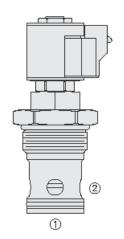


Overview



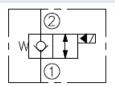
Description

A solenoid-operated, 2 way, normally closed, poppet-type, screw in hydraulic cartridge valve, designed to function as a load holding or blocking valve in applications requiring low internal leakage at high pressure. When de-energized, the SF20-22 acts as a check valve, allowing flow to pass from port 1 to port 2, while blocking flow in the reverse direction. When energized, the poppet lifts to open the port 2 to port 1 flow path. In the energized mode, flow is also allowed from port 1 to port 2.

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.
- o Optional waterproof E-Coils rated up to IP69K.
- · Corrosion-resistant plating.
- · Industry common cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating 1.4 to 345 bar (20 to 5000 psi)

Flow Ratings

Flow rating 303 lpm (80 gpm)

Maximum internal leakage 10 drops/min - Note: Max at 345 bar (5000 psi)

Temperature Ratings

Operating fluid temperature -40 to 100 °C (-40 to 212 °F)
-26 to 204 °C (-15 to 400 °F)

- Note: With buna N seals
- Note: With viton seals

-54 to 107 °C (-65 to 225 °F) - **Note:** With viton seals

Storage temperature -40 to 70 °C (-40 to 160 °F) Ambient temperature -40 to 70 °C (-40 to 160 °F)

Operating Parameters

Fluids Mineral based or synthetic hydraulic fluid with lubricating properties

Fluid viscosity range 7.4 to 420 cSt

Maximum operating contamination 20/18/14 per ISO 4406

level

Properties

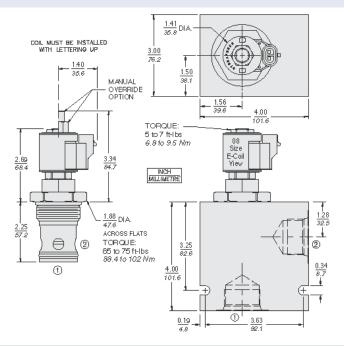
Unit weight 1.43 lb (0.65 kg) Internal wetted surface area 378 cm² (58.6 in²)



Performance

② to ① without cavity undercut —— ② to ③ with cavity undercut — — ④ to ② without cavity undercut – – 1 to 2 with cavity undercut - - - -32 cSt/150 sus oil at 40°C 9.3/135 8.3/120 7.2/105 6.2/90 PRESSURE DROP bar/psi 5.2/75 4.1760 3.1745 2.1/30 1.0/15 114 151 189 227 30 40 50 60 FLOWIpm/gpm

Dimensions



Installation Specifications

Cavity VC20-2

Cartridge installation torque 88.4 to 102 N-m (65 to 75 ft-lb)
Coil nut torque 5.4 to 6.8 N-m (4 to 5 ft-lb)

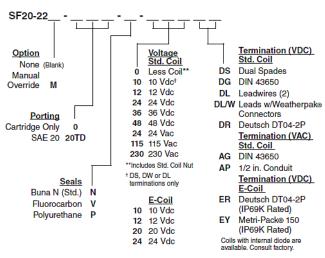
Orientation restriction None

Accessories

Seal kit SK20-2X-T - Note: X = seal option

Order Code





Model Options

SF20-22E-H-J-L

E Manual Override

CODE	DESCRIPTION
BLANK	NONE
J	Momentary Pull Override, #10-32 threads
М	Two Position Override, Red Knurled Knob
Υ	Momentary Pull Override, Red Knurled Knob

H Line Body

CODE	DESCRIPTION
0	No Body
16T	Aluminum SAE 16
20T	Aluminum SAE 20
16TD	Ductile Iron SAE 16
20TD	Ductile Iron SAE 20

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
Р	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



CODE	DESCRIPTION
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
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
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SOLENOID CARTRIDGE VALVE POPPET, 2 WAY, NORMALLY CLOSED



CODE	DESCRIPTION
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