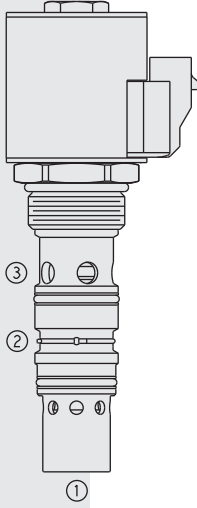


# SPCL16-30 Poppet, 3-Port, Normally Closed

U.S. Patent  
7,921,880



## DESCRIPTION

A solenoid-operated, 3-port, normally-closed, proportional, poppet-type, screw-in hydraulic cartridge valve for low-leakage blocking and load-holding applications.

## OPERATION

When the **SPCL16-30** is energized, the poppet lifts to allow flow from port 3 to ports 1 and 2. Flow at port 2 is typical for load sensing applications and includes a check valve for isolation.

## FEATURES

- Industry-common cavity.
- Efficient wet-armature construction.
- Continuous-duty rated coils.
- Optional waterproof E-Coils rated up to IP69K.
- Reduce manifold space claim.

## RATINGS

**Operating Pressure:** Maximum: 250 bar (3625 psi); Minimum: 2.4 bar (35 psi)

**Flow Rating:** up to 152 lpm (40 gpm); see performance charts

**Internal Leakage:** Ports 1 and 3: 5 drops/minute max. at 250 bar (3625 psi)  
Port 2: 15 drops/minute max. at 250 bar (3625 psi)

**Operating Temperature:** -40° to 100°C (-40° to 212° F) with standard Buna N seals;  
-26° to 204°C (-15° to 400°F) with Fluorocarbon seals;  
-54°C to 104°C (-65°F to 225°F) with Polyurethane seals

**Valve Inductance:** 173.3 mH at 1.2A (Max. Control Current)

**Threshold Current:** 0.40A to 0.60A

**Hysteresis:** Less than 10% of maximum flow at 1.2A (Max. Control Current)

**Dither Frequency:** 100 Hz recommended

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

**Cavity:** VC16-3SPCL; See page 9.116.1

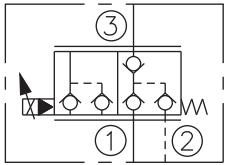
**Cavity Tool:** CT16-3SPCL; See page 8.600.1

**Seal Kit:** SK16-3X-MM; See page 8.650.1

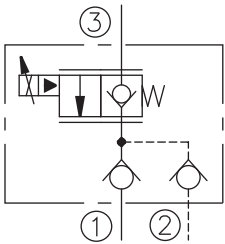
**Coil Nut:** Part No. 7004400

## SYMBOL

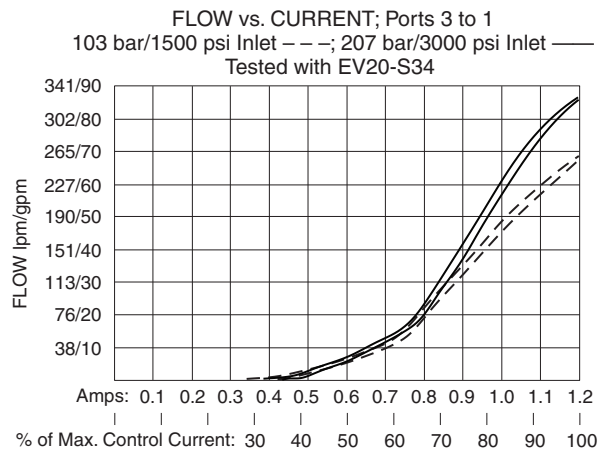
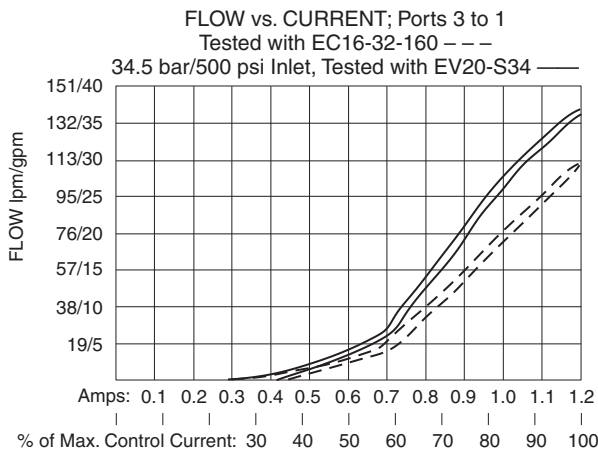
### ISO:



