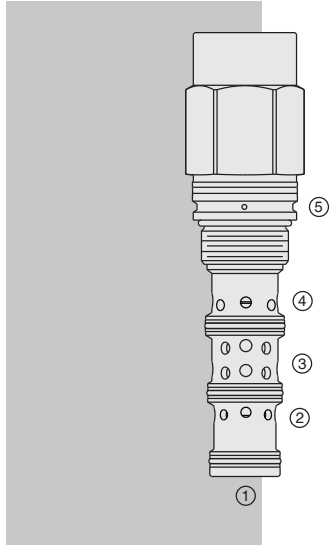


# HPE42-S50 HyPerformance™ Proportional, Piloted,



## DESCRIPTION

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

## OPERATION

When in neutral (unpiloted), the HPE42-S50 allows flow between ports 3 and 2 bidirectionally while port 4 is blocked. On remote pilot signal at 1, the valve's spool shifts proportionally to the applied pilot pressure to gradually close ports 3 to 2 while gradually opening ports 3 and 4. The spring chamber is vented to the tank through port 5. Pressure at port 5 will directly (1:1) affect the pilot pressure required and must be added to the bias spring value.

## FEATURES

- Hardened spool and cage for long life.
- All HyPerformance™ products are tested to the rigorous standards of the NFPA specification T2.6.1.
- All HyPerformance™ valves 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:** 690 bar (10000 psi)  
**Burst Pressure:** 1380 bar (20000 psi)

**Flow Rating:** 170 lpm (45 gpm)

**Maximum Internal Leakage:** 350 bar (5075 psi) at 32 cSt.  
 HPE42-S50: 250 ml/min. (15 cu.in./min.)  
 HPE42-S50N: 410 ml/min. (25 cu.in./min.)

**Operating Temperature:** -54° to 107°C (-65° to 225°F) with PPD1 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

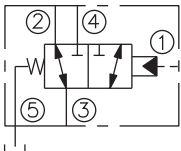
**Cavity:** HVC42-S5; See page 9.142.1

**Cavity Tool:** HCT42-S5XX; See page 8.600.1

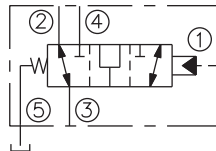
**Seal Kit:** HSK42-S5U-0000 (Urethane); See page 8.650.1

## SYMBOLS

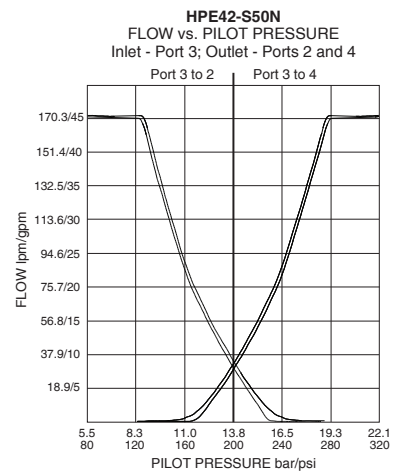
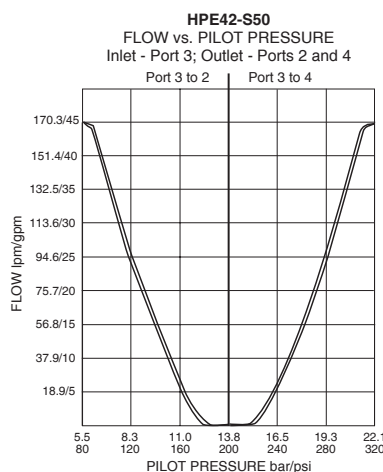
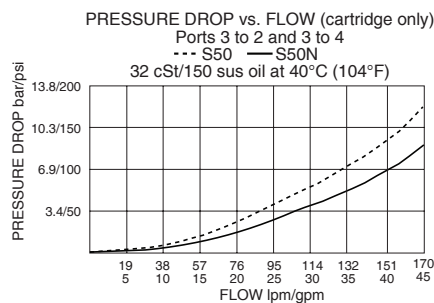
### ISO:



### TRANSITION:



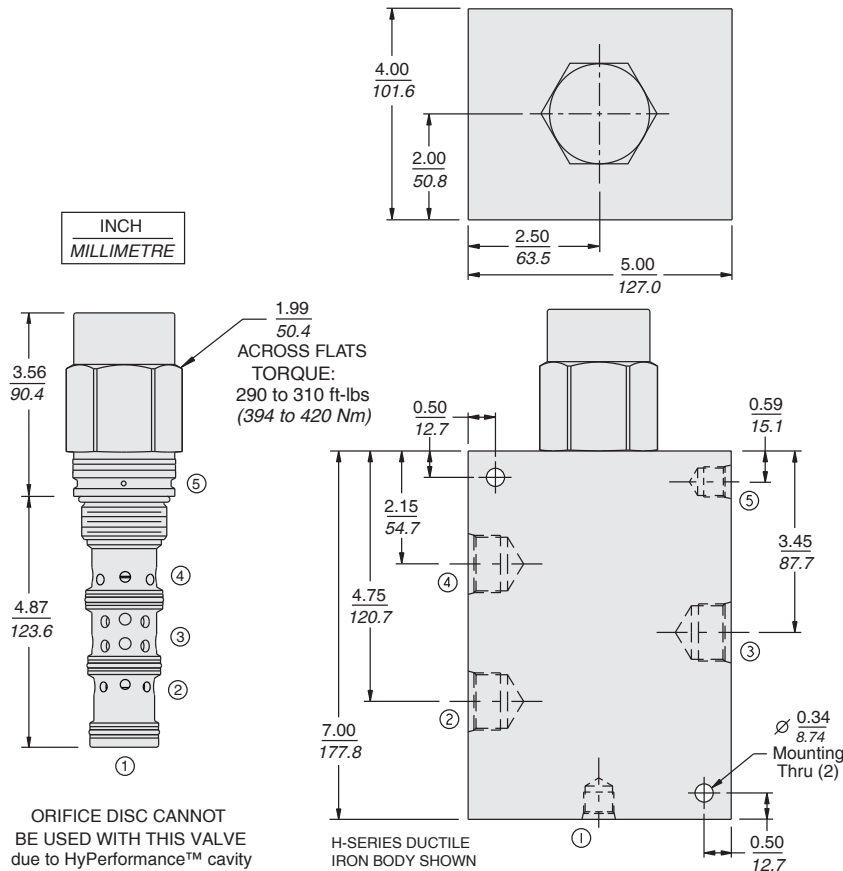
## PERFORMANCE (Cartridge Only)



# 3-Way Spool

# HPE42-S50

## DIMENSIONS

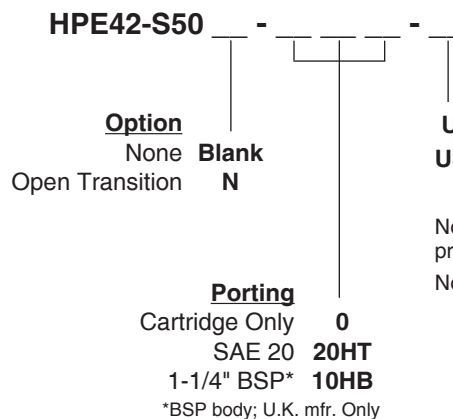


## MATERIALS

**Cartridge:** Weight: 2.0 kg. (4.4 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.  
PPDI Urethane seals without back-up rings standard.

**Ported Body:** Weight: 14.12 kg (31.14 lbs)  
H-series ductile iron standard. Rated to 345 bar (5000 psi).  
See page 8.042.1

## TO ORDER



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

Note: Consult factory for additional seal options.