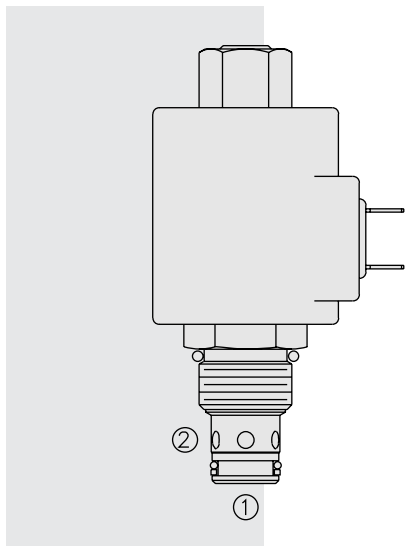


# SV10-21 Poppet, 2-Way, Normally Open



## DESCRIPTION

A solenoid-operated, 2-way, piloted, poppet-type, normally open, screw-in, hydraulic cartridge valve designed for low leakage in load-holding applications.

## OPERATION

When de-energized, the **SV10-21** allows flow from ② to ①. Flow from ① to ② is severely restricted in this mode. If the ① to ② path is required, see model SV10-23, page 1.053.1.

When energized, the valve's poppet closes on its seat, blocking flow in the ② to ① direction. In this mode the cartridge will allow ① to ② flow after overcoming the solenoid force (requires 3.4 to 10.3 bar / 50 to 150 psi).

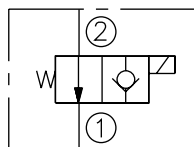
**Operation of Manual Override Option:** To override, push and hold override button.

## FEATURES

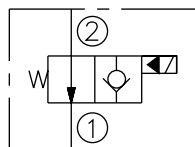
- Continuous duty-rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Industry common cavity.
- Manual override option.
- Optional waterproof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

## SYMBOLS

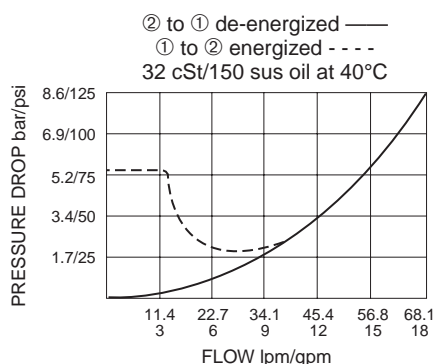
### USASI:



### ISO:



## PERFORMANCE (Cartridge Only)



## RATINGS

**Operating Pressure:** 207 bar (3000 psi)

**Proof Pressure:** 345 bar (5000 psi)

**Flow:** See Performance Chart

**Internal Leakage:** 0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 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: 80 msec.; De-energized: 30 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 207 bar (3000 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:** VC10-2; See page 9.110.1

