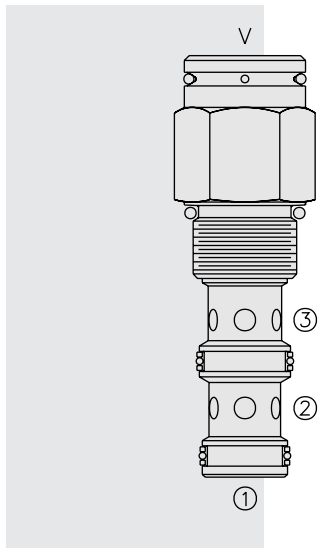


# DIRECTIONAL VALVES

## PD12-30 Piloted 2-Way Spool, Normally Open,



### DESCRIPTION

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

### OPERATION

In neutral (unpiloted), the **PD12-30** allows flow from ③ to ② bidirectionally.

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 block ② to ③ bidirectionally.

Because of the vented spring chamber, the cartridge may be fully pressurized at any port without affecting required pilot pressure.

### FEATURES

- Hardened spool and cage for long life.
- Cost-effective cavity.

### RATINGS

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

**Flow:** See Performance Chart

**Internal Leakage:** 82 cc/minute (5 cu. in./minute) max. at 207 bar (3000 psi)

**Pilot Pressure Required for 7.6 bar (110 psi) Spring:**

to Cross-Over: 7.6 bar (110 psi)

to Full Shift: 9.1 bar (132 psi)

**Oil Volume Required to Full Shift:** 1.32 cc (0.08 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:** VC12-3; See page 9.112.1

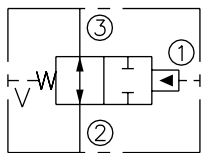
**Cavity Tool:** CT12-3XX; See page 8.600.1

**Seal Kit:** SK12-3X-MM; See page 8.650.1

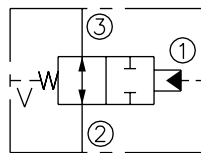
**Cap Vent Seal:** 6003121

### SYMBOLS

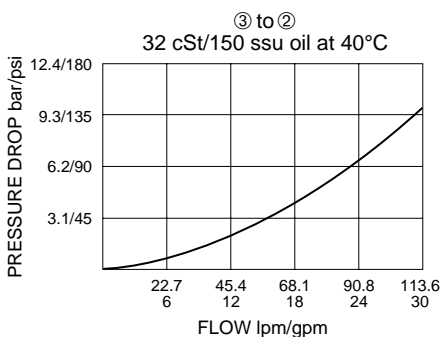
#### USASI:



