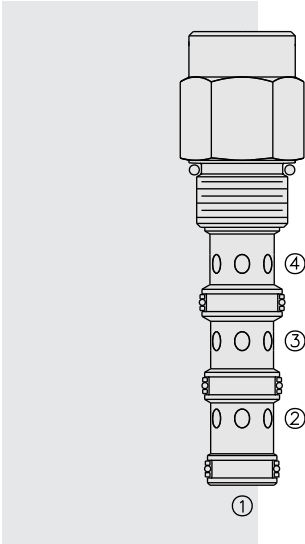


# PD12-42 Piloted 3-Way Spool, Internal Vent



## 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 **PD12-42** allows flow from ③ to ② bidirectionally while ④ is blocked.

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

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.

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

## FEATURES

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

## RATINGS

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

**Proof Pressure:** 420 bar (6090 psi)

**Flow:** See Performance Chart

**Internal Leakage:** 115 cc/minute (7 cu. in./minute) max. at 207 bar (3000 psi)

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

To Spool Crossover: 7.6 bar (110 psi)

To Full Spool 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

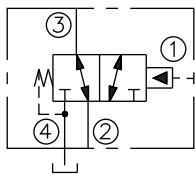
**Cavity:** VC12-4; See page 9.112.2

**Cavity Tool:** CT12-4XX; See page 8.600.1

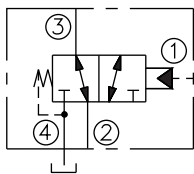
**Seal Kit:** SK12-4X-MMM; See page 8.650.1

## SYMBOLS

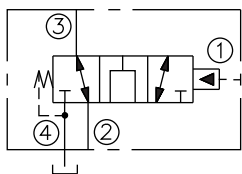
### USASI:



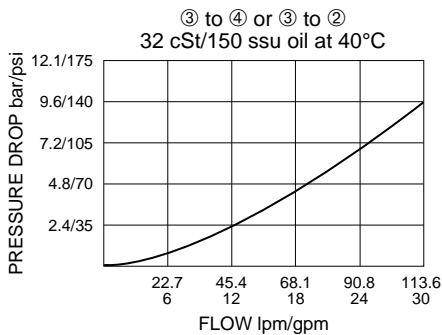
### ISO:



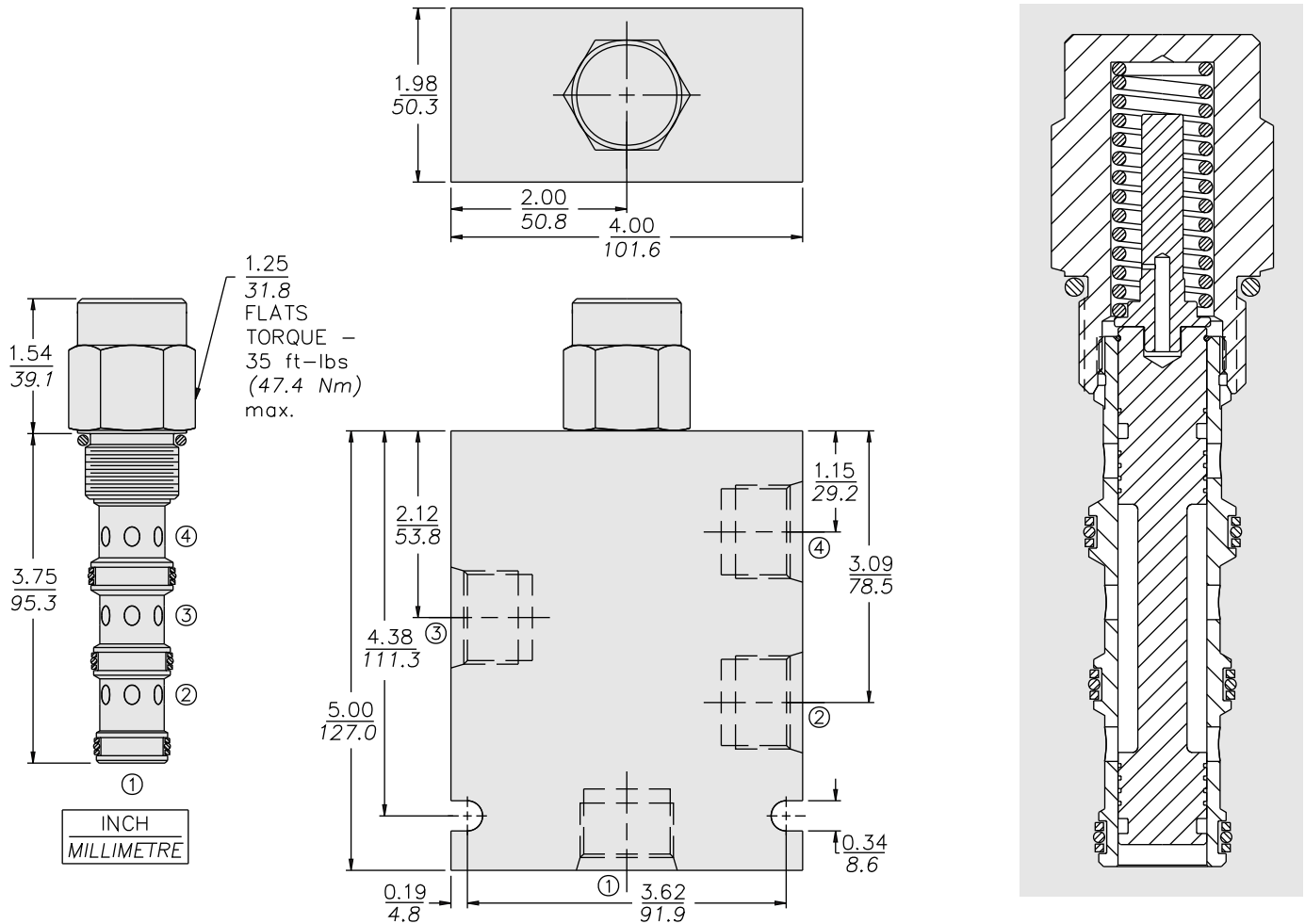
### OPEN TRANSITION:



## PERFORMANCE (Cartridge Only)



**DIMENSIONS**



**MATERIALS**

**Cartridge:** Weight: 0.28 kg. (0.61 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 8.012.1

**TO ORDER**

<b>PD12-42</b>		-	-	-
<b>Option</b>	None (Blank)			
Open Transition	<b>N</b>			
<b>Porting</b>				
Cartridge Only	<b>0</b>			
SAE 10	<b>10T</b>			
SAE 12	<b>12T</b>			
<b>Bias Spring</b>				
<b>60</b>	4.1 bar (60 psi)			
<b>110</b>	7.6 bar (110 psi)			
<b>170</b>	11.7 bar (170 psi)			
	Optional bias springs considered on OEM request.			
<b>Seals</b>				
<b>N</b>	Buna N (Std.)			
<b>NS</b>	Buna N with Sealed Spool			
<b>V</b>	Fluorocarbon			
<b>VS</b>	Fluorocarbon with Sealed Spool			