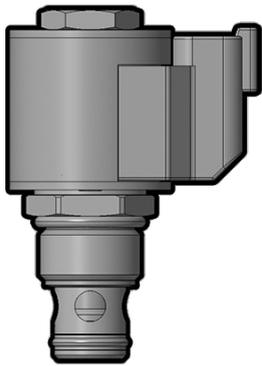




## Overview



### Description

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

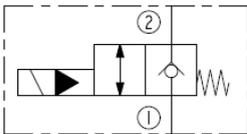
### Operation

When de-energized, the SF80-22R acts as a check valve, allowing flow from port 2 to port 1, while blocking flow from port 1 to port 2. When energized, the valve will open to allow flow from port 1 to port 2 bi-directionally.

### Features

- 280 bar (4000 psi) rating
- 10 size valve with 8 size coil reduces space claim and operating power
- Reverse operating logic, holds load at port 1
- Bi-directional flow when energized
- Hardened seat for long life and low leakage
- Waterproof continuous-duty E-coils rated up to IP69K with optional voltages and terminations
- Corrosion-resistant plating
- Industry common cavity

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	280 bar (4060 psi)
Proof pressure	483 bar (7000 psi)
Burst pressure	621 bar (9000 psi)

### Flow Ratings

Flow rating	76 lpm (20 gpm)	- <b>Note:</b> At rated pressure
Maximum internal leakage	5 drops/min	- <b>Note:</b> at 280 bar (4060 psi) at port 1

### Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- <b>Note:</b> Buna N
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> Fluorocarbon
	-57 to 107 °C (-65 to 225 °F)	- <b>Note:</b> Polyurethane
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

### Fluids

Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties.
Fluid viscosity	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

### Properties

Minimum pull-in voltage	10.2 Vdc	- <b>Note:</b> 12 Vdc coil
Unit weight	0.12 kg (0.27 lb)	
Internal wetted surface area	99 cm <sup>2</sup> (15.3 in <sup>2</sup> )	

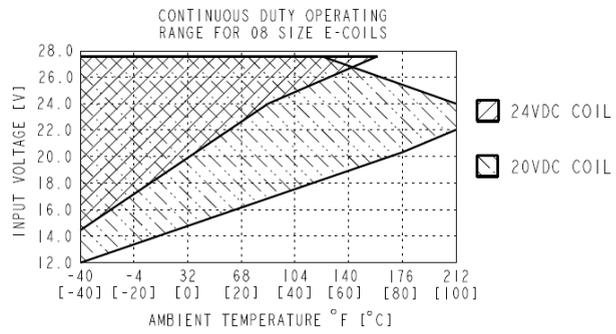
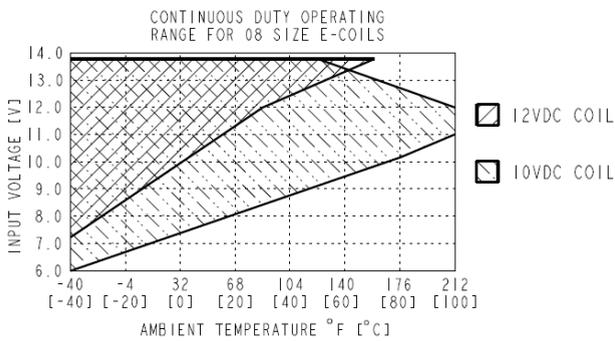
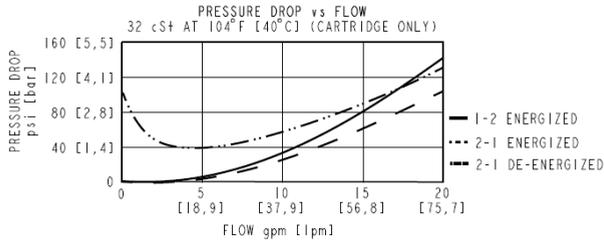
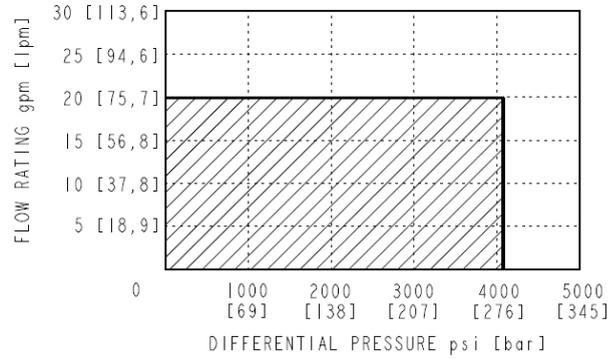


