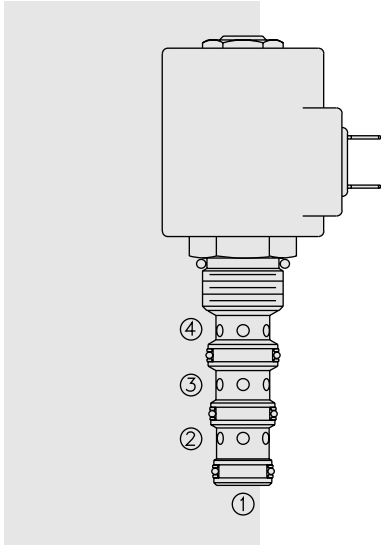


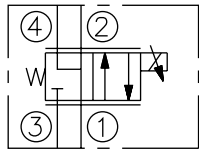
ELECTRO-PROPORTIONAL VALVES—DIRECTIONAL CONTROL

SP10-46R Spool, 4-Way, 2-Position

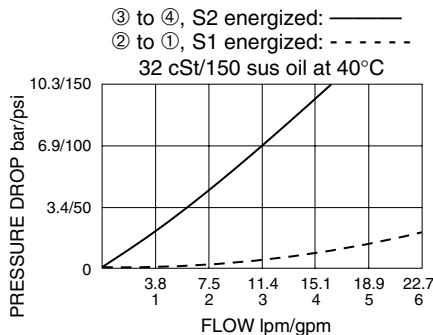
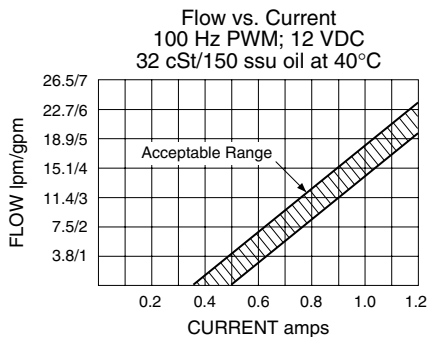


SYMBOLS

USAS/ISO:



PERFORMANCE (Cartridge Only)



DESCRIPTION

A proportional, solenoid-operated, 4-way, 2-position, screw-in hydraulic cartridge valve.

OPERATION

When de-energized, the **SP10-46R** allows flow from ②, ① and ④, while blocking flow at ③. When energized, metered flow is allowed from ③ to ④, as well as metered return flow from ② to ①.

FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Good linearity and hysteresis.
- Industry common cavity.

RATINGS

Operating Pressure: 247 bar (3625 psi) with standard Buna N seals

Flow: 22.7 lpm (6 gpm) maximum; see performance chart

Internal Leakage: 328 ml/minute (20 cu. in./minute) max. at 207 bar (3000 psi)

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

Coil Duty Rating: Standard Coils and E-Coils: 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 ssu)

Installation: No restrictions; See page 9.020.1

Cavity: VC10-4; See page 9.110.1

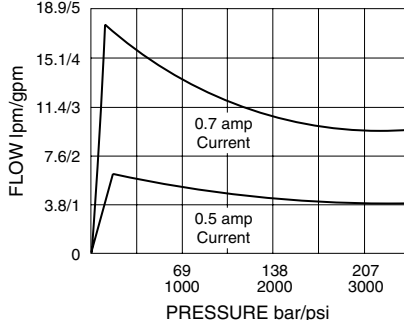
Cavity Tool: CT10-4XX; See page 8.600.1

Seal Kit: SK10-4X-MMM; 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.

Pressure Compensation, Inlet to Work Port
Typical Differential Pressure
32 cSt/150 sus oil at 40°C

