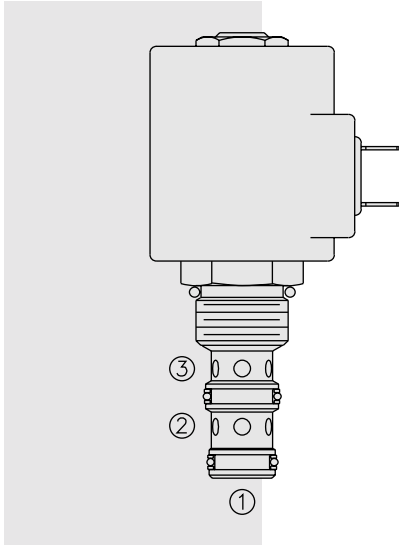


SOLENOID VALVES

SV10-31 Spool, 3-Way



DESCRIPTION

A solenoid-operated, 3-way, direct-acting, spool-type, screw-in hydraulic cartridge valve.

OPERATION

When de-energized, the **SV10-31** allows flow from ② to ①, while blocking flow at ③.

When energized, the valve shifts to open from ① to ③, while blocking at ②.

Operation of Manual Override Option: To override, push button in and twist counterclockwise 180°. The internal spring will push the button out. In this position, the valve may be only partially shifted. To assure full override shift, pull the button out to its fullest extension and hold it in this position.

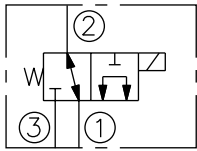
To return to normal valve function, push button in, twist clockwise 180°, and release. Override will be detented in this position.

FEATURES

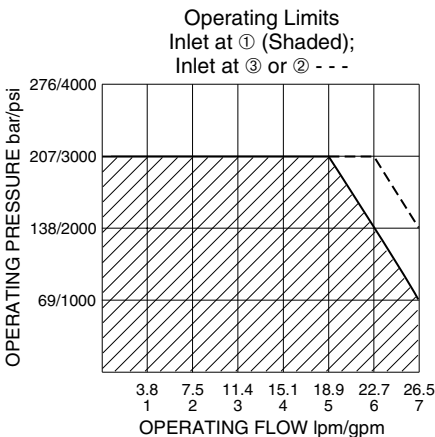
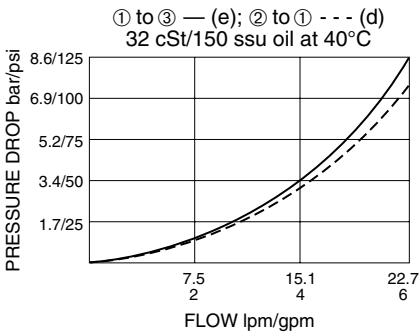
- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

SYMBOLS

USASI/ISO:



PERFORMANCE (Cartridge Only)



RATINGS

Operating Pressure: 207 bar (3000 psi)

Proof Pressure: 350 bar (5075 psi)

Flow: 22.7 lpm (6 gpm) max.

Internal Leakage: 82 cc/minute (5 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

Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 60 msec.; De-energized: 10 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: VC10-3, See page 9.110.1

