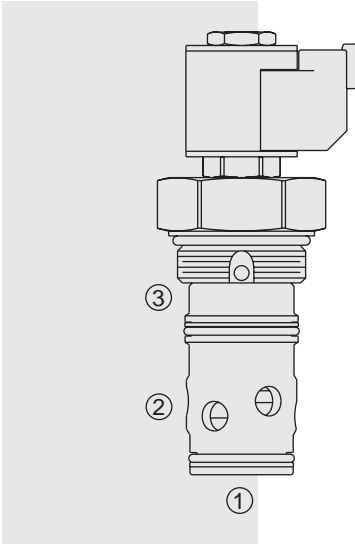


## SV20-S39 Poppet-Type High-Flow Blocking, N.O.



### DESCRIPTION

A solenoid-operated, normally open, poppet-type, screw-in hydraulic cartridge valve, designed to operate as a bidirectional load-holding or blocking valve in high flow circuits requiring low internal leakage.

### OPERATION

When the **SV20-S39** is energized, it functions as a check valve, allowing flow from ① to ② while blocking flow from ② to ①. When de-energized, the poppet lifts to open the ② to ① flow path while also allowing flow from ① to ②. Port ③ is typically connected to the reservoir.

### FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual override option.
- Optional E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

### RATINGS

**Operating Pressure:** 293 bar (4250 psi)

**Flow:** 378 lpm (100 gpm) max.

**Internal Leakage:** 1 ml/minute (0.06 cu. in./minute) max. at 293 bar (4250 psi)

**Temperature:** -40 to 100°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: 1.2 amps at 12 VDC;

0.13 amps at 115 VAC (full wave rectified).

E-Coil: 1.4 amps at 12 VDC; 0.7 amps at 24 VDC

**Minimum Pull-in Voltage:** 85% of nominal at 207 bar (3000 psi)

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

**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:** VC20-S3, Variation "A"; See page 9.120.1

**Cavity Tool:** CT20-S3xx; See page 8.600.1

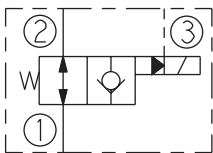
**Seal Kit:** SK20-S3x-MM; See page 8.650.1

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

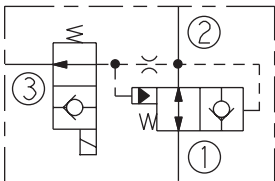
For E-coils manufactured prior to 1-1-04, see page 3.400.1 for coil nut info.

