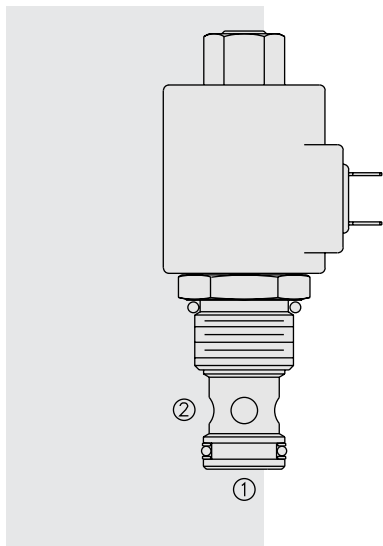


# SV12-29 Poppet, 2-Way, N.O., Bi-Directional Blocking



## DESCRIPTION

A solenoid-operated, two-way, normally open, internally piloted, poppet-type, bi-directional blocking, screw-in hydraulic cartridge valve, designed for low leakage in load-holding applications.

## OPERATION

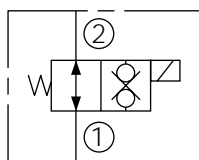
When de-energized, the **SV12-29** allows flow in both directions. When energized, the valve's poppet closes on its seat, blocking flow from ② to ① or ① to ②.

## FEATURES

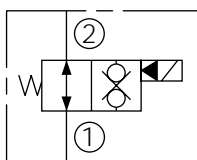
- Continuous-duty rated coil.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Manual Override option.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Hardened seat for long life and low leakage.
- Unitized, molded coil design.
- Cost-effective cavity.

## SYMBOLS

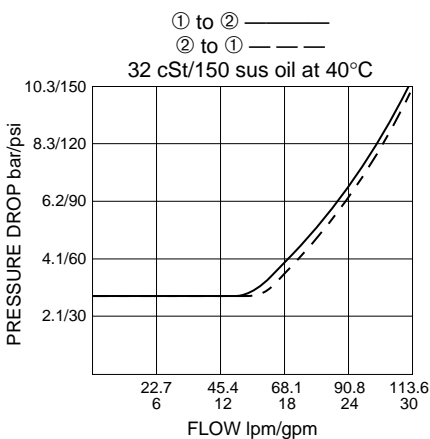
### USASI:



