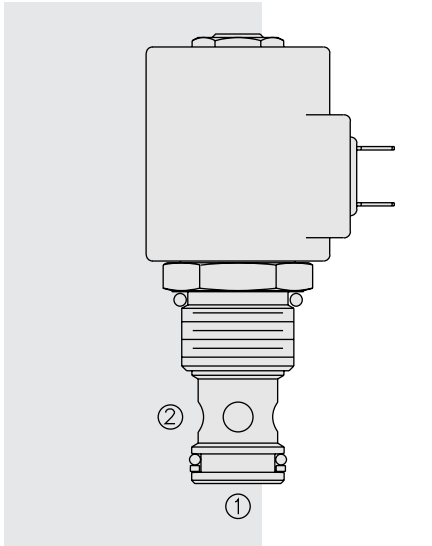


# SV12-20 Poppet, 2-Way, Normally Closed



## DESCRIPTION

A solenoid-operated, 2-way, normally closed, 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 de-energized, the **SV12-20** acts as a check valve, allowing flow to pass from 1 to 2, while blocking flow in the reverse direction.

When energized, the poppet lifts to open the 2 to 1 flow path. In this mode, flow from 1 to 2 is severely restricted. If this path is required, see model SV12-22, page 1.045.1.

**Operation of Manual Override Option:** To override, push button in, twist counter-clockwise 180° and release. In this position, the valve will remain open.

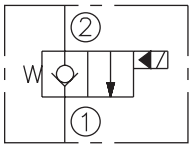
To return to normal operation, push button in, twist clockwise 180° and release. Override will be detented in this position.

## FEATURES

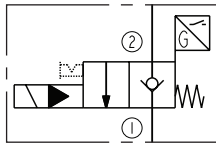
- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Manual override option.
- Unitized, molded coil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

## SYMBOLS

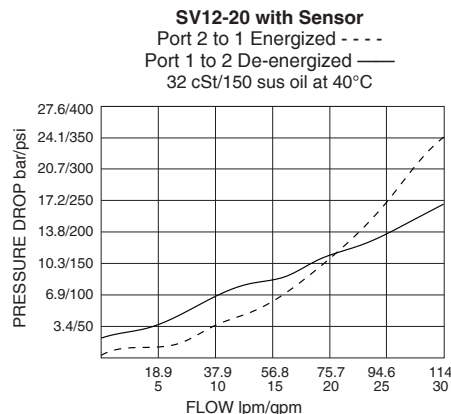
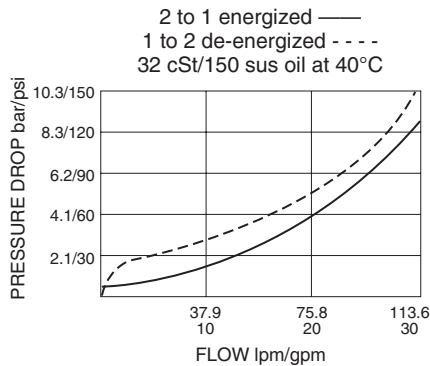
ISO:



with Sensor:



## PERFORMANCE (Cartridge Only)



## RATINGS

**Operating Pressure:** 240 bar (3500 psi)

**Proof Pressure:** 345 bar (5000 psi)

**Flow:** 30 gpm (114 lpm); 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: 40 msec.; De-energized: 80 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: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC

**Minimum Pull-in Voltage:** 85% of nominal at 240 bar (3500 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 sus); See Temperature and Oil Viscosity, page 9.060.1

**Installation:** No restrictions; See page 9.020.1

**Cavity:** VC12-2; See page 9.112.1

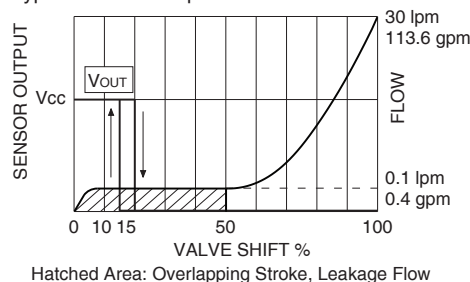
**Cavity Tool:** CT12-2XX; See page 8.600.1

