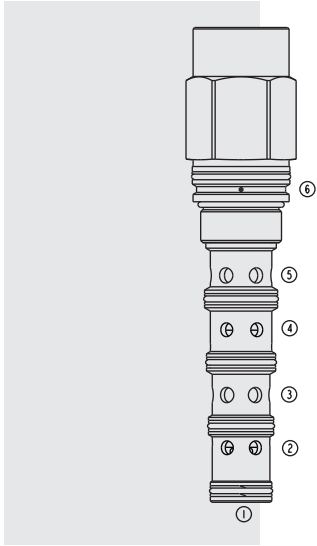
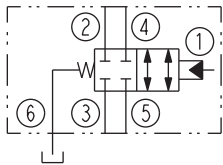


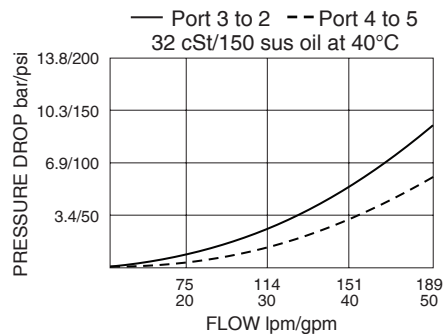
# HPD42-S63 HyPerformance™ Piloted 4-Way



## SYMBOL



## PERFORMANCE (Cartridge Only)



## DESCRIPTION

A high pressure, screw-in, cartridge-style, pilot-operated, spool-type, hydraulic cartridge valve.

## OPERATION

In the neutral position, the **HPD42-S63** blocks flow at all ports. On remote pilot signal at 1, the valve shifts to allow flow between ports 2 and 3, and between 4 and 5 bidirectionally. The spring chamber is vented to the tank through port 6. The vented spring chamber allows the valve to be fully pressurized at ports 1, 2, 3, 4 and 5 without affecting required pilot pressure. Pressure at 6 will increase the required pilot pressure at a 1:1 ratio.

## FEATURES

- Hardened spool and cage for long life.
- Optional sealed spool between ports 1 and 2.
- All HyPerformance™ products are tested to the rigorous standards of the NFPA specification T2.6.1 and are tested at a verification level of 90% and an assurance of 99%

## 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.

**Proof Pressure:** 630 bar (10000 psi)

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

**Flow Rating:** 189 lpm (50 gpm)

**Maximum Internal Leakage:** at 350 bar (5075 psi) with 32 cSt oil:

Ports 3 to 4: 740 ml/minute (45 cu. in./minute)

Ports 3 to 2: 370 ml/minute (23 cu. in./minute)

**Temperature:** -40 to 100°C (-40 to 212°F) with Buna N seals; -26 to 204°C (-15 to 400°F) with Viton seals; -54 to 107°C (-65 to 225°F) with 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-S6; See page 9.142.1

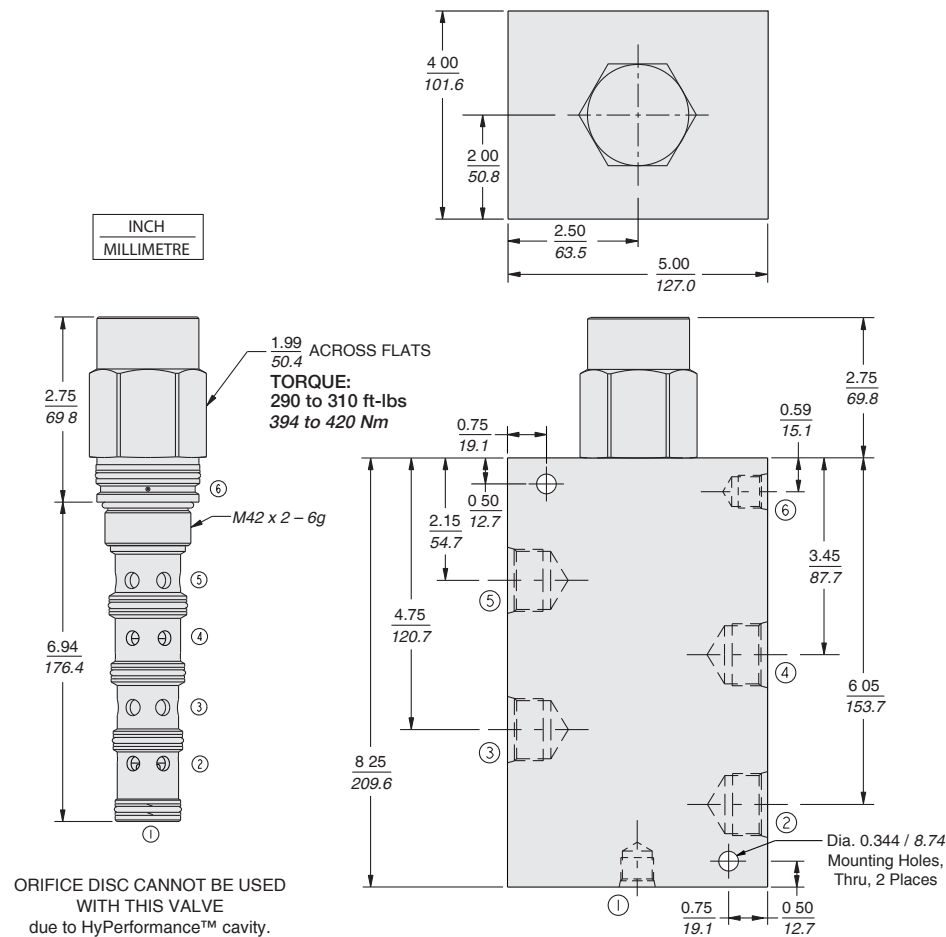
**Cavity Tool:** HCT42-S6XX; See page 8.600.1

**Seal Kit:** HSK42-S6X-BMMMM (Buna N), HSK42-S6V-BMMMM (Viton), HSK42-S6U-0000 (Urethane); See page 8.650.1

# Directional Valve

# HPD42-S63

## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 2.0 kg. (4.3 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.

**Ported Body:** Weight 16.61 kg (36.62 lbs). HyPerformance™ ductile iron (code 'D') standard. Rated to 354 bar (5000 psi). See page 8.042.1.

## TO ORDER

**HPD42-S63-** - - -

**Porting**  
Cartridge Only    0  
1-1/4 in. BSP    10 BD  
SAE 20            20 TD  
\*BSP Body; U.K. Mfr. Only

**Bias Spring**  
170 11.7 bar (170 psi)

### Seals

- N** Buna N (Std.)
- NS** Buna N with Sealed Spool between 1 and 2
- V** Fluorocarbon
- VS** Fluorocarbon with Sealed Spool between 1 and 2
- U** PPDI Urethane
- US** PPDI Urethane with Sealed Spool between 1 and 2

*Note: PPDI Urethane seals are recommended for pressures over 241 bar (3500 psi).*

*Note: Consult factory for additional seal options.*