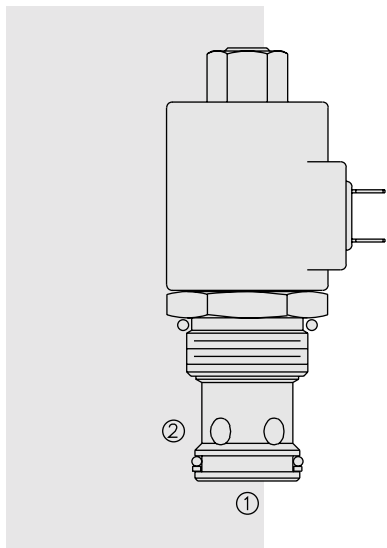


# SOLENOID VALVES

## SV16-21 Poppet, 2-Way, Normally Open



### DESCRIPTION

A solenoid-operated, 2-way, normally open, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load-holding or blocking valve in applications requiring low internal leakage.

### OPERATION

When de-energized, the **SV16-21** poppet lifts to open the ② to ① flow path. In this mode, flow from ① to ② is severely restricted. If this path is required, see model SV16-23, page 1.055.1.

When energized, the ② to ① flow path is closed. In this mode, the valve acts as a check valve, allowing flow to pass from ① to ② after overcoming the solenoid force (requires 3.4 to 10.3 bar [50 to 500 psi]).

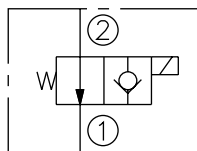
**Operation of Manual Override Option:** To override, push and hold override button.

### FEATURES

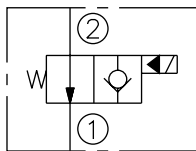
- Continuous duty-rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Industry common cavity.
- Manual override option.
- Optional waterproof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

### SYMBOLS

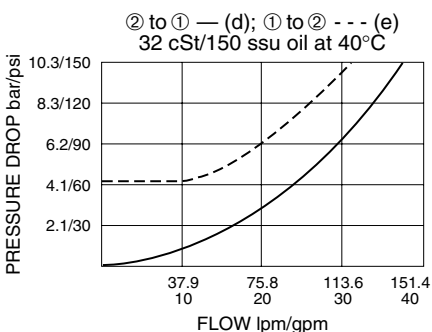
#### USASI:



#### ISO:



### PERFORMANCE (Cartridge Only)



### RATINGS

**Operating Pressure:** 207 bar (3000 psi); Under certain operating conditions, this valve may be used at higher pressures; consult factory.

**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

**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 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 ssu)

**Installation:** No restrictions; See page 9.020.1

**Cavity:** VC16-2; See page 9.116.1

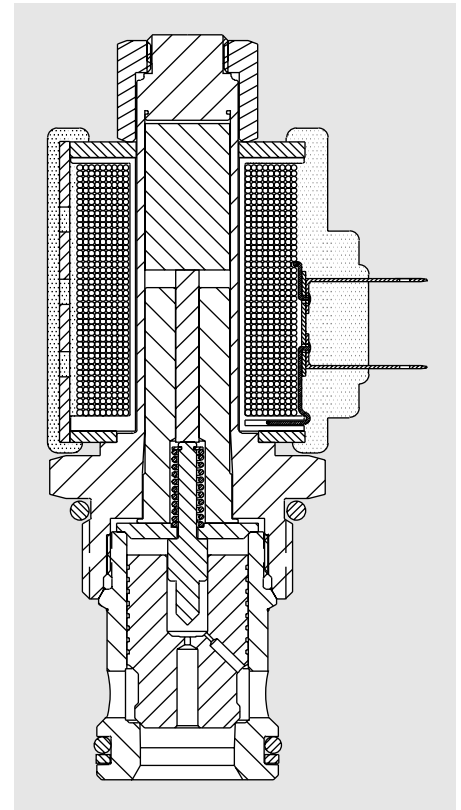
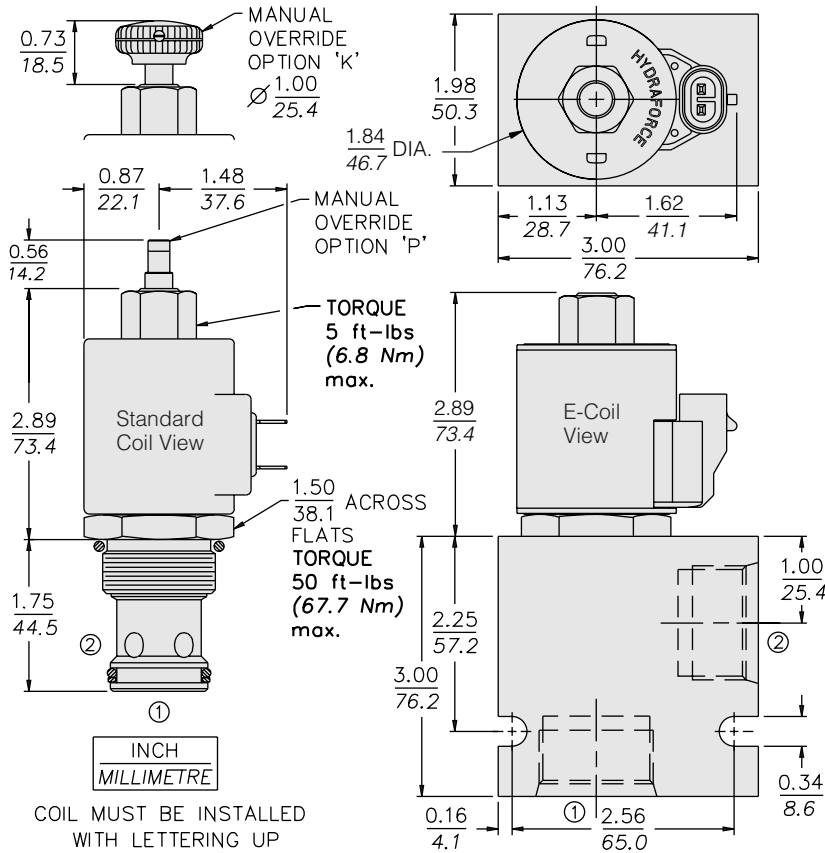
**Cavity Tool:** CT16-2XX; See page 8.600.1

**Seal Kit:** SK16-2X-T; See page 8.650.1

**Coil Nut:** Part No. 7004400;

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

**DIMENSIONS**



**MATERIALS**

**Cartridge:** Weight: 0.31 kg. (0.69 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 8.016.1. 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**

**SV16-21**

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

\*\*Includes Std. Coil Nut

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

Coils with internal diode are available. Consult factory.