**DESCRIPTION**
A spool-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-S35 is a spring-biased blocking valve which will shift to allow full flow from 1 to 2 only when pressure at 1 exceeds the cumulative pressure of 3, plus the bias spring pressure value.
EP10-S35 is a pilot-to-close directional valve.
With no pressure at 3, flow will be allowed from 1 to 2 once the bias spring force is overcome with pressure at 1.

**FEATURES**
- Multiple function/application potential.
- Low pressure drop.
- Range of bias spring pressure options. Tall cap required for 160, M11, 230, and M15.9 spring options.
- Industry common cavity.

**RATINGS**
**Operating Pressure:** 345 bar (5000 psi) cartridge; 207 bar (3000 psi) standard aluminum housing; 345 bar (5000 psi) ductile iron housing.

**Flow Rating:** See Performance Chart

**Internal Leakage:** 164 ml/minute (10 cu. in./minute) max. at 207 bar (3000 psi)

**Temperature:** -54 to 107°C (-65 to 225°F) with standard polyurethane 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-P; See page 8.650.1

**PERFORMANCE (Cartridge Only)**

**PRESSURE DROP vs. FLOW**
1 to 2 (fully open)
32 cSt/150 sus oil at 40°C (104°F)

**PRESSURE vs. FLOW**
1 to 2 (Port 3 vented)
32 cSt/150 sus oil at 40°C (104°F)

**Data**
- **PRESSURE DROP bar/psi**
- **FLOW lpm/gpm**
**DIMENSIONS**

- **Cartridge**: Weight: 0.14 kg (0.31 lbs); with tall cap option 0.27 kg (0.60 lb). 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 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron (8TD) bodies are available for pressures up to 350 bar (5000 psi); Weight and dimensions may differ. See page 8.010.1.

**MATERIALS**

- **Cartridge**: Weight: 0.14 kg, (0.31 lbs.); with tall cap option 0.27 kg, (0.60 lb.) 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 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron (8TD) bodies are available for pressures up to 350 bar (5000 psi); Weight and dimensions may differ. See page 8.010.1.

**TO ORDER**

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<th>EP10-S35</th>
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<tr>
<td><strong>Option</strong></td>
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<tr>
<td><strong>Porting</strong></td>
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<td>SAE 8*</td>
<td>8T</td>
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<td>12T</td>
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<td>*</td>
<td>SAE 6 pilot port</td>
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Ductile iron (8TD) bodies are available for pressures up to 350 bar (5000 psi).

**Bias Spring**

- 10 0.7 bar (10 psi)
- 40 2.8 bar (40 psi)
- 80 5.52 bar (80 psi)
- 110 7.6 bar (110 psi)
- 160 11.0 bar (160 psi)
- M11 11.0 bar (160 psi)
- 230 15.9 bar (230 psi)
- M15.9 15.9 bar (230 psi)

**Seals**

- P Polyurethane

Note: Polyurethane seals required for pressures over 241 bar (3500 psi). Consult factory for additional seal options.