#### ISO:



### PERFORMANCE (Cartridge Only)

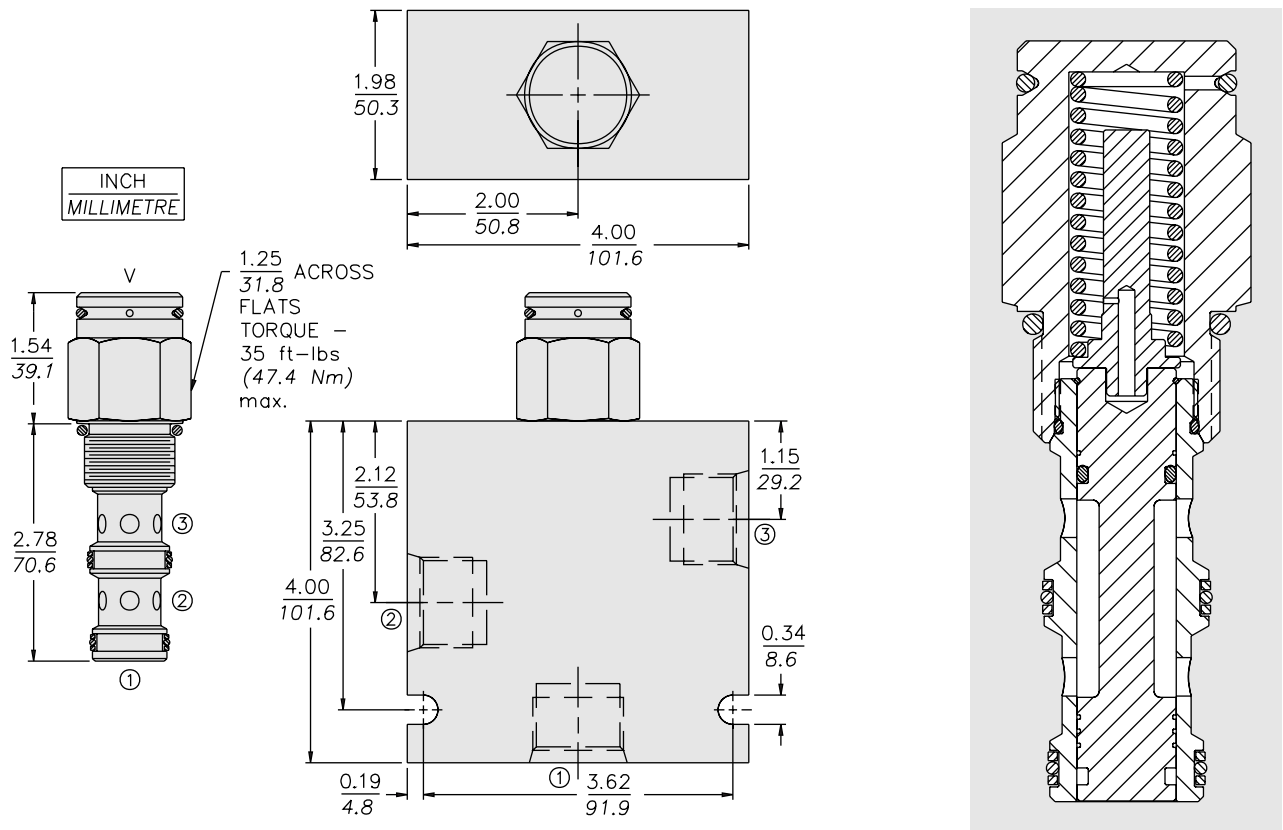


**Note:** This valve is designed with a dynamic oil-to-atmosphere seal in the vent section. Ambient conditions will cause this vent seal to degrade which will reduce the valve's cycle life. If this could cause a problem, we suggest that a non-vented model be selected, or special seal be used. Consult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

# External Vent

PD12-30

## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.23 kg. (0.50 lbs.)  
Steel with hardened work surfaces;  
Zinc-plated exposed surfaces.  
Buna N O-rings and polyester  
elastomer back-ups standard.

**Standard Ported Body:** Weight:  
1.13 kg. (2.50 lbs.) Anodized high-  
strength 6061 T6 aluminum alloy,  
rated to 207 bar (3000 psi). Ductile  
iron bodies available; dimensions  
may differ. See page 8.012.1

## TO ORDER

PD12-30 -

<p><b>Porting</b></p> <p>Cartridge Only <b>0</b></p> <p>SAE 8 <b>8T</b></p> <p>SAE 10 <b>10T</b></p> <p>SAE 12 <b>12T</b></p> <p>1/2 in. BSP* <b>4B</b></p> <p>3/4 in. BSP* <b>6B</b></p> <p><small>*BSP Body U.K. Mfr. Only</small></p>	<p>-</p> <p>-</p> <p>-</p>	<p><b>Bias Spring</b></p> <p><b>110</b> 7.6 bar (110 psi)</p> <p><b>170</b> 11.7 bar (170 psi)</p> <p><b>Seals</b></p> <p><b>N</b> Buna N (Std.)</p> <p><b>NS</b> Buna N with Sealed Spool</p> <p><b>V</b> Fluorocarbon</p> <p><b>VS</b> Fluorocarbon with Sealed Spool</p>
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