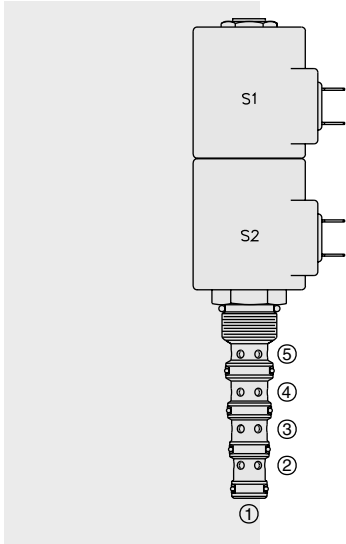


ELECTRO-PROPORTIONAL VALVES—DIRECTIONAL CONTROL

SP10-57C Spool, 5-Way, 3-Position . . .



DESCRIPTION

A solenoid-operated, 5-way, 3-position, proportional, screw-in hydraulic cartridge valve with integral load-sense port.

OPERATION

When de-energized, the **SP10-57C** blocks flow to all ports. 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.
- Optional manual override.
- Optional waterproof E-Coils rated up to IP69K.
- Cartridges are voltage interchangeable.

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)

Installation: No restrictions; See page 9.020.1

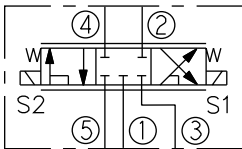
Cavity: VC10-5; See page 9.110.1; **Cavity Tool:** CT10-5XX; See page 8.600.1

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

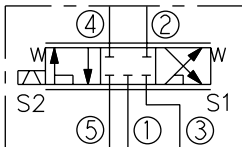
Coil Nut: Part No. 7004400; **Coil Spacer** for E-Coils: Part No. 4539700

SYMBOLS

USASI:



ISO:



Recommended Controller

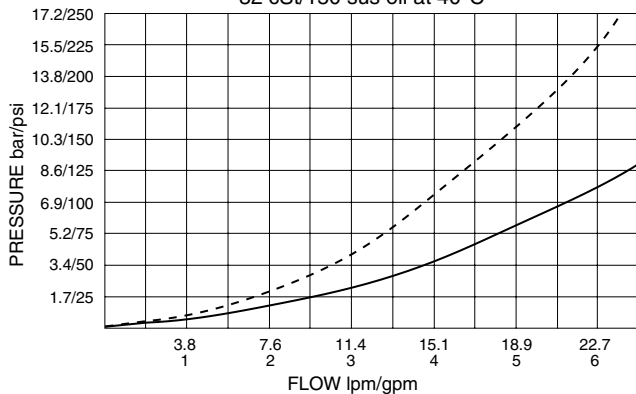
Dual Solenoid Driver

Part No. 4000149

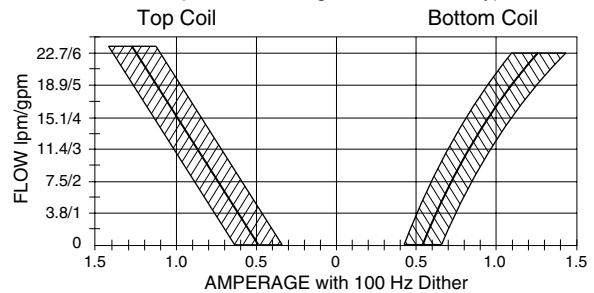
(See page 3.550.1)

PERFORMANCE (Cartridge Only)

⑤ to ② or ⑤ to ④ at 100% current, S1 or S2 energized: - - - - -
 ④ to ③ or ② to ③ at 100% current, S1 or S2 energized: ————
 32 cSt/150 sus oil at 40°C



Performance with 12 VDC Coils
 and 10.3 bar/150 psi inline compensator
 (for other voltages consult factory)

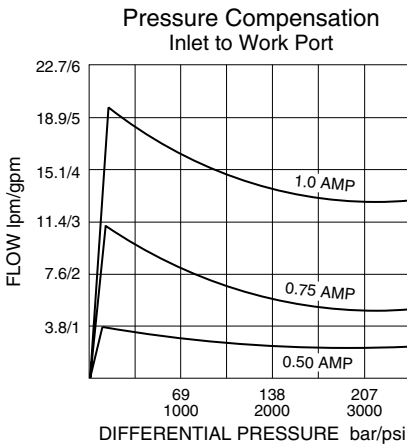


Performance information continued on following page.

