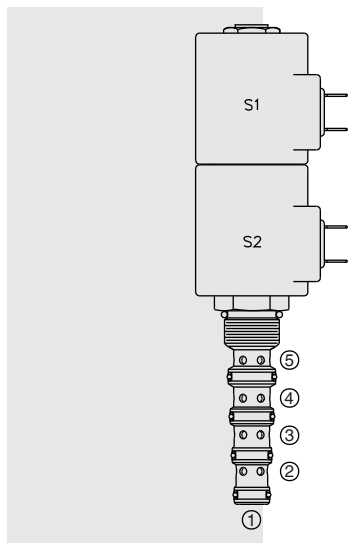


ELECTRO-PROPORTIONAL VALVES—DIRECTIONAL CONTROL

SP10-57D Spool, 5-Way, 3-Position . . .**DESCRIPTION**

A solenoid-operated, five-way, three-position, proportional, screw-in hydraulic cartridge valve with integral load-sense port.

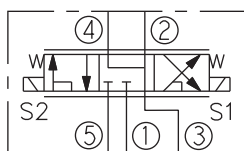
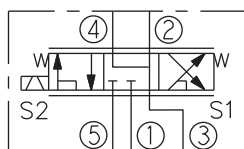
OPERATION

When de-energized, the **SP10-57D** blocks flow at 5 while allowing flow from both 2 and 4 to 3. When coil #1 is energized, flow is allowed from 5 to 2, and from 4 to 3. When coil #2 is energized, flow is allowed from 5 to 4, and from 2 to 3. Load sense is connected to port 5 when the spool is in shifted positions.

Note: If low voltage is expected on the machine, 12 or 24 volt systems will require the use of 10 volt or 20 volt coils respectively. See "SP Valves and Coil Operating Parameters," page 2.002.1.

FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations
- Cartridges are voltage interchangeable.
- Optional manual override.
- Optional waterproof E-Coils rated up to IP69K.

SYMBOLS**USASI:****ISO:****RATINGS**

Operating Pressure: 250 bar (3625 psi) with standard Buna N seals

Flow: 22.8 lpm (6 gpm) max. See performance chart

Internal Leakage: 246 cc/minute (15 cu. in./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

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

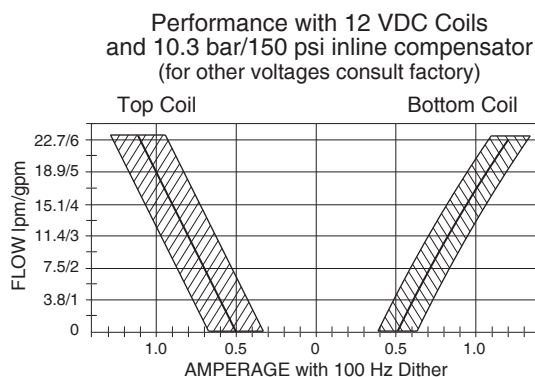
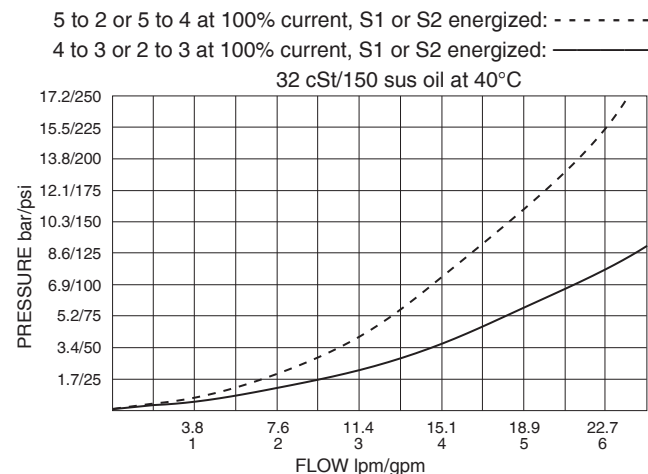
Installation: No restrictions; See page 9.020.1

Cavity: VC10-5; See page 9.110.1; **Cavity Tool:** CT10-5XX; See page 8.600.1

Seal Kit: SK10-5X-MMMM; See page 8.650.1

Coil Nut: Part No. 7004400

Coil Spacer: Std. D-Coil Spacer Part No. 7009280; E-Coil Spacer Part No. 4539700; If cartridge is ordered "Less Coil," D-Coil spacer will be provided unless an E is specified in the Coil Termination To Order section.

