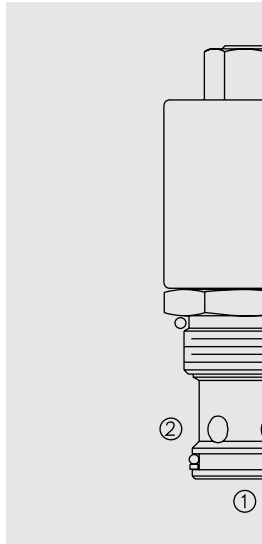


# SOLENOID VALVES

## SV16-23 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 **SV16-23** poppet lifts to open the ② to ① flow path. In this mode, flow from ① to ② is also allowed.

When energized, the cartridge acts as a check valve, allowing flow to pass from ① to ②, while blocking flow in the reverse direction after overcoming the solenoid force (requires 3.4 to 10.3 bar [50 to 150 psi]).

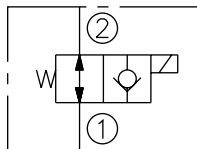
**Operation of Manual Override Option:** To override, push and hold override button.

### FEATURES

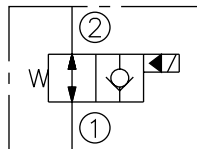
- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil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

### SYMBOLS

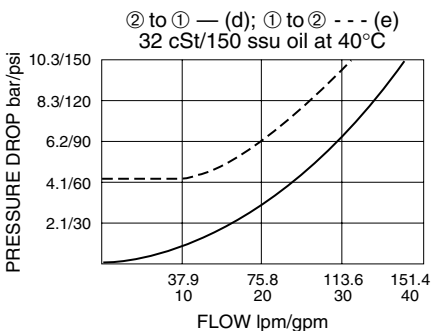
#### USASI:



#### 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:** 390 bar (5700 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

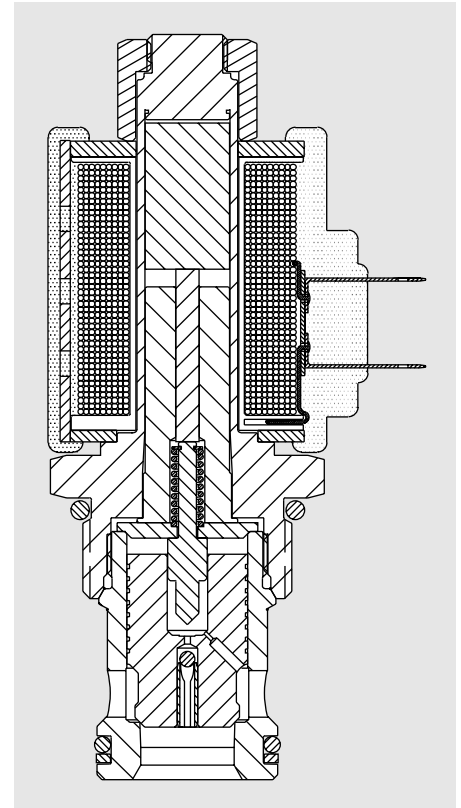
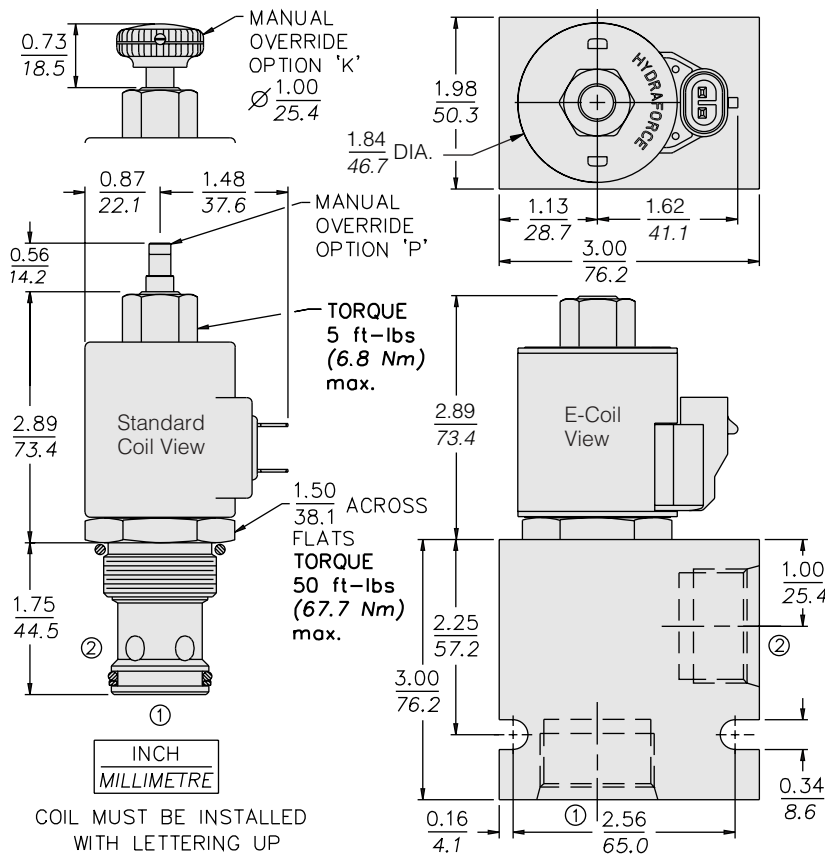
**Seal Kit:** SK16-2X-T; See page 8.650.1

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

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

# SV16-23

## 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

<b>SV16-23</b>		-	-	-	-	-
<b>Option</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 <sup>†</sup>		<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 12	<b>12T</b>	<b>230</b> 230 VAC		<b>AG</b> DIN 43650		
SAE 16	<b>16T</b>			<b>AP</b> 1/2 in. Conduit		
3/4 in. BSP*	<b>6B</b>			<b>Termination (VDC)</b>		
1 in. BSP*	<b>8B</b>			<b>E-Coil</b>		
*BSP Body; U.K. Mfr. Only				<b>ER</b> Deutsch DT04-2P (IP69K Rated)		
<b>Seals</b>		<b>E-Coil</b>		<b>EY</b> Metri-Pack® 150 (IP69K Rated)		
Buna N (Std.)	<b>N</b>	<b>10</b> 10 VDC				
Fluorocarbon	<b>V</b>	<b>12</b> 12 VDC				
		<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.