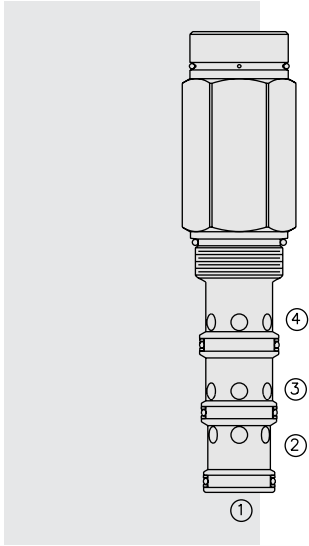


DIRECTIONAL VALVES

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

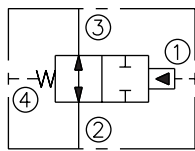
Cavity: VC42-M4; See page 9.142.1

Cavity Tool: CT42-M4XX; See page 8.600.1

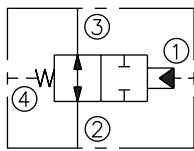
Seal Kit: SK42-4X-MMM; See page 8.650.1

SYMBOLS

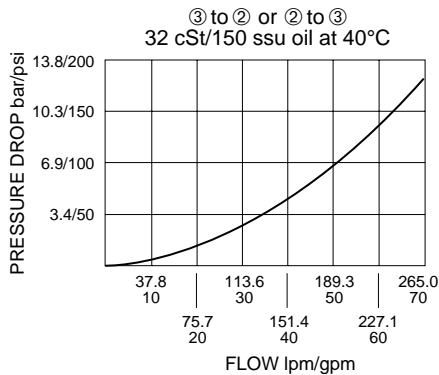
USASI:



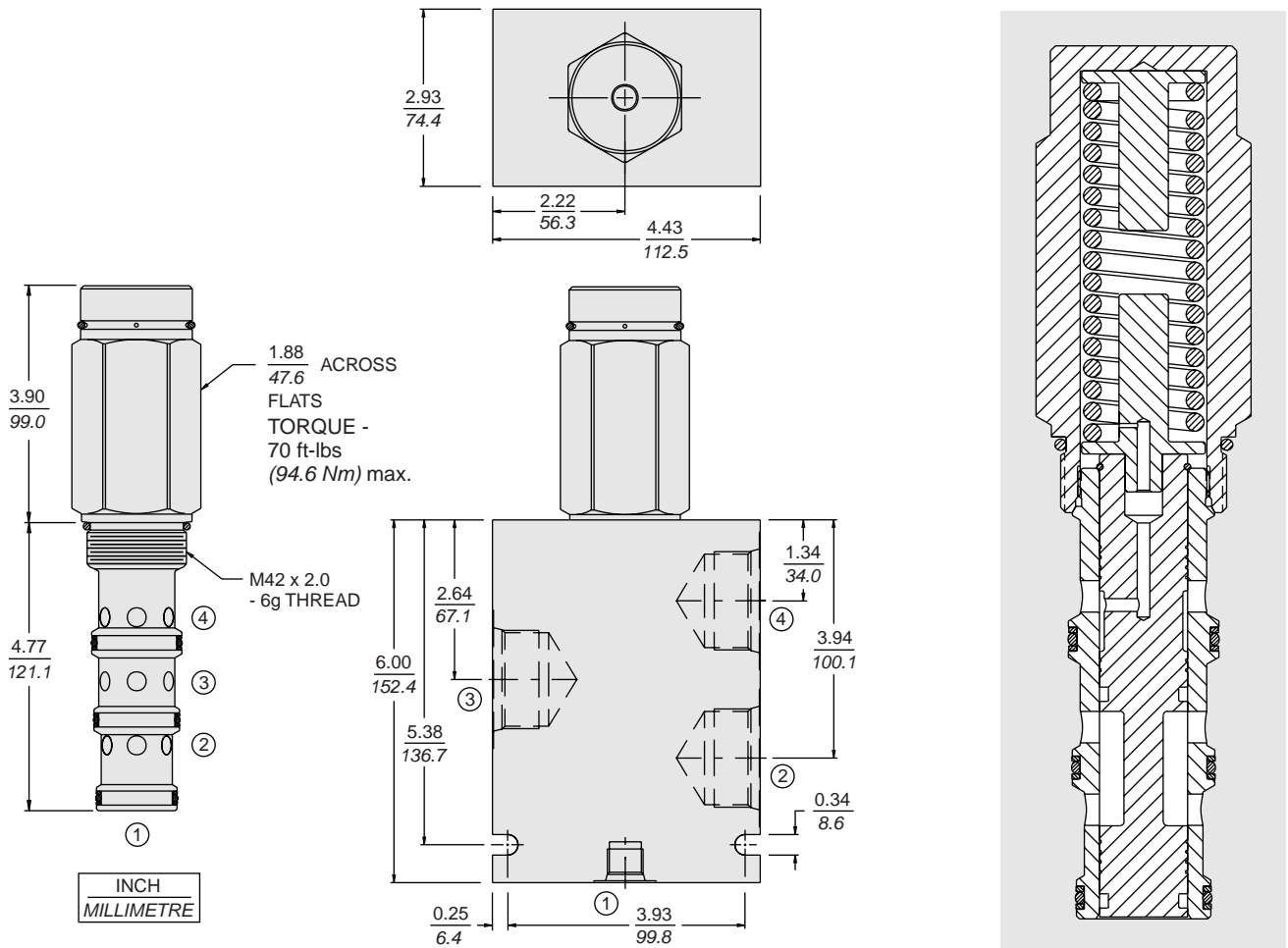
ISO:



PERFORMANCE (Cartridge Only)



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[‡]

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

[‡]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.