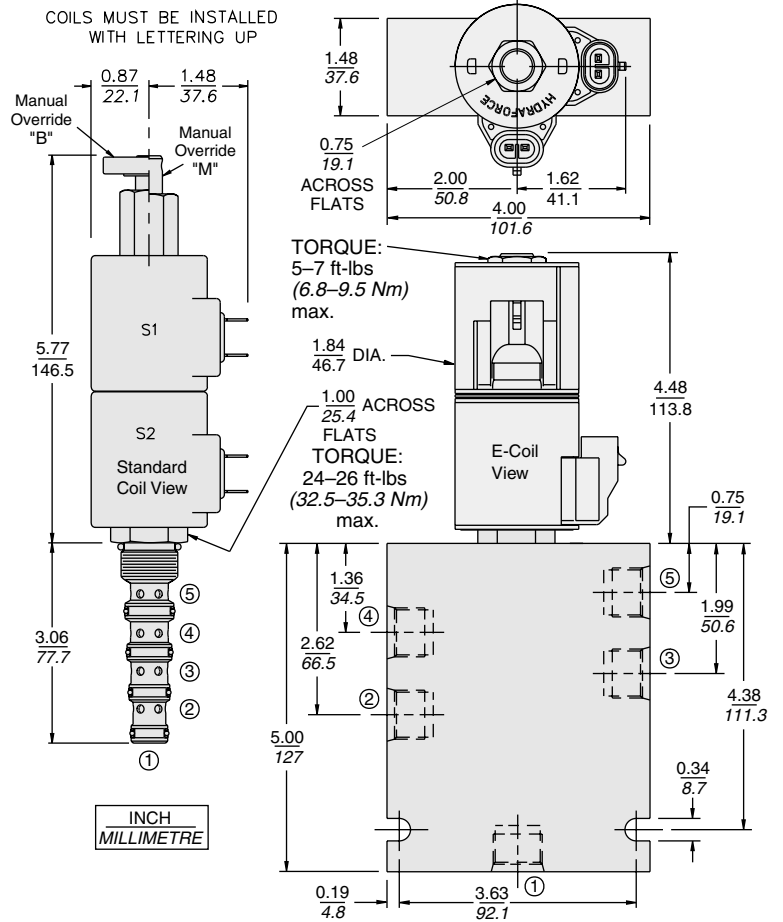
for Load Sense Applications

SP10-57C

PERFORMANCE (Continued)



DIMENSIONS



MATERIALS

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

Standard Ported Body: Weight: 0.41 kg. (0.85 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.010.1. Steel and Ductile Iron bodies available, dimensions may differ, consult factory.

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

E-Coils: Weight each: 0.41 kg. (0.9 lbs.); Fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

SP10-57C

Option		Voltage Std. Coil		Termination (VDC) Std. Coil
None (Blank)		0 Less Coil**		DS Dual Spades
Manual Override B		10 10 VDC†		DG DIN 43650
Manual Override M		12 12 VDC		DL Leadwires (2)
		20 20 VDC		DL/W Leads w/Weatherpak® Connectors
		24 24 VDC		DR Deutsch DT04-2P
Porting		**Includes coil nut and coil spacer		Termination (VDC) E-Coil
Cartridge Only 0		† DS, DW or DL terminations only		ER Deutsch DT04-2P (IP69K Rated)
SAE 6 6T		E-Coil		EY Metri-Pack® 150 (IP69K Rated)
SAE 8 8T		10 10 VDC		
		12 12 VDC		
Seals		20 20 VDC		
Buna N (Std.) N		24 24 VDC		
Fluorocarbon V				

Coils with internal diode are available. Consult factory.