Performance

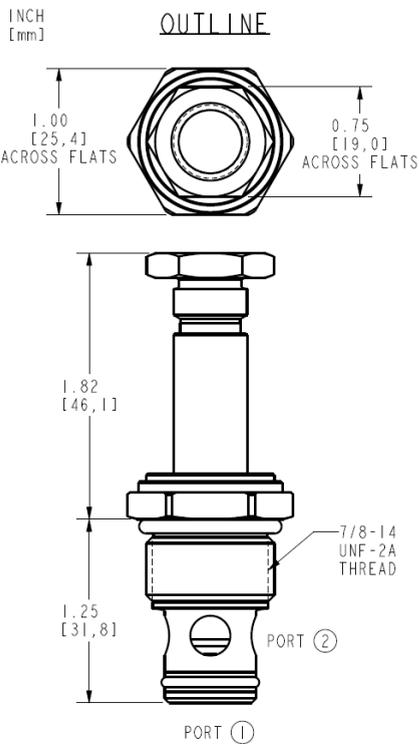
FLOW RATING VS DIFFERENTIAL PRESSURE

PULL IN: 85% OF NOMINAL VOLTAGE  
DROP OUT: 5% OF NOMINAL VOLTAGE

INLET AT PORT 2 & TANK AT PORT 1



Dimensions



ALL DIMENSIONS ARE FOR REFERENCE ONLY.



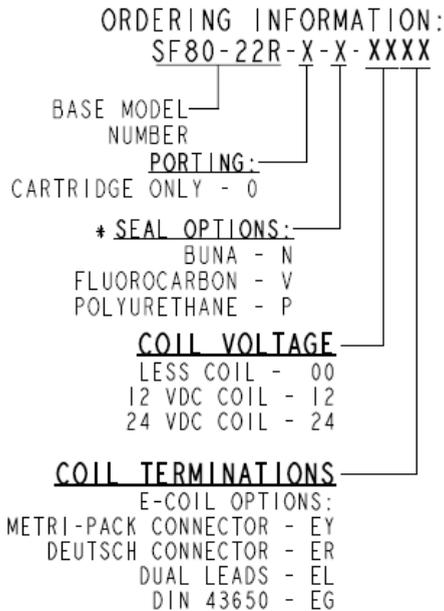
## Installation Specifications

Cavity	VC10-2
Cartridge installation torque	22.9 to 55.6 N-m (39 to 41 ft-lb)
Coil nut torque	6.8 to 9.5 N-m (5 to 7 ft-lb)
Orientation restrictions	None

## Accessories

Seal kit	SK10-2X-M (X = Seal option)
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## Order Code



\* POLYURETHANE SEALS RECOMMENDED  
FOR OPERATING PRESSURES  
ABOVE 3500 psi [241 bar]

### Model Options

#### SF80-22R-H-J-L

#### H Line Body

CODE	DESCRIPTION
0	No Body
6T	Aluminum SAE 6
8T	Aluminum SAE 8
8TD	Ductile Iron SAE 8
4B	Aluminum BSPP 1/2" (3)
4BD	Ductile Iron BSPP 1/2" (3)

