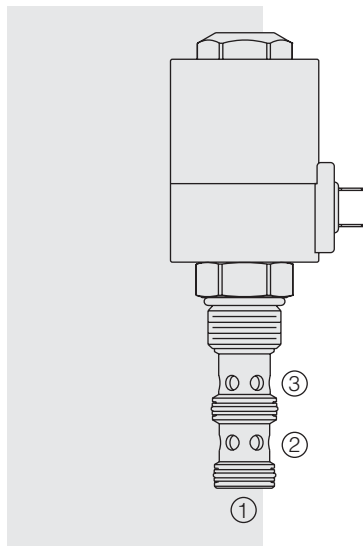


## SV12-31 Spool, 3-Way



### DESCRIPTION

A solenoid-operated, 3-way, direct-acting spool-type, screw-in hydraulic cartridge valve.

### OPERATION

When de-energized, the **SV12-31** allows flow between ② and ① while blocking flow at ③. When energized, the spool shifts to allow flow between ① and ③ while blocking flow at ②.

While port ① may be fully pressurized, it is not intended to be used as the inlet.

### FEATURES

- Continuous-duty rated solenoid.
- Hardened spool and cage for long life.
- Optional coil voltages and terminations.
- All ports may be fully pressurized.
- Heavy-duty waterproof E-Coils rated up to IP69K.

### RATINGS

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

**Flow:** See Performance Chart

**Leakage:** 410 cc/minute (25 cu. in./minute) at 240 bar (3500 psi)

**Temperature:** -40 to 120°C with Buna N seals

**Coil Duty Rating:** See Chart

**Response Time:** Pull-In: 100 msec; Drop-Out: 100 msec

**Initial Coil Current Draw at 20°C:** 2.8 amps at 12 VDC

**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:** VC12-3; See page 9.112.1

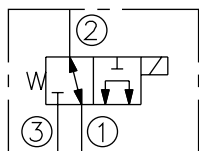
**Cavity Tool:** CT12-3XX; See page 8.600.1

**Seal Kit:** SK12-3X-MM; See page 8.650.1

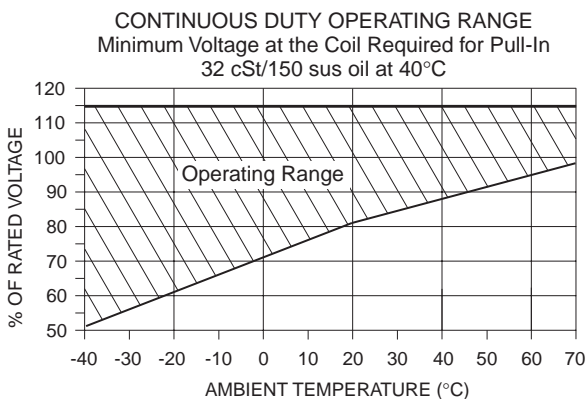
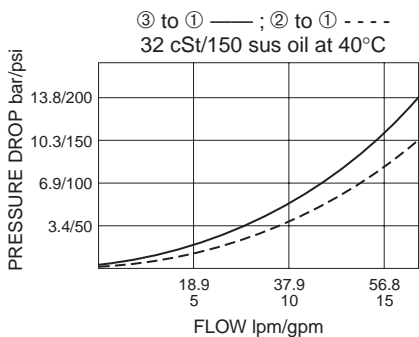
**E-Coil Nut:** Part No. 7085180

### SYMBOLS

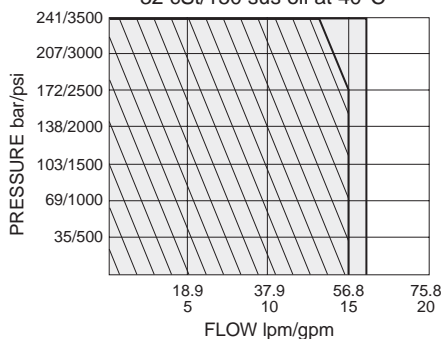
#### USAS/ISO:



