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

**OPERATION**
The EP10-S38 is a spring-biased poppet valve which will block ➀ to ➁ or ➁ to ➀ until pressure at ➀ or ➁ exceeds the cumulative pressure at ➂ and bias spring. With no pressure at ➂, flow will be allowed from ➀ to ➁ or ➁ to ➀ once the bias spring force is overcome with pressure at ➀ or ➁. When the element is in closed state, the ratio of areas ➀ and ➁ is 1:1, and the ratio of areas ➀ or ➁ to ➂ is 1:2.

**FEATURES**
- Multiple function/application potential.
- Low pressure drop.
- Industry common cavity.

**RATINGS**
- **Operating Pressure:** 350 bar (5000 psi) cartridge; 207 bar (3000 psi) standard aluminum housing
- **Flow:** See Performance Chart
- **Internal Leakage:** 0.2 cc/minute (.01 cu. in./minute) max. at 240 bar (3500 psi)
- **Bias Spring Pressure:** 11.0 bar (160 psi)
- **Temperature:** -40 to 120°C with standard Buna 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:** VC10-S3; See page 9.110.1
- **Cavity Tool:** CT10-S3xx; See page 8.600.1
- **Seal Kit:** SK10-S3x-MM; See page 8.650.1

**PERFORMANCE** (Cartridge Only)

![Performance Chart]

- ➀ to ➁ or ➁ to ➀ (fully open)
- 32 cSt/150 ssu oil at 40°C

**SYMBOLS**

**USASI/ISO:**

- ➀
- ➁
- ➂

**PERFORMANCE** (Cartridge Only)

- **FLOW lpm/gpm**
- **PRESSURE DROP bar/psi**
  - 8.3/120
  - 5.5/80
  - 2.8/40

**FLOW lpm/gpm**
- 18.9
- 37.9
- 56.8
- 75.8
- 94.4
- 113.6

**PRESSURE DROP bar/psi**
- 5
- 10
- 15
- 20
- 25
- 30

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DIMENSIONS

Cartridge: Weight: 0.15 kg. (0.32 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight:
0.32 kg. (0.70 lbs.) Anodized high-strength 6061 T6 aluminum alloy,
rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ; see page 8.010.1

MATERIALS TO ORDER

EP10-S38 - __ __ __ - __ - __ __

Bias Spring
80 5.52 bar (80 psi)
160 11.0 bar (160 psi)

Porting
Cartridge Only 0
SAE 8* 8T
SAE 10* 10T
SAE 12* 12T
*SAE 6 pilot port

Seals
N Buna N (Std.)
V Fluorocarbon
P Polyurethane (for pressures over 240 bar/3500 psi)

TORQUE: 25 ft-lbs (33.9 Nm) max.

ORIFICE DISCS SHOULD NOT BE USED WITH THIS PRODUCT

Blue rectangles are links to other catalog pages.