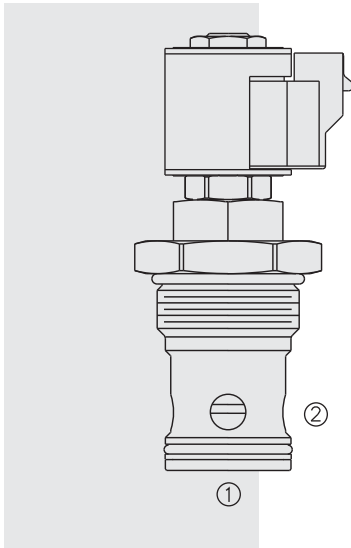


SF20-22 Poppet, 2-Way, N.C., High Pressure



DESCRIPTION

A solenoid-operated, 2-way, normally closed, piloted poppet-type, screw-in hydraulic cartridge valve, intended to act as a blocking or load-holding device for applications requiring low internal leakage.

OPERATION

When de-energized, the **SF20-22** acts as a check valve, allowing flow from ① to ②, while blocking flow from ② to ①.

When energized, the cartridge's poppet lifts to open the ② to ① flow path. In this mode, bidirectional flow is allowed.

FEATURES

- Continuous-duty rated coil.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.

RATINGS

Operating Pressure: Maximum: 345 bar (5000 psi); Minimum: 1.4 bar (20 psi).
 Pressure rating established per NFPA/T2.6.1 R2-2000 using 90% assurance and 90% verification levels for 1 million cycles.

Flow: Up to 303 lpm (80 gpm)

Internal Leakage: 10 drops/minute max. at 345 bar (5000 psi)

Operating Temperature: -40 to 100°C with standard Buna N seals
 -26 to 204°C with Fluorocarbon seals
 -54 to 107°C with Polyurethane seals

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

Initial Coil Current Draw at 20°C: Standard Coil: 1.2 amps at 12 VDC;
 0.13 amps at 115 VAC (full wave rectified);
 E-Coil: 1.4 amps at 12 VDC; 0.7 amps at 24 VDC

Minimum Pull-in Voltage: 85% of nominal at 345 bar (5000 psi)

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 5 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: VC20-2; See page 9.120.1

Cavity Tool: CT20-2XX; See page 8.600.1

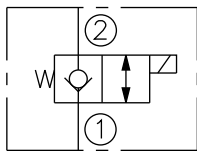
Seal Kit: SK20-2x-T; See page 8.650.1

Coil Nut: Part No. 7004400;

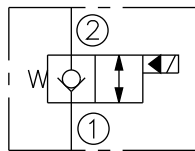
For E-coils manufactured prior to 1-1-04, see page 3.400.1 for coil nut info.

SYMBOLS

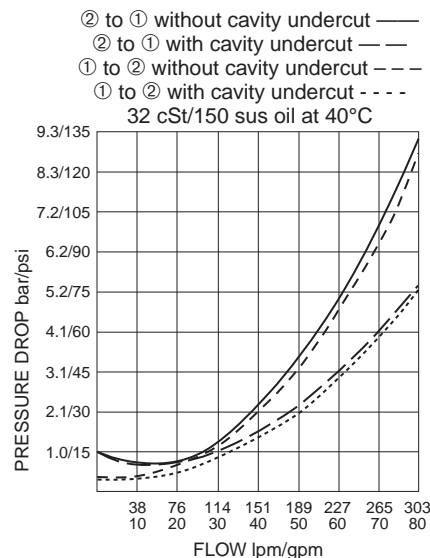
USASI:



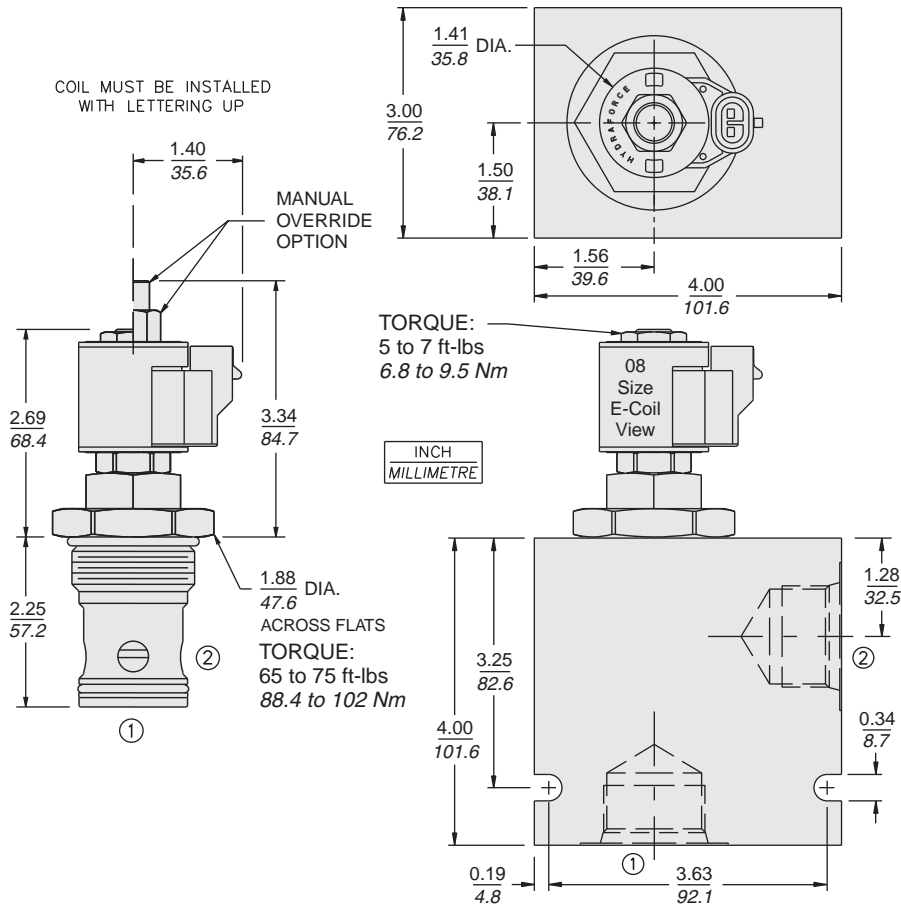
ISO:



PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

Cartridge: Weight: 0.61 kg. (1.35 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings with polyester elastomer back-up standard.

Standard Ported Body: Weight: 4.51 kg. (9.94 lbs.) Ductile iron standard; rated to 345 bar (5000 psi). See page 8.020.1.

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.); 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

| | | | | | | |
|-----------------|-------------|---|---|---|--------------------------|---|
| SF20-22 | | - | - | - | - | - |
| Option | | | | | | |
| None (Blank) | | | | | | |
| Manual Override | M | | | | | |
| Porting | | | | | | |
| Cartridge Only | 0 | | | | | |
| SAE 16 | 16TD | | | | | |
| SAE 20 | 20TD | | | | | |
| Seals | | | | | | |
| Buna N (Std.) | N | | | | | |
| Fluorocarbon | V | | | | | |
| Polyurethane | P | | | | | |
| | | | | | 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 | |
| | | | | | | Termination (VDC) Std. Coil |
| | | | | | | DS Dual Spades |
| | | | | | | DG DIN 43650 |
| | | | | | | DL Leadwires (2) |
| | | | | | | DL/W Leads w/Weatherpak® Connectors |
| | | | | | | DR 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. |