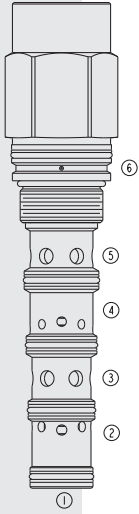
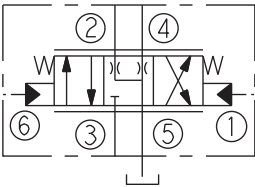


# HPE42-S67H HyPerformance™ Proportional,

U.S. Patent  
6,554,014



## ISO SYMBOL



## DESCRIPTION

A high pressure, screw-in, cartridge-style, proportional, spring-centered, pilot-operated spool-type hydraulic directional valve with neutral position bleed-to-tank.

## OPERATION

When the **HPE42-S67H** is in neutral position inlet port 3 is blocked and ports 2, 4, and 5 are communicating with each other. On remote pilot signal at 1 the spool shifts proportionally to the applied pilot pressure to allow flow from 3 to 4 through a load such as a hydraulic cylinder or motor, and then from 2 to 5, and to tank. Port 5 is to be used as tank port only with maximum pressure of 69 bar (1000 psi). On remote pilot signal at port 6, the spool shifts proportionally to the applied force in the opposite direction, thus reversing the flow direction.

**The spool is symmetrical and provides meter-in and meter-out control.**

## FEATURES

- Hardened spool and cage for long life.
- Cost-effective cavity.
- Excellent metering characteristics.
- Good linearity.
- 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

**Maximum Operating Pressure:** Ports 2, 3, 4 (work): 350 bar (5075 psi)  
(10% life cycle) 420 bar (6090 psi); Ports 1 and 6 (pilot): 35 bar (500 psi);  
Port 5 (tank): 69 bar (1000 psi)

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

**Internal Leakage:** 1310 ml/minute (80 cu. in./minute) at 350 bar (5075 psi)

**Temperature:** -54°C to 107°C (-65°F 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

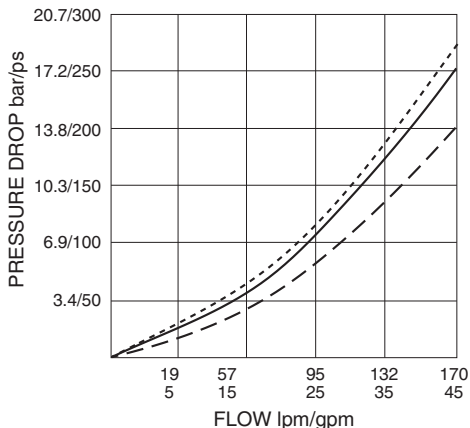
**Cavity:** HVC42-S6, Variation A; See page 9.142.1

**Cavity Tool:** HCT42-S6; See page 8.600.1

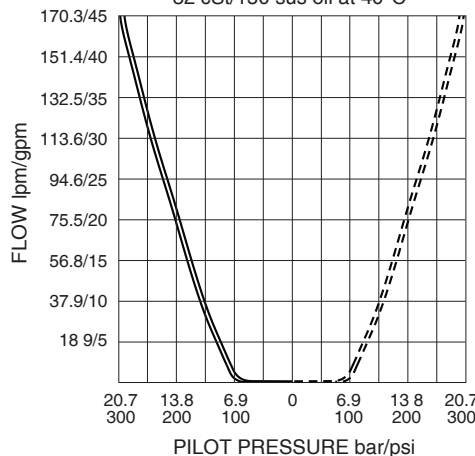
**Seal Kit:** HSK42-S6U-0000; See page 8.650.1

## PERFORMANCE (Cartridge Only)

Pressure Drop vs. Flow (Piloted)  
2 to 5 - - - -; 3 to 4 - - - -  
3 to 2 and 4 to 5 ———  
32 cSt/150 sus oil at 40°C



Flow vs. Pilot Pressure  
3 to 4, Port 1 Pilot ———  
3 to 2, Port 6 Pilot - - - -  
32 cSt/150 sus oil at 40°C

