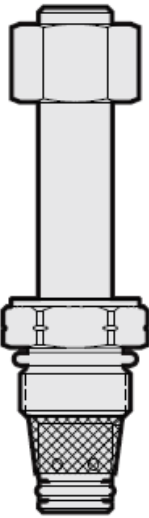




## Overview



### Description

A solenoid-operated, 2 port, normally closed, direct-acting, poppet-type, screw in hydraulic cartridge valve, designed for low-leakage blocking and load-holding applications to operate as a bidirectional blocking valve in low flow circuits.

### Operation

When de-energized, the SF08-28 blocks flow in both directions. When energized, the poppet shifts to open the bidirectional flow path.

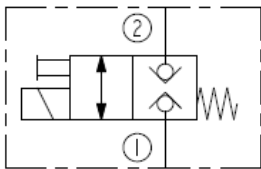
### Manual Override Operation

Emergency use only! Not for continuous duty operation. To activate the "T" manual override: turn the knurled adjustment knob clockwise until the valve opens. To deactivate: turn the adjustment knob counterclockwise until it stops. To activate the "P" and "K" manual override: push until the valve opens. To deactivate: remove the applied force from the manual override.

### Features

- Flow rating 11.3 lpm (3 gpm), peak flow up to 39 lpm (10.4 gpm)
- Pushbutton (P), Knob (K), and Threaded (T) manual override options
- Tested to 2 million cycles
- Less than 5 drops/min leakage maintained after endurance test

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	345 bar (5000 psi)
Proof pressure	690 bar (10,000 psi)
Burst pressure	1379 bar (20,000 psi)

### Flow Ratings

Flow rating	11.3 lpm (3 gpm)	- <b>Note:</b> See performance graph for shifting limits.
Maximum internal leakage	5 drops/min	- <b>Note:</b> At 345 bar (5000 psi)

### Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- <b>Note:</b> Buna N Seals
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> Fluorocarbon Seals
	-54 to 107 °C (-54 to 225 °F)	- <b>Note:</b> Polyurethane Seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

## Operating Parameters

### Fluids

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



Properties

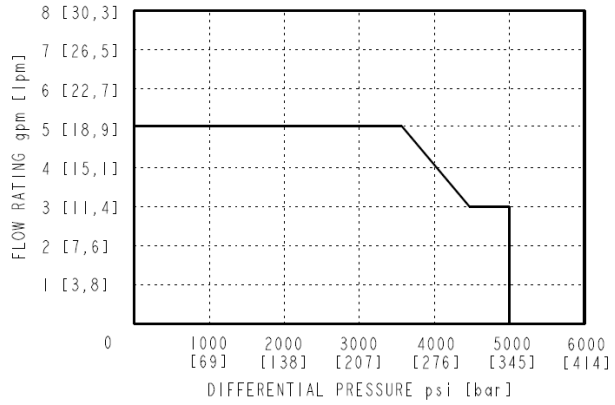
Corrosion protection	12 hr salt spray per ASTM B 633
Unit weight	0.18 kg (0.39 lb)
Internal wetted surface area	85 cm <sup>2</sup> (18.6 in <sup>2</sup> )

Performance

FLOW RATING vs DIFFERENTIAL PRESSURE

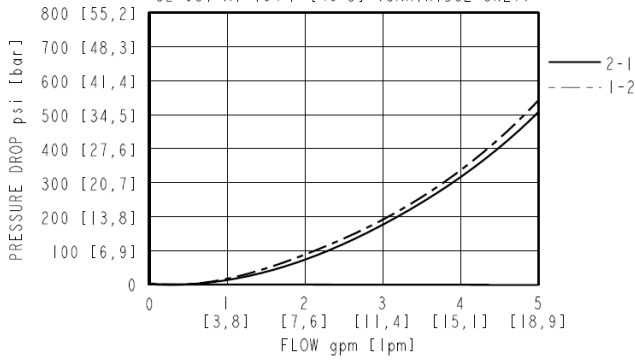
PULL IN: 85% OF NOMINAL / DROP OUT: 5% OF NOMINAL.

