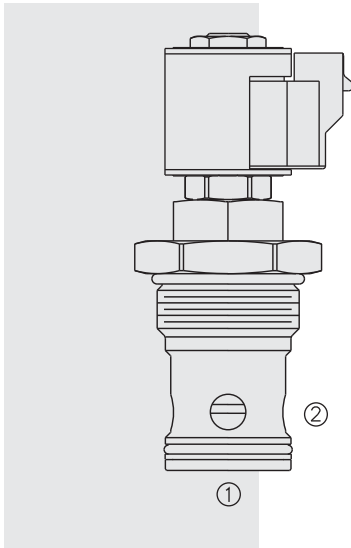


SF20-22 Poppet, 2-Way, N.C., High Pressure



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

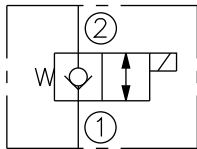
Seal Kit: SK20-2x-T; See page 8.650.1

Coil Nut: Part No. 7004400;

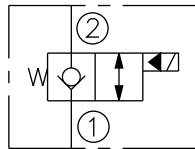
For E-coils manufactured prior to 1-1-04, see page 3.400.1 for coil nut info.

SYMBOLS

USASI:

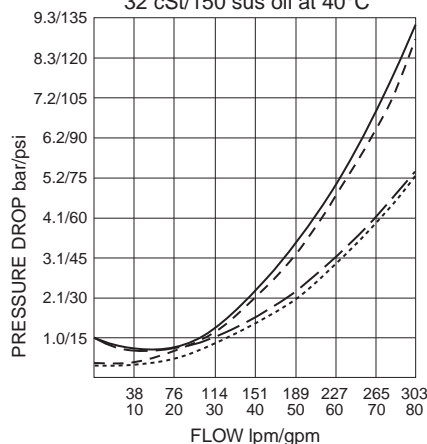


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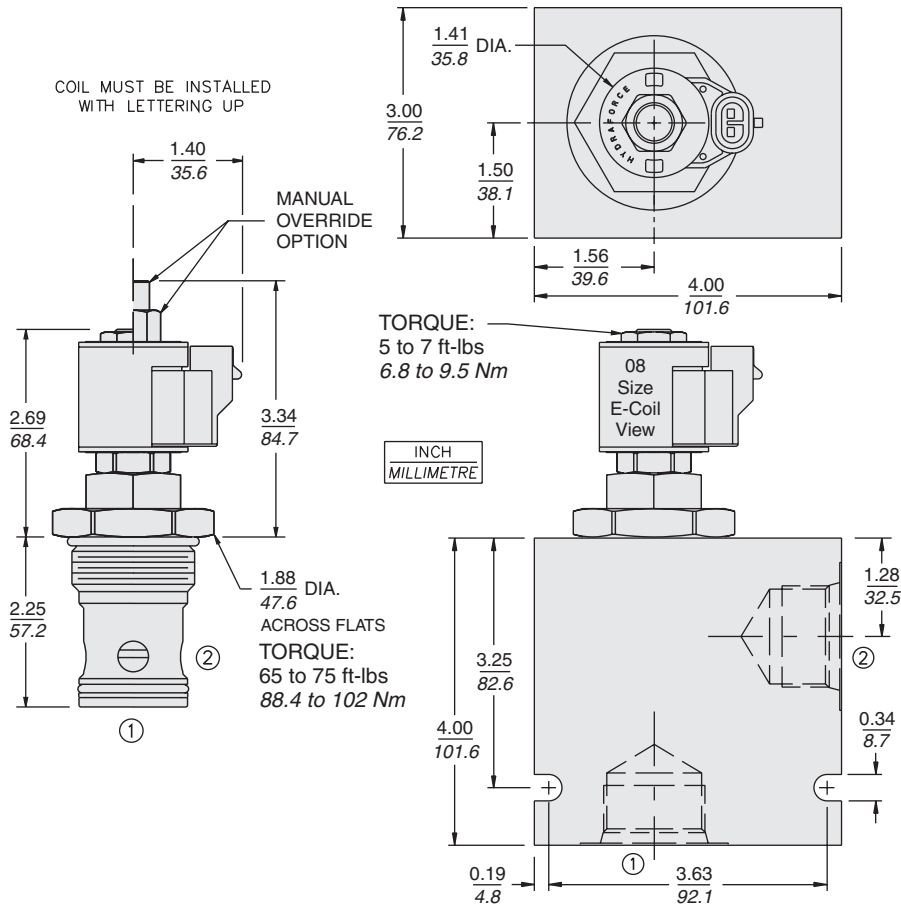


PERFORMANCE (Cartridge Only)

- ② to ① without cavity undercut ———
 - ② to ① with cavity undercut - - - -
 - ① to ② without cavity undercut - - - -
 - ① to ② 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	
						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 Metr i-Pack® 150 (IP69K Rated)

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

Coils with internal diode are available. Consult factory.