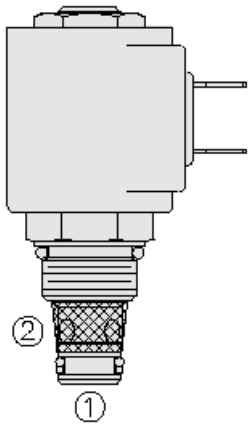




## Overview



### Description

A solenoid-operated, 2 port, normally closed, poppet-type, proportional, screw-in hydraulic cartridge valve, designed for low leakage blocking and load-holding applications.

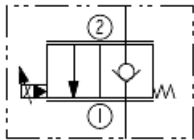
### Operation

When de-energized, the SP08-20X acts as a check valve, allowing flow from 1 to 2, while blocking flow from 2 to 1. When energized, the poppet lifts to open the 2 to 1 flow path.

### Features

- Continuous-duty rated coil.
- Efficient wet-armature construction.
- Manual override options.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.
- Compact size.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	207 bar (3000 psi)	
Proof pressure	413 bar (6000 psi)	- <b>Note:</b> SP08-20 only)
Burst pressure	827 bar (12000 psi)	- <b>Note:</b> SP08-20 only)

### Flow Ratings

Maximum internal leakage	5 drops/min	- <b>Note:</b> At 207 bar (3000 psi)
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### Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- <b>Note:</b> With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	- <b>Note:</b> With polyurethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 90 °C (-40 to 194 °F)	

## Operating Parameters

Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Filtration requirements	ISO 4406 16/13

## Properties

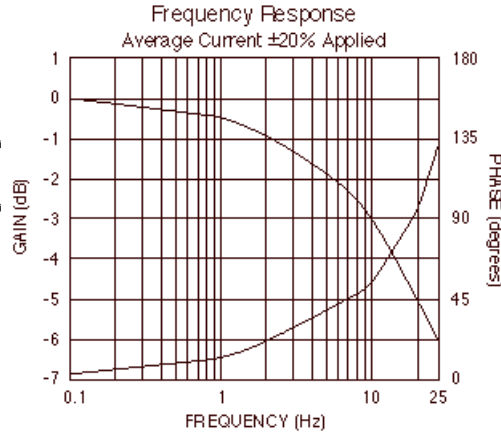
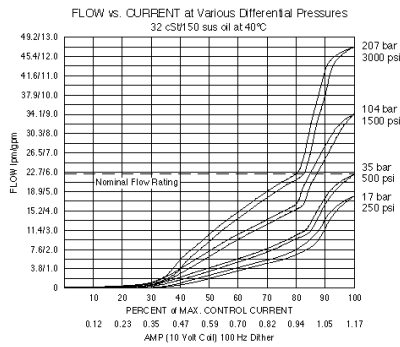
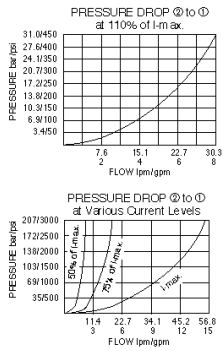
Materials	Steel with hardened work surfaces zinc-plated exposed surfaces
Unit weight	0.10 kg (0.23 lb) 0.10 kg (0.94 lb) - <b>Note:</b> Including coil
Internal wetted surface area	85.2 cm <sup>2</sup> (13.2 in <sup>2</sup> )

## Electrical Parameters

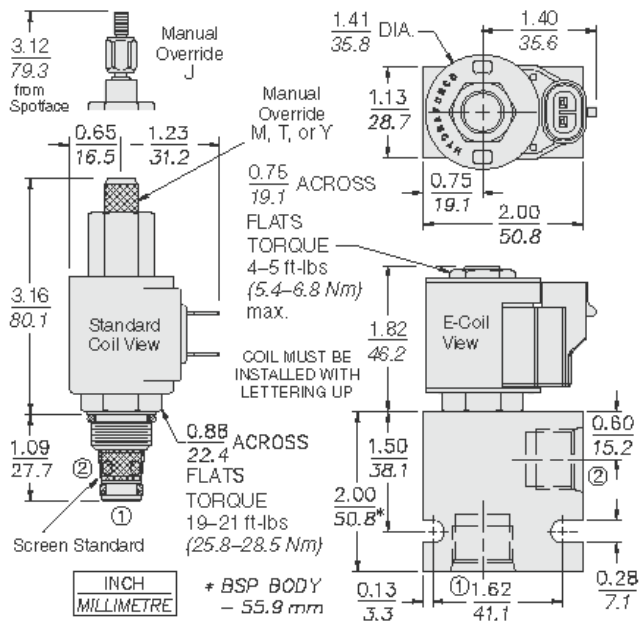
Minimum operating PWM dither frequency	70 Hz
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## Performance



## Dimensions



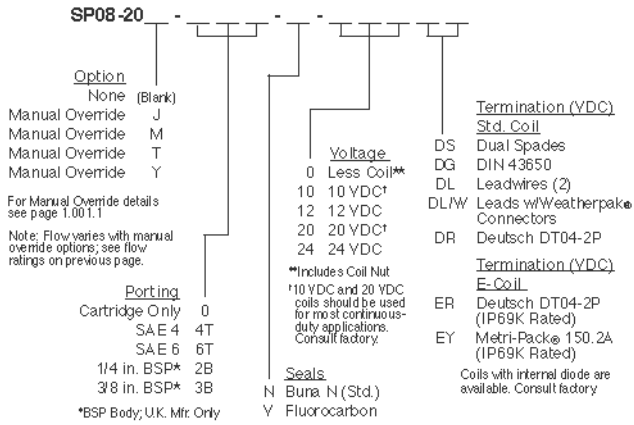
## Installation Specifications

Cavity	VC08-2
Cartridge installation torque	25.8 to 28.5 N-m (19 to 21 ft-lb)
Maximum allowable torque	54 N-m (40 ft-lb) - <b>Note:</b> In aluminum
Coil nut torque	5.4 to 6.8 N-m (4.5 ft-lb)
Orientation restriction	None

## Accessories

Seal kit	SK08-2X-T
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## Order Code



**Model Options**

**SP08-20E-H-J-L**

**E Manual Override**

CODE	DESCRIPTION
BLANK	NONE
J	Momentary Pull Override, #10-32 threads
M	Two Position Override, Red Knurled Knob
T	Variable Position Override, Red Knurled Knob
Y	Momentary Pull Override, Red Knurled Knob

**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
U	PPDI Urethane

**L Coil**

CODE	DESCRIPTION
0	No Coil
10DL	10 VDC, D-Coil, Dual Lead Wires
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



CODE	DESCRIPTION
10ER	10 VDC, E-Coil, Deutsch
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
12DR	12 VDC, D-Coil, Deutsch
12DS	12 VDC, D-Coil, Dual Spade
12EG	12 VDC, E-Coil, DIN 43650
12EJ	12 VDC, E-Coil, AMP Jr.
12EL	12 VDC, E-Coil, Dual Lead Wires, 18 inches long
12EL/36	12 VDC, E-Coil, Dual Lead Wires, 36 inches long
12ER	12 VDC, E-Coil, Deutsch
12EY	12 VDC, E-Coil, Metri-Pack 150
20DG	20 VDC, D-Coil, DIN 43650
20DS	20 VDC, D-Coil, Dual Spade
20ER	20 VDC, E-Coil, Deutsch
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
24DS	24 VDC, D-Coil, Dual Spade
24EG	24 VDC, E-Coil, DIN 43650
24EJ	24 VDC, E-Coil, AMP Jr.
24ER	24