INLET AT PORT 2 & TANK AT PORT 1



PRESSURE DROP vs FLOW

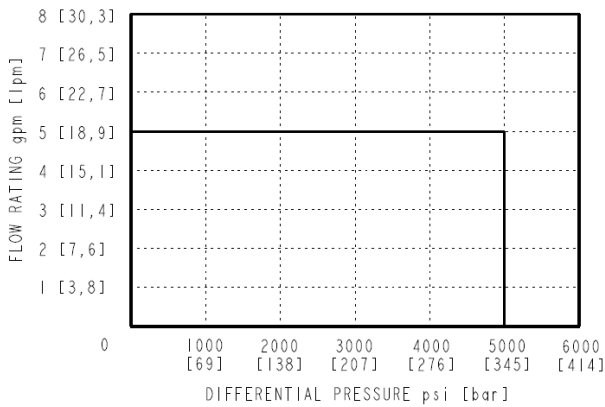
32 cSt AT 104°F [40°C] (CARTRIDGE ONLY)



FLOW RATING vs DIFFERENTIAL PRESSURE

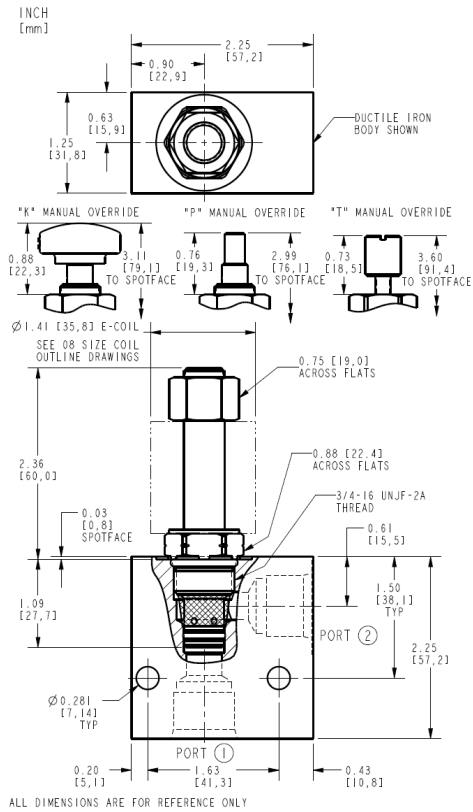
PULL IN: 85% OF NOMINAL / DROP OUT: 5% OF NOMINAL.

INLET AT PORT 1 & TANK AT PORT 2





## Dimensions



## Installation Specifications

Cavity	VC08-2
Cartridge installation torque	25.8 to 28.6 N-m (19 to 21 ft-lb)
Coil nut torque	5.4 to 6.8 N-m (4 to 5 ft-lb)
Orientation restrictions	None

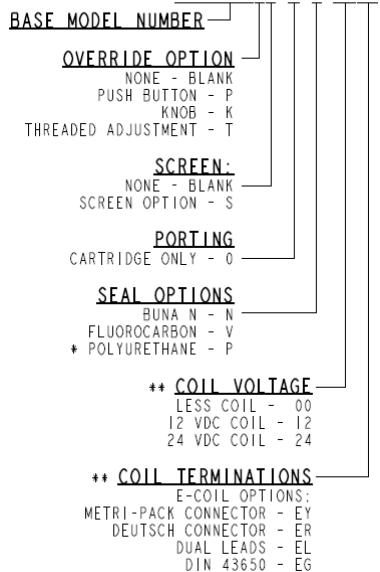
## Accessories

Seal kit	SK08-2X-M (X = Seal option)
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## Order Code

**ORDERING INFORMATION**

SF08-28XX-X-X-XXXX



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

\*\* CONSULT FACTORY OR CATALOG FOR OTHER AVAILABLE OPTIONS

**Model Options****SF08-28EG-H-J-L****E Manual Override**

CODE	DESCRIPTION
BLANK	NONE
P	Push button
K	Knob
T	Threaded adjustment

**G Screen**

CODE	DESCRIPTION
BLANK	NONE
S	Screen

**H Line Body**

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

**J Seal**



CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane

### L Coil

CODE	DESCRIPTION
00	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



CODE	DESCRIPTION
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
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