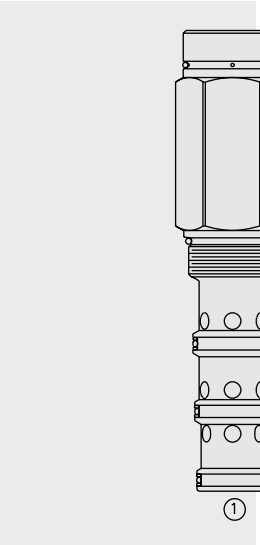
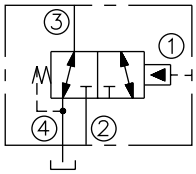
PD42-M41 Piloted 3-Way Spool, Internal Vent



SYMBOLS

USASI:



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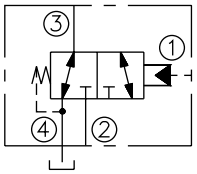
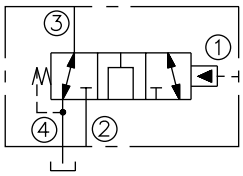
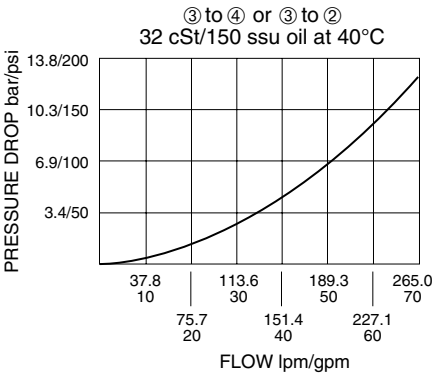


OPEN TRANSITION:



PERFORMANCE (Cartridge Only)



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-M41** allows flow from ③ to ④. 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-standard ISO cavity.

RATINGS

Maximum Operating Pressure: With Polyurethane Seals: Ports ①, ②, & ③: 345 bar (5000 psi); Port ④: 210 bar (3000 psi)

Flow: See Performance Chart

Internal Leakage at Maximum Operating Pressure: Ports ②, ③, & ④: 246 cc/minute (15 cu. in./minute); Port ①: 524 cc/minute (32 cu. in./minute); The sealed pilot version exhibits no leakage at ① at maximum operating pressure.

Pilot Pressure Required:
To Begin Spool Movement: 11 bar (160 psi)
To Bring Spool to Cross-Over Point: 16.2 bar (235 psi)
To Fully Shift the Spool: 18.3 bar (265 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 ssu)

Installation: No restrictions; See page 9.020.1

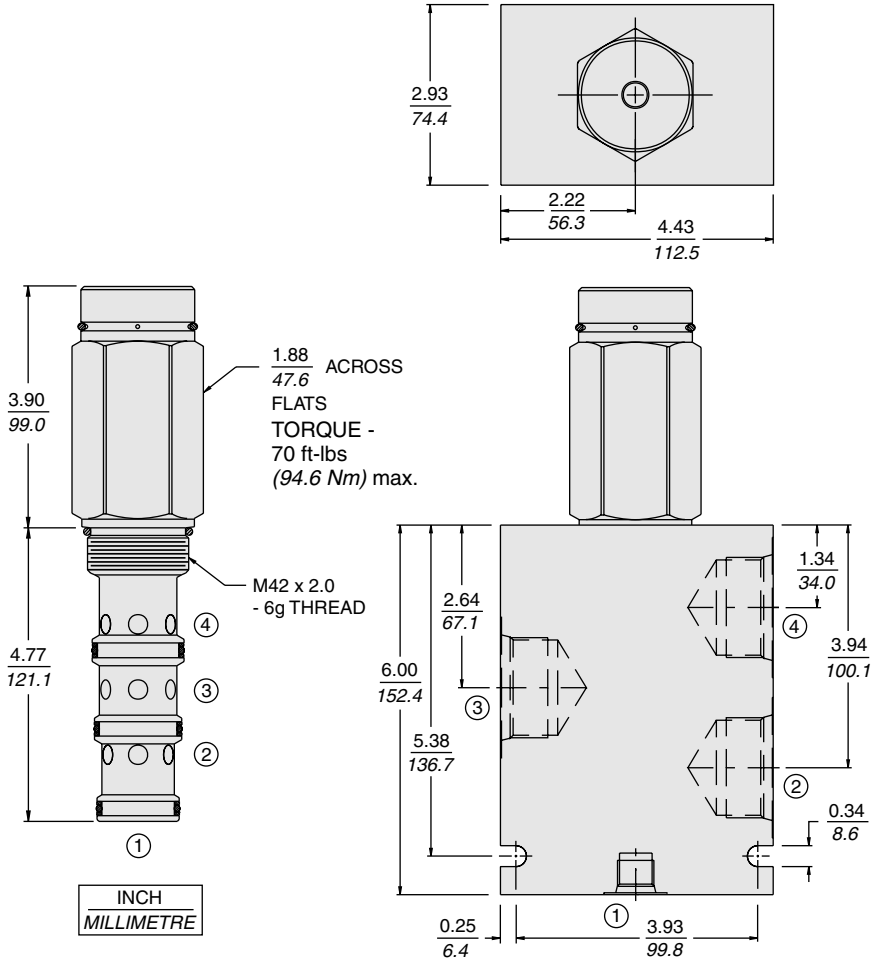
Cavity: VC42-M4; See page 9.142.1

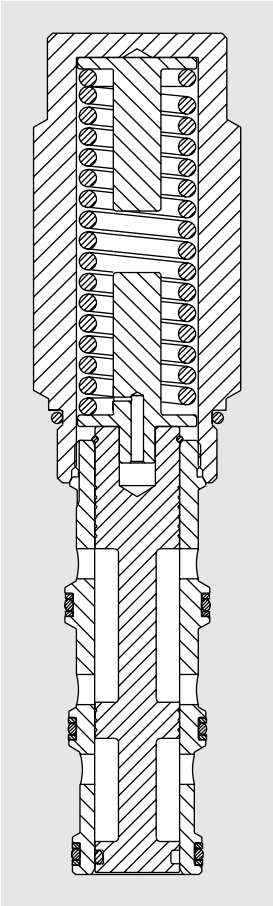
Cavity Tool: CT42-M4XX; See page 8.600.1

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

PD42-M41

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 240 bar (3500 psi); See page 8.042.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

TO ORDER

PD42-M41__ - __ __ __ - __ -160†

†160 psi bias spring standard. Optional bias springs considered on OEM request.

Option

None	(Blank)
Open Transition	**N**

Porting

Cartridge Only	**0**
SAE 16, SAE 6 Pilot	**16T**
*SAE 16, SAE 6 Pilot	**16TS**
SAE 20, SAE 6 Pilot	**20T**

*Steel body for pressures over 3500 psi

Note: All bodies are PD type.

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**

**Required for pressures over 3500 psi