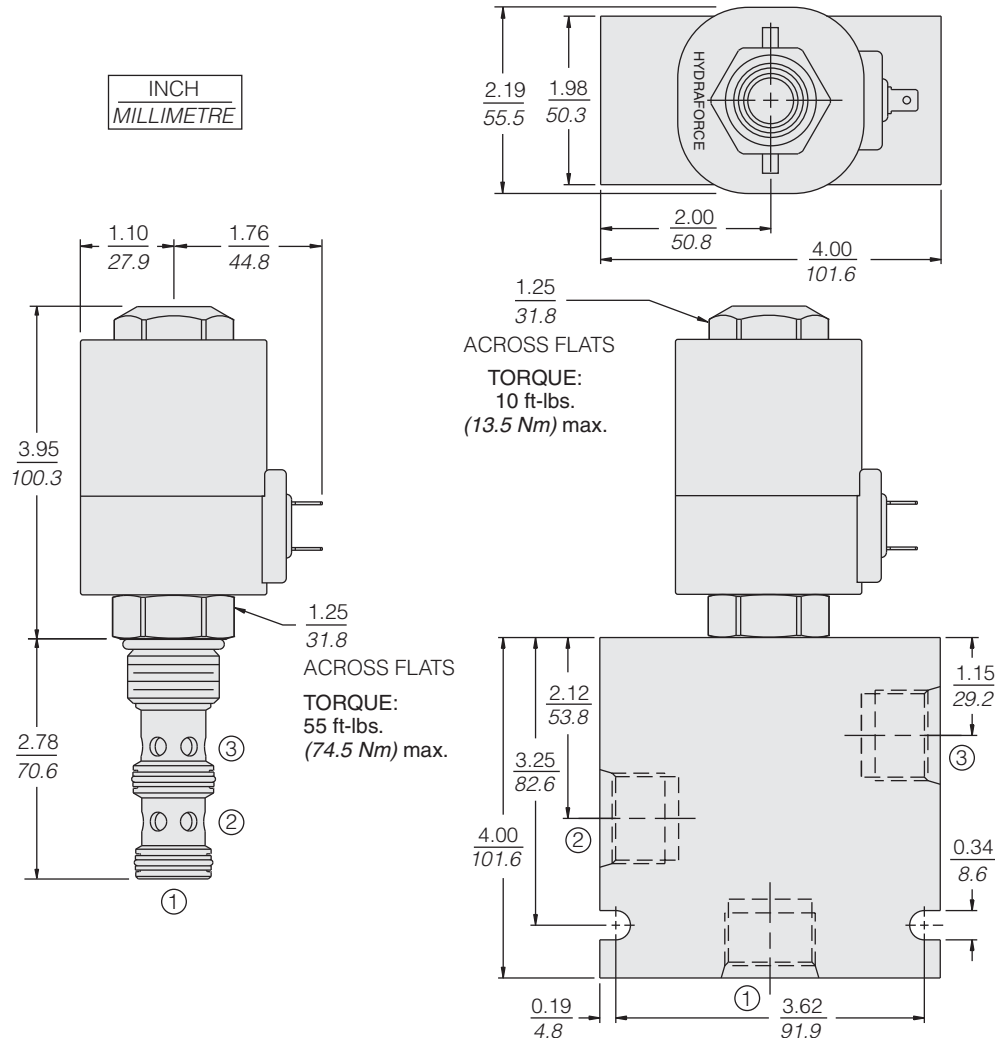
### PERFORMANCE (Cartridge Only)



OPERATING LIMITS  
Pull-In Current 85% of Nominal  
Drop-Out Current 5% of Nominal  
Inlet at ①: hatched; Inlet at ③: shaded  
32 cSt/150 sus oil at 40°C



**DIMENSIONS**



**MATERIALS**

**Cartridge:** Weight: 0.29 kg. (0.65 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.  
Buna N O-rings and TFE back-ups standard.

**Standard Ported Body:** Weight:  
0.98 kg. (2.15 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.012.1.

**E-Coil:** Weight: 1.36 kg. (3.0 lbs.)  
Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors. See page 3.400.1.

**TO ORDER**

<b>SV12-31</b>		-	-	-	-	-
<b>Porting</b>						
Cartridge Only	<b>0</b>					
SAE 8	<b>8T</b>					
SAE 10	<b>10T</b>					
SAE 12	<b>12T</b>					
1/2 in. BSP*	<b>4B</b>					
3/4 in. BSP*	<b>6B</b>					
*BSP Body; U.K. Mfr. Only						
<b>Seals</b>						
Buna N (Std.)	<b>N</b>					
Fluorocarbon	<b>V</b>					
					<b>Terminations (VDC)</b>	
					<b>EL</b> Leadwires (2), IP65 Rated	
					<b>ES</b> Dual Spades, IP65 Rated	
					<b>EG</b> DIN 43650, IP65 Rated	
					<b>EW</b> Leads w/Weather-Pack® Connector, IP65 Rated	
					<b>EY</b> Metri-Pack® 150 Connector, IP69K Rated	
						Coils with internal diode are available. Consult factory.
				<b>Voltage</b>		
				<b>0</b> Less Coil		
				<b>12</b> 12 VDC		
				<b>24</b> 24 VDC		
				<b>36</b> 36 VDC		
				<b>48</b> 48 VDC		
					Other coil voltages may be available for OEM applications. Consult factory.	