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

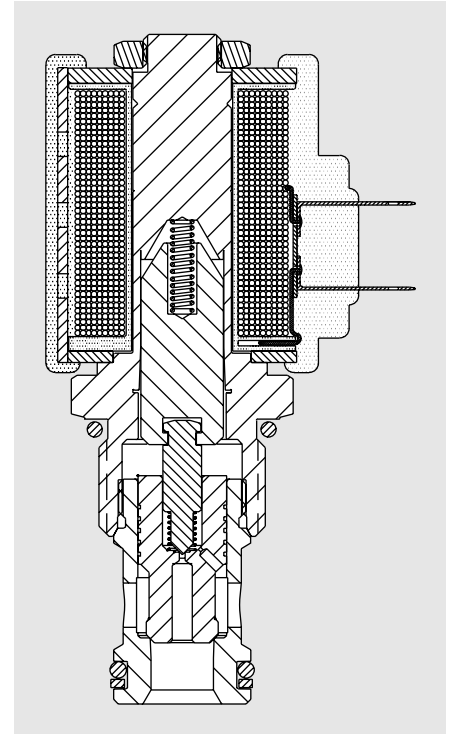
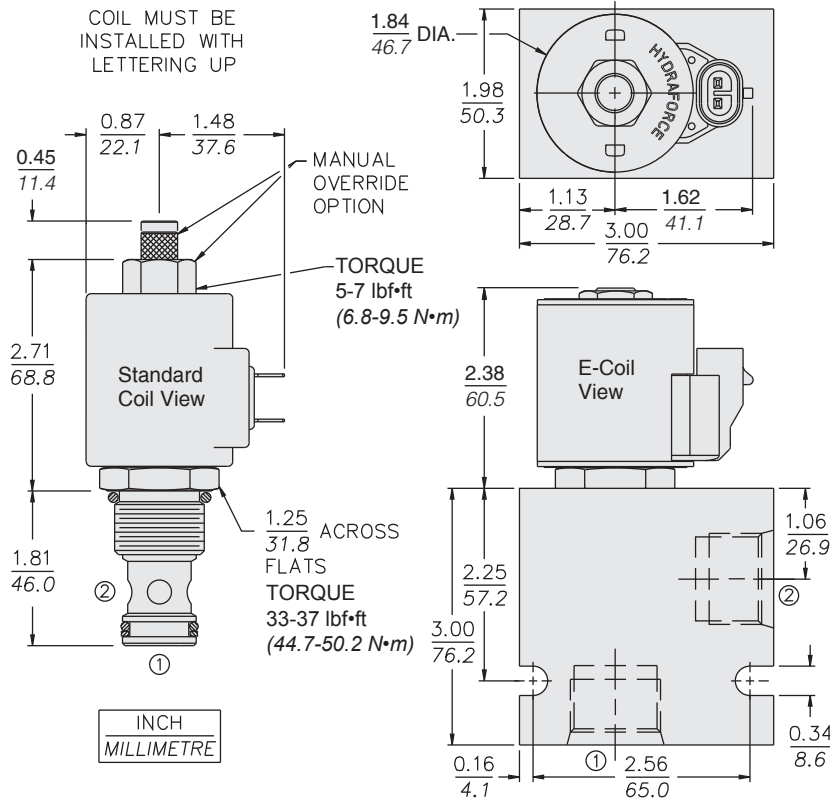
**Coil Nut:** Part No: 7004400;

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

Typical Sensor Output & Flow vs. Valve Shift



**DIMENSIONS**



Dimensions will differ significantly with Sensor Option; see page 3.010.1.

**MATERIALS**

**Cartridge:** Weight: 0.33 kg. (0.72 lbs.); Weight with Sensor option: 0.58 kg. (1.27 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 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.012.1.

**D-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. See page 3.400.1.

**TO ORDER**

**SV12-(P)20(A)**