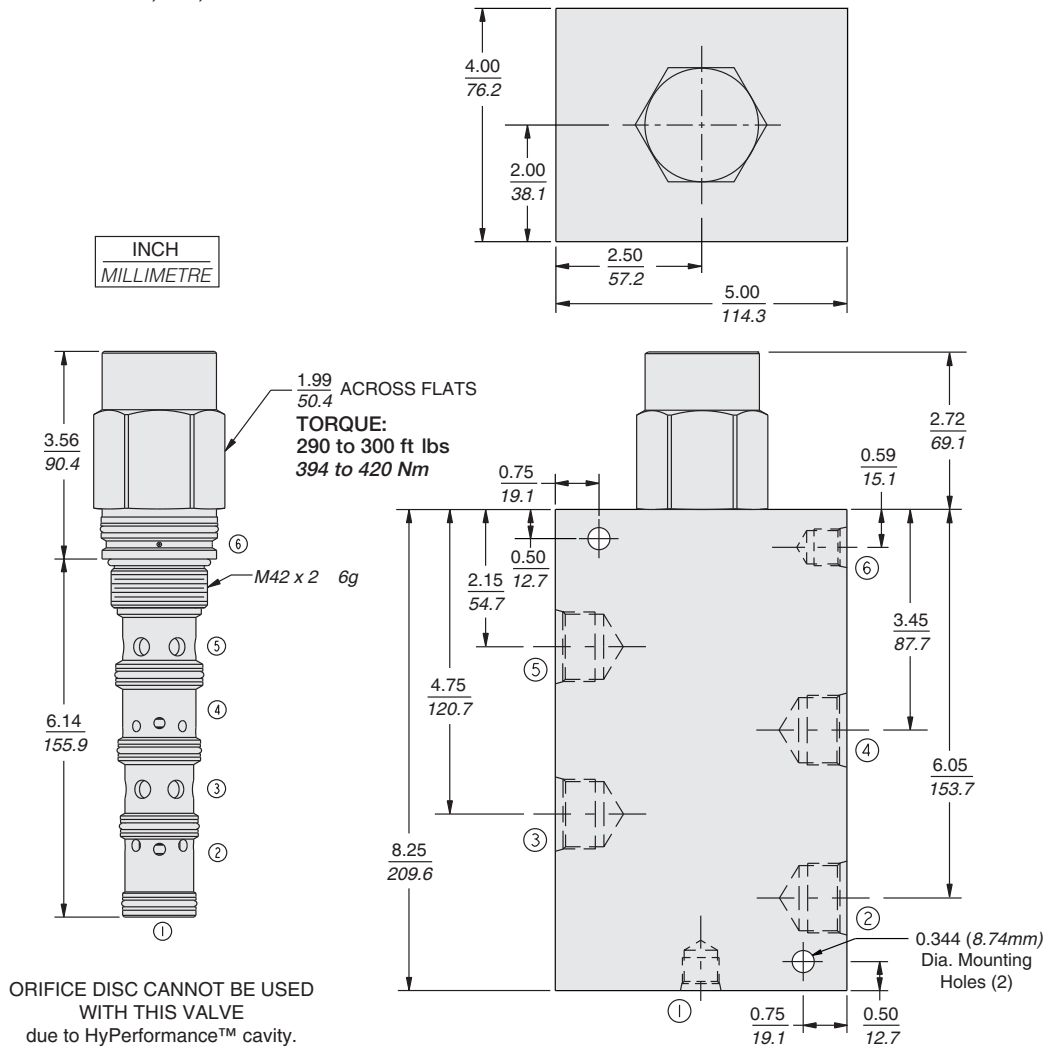


# Pilot Operated

# HPE42-S67H

## DIMENSIONS

U.S. Patent 6,554,014



## MATERIALS

**Cartridge:** Weight: 2.0 kg. (4.5 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.  
Urethane seals without back-up rings standard.

**Ported Body:** Weight: 16.61 kg.  
(36.62 lbs.) HyPerformance ductile iron (code 'D') standard. Rated to 345 bar (5000 psi). See page 8.042.1

## TO ORDER

**HPE42-S67H - -**

<b>Porting</b>	
Cartridge Only	<b>0</b>
SAE 12	<b>12TD</b>
SAE 16	<b>16TD</b>
SAE 20	<b>20TD</b>
*3/4 in. BSP	<b>6BD</b>
*1 in. BSP	<b>8BD</b>
*1-1/4 in. BSP	<b>10BD</b>
*BSP Body; U.K. Mfr. Only	

### Seals

**\*U** PPDI Urethane (standard)  
\*Urethane seals recommended for operating pressures above 241 bar (5000 psi).  
*NOTE: Consult factory for additional seal options.*