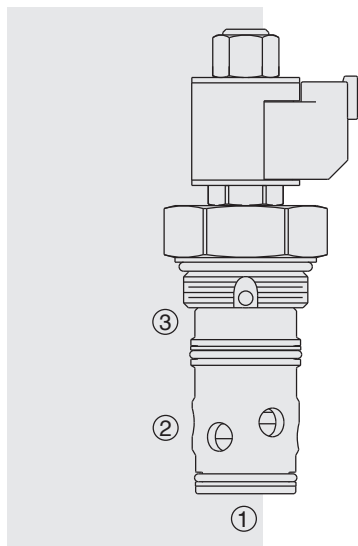


SV20-S39 Poppet-Type High-Flow Blocking, N.O.



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.
- Optional corrosion-resistant plating.
- Cartridges are voltage interchangeable.
- Manual override option.
- Optional E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.
- High flow with low pressure drop.

RATINGS

Operating Pressure: 293 bar (4250 psi)

Flow Rating: 378 lpm (100 gpm) max.

Endurance: 2 million cycles at 293 bar (4250 psi)

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

Temperature: -40 to 100 °C (-40 to 212 °F) with Buna seals;

-54 to 104 °C (-65 to 225 °F) with polyurethane seals;

-26 to 204 °C (-15 to 400 °F) with fluorocarbon seals

Coil Duty Rating: Continuous from 85% to 115% of nominal voltage

Initial Coil Current Draw at 20 °C: Standard Coil: 1.2 A at 12 Vdc;

0.13 A at 115 Vac (full wave rectified). E-Coil: 1.4 A at 12 Vdc; 0.7 A 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 sus); See Temperature and Oil Viscosity, page 9.060.1

Installation: No restrictions; See page 9.020.1

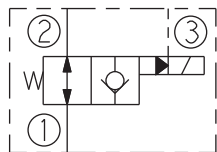
Cavity: VC20-S3 or VC20-S3 Variation "A"; See page 9.120.1

Cavity Tool: CT20-S3xx; See page 8.600.1

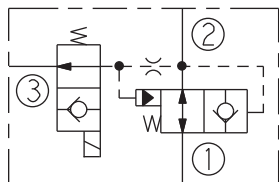
Seal Kit: SK20-S3x-BT; See page 8.650.1

Coil Nut: Part No. 7004400; For E-coils manufactured prior to 1-1-04, see page 3.400.1 for coil nut info.