#### J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane

#### L Coil



CODE	DESCRIPTION
0	No Coil
10DL	10 VDC, D-Coil, Dual Lead Wires
10DR/D	10 VDC, D-Coil, Deutsch with Diode
10DS	10 VDC, D-Coil, Dual Spade
10EL	10 VDC, E-Coil, Dual Lead Wires, 18 inches long
10EL/36	10 VDC, E-Coil, Dual Lead Wires, 36 inches long
10ER	10 VDC, E-Coil, Deutsch
10ER/Z	10 VDC, E-Coil, Deutsch with Zener Diode
12DG	12 VDC, D-Coil, DIN 43650
12DL	12 VDC, D-Coil, Dual Lead Wires, 18 inches long
12DL/36	12 VDC, D-Coil, Dual Lead Wires, 36 inches long
12DL/W	12 VDC, D-Coil, Dual Lead Wires with Weatherpak
12DL/W/D	12 VDC, D-Coil, Dual Lead Wires with Weatherpak with Diode
12DR	12 VDC, D-Coil, Deutsch
12DR/D	12 VDC, D-Coil, Deutsch with Diode
12DR/Z	12 VDC, D-Coil, Deutsch with Zener Diode
12DS	12 VDC, D-Coil, Dual Spade
12EG	12 VDC, E-Coil, DIN 43650
12EG/Z	12 VDC, E-Coil, DIN 43650 with Zener Diode
12EJ	12 VDC, E-Coil, AMP Jr.
12EJ/Z	12 VDC, E-Coil, AMP Jr. with Zener Diode
12EL	12 VDC, E-Coil, Dual Lead Wires, 18 inches long
12EL/36	12 VDC, E-Coil, Dual Lead Wires, 36 inches long
12EL/Z	12 VDC, E-Coil, Dual Lead Wires with Zener Diode
12ER	12 VDC, E-Coil, Deutsch
12ER/Z	12 VDC, E-Coil, Deutsch with Zener Diode
12EY	12 VDC, E-Coil, Metri-Pack 150
12EY/Z	12 VDC, E-Coil, Metri-Pack 150 with Zener Diode
20DG	20 VDC, D-Coil, DIN 43650
20DS	20 VDC, D-Coil, Dual Spade
20ER	20 VDC, E-Coil, Deutsch
20ER/Z	20 VDC, E-Coil, Deutsch with Zener Diode
24AG	24 VDC, D-Coil, DIN 43650
24AP	24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires
24DG	24 VDC, D-Coil, DIN 43650
24DL	24 VDC, D-Coil, Dual Lead Wires, 18 inches long
24DL/36	24 VDC, D-Coil, Dual Lead Wires, 36 inches long
24DL/W	24 VDC, D-Coil, Dual Lead Wires with Weatherpak
24DR	24 VDC, D-Coil, Deutsch
24DR/D	24 VDC, D-Coil, Deutsch with Diode
24DR/Z	24 VDC, D-Coil, Deutsch with Zener Diode
24DS	24 VDC, D-Coil, Dual Spade
24EG	24 VDC, E-Coil, DIN 43650



CODE	DESCRIPTION
24EG/Z	24 VDC, E-Coil, DIN 43650 with Zener Diode
24EJ	24 VDC, E-Coil, AMP Jr.
24EL/D	24 VDC, E-Coil, Dual Lead Wires with Diode
24ER	24 VDC, E-Coil, Deutsch
24ER/Z	24 VDC, E-Coil, Deutsch with Zener Diode
24EY	24 VDC, E-Coil, Metri-Pack 150
24EY/Z	24 VDC, E-Coil, Metri-Pack 150 with Zener Diode
36DG	36 VDC, D-Coil, DIN 43650
36DS	36 VDC, D-Coil, Dual Spade
115AG	115 VAC, D-Coil, DIN 43650
115AP	115 VAC, D-Coil, 1/2" Conduit and Dual Lead Wires
230AG	230 VAC, D-Coil, DIN 43650
230AP	230 VAC, D-Coil, 1/2" Conduit and Dual Lead Wires