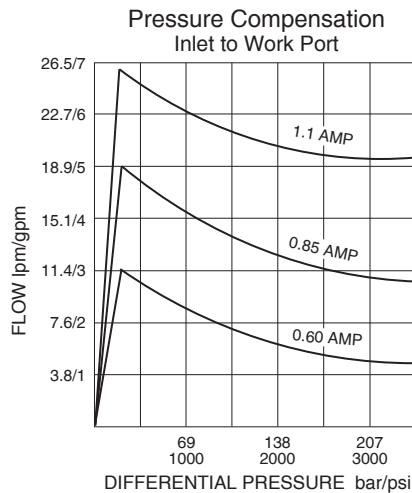
PERFORMANCE (Cartridge Only)

Performance information continued on following page.

for Load Sense Applications

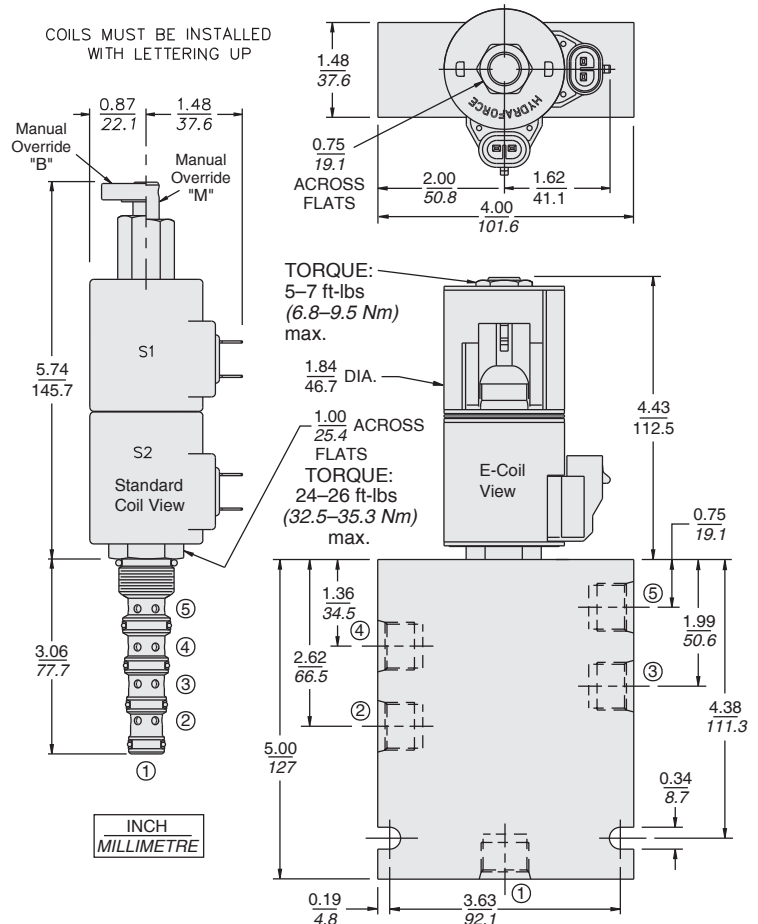
SP10-57D

PERFORMANCE (Continued)



Recommended Electronic Controllers:
See page 2.001.1 or our Electronics catalog.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.36 kg. (0.80 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.

Standard Ported Body: Weight: 0.41 kg. (0.85 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi); Ductile iron bodies available; dimensions may differ. See page 8.010.1.

Standard Coil: Weight each: 0.27 kg. (0.60 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnet wire. See page 3.200.1

E-Coil: Weight each: 0.41 kg. (0.9 lbs.); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors. See page 3.400.1

TO ORDER

SP10-57D							
1,000 Hour Salt Spray Coating		G					
Option		None (Blank)		Voltage Std. Coil			
Manual Override		M		00		Less Coil**	
Manual Override		B		10		10 VDC†	
For Manual Override options see page 1.001.1				12		12 VDC	
				20		20 VDC	
				24		24 VDC	
						**Includes D-Coil Nut and Spacer.	
						† DS, DW or DL terminations only.	
Porting				E-Coil		Coil Termination	
Cartridge Only		0		10		Less Coil w/Spacer	
SAE 6		6T		12		Deutsch DT04-2P	
SAE 8		8T		20		Metri-Pack® 150	
				24		Dual Lead Wires	
						Amp Jr. Timer	
						DIN 43650	
						Dual Spades	
Seals						E-Coil	
Buna N (Std.)		N				E (IP69K)	
Fluorocarbon		V				ER (IP69K)	
						EY (IP69K)	
						EL (IP69K)	
						EJ (IP67)	
						EG (IP65)	
						—	
						D-Coil	
						—	
						DR (IP65)	
						DY (IP65)	
						DL (IP65)	
						—	
						DG (IP65)	
						DS (IP65)	

For Coils with Zener Diode, add "IZ" to option code.
For example: "ERIZ". Not available on all models.
See coil option info. on pages 3.200.1 & 3.400.1