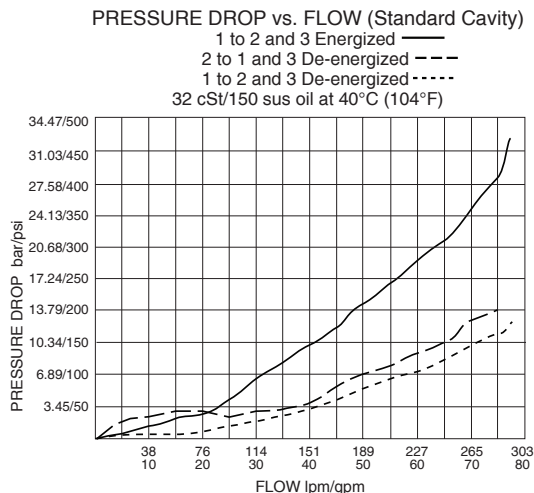
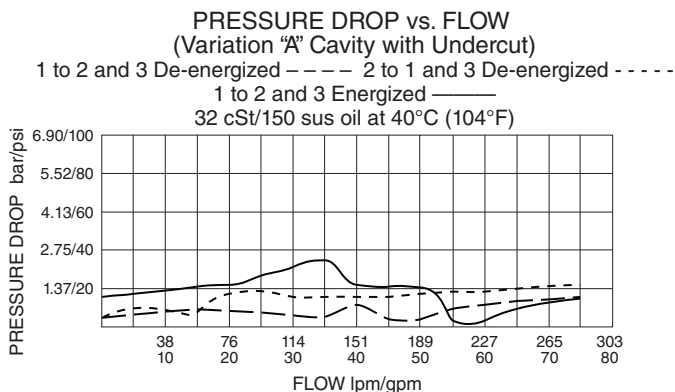
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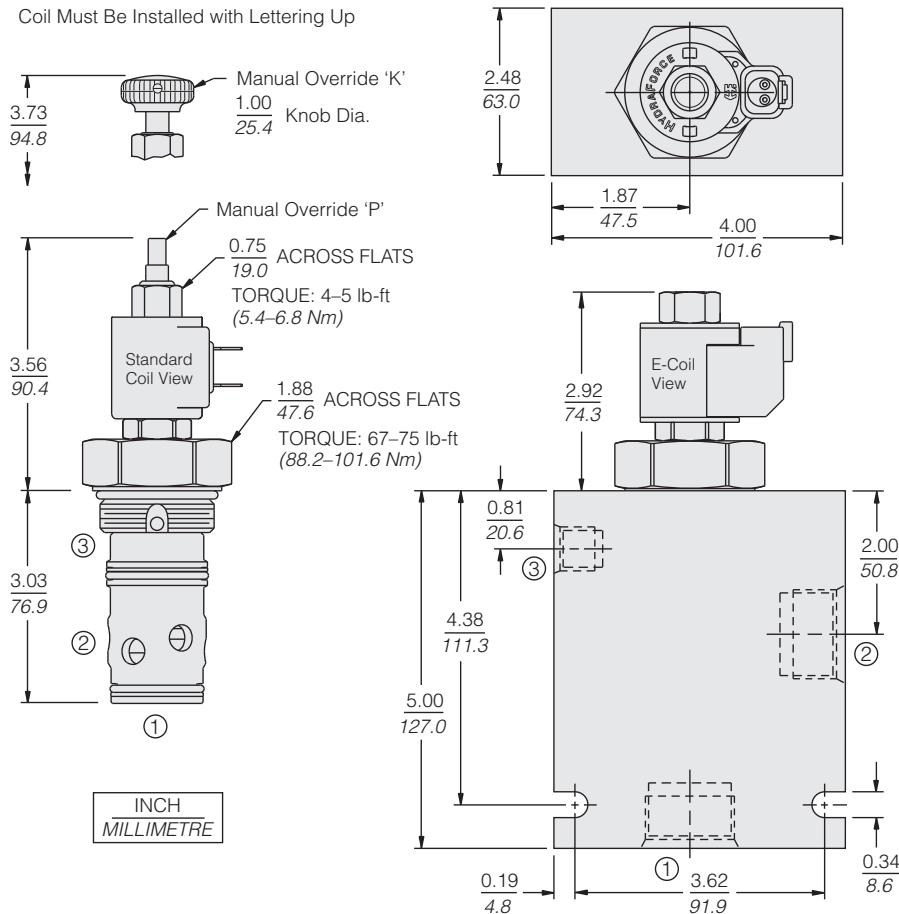
Expanded:



PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

Cartridge: Weight: 0.74 kg (1.63 lb)
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Polyurethane seals required for operation over 241 bar (3500 psi).

Standard Ported Body: Weight: 1.65 kg (3.65 lb) Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available for high pressure applications;; dimensions may differ. See page 8.020.1.

Standard Coil: Weight: 0.11 kg (0.25 lb); Unitized thermoplastic encapsulated, Class H high temperature magnet wire. See page 3.200.1

E-Coil: Weight: 0.14 kg (0.3 lb); 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

Option	Voltage	Termination (Vdc)
None (Blank)	Std. Coil	Std. Coil
Manual Override K	0 Less Coil**	DS Dual Spades
Manual Override P	10 10 Vdc [†]	DG DIN 43650
Manual Override	12 12 Vdc	DL Leadwires (2)
Type P w/Cover HP	24 24 Vdc	DL/W Leads w/Weatherpak® Connectors
	36 36 Vdc	DR Deutsch DT04-2P
	48 48 Vdc	
	24 24 Vac	Termination (Vac)
	115 115 Vac	Std. Coil
	230 230 Vac	AG DIN 43650
Porting	**Includes Std. Coil Nut	AP 1/2 in. Conduit
Cartridge Only 0	[†] DS, DW or DL terminations only.	
SAE 16 16T		Termination (Vdc)
SAE 16 16TD		Std. Coil
1-1/4" BSP* 10 BD		ER Deutsch DT04-2P (IP69K Rated)
*BSP Body; U.K. Mfr. Only		EY Metri-Pack® 150 (IP69K Rated)
Seals	E-Coil	
Buna N (Std.) N	10 10 Vdc	
Fluorocarbon V	12 12 Vdc	
Polyurethane P	20 20 Vdc	
	24 24 Vdc	

Coils with internal diode are available. Consult factory.