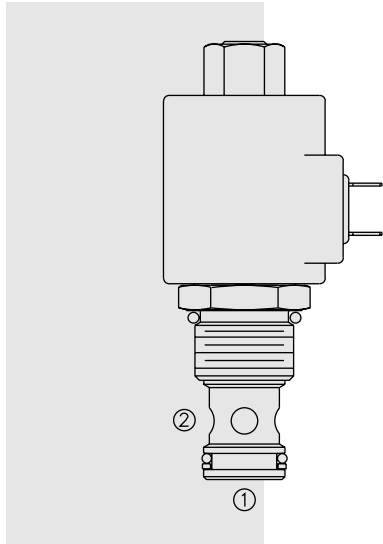


SOLENOID VALVES

SV12-21 Poppet, 2-Way, Normally Open



DESCRIPTION

A solenoid-operated, 2-way, normally open, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load holding or blocking valve in applications requiring low internal leakage.

OPERATION

When energized, the **SV12-21** acts as a check valve, allowing flow to pass from ① to ②, while blocking flow in the reverse direction.

When de-energized, the poppet lifts to open the ② to ① flow path after overcoming the solenoid force (requires 3.4 to 10.3 bar [50 to 150 psi]). In this mode, flow from ① to ② is severely restricted. If this path is required, see model SV12-23, page 1.054.1.

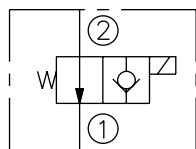
Operation of Manual Override Option: To override, push and hold override button.

FEATURES

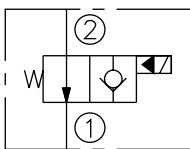
- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Cost effective cavity.

SYMBOLS

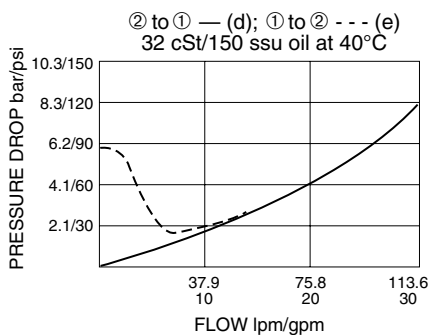
USASI:



ISO:



PERFORMANCE (Cartridge Only)



RATINGS

Operating Pressure: 240 bar (3500 psi)

Flow: See Performance Chart

Internal Leakage: 0.15 cc/minute (3 drops/minute) max. at 240 bar (3500 psi)

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

Coil Duty Rating: Continuous from 85% to 115% of nominal voltage

Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 110 msec.; De-energized: 40 msec.

Initial Coil Current Draw at 20°C: Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified). E-Coil: 2.0 amps at 12 VDC; 1.0 amps at 24 VDC

Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)