### SYMBOLS

#### USAS/ISO:

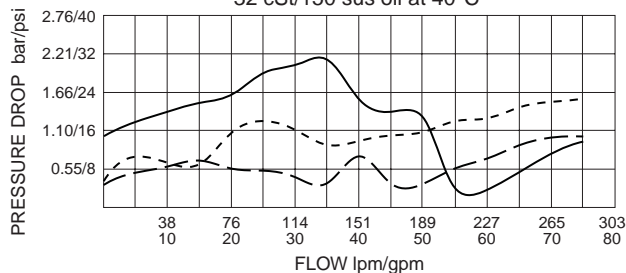


#### Expanded:

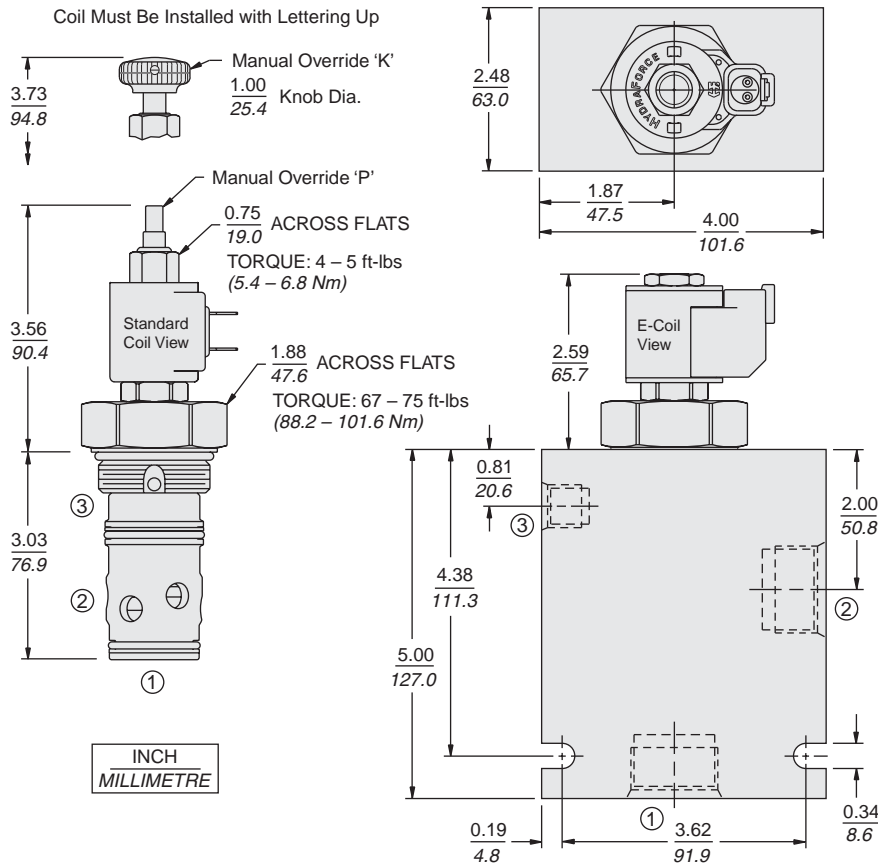


### PERFORMANCE (Cartridge Only)

- ① to ② and ③ De-energized - - - -
  - ① to ② and ③ Energized - - - -
  - ② to ① and ③ Energized - - - -
- 32 cSt/150 sus oil at 40°C



**DIMENSIONS**



**MATERIALS**

**Cartridge:** Weight: 0.74 kg. (1.63 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.  
Buna N O-rings and polyester elastomer back-ups standard.

**Standard Ported Body:** Weight: 1.65 kg. (3.65 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies can be made available; dimensions may differ. See page 8.020.1.

**Standard Coil:** Weight: 0.11 kg. (0.25 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire. See page 3.200.1

**E-Coil:** Weight: 0.14 kg. (0.3 lbs.); Perfect wound, 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**

**SV20-S39**

<b>Option</b>	<b>Voltage</b>	<b>Termination (VDC)</b>
None (Blank) <b>K</b>	<b>Std. Coil</b>	<b>Std. Coil</b>
Manual Override <b>P</b>	<b>0</b> Less Coil**	<b>DS</b> Dual Spades
Manual Override <b>HP</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>24</b> 24 VAC	<b>Termination (VAC)</b>
	<b>115</b> 115 VAC	<b>Std. Coil</b>
	<b>230</b> 230 VAC	<b>AG</b> DIN 43650
		<b>AP</b> 1/2 in. Conduit
<b>Porting</b>	**Includes Std. Coil Nut	
Cartridge Only <b>0</b>	<sup>†</sup> DS, DW or DL terminations only.	<b>Termination (VDC)</b>
SAE 16 w/SAE 6 Pilot Port <b>16T</b>		<b>E-Coil</b>
	<b>E-Coil</b>	<b>ER</b> Deutsch DT04-2P (IP69K Rated)
<b>Seals</b>	<b>10</b> 10 VDC	<b>EY</b> Metri-Pack® 150 (IP69K Rated)
Buna N (Std.) <b>N</b>	<b>12</b> 12 VDC	
Fluorocarbon <b>V</b>	<b>20</b> 20 VDC	
Polyurethane <b>P</b>	<b>24</b> 24 VDC	

Coils with internal diode are available. Consult factory.