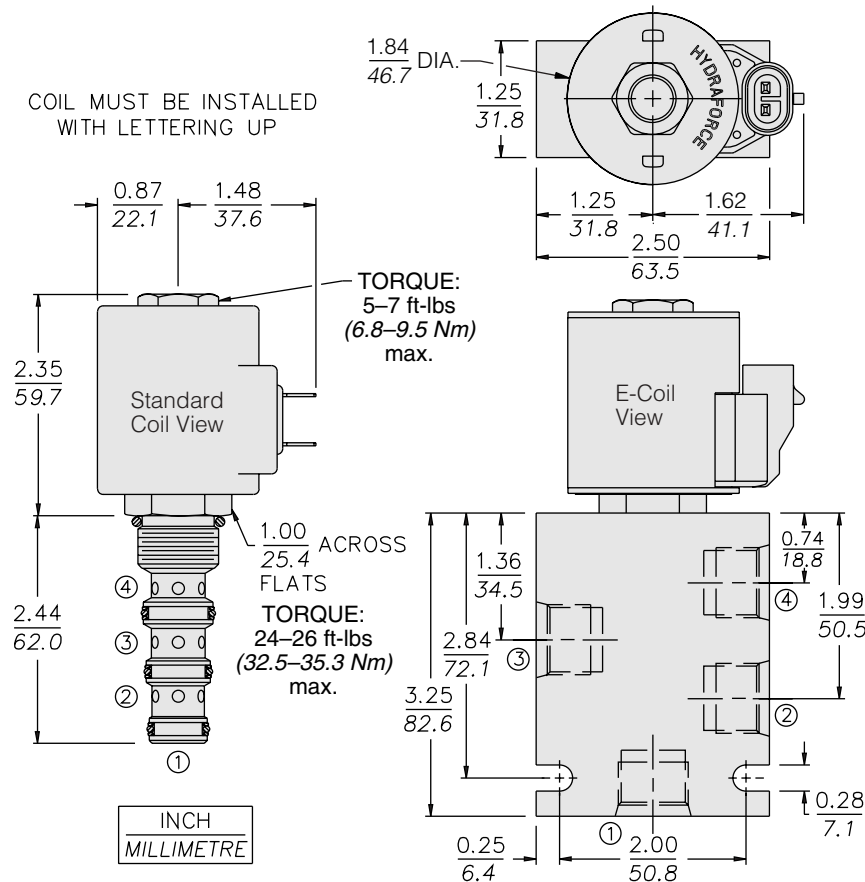


Recommended Controllers (See Section 3)

Input Sig. w/12V Coil	DIN Coil Mount	PCB Board	Metal Box	DIN Rail Mount
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA PWM	4000123	4000143	4000130	4000139
	—	4000144	4000133	4000140
w/24V Coil				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA PWM	4000169	4000143	4000186	4000139
	—	4000144	4000133	4000140

SP10-46R

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.20 kg. (0.45 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and single-turn polyester elastomer back-up standard.

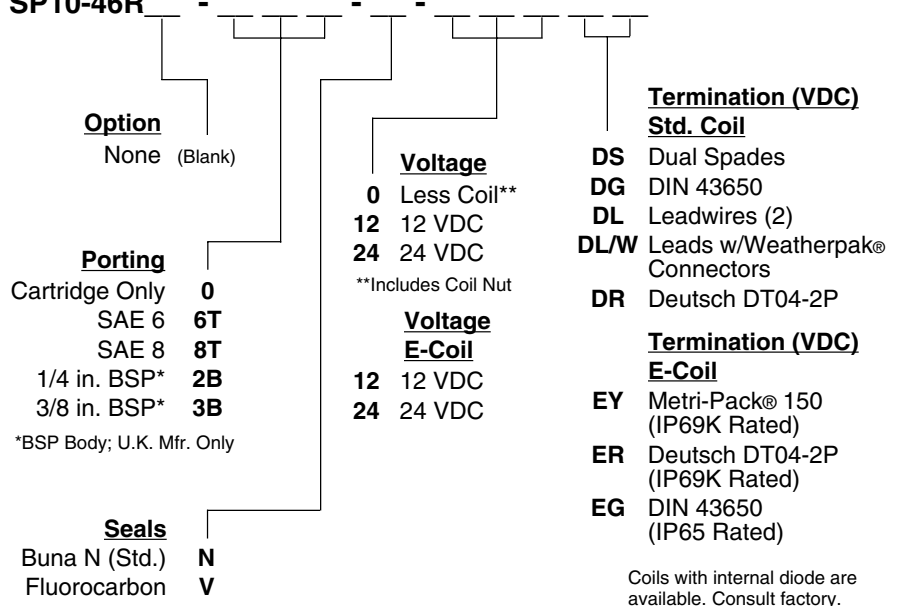
Standard Ported Body: Weight: 0.36 kg. (0.80 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.010.1. Steel and Ductile Iron bodies available, dimensions may differ, consult factory.

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

E-Coil: Weight: 0.41 kg. (0.9 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

SP10-46R



Coils with internal diode are available. Consult factory.