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: VC12-2; See page 9.112.1

Cavity Tool: CT12-2XX; See page 8.600.1

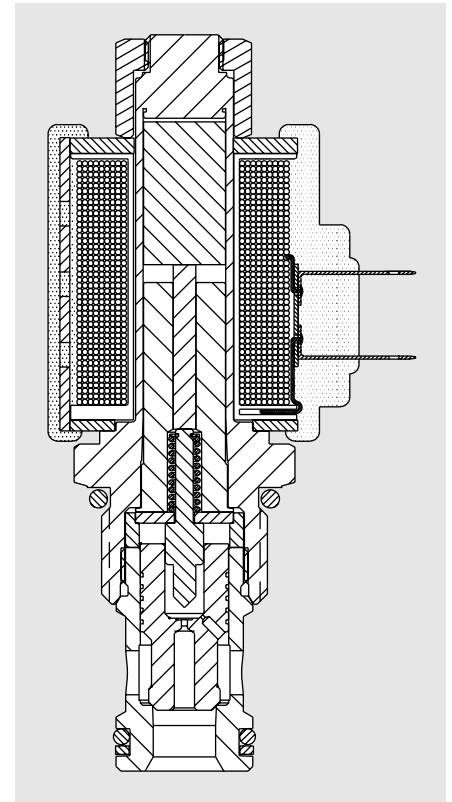
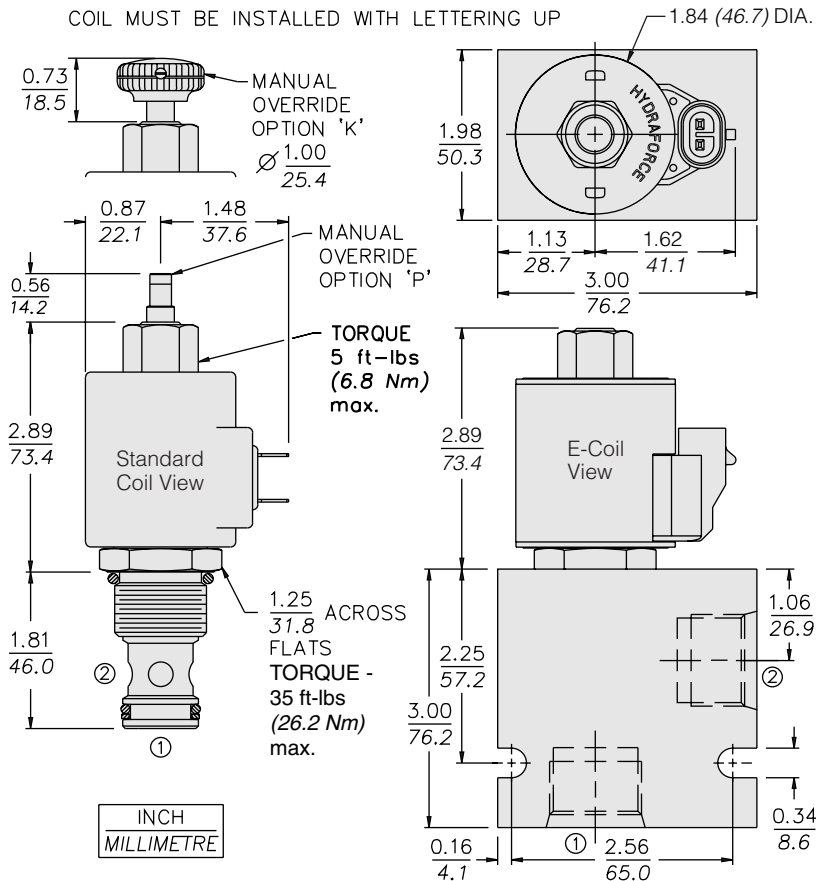
Seal Kit: SK12-2X-T; See page 8.650.1

Coil Nut: Part No. 7004420;

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

SV12-21

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.25 kg. (0.55 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.

Standard Ported Body: Weight: 0.57 kg. (1.25 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.012.1. Ductile iron and steel 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.); 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

SV12-21

Options

None (Blank)

Manual Override without Knob **P**

Manual Override with Knob **K**

Porting

Cartridge Only **0**

SAE 10 **10T**

SAE 12 **12T**

SAE 16 **16T**

3/4 in. BSP* **6B**

1 in. BSP* **8B**

*BSP Body; U.K. Mfrs. Only

Seals

Buna N (Std.) **N**

Fluorocarbon **V**

Voltage Std. Coil

0 Less Coil**

10 10 VDC[†]

12 12 VDC

24 24 VDC

36 36 VDC

48 48 VDC

24 24 VAC

115 115 VAC

230 230 VAC

**Includes Std. Coil Nut

[†] DS, DW or DL terminations only

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)

DL/W Leads w/Weatherpak® Connectors

ER Deutsch DT04-2P

Termination (VAC) Std. Coil

AG DIN 43650

AP 1/2 in. Conduit

Termination (VDC) E-Coil

ER Deutsch DT04-2P (IP69K Rated)

EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.