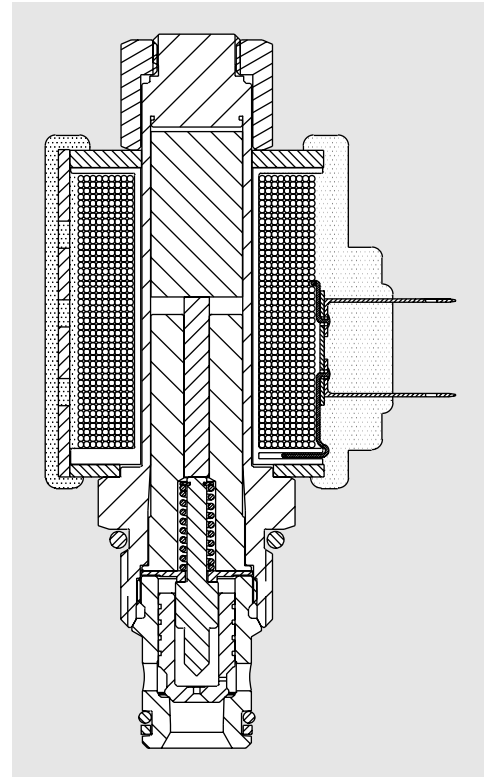
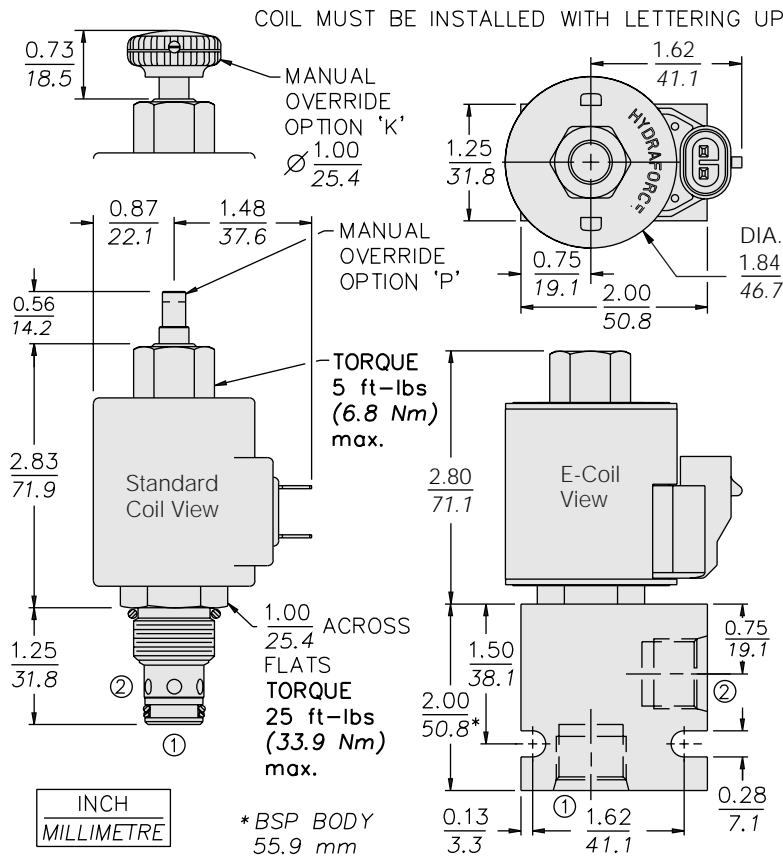
**Cavity Tool:** CT10-2XX; See page 8.600.1

**Seal Kit:** SK10-2X-T; 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: 0.16 kg. (0.35 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.

**Standard Ported Body:** Weight: 0.16 kg. (0.35 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

**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**

<b>SV10-21</b> - - - -			
<b>Option</b>		<b>Voltage</b>	<b>Termination (VDC)</b>
None (Blank)		<b>Std. Coil</b>	<b>Std. Coil</b>
152 $\mu$ Screen <b>S</b>		<b>0</b> Less Coil**	<b>DS</b> Dual Spades
Manual Override without knob <b>P</b>		<b>10</b> 10 VDC <sup>†</sup>	<b>DG</b> DIN 43650
Manual Override with knob <b>K</b>		<b>12</b> 12 VDC	<b>DL</b> Leadwires (2)
For Manual Override options see page 1.001.1		<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 6 <b>6T</b>		<b>230</b> 230 VAC	<b>AG</b> DIN 43650
SAE 8 <b>8T</b>			<b>AP</b> 1/2 in. Conduit
1/4 in. BSP* <b>2B</b>			<b>Termination (VDC)</b>
3/8 in. BSP* <b>3B</b>			<b>E-Coil</b>
1/2 in. BSP* <b>4B</b>			<b>ER</b> Deutsch DT04-2P (IP69K Rated)
*BSP Body; U.K. Mfr. Only		<b>E-Coil</b>	<b>EY</b> Metri-Pack® 150 (IP69K Rated)
<b>Seals</b>		<b>10</b> 10 VDC	
Buna N (Std.) <b>N</b>		<b>12</b> 12 VDC	
Fluorocarbon <b>V</b>		<b>20</b> 20 VDC	
		<b>24</b> 24 VDC	

\*\*Includes Std. Coil Nut

<sup>†</sup> DS, DW or DL terminations only.

Coils with internal diode are available. Consult factory.