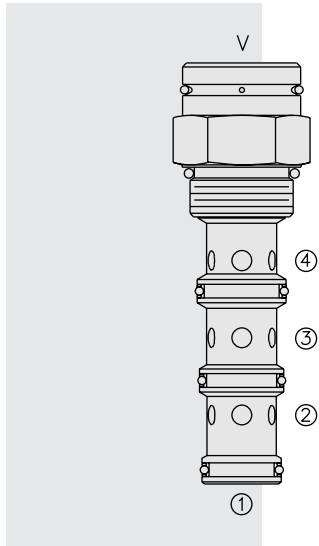


## PD16-40 Piloted 3-Way Spool, External Vent



### 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 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

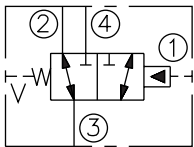
**Cavity Tool:** CT16-4XX; See page 8.600.1

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

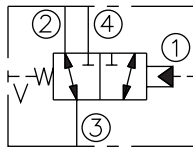
**Cap Vent Seal:** 6003125

### SYMBOLS

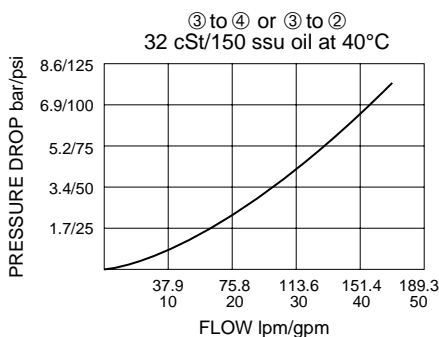
#### USASI:



#### ISO:

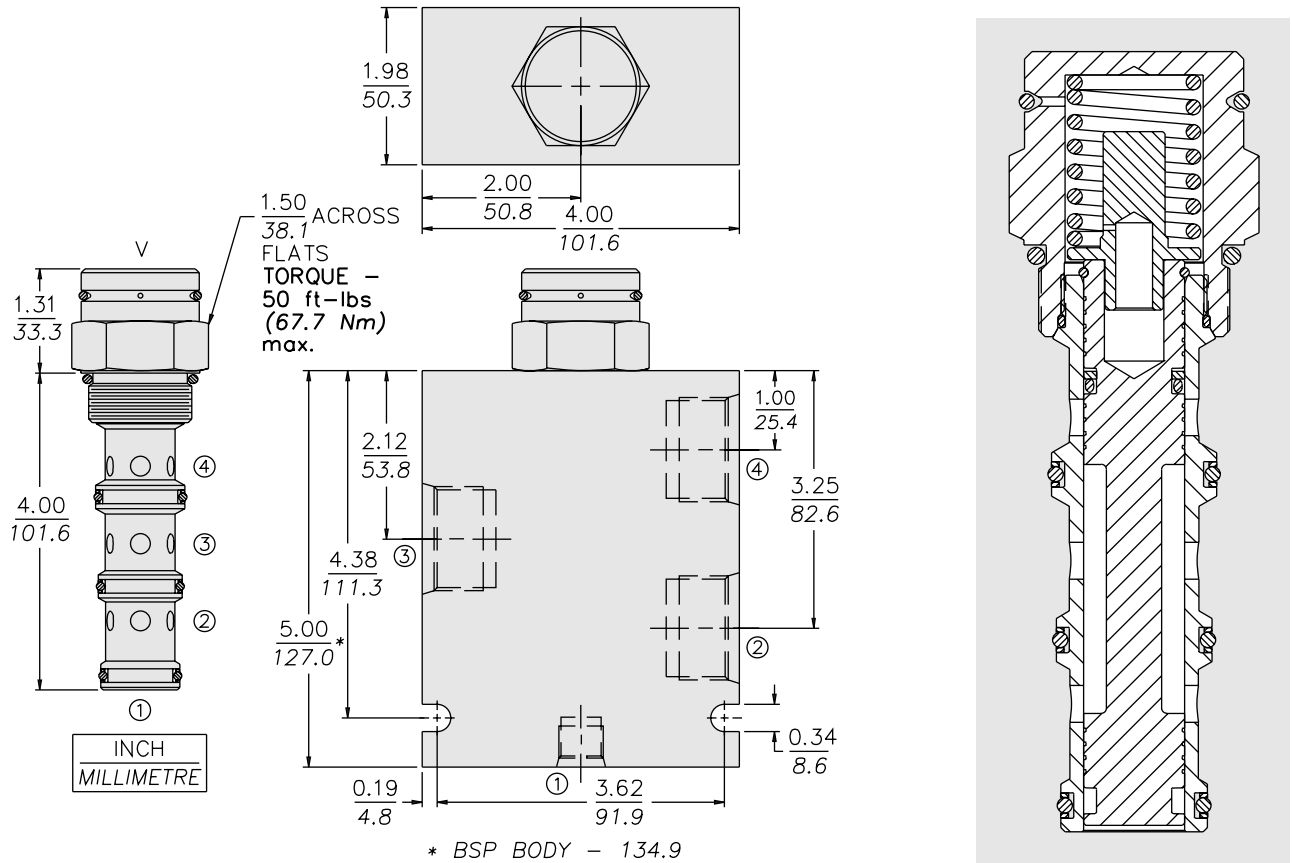


### PERFORMANCE (Cartridge Only)



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

**TO ORDER**

**PD16-40** - - -

<p><b>Option</b>                  None (Blank)                  Open Transition <b>N</b></p>	<p><b>Porting</b>                  Cartridge Only <b>0</b>                  SAE 12, SAE 6 Pilot <b>12T</b>                  SAE 16, SAE 6 Pilot <b>16T</b></p>	<p><b>Bias Spring<sup>†</sup></b>  <b>60</b> 4.1 bar (60 psi)  <b>80</b> 5.5 bar (80 psi)  <b>110</b> 7.6 bar (110 psi)  <b>170</b> 11.7 bar (170 psi)</p> <p>Optional bias springs considered on OEM request.  <sup>†</sup>Note: 110 psi bias spring is the minimum required for use with sealed spool.</p>
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**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)