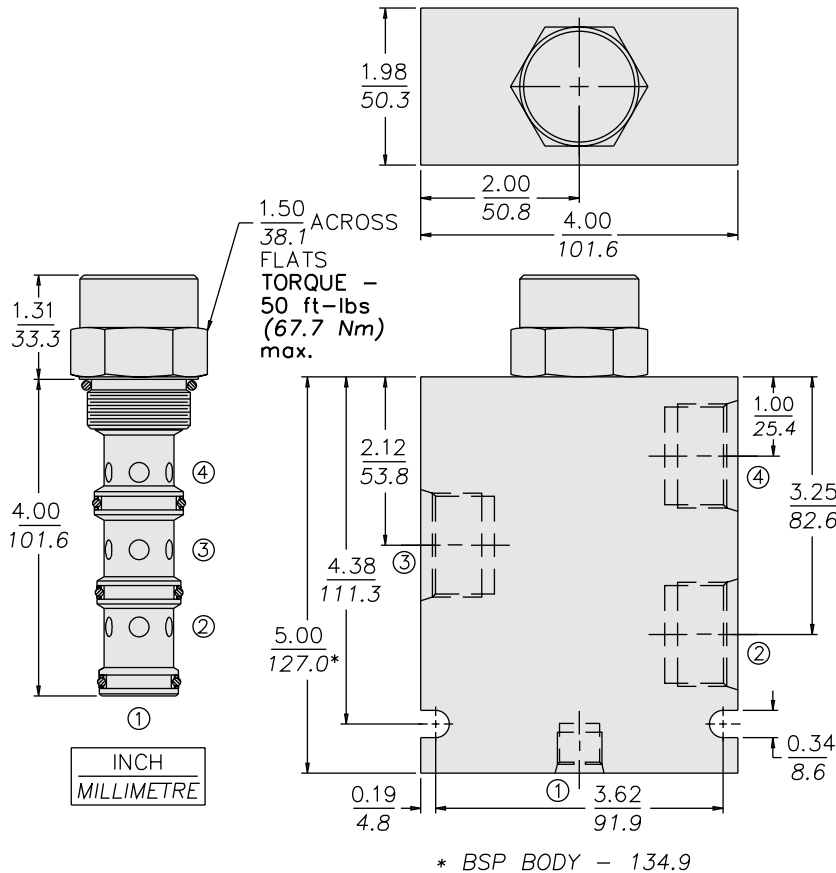
**OPEN TRANSITION:**



**PERFORMANCE (Cartridge Only)**



**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 207 bar (3000 psi). Ductile  
iron bodies available; dimensions  
may differ. See page 8.016.1

**TO ORDER**

**PD16-41** - - -

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

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

**Bias Springs†**  
**60** 4.1 bar (60 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  
**V** Fluorocarbon  
**VS** Fluorocarbon with Sealed Spool