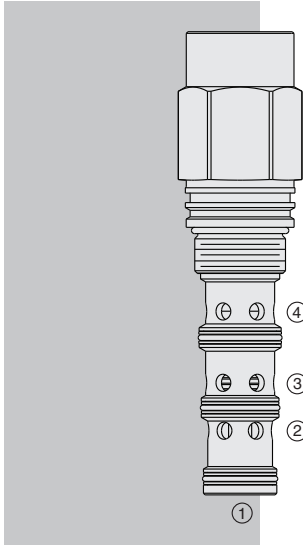


HPD42-M44 HyPerformance™ Piloted 2-Way Spool



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

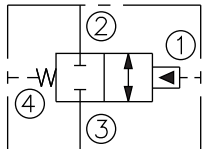
In neutral (unpiloted), the **HPD42-M44** blocks flow from 2 to 3 and 3 to 2 on remote pilot signal at port 1. The valve's spool shifts to allow flow from port 2 to 3 and port 3 to 2. The spring chamber is vented to port 4. Pressure at port 4 will directly (1:1) affect the pilot pressure required and must be added to the bias spring value.

FEATURES

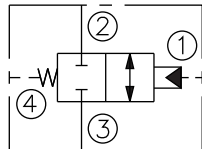
- Multiple function/application potential.
- Smooth shift transition.
- Low pressure drop.
- Hardened spool and cage for long life.
- Optional sealed pilot.
- Industry-standard ISO cavity.
- All HyPerformance products are tested to the rigorous standards of NFPA specification T2.6.1.
- All HyPerformance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

SYMBOLS

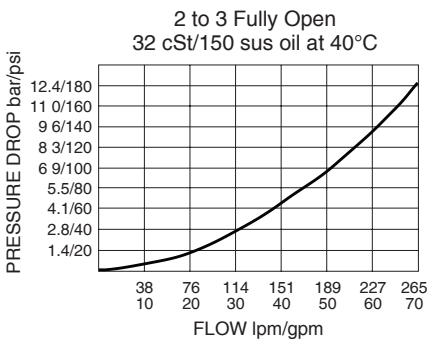
USASI:



ISO:



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

Fatigue Rating: 2 million cycles at 420 bar

Burst Pressure: 1380 bar (20000 psi)

Flow: 265 lpm (70 gpm)

Internal Leakage: 310 ml/min (19 cu. in./minute) at 350 bar (5075 psi)

Pilot Pressure Required:

To Spool Crossover: 10.3 bar (150 psi) with 150 psi bias spring

To Full Spool Shift: 17.9 bar (260 psi) with 150 psi bias spring

Oil Volume Required to Full Shift: 6.22 cc (0.38 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

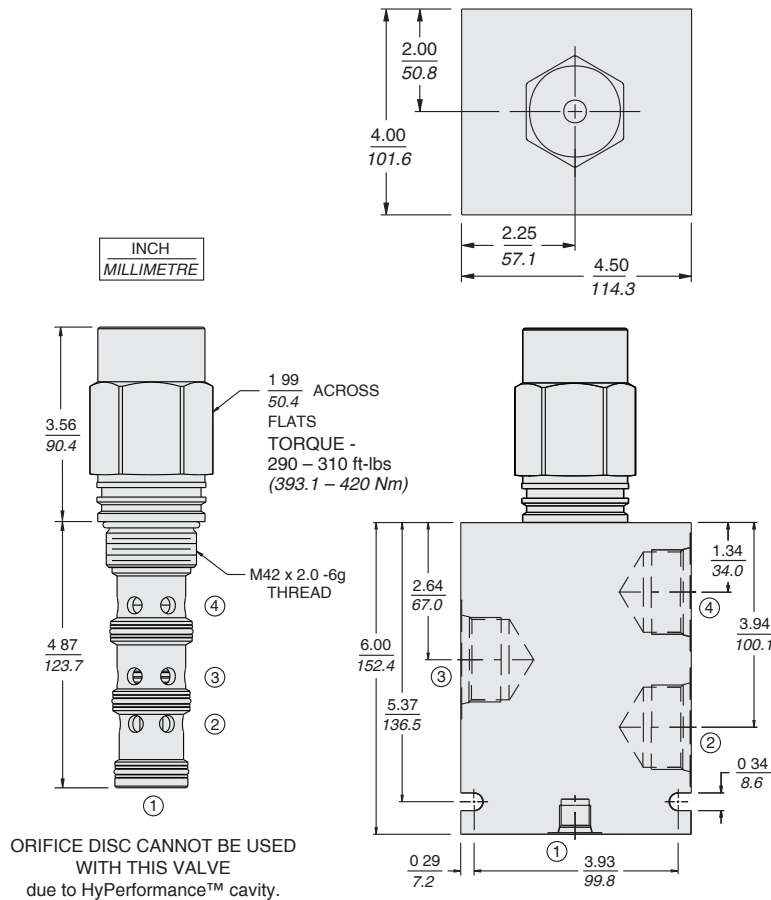
Installation: No restrictions; See page 9.020.1

Cavity: HVC42-M4 See page 9.142.1

Cavity Tool: HCT42-M4XX See page 8.600.1

Seal Kit: SK42-M4U-000 (Urethane) See page 8.650.1

DIMENSIONS

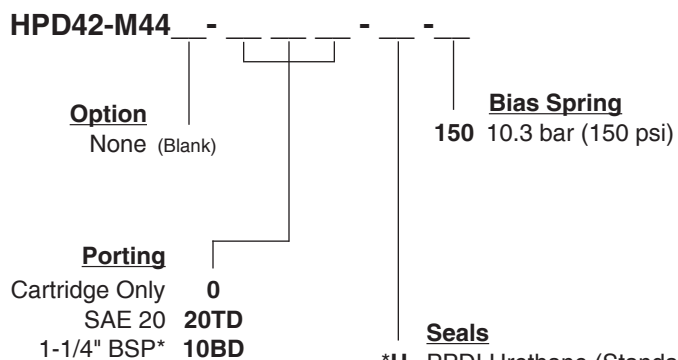


MATERIALS

Cartridge: Weight: 1.9 kg. (4.2 lbs.)
Steel with hardened work surfaces.
Zinc-nickel plated exposed surfaces.
PPDI urethane O-rings and polyester elastomer back-ups standard.

Ported Body: Weight: 10.68 kg (23.56 lbs.) HyPerformance™
Ductile iron (code 'D') standard. PD type. Rated to 345 bar (5000 psi).

TO ORDER



*BSP body; U.K. mfr. Only

NOTE: All bodies are PD type.

*U PPDI Urethane (Standard)
*US PPDI Urethane with Sealed Spool
* Urethane seals recommended for operating pressures above 241 bar (3500 psi)