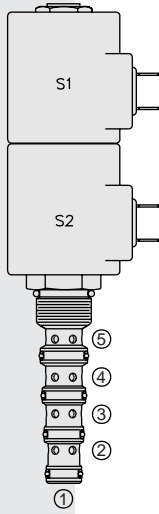


ELECTRO-PROPORTIONAL VALVES—DIRECTIONAL CONTROL

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.

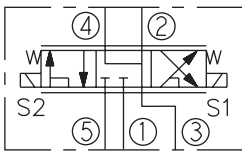
Note: If low voltage is expected on the machine, 12 or 24 volt systems will require the use of 10 volt or 20 volt coils respectively. See “SP Valves and Coil Operating Parameters,” page 2.002.1.

FEATURES

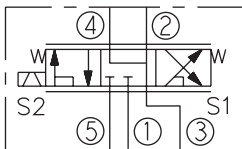
- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations
- Cartridges are voltage interchangeable.
- Optional manual override.
- Optional waterproof E-Coils rated up to IP69K.

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** for E-Coils: Part No. 4539700

Recommended Electronic Controllers:

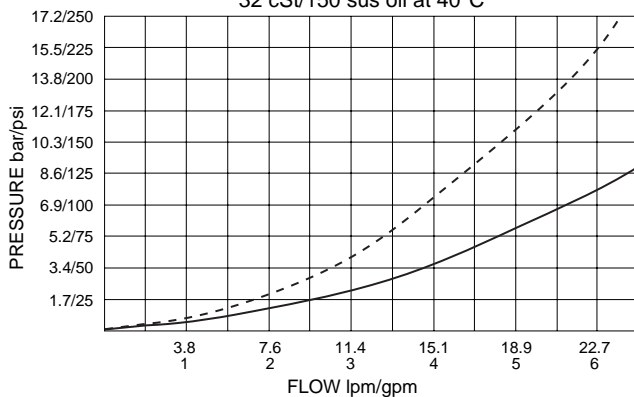
See page 2.001.1 or our Electronics catalog.

PERFORMANCE (Cartridge Only)

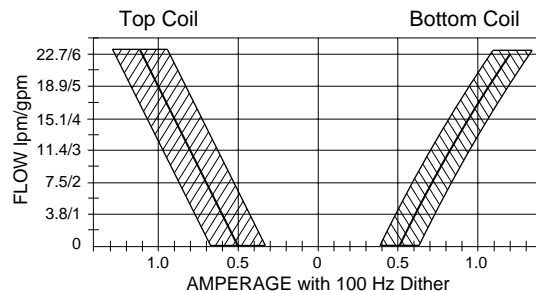
⑤ to ② or ⑤ to ④ at 100% current, S1 or S2 energized: - - - - -

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)

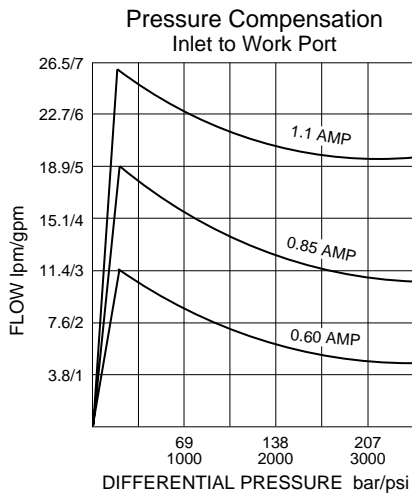


Performance information continued on following page.

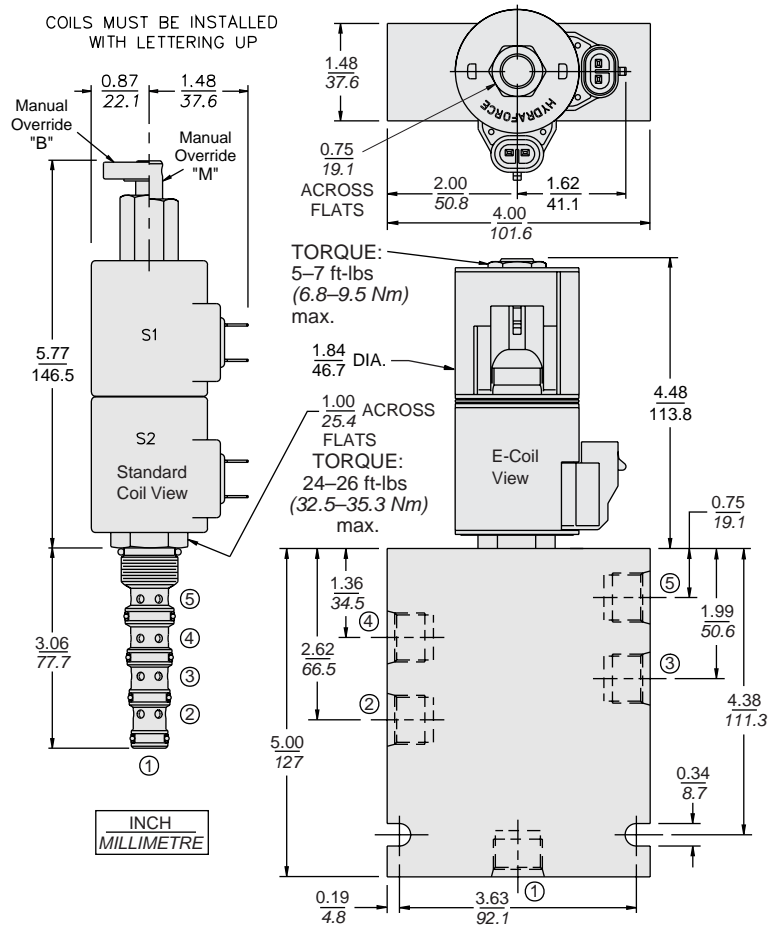
for Load Sense Applications

SP10-57D

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 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 magnetwire. 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 for all E-Coil retrofit applications.

TO ORDER

SV10-57D

Option
None (Blank)
Manual Override **B**
Manual Override **M**
For Manual Override options see page 1.001.1

Porting
Cartridge Only **0**
SAE 6 **6T**
SAE 8 **8T**

Seals
Buna N (Std.) **N**
Fluorocarbon **V**

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
20 20 VDC
24 24 VDC
**Includes Std. Coil Nut

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DLW Leads w/Weatherpak® Connectors
DR Deutsch DT04-2P
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.