HEP42-S38  HyPerformance™ Piloted Poppet-Type

DESCRIPTION
A high-pressure poppet-type, screw-in, cartridge-style, spring-biased, bi-directional blocking-type hydraulic directional element with multi-function potential when used with other directional, pressure, or flow control devices.

OPERATION
The HEP42-S38 is a spring-biased poppet valve which will block 1 to 2 or 2 to 1 until pressure at 1 or 2 exceeds the cumulative pressure at 3 and bias spring. With no pressure at 3, flow will be allowed from 1 to 2 or 2 to 1 once the bias spring force is overcome with pressure at 1 or 2. When the element is in the closed state, the ratio of areas 1 and 2 is 1:1, and the ratio of areas 1 or 2 to 3 is 1:2.

FEATURES
• Multiple function/application potential.
• Low pressure drop.
• 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.
Fatigue Rating: 2 million cycles at 420 bar (6090 psi)
Proof Pressure: 690 bar (10,000 psi)
Burst Pressure: 1380 bar (20000 psi)
Flow: Up to 284 lpm (75 gpm)
Internal Leakage: 12 drops/minute max. at 350 bar (5075 psi)
Operating Temperature: -54 to 107°C (-65 to 225°F) with Urethane seals Ambient Temperature: -40 to 90°C (-40 to 194°F)
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-S3; See page 9.142.1
Cavity Tool: HCT42-S3XX; See page 8.600.1
Seal Kit: SK42-S3U-OO with Urethane seals; See page 8.650.1
**Logic Element**

**HEP42-S38**

### Dimensions

**Cartridge:** Weight: 1.04 kg. (2.30 lbs.)
Steel with hardened work surfaces.
Zinc-nickel plated exposed surfaces.
PPDI Urethane seals with no back-up rings standard.

**Ported Body:** Weight: 10.68 kg. (23.56 lbs.); H-series ductile iron standard. Rated to 345 bar (5000 psi). See page 8.042.1.

**Torque:**
290 to 300 ft-lbs
394 to 420 Nm

**Materials**

**Orifice Discs Cannot Be Used with this Valve due to HyPerformance™ Cavity.**

### To Order

**HEP42-S38**

**Porting**
- Cartridge Only: 0
- SAE 20 Ductile Iron: 20HT
- 1-1/4" BSP Ductile Iron*: 10HB

**Bias Spring Value**
- 40: 2.8 bar (40 psi)
- 80: 5.5 bar (80 psi)
- 160: 11.0 bar (160 psi)

**Seals**
- U: PPDI Urethane — Recommended for pressures above 241 bar (3500 psi)

**NOTE:** Consult factory for additional seal options.