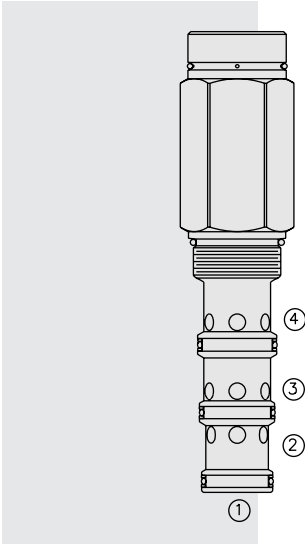


## PD42-M45 Piloted 2-Way Spool



### 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 **PD42-M45** allows flow from ③ to ② bidirectionally. The spring chamber is directed to port ④.

On remote pilot signal at ①, the valve shifts to block ③ to ② bidirectionally.

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.

### FEATURES

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

### RATINGS

**Maximum Operating Pressure:** With Polyurethane Seals: Ports ①, ② & ③: 344 bar (5000 psi); Port ④: 210 bar (3000 psi)

**Flow:** See Performance Chart

**Internal Leakage:** 246 ml/minute (15 cu. in./minute) max. at 344 bar (5000 psi)

**Pilot Pressure Required:**

To Spool Crossover: 13 bar (188 psi)

To Full Spool Shift: 17.2 to 27.6 bar (250 to 400 psi)

**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

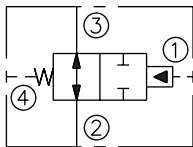
**Cavity:** VC42-M4; See page 9.142.1

**Cavity Tool:** CT42-M4XX; See page 8.600.1

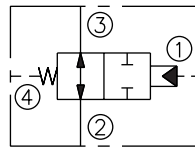
**Seal Kit:** SK42-4X-MMM; See page 8.650.1

### SYMBOLS

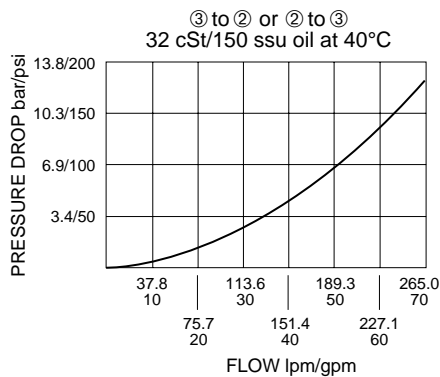
#### USASI:



#### ISO:

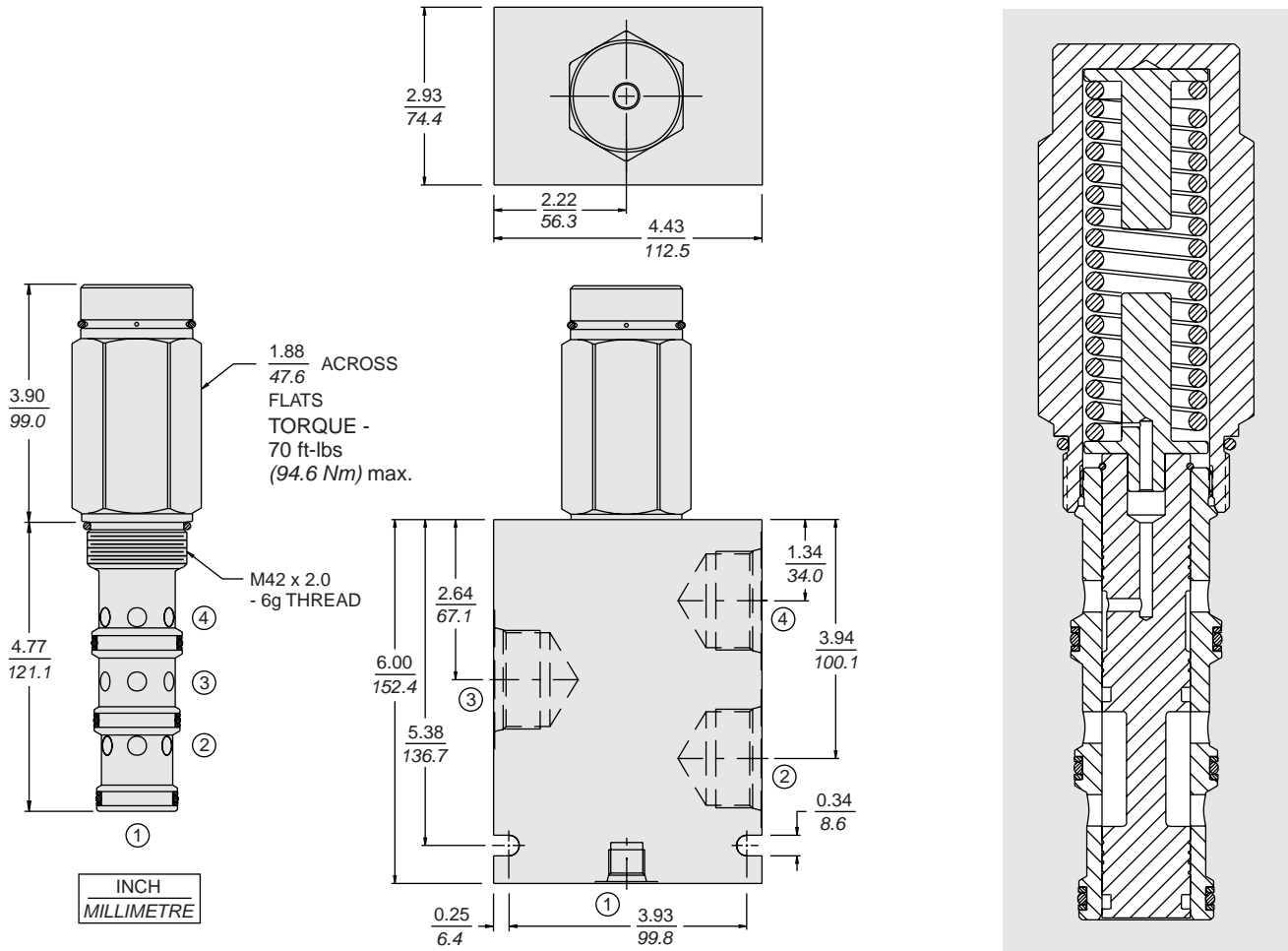


### PERFORMANCE (Cartridge Only)



PD42-M45

**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: 2.8  
kg. (6.2 lbs.) Anodized high-strength  
6061 T6 aluminum alloy, rated to  
207 bar (3000 psi). Ductile iron  
bodies available; dimensions may  
differ. See page 8.042.1.

**TO ORDER**

PD42-M45 - - -160<sup>‡</sup>

**Option**  
None (Blank)

**Porting**  
Cartridge Only 0  
SAE 16, SAE 6 Pilot 16T  
\*SAE 16, SAE 6 Pilot 16TD  
SAE 20, SAE 6 Pilot 20T

<sup>‡</sup>160 psi bias spring standard.  
Optional bias springs considered  
on OEM request.

**Seals**  
N Buna N (Std.)  
NS Buna N with Sealed Spool  
V Fluorocarbon  
VS Fluorocarbon with Sealed Spool  
P Polyurethane\*\*  
PS Polyurethane with  
Sealed Spool\*\*

\*Ductile iron body for pressures  
over 207 bar/3000 psi

\*\*Required for pressures over 3500 psi

Note: All bodies are PD type.