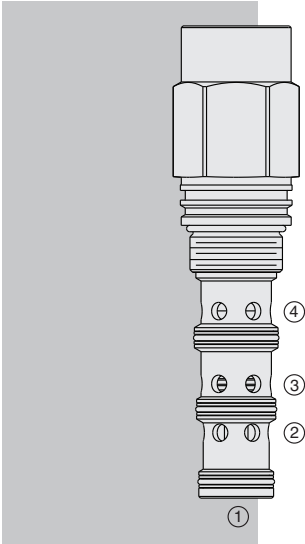


# HPD42-M45 HyPerformance™ Piloted 2-Way Spool



## DESCRIPTION

A high performance, screw-in, cartridge-style, pilot-operated, spool-type, hydraulic directional valve for two-way circuits requiring remote pilot actuation and vented spring chamber.

## OPERATION

In neutral (unpiloted), the **HPD42-M45** allows flow from 3 to 2 bidirectionally. The spring chamber is directed to port 4.

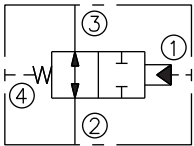
On remote pilot signal at 1, the valve shifts to block 3 to 2 bidirectionally.

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.

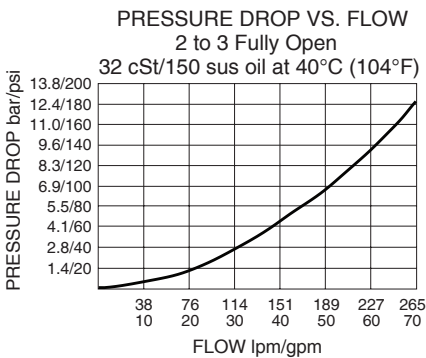
## FEATURES

- Multiple function/application potential.
- Smooth shift transition.
- Low pressure drop.
- Hardened spool and cage for long life.
- Optional sealed pilot.
- Industry-standard ISO cavity.
- All HyPerformance products are tested to the rigorous standards of NFPA specification T2.6.1.
- All HyPerformance products are tested at a verification level of 90% and an assurance of 99%.

## ISO SYMBOL



## PERFORMANCE (Cartridge Only)



## RATINGS

**Operating Pressure:** 350 bar (5075 psi); 10% cycle life: 420 bar (6090 psi)

Note: All HyPerformance products are tested for 900K cycles at 350 bar and 100K at 420 bar

**Cycle Life:** One million cycles

**Burst Pressure:** 1380 bar (20000 psi)

**Flow Rating:** 265 lpm (70 gpm)

**Internal Leakage:** 500 ml/min (30 cu. in./minute) max at 350 bar (5075 psi)

**Pilot Pressure Required:**

To Spool Crossover: 5.51 bar (80 psi) with 180 psi bias spring

To Full Spool Shift: 12.4 bar (180 psi) with 180 psi bias spring

**Oil Volume Required to Full Shift:** 5.07 cu. cm. (0.31 cu. in.)

**Temperature:** -54°C to 107°C (-65°F to 225°F) with standard PPDI Urethane 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:** HVC42-M4; See page 9.142.1

**Cavity Tool:** HCT42-M4XX; See page 8.600.1

**Seal Kit:** SK42-M4U-000; See page 8.650.1