### ISO:



## PERFORMANCE (Cartridge Only)



## RATINGS

**Operating Pressure:** 240 bar (3500 psi)

**Flow:** 113.6 lpm (30 gpm)

**Internal Leakage:** 7 drops per minute maximum at 240 bar (3500 psi)

**Temperature:** -40 to 120°C with standard Buna seals

**Coil Duty Rating:** Continuous from 85% to 115% of nominal voltage

**Response Time:** First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 60 msec.; De-energized: 15 msec.

**Initial Coil Current Draw at 20°C:** Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).

E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC

**Minimum Pull-in Voltage:** 85% of nominal at 240 bar (3500 psi)

**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:** VC12-2; See page 9.112.1

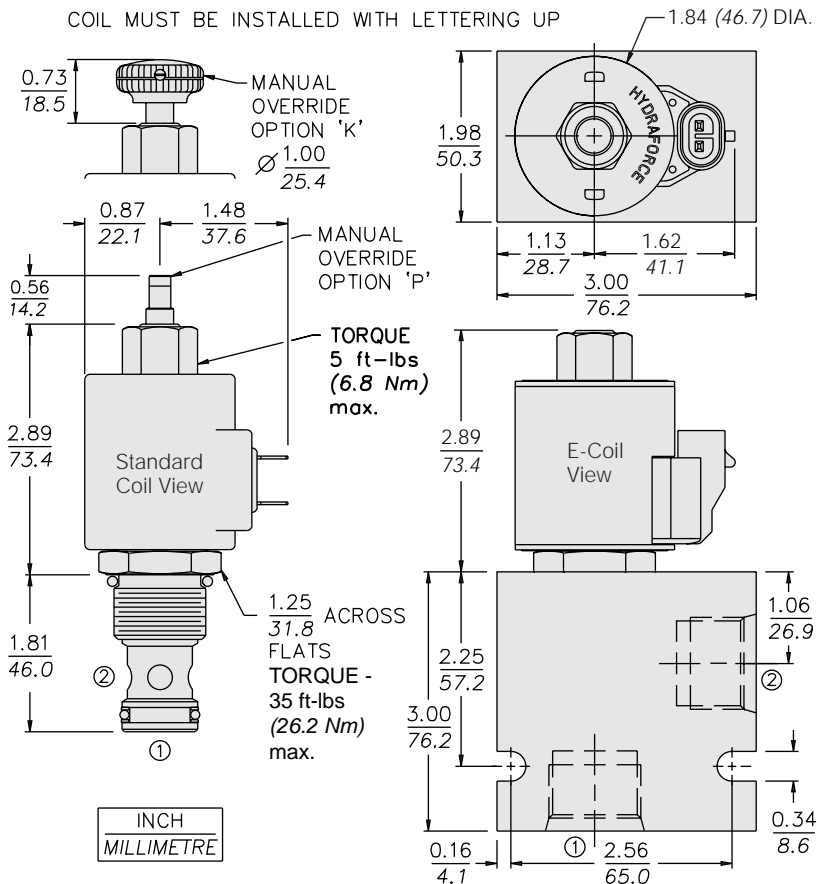
**Cavity Tool:** CT12-2XX; See page 8.600.1

**Seal Kit:** SK12-2X-M; See page 8.650.1

**Coil Nut:** Part No. 7004420

For E-Coils manufactured prior to 1-1-04, see page 3.400.1 for coil nut info.

**DIMENSIONS**



**MATERIALS**

**Cartridge:** Weight: 0.25 kg. (0.55 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.

**Standard Ported Body:** Weight: 0.57 kg. (1.25 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.012.1

**Standard Coil:** Weight: 0.27 kg. (0.60 lbs.) Unitized thermoplastic encapsulated, Class H high temperature magnetwire. See page 3.200.1

**E-Coil:** Weight: 0.41 kg. (0.9 lbs.); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

**Note:** See page 3.400.1 for all E-Coil retrofit applications.

**TO ORDER**

**SV12-29**

- Option
- None (Blank)
- Manual Override without knob **P**
- Manual Override with knob **K**
- For Manual Override options see page 1.001.1
- Porting
- Cartridge Only **0**
- SAE 10 **10T**
- SAE 12 **12T**
- SAE 16 **16T**
- 3/4 in. BSP\* **6B**
- 1 in. BSP\* **8B**
- \*BSP Body; U.K. Mfr. Only
- Seals
- Buna N (Std.) **N**
- Fluorocarbon **V**

- Voltage
- Std. Coil
- 0** Less Coil\*\*
- 10** 10 VDC<sup>†</sup>
- 12** 12 VDC
- 24** 24 VDC
- 36** 36 VDC
- 48** 48 VDC
- 24** 24 VAC
- 115** 115 VAC
- 230** 230 VAC
- \*\*Includes Std. Coil Nut
- <sup>†</sup> DS, DW or DL terminations only.
- E-Coil
- 10** 10 VDC
- 12** 12 VDC
- 20** 20 VDC
- 24** 24 VDC

- Termination (VDC) Std. Coil
- DS** Dual Spades
- DG** DIN 43650
- DL** Leadwires (2)
- DL/W** Leads w/Weatherpak® Connectors
- DR** Deutsch DT04-2P
- Termination (VAC) Std. Coil
- AG** DIN 43650
- AP** 1/2 in. Conduit
- Termination (VDC) E-Coil
- ER** Deutsch DT04-2P (IP69K Rated)
- EY** Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.