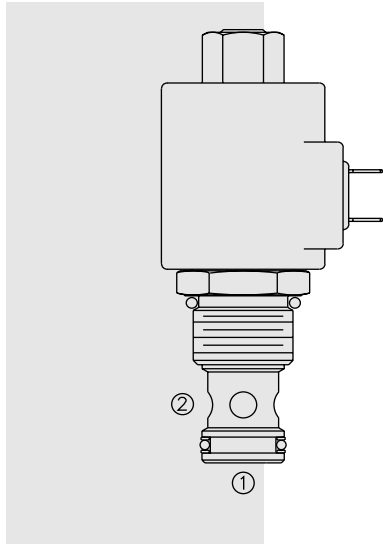


# SOLENOID VALVES

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



### DESCRIPTION

A solenoid-operated, 2-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.

### 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: 2.0 amps at 12 VDC; 1.0 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 ssu)

**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

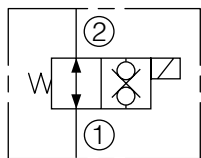
**Seal Kit:** SK12-2X-M; See page 8.650.1

**Coil Nut:** Part No. 7004420

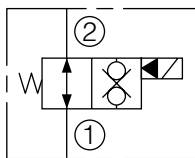
For E-Coils manufactured prior to 1-1-04, see page 3.400.1 for coil nut info.

### SYMBOLS

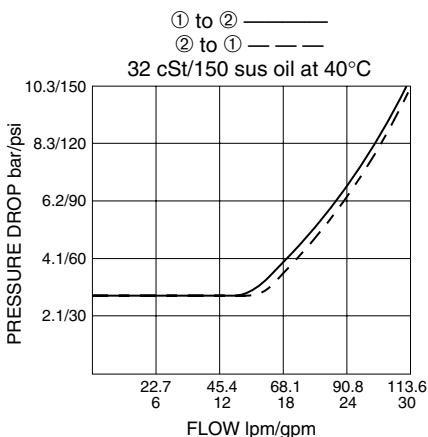
#### USASI:



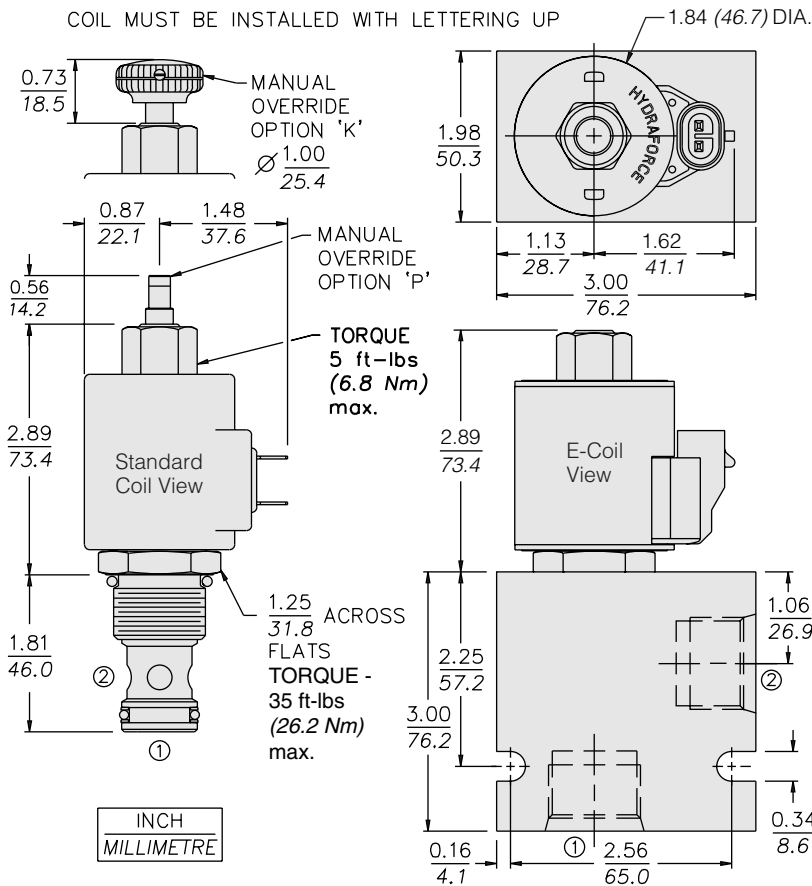
#### ISO:



### PERFORMANCE (Cartridge Only)



**DIMENSIONS**



**MATERIALS**

**Cartridge:** Weight: 0.27 kg. (0.60 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 240 bar (3500 psi); See page 8.012.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

**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**

|                              |            |                      |  |  |
|------------------------------|------------|----------------------|--|--|
| <b>Options</b>               |            | <b>Voltage</b>       |  | <b>Termination (VDC)</b>                   |
| None (Blank)                 |            | <b>Std. Coil</b>     |  | <b>Std. Coil</b>                           |
| Manual Override without Knob | <b>P</b>   | <b>0</b> Less Coil** |  | <b>DS</b> Dual Spades                      |
| Manual Override with Knob    | <b>K</b>   | <b>10</b> 10 VDC†    |  | <b>DG</b> DIN 43650                        |
|                              |            | <b>12</b> 12 VDC     |  | <b>DL</b> Leadwires (2)                    |
|                              |            | <b>24</b> 24 VDC     |  | <b>DL/W</b> Leads w/Weatherpak® Connectors |
|                              |            | <b>36</b> 36 VDC     |  | <b>DR</b> Deutsch DT04-2P                  |
|                              |            | <b>48</b> 48 VDC     |  |  |
| <b>Porting</b>               |            | <b>24</b> 24 VAC     |  | <b>Termination (VAC)</b>                   |
| Cartridge Only               | <b>0</b>   | <b>115</b> 115 VAC   |  | <b>Std. Coil</b>                           |
| SAE 10                       | <b>10T</b> | <b>230</b> 230 VAC   |  | <b>AG</b> DIN 43650                        |
| SAE 12                       | <b>12T</b> |                      |  | <b>AP</b> 1/2 in. Conduit                  |
| SAE 16                       | <b>16T</b> |                      |  |  |
| 3/4 in. BSP*                 | <b>6B</b>  |                      |  | <b>Termination (VDC)</b>                   |
| 1 in. BSP*                   | <b>8B</b>  |                      |  | <b>E-Coil</b>                              |
|                              |            | <b>E-Coil</b>        |  | <b>ER</b> Deutsch DT04-2P (IP69K Rated)    |
| *BSP Body; U.K. Mfrs. Only   |            | <b>10</b> 10 VDC     |  | <b>EY</b> Metri-Pack® 150 (IP69K Rated)    |
| <b>Seals</b>                 |            | <b>12</b> 12 VDC     |  |  |
| Buna N (Std.)                | <b>N</b>   | <b>20</b> 20 VDC     |  |  |
| Fluorocarbon                 | <b>V</b>   | <b>24</b> 24 VDC     |  |  |

\*\*Includes Std. Coil Nut  
† DS, DW or DL terminations only

Coils with internal diode are available. Consult factory.