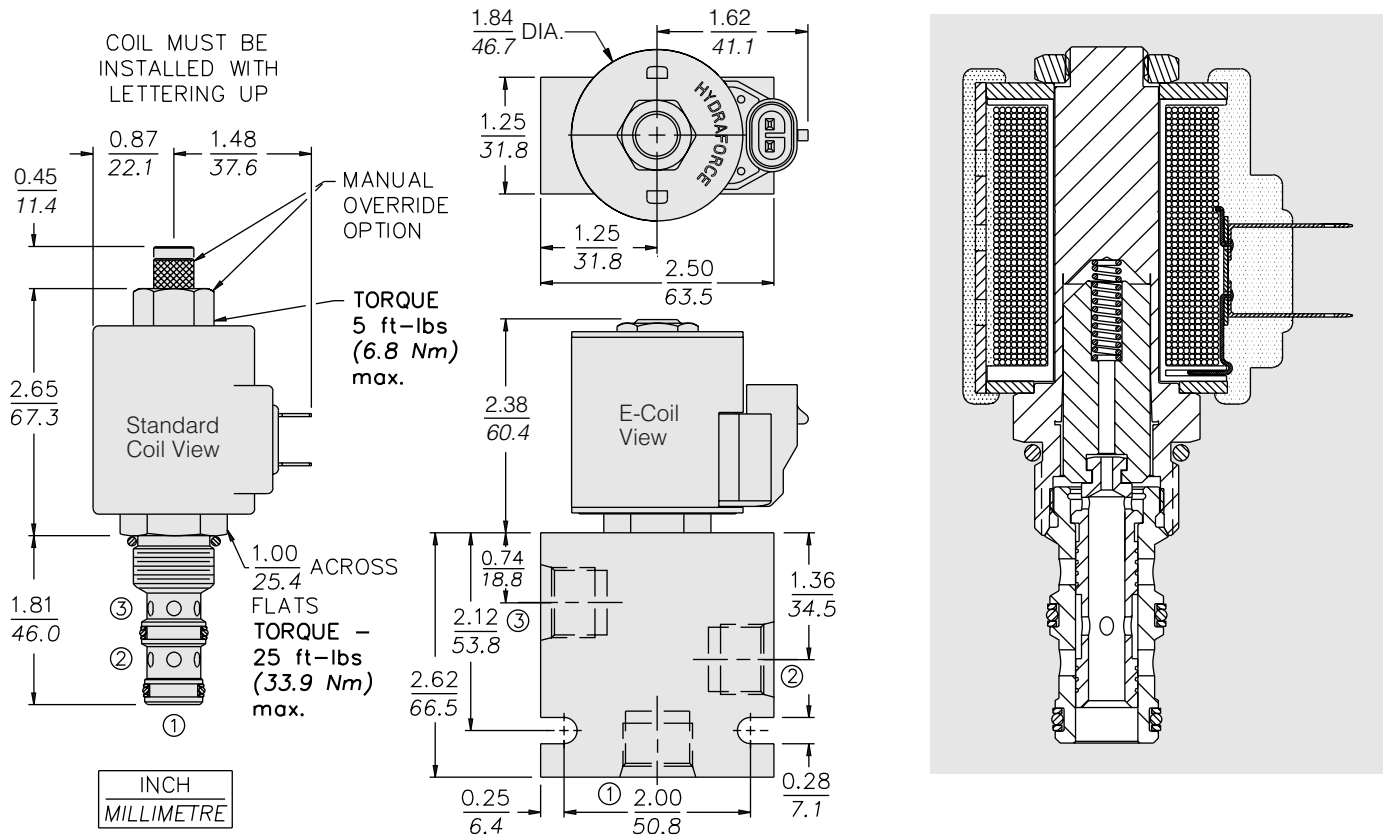
Cavity Tool: CT10-3XX; See page 8.600.1

Seal Kit: SK10-3X-MM; 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.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.14 kg. (0.30 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.

Standard Ported Body: Weight: 0.36 kg. (0.80 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.010.1. 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

SV10-31		Termination (VDC) Std. Coil	
Option	Voltage Std. Coil	DS	Dual Spades
None (Blank)	0 Less Coil**	DG	DIN 43650
Manual Override M	10 10 VDC†	DL	Leadwires (2)
Manual Override Y	12 12 VDC	DL/W	Leads w/Weatherpak® Connectors
Manual Override J	24 24 VDC	DR	Deutsch DT04-2P
For Manual Override options see page 1.001.1	36 36 VDC	Termination (VAC) Std. Coil	
Porting	48 48 VDC	AG	DIN 43650
Cartridge Only 0	24 24 VAC	AP	1/2 in. Conduit
SAE 6 6T	115 115 VAC	Termination (VDC) E-Coil	
SAE 8 8T	230 230 VAC	ER	Deutsch DT04-2P (IP69K Rated)
1/4 in. BSP* 2B	**Includes Std. Coil Nut	EY	Metri-Pack® 150 (IP69K Rated)
3/8 in. BSP* 3B	† DS, DW or DL terminations only		
*BSP Body; U.K. Mfr. Only	E-Coil		
Seals	10 10 VDC		
Buna N (Std.) N	12 12 VDC		
Fluorocarbon V	20 20 VDC		
	24 24 VDC		

Coils with internal diode are available. Consult factory.