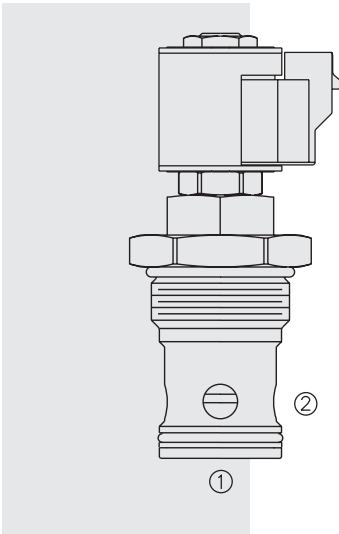


SF20-22 Poppet, 2-Way, N.C., High Pressure



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)

Flow: Up to 303 lpm (80 gpm)

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

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

-30 to 205°C with Fluorocarbon seals

-50 to 80°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 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: VC20-2; See page 9.120.1

Cavity Tool: CT20-2XX; See page 8.600.1

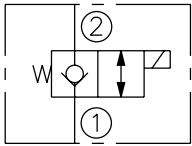
Seal Kit: SK20-2x-T; See page 8.650.1

Coil Nut: Part No. 7004400;

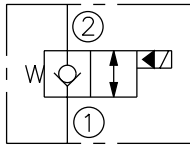
For E-coils manufactured prior to 1-1-04, see page 3.400.1 for coil nut info.

SYMBOLS

USASI:

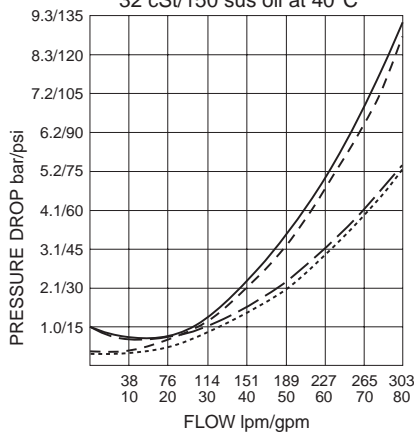


ISO:

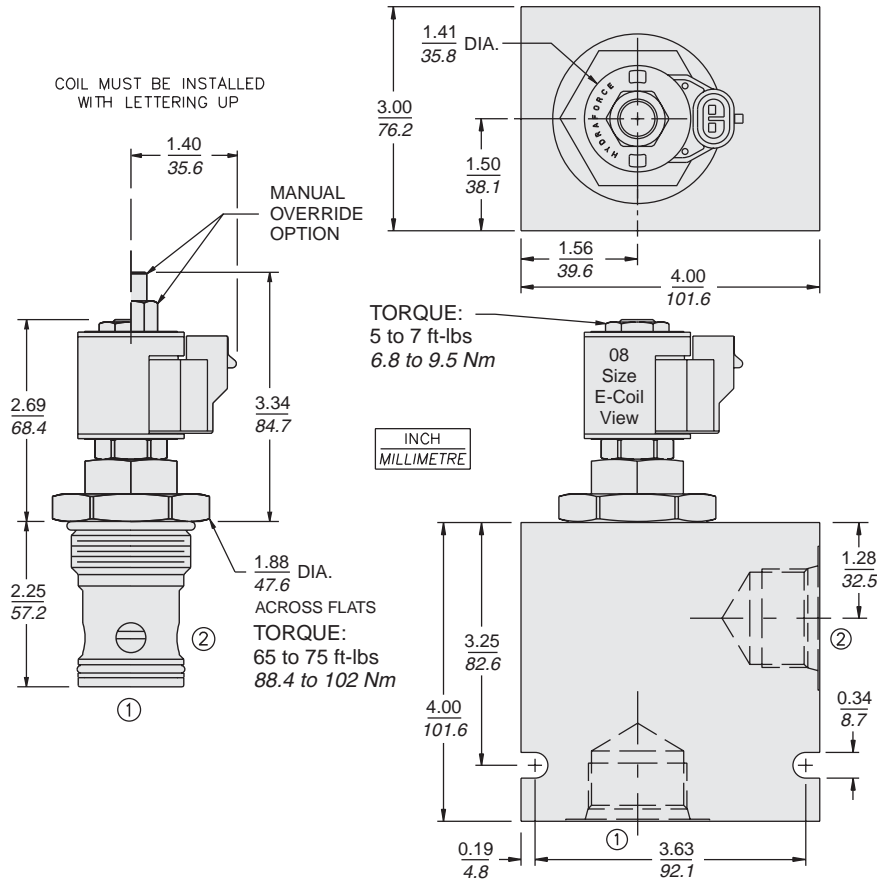


PERFORMANCE (Cartridge Only)

- $\frac{3}{4}$ to $\frac{1}{2}$ without cavity undercut ———
 - $\frac{3}{4}$ to $\frac{1}{2}$ with cavity undercut — — —
 - $\frac{1}{2}$ to $\frac{3}{4}$ without cavity undercut - - - -
 - $\frac{1}{2}$ to $\frac{3}{4}$ with cavity undercut - - - -
- 32 cSt/150 sus oil at 40°C



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								
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								
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)								

**Includes Std. Coil Nut
[†] DS, DW or DL terminations only

Coils with internal diode are available. Consult factory.