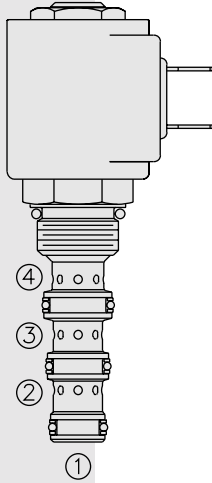


# ELECTRO-PROPORTIONAL VALVES—DIRECTIONAL CONTROL

## SP08-46R Spool, 4-Way, 2-Position



### DESCRIPTION

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

### OPERATION

When de-energized, the **SP08-46R** 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. Please note that this valve will allow flow from ④ to ③ and from ① to ② but these flows will not be metered.

### FEATURES

- Continuous-duty rated solenoid.
- Hardened parts 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:** 11.4 lpm (3 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:** VC08-4; See page 9.108.1

**Cavity Tool:** CT08-4XX; See page 8.600.1

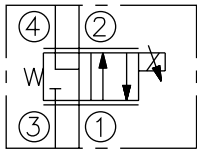
**Seal Kit:** SK08-4X-MMM; See page 8.650.1

**Coil Nut:** Part No. 7004400;

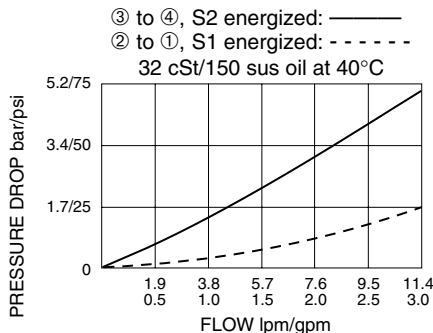
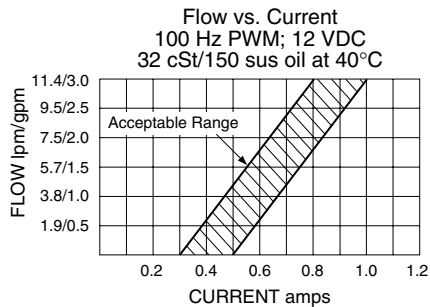
For E-coils manufactured prior to 1-1-04, see page 3.400.1 for coil nut info.

### SYMBOLS

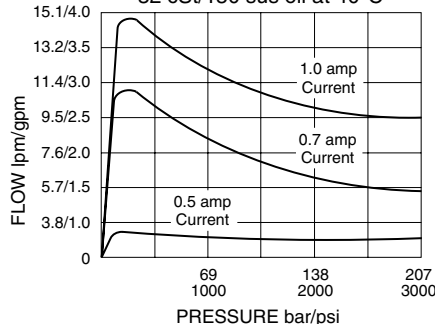
#### USAS/ISO:



### PERFORMANCE (Cartridge Only)



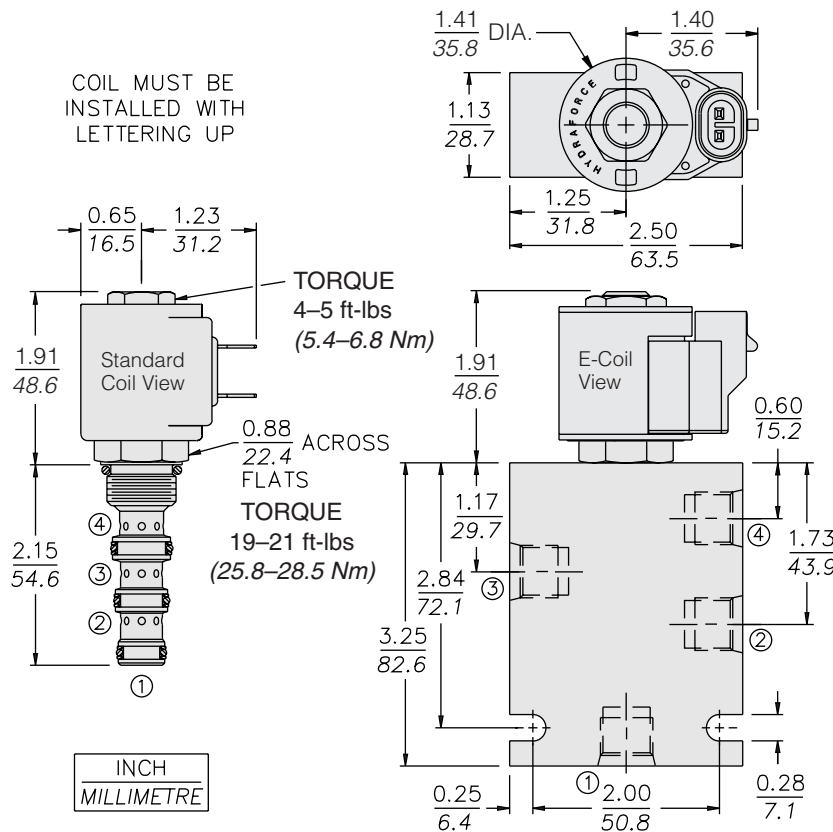
Pressure Compensation, Inlet to Work Port  
Typical Differential Pressure  
32 cSt/150 sus oil at 40°C



### 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	4000123	4000143	4000130	4000139
PWM	—	4000144	4000133	4000140
<b>w/24V Coil</b>				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM	—	4000144	4000133	4000140

**DIMENSIONS**



**MATERIALS**

**Cartridge:** Weight: 0.13 kg. (0.28 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: 0.27 kg. (0.60 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.008.1. Steel and Ductile Iron bodies available, dimensions may differ, consult factory.

**Standard Coil:** Weight: 0.11 kg. (0.25 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire; See page 3.200.1.

**E-Coil:** Weight: 0.14 kg. (0.3 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**

**SP08-46R**