### Expanded:



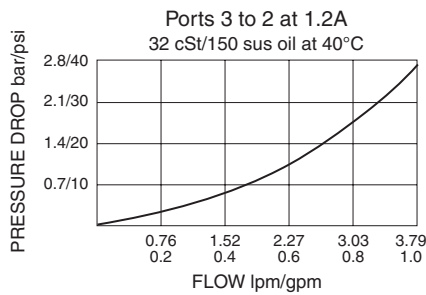
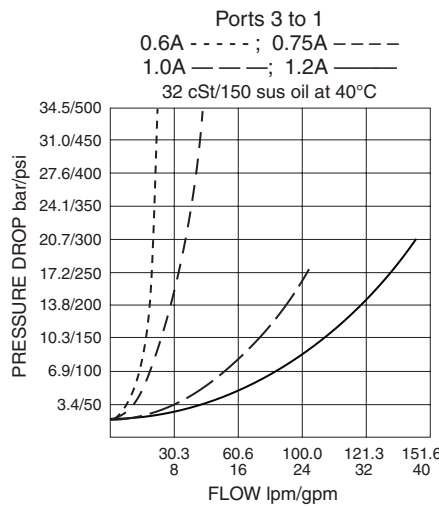
## PERFORMANCE (Cartridge Only)



Performance info. continued on next page.

# SPCL16-30

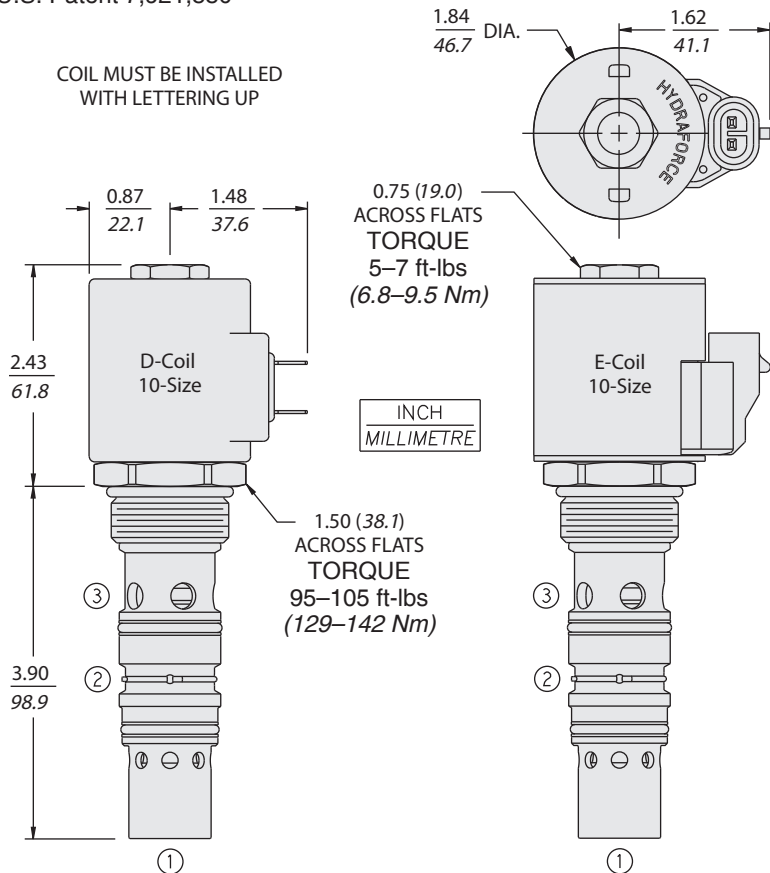
## PERFORMANCE (Continued)



**Recommended Electronic Controllers:**  
See page 2.001.1 or our Electronics catalog.

## DIMENSIONS

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## MATERIALS

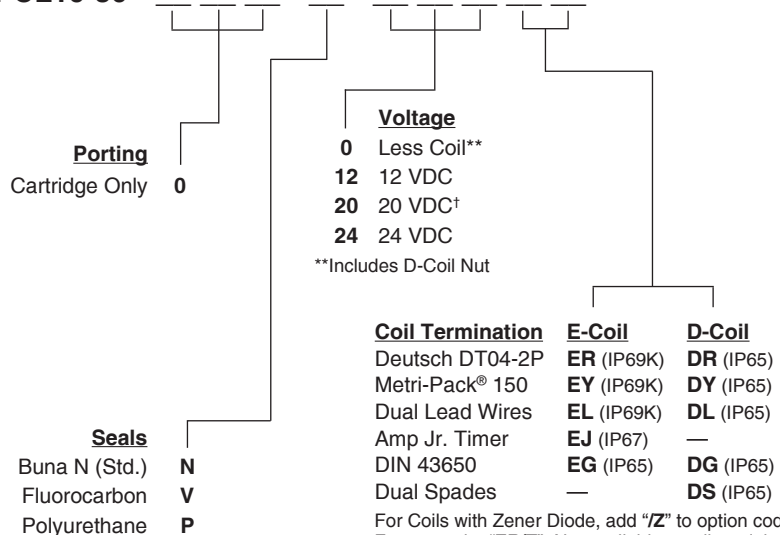
**Cartridge:** Weight: 0.49 kg. (1.09 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.

**Standard 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.  
**Note:** See page 3.400.1 for all E-Coil retrofit applications.

## TO ORDER

### SPCL16-30 -



For Coils with Zener Diode, add "Z" to option code.  
For example: "ER/Z". Not available on all models.  
See coil option info. on pages 3.200.1 & 3.400.1