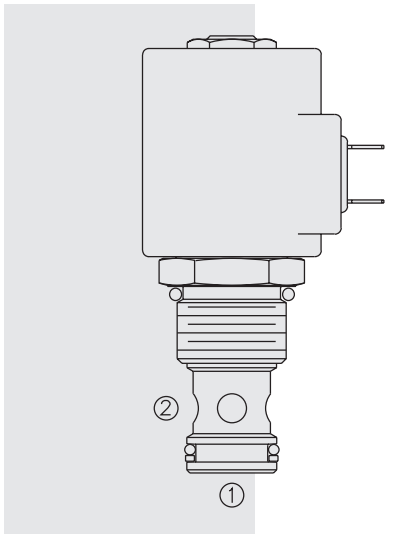


# SOLENOID VALVES

## SV12-20 Poppet, 2-Way, Normally Closed



### DESCRIPTION

A solenoid-operated, 2-way, normally closed, 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 **SV12-20** acts as a check valve, allowing flow to pass from ① to ②, while blocking flow in the reverse direction.

When energized, the 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 SV12-22, page 1.045.1.

**Operation of Manual Override Option:** To override, push button in, twist counter-clockwise 180° and release. In this position, the valve will remain open.

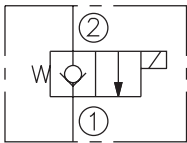
To return to normal operation, push button in, twist clockwise 180° and release. Override will be detented in this position.

### FEATURES

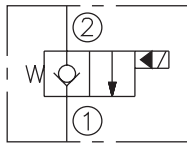
- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil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

### SYMBOLS

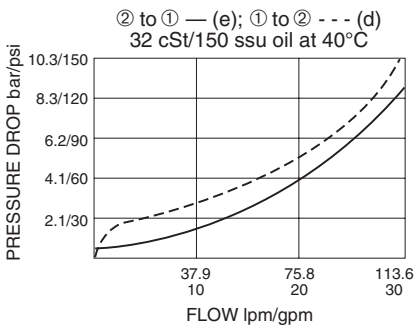
#### USASI:



#### ISO:



### PERFORMANCE (Cartridge Only)



### RATINGS

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

**Proof Pressure:** 390 bar (5700 psi)

**Flow:** See Performance Chart

**Internal Leakage:** 0.15 cc/minute (3 drops/minute) max. 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: 40 msec.; De-energized: 80 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 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:** VC12-2; See page 9.112.1

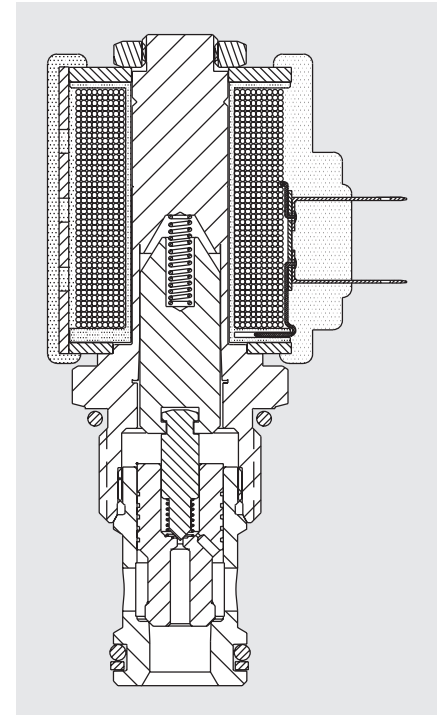
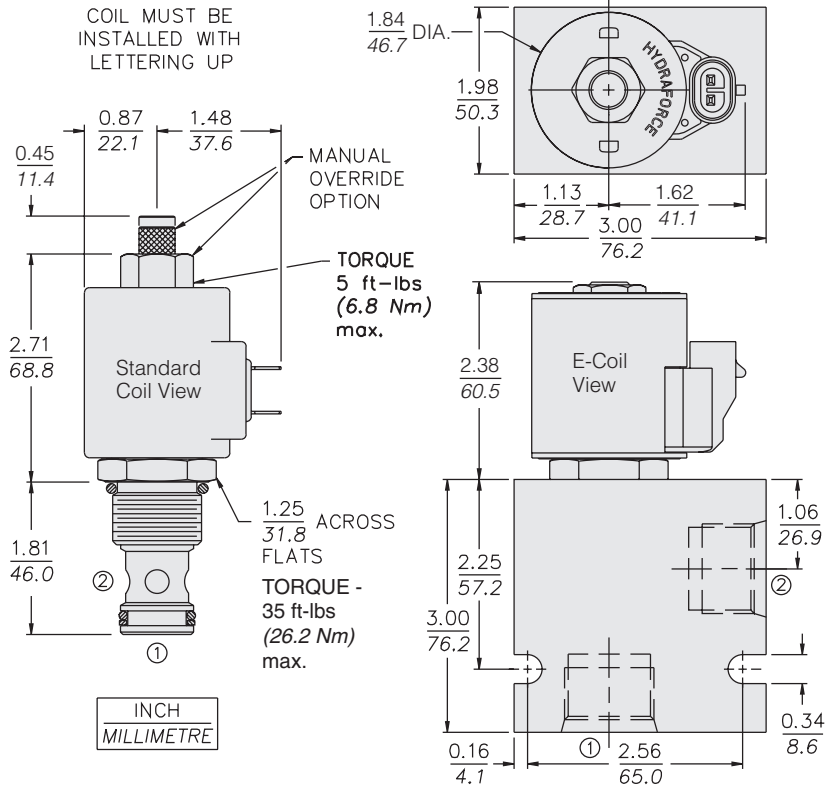
**Cavity Tool:** CT12-2XX; See page 8.600.1

**Seal Kit:** SK12-2X-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: 0.25 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 240 bar (3500 psi); See page 8.012.1. Ductile iron and steel bodies available; 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>SV12-20</b>		-	-	-	-	-
<b>Options</b>	None (Blank)					
Manual Override	<b>M</b>					
Manual Override	<b>Y</b>					
Manual Override	<b>J</b>					
For Manual Override options see page 1.001.1						
<b>Porting</b>	Cartridge Only	<b>0</b>				
	SAE 10	<b>10T</b>				
	SAE 12	<b>12T</b>				
	SAE 16	<b>16T</b>				
	3/4 in. BSP*	<b>6B</b>				
	1 in. BSP*	<b>8B</b>				
*BSP Body; U.K. Mfrs. Only						
<b>Seals</b>	Buna N (Std.)	<b>N</b>				
	Fluorocarbon	<b>V</b>				
			<b>Voltage</b>			
			<b>Std. Coil</b>			
			<b>0</b>	Less Coil**		
			<b>10</b>	10 VDC†		
			<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		
**Includes Std. Coil Nut						
† DS, DW or DL terminations only						
			<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)
Coils with internal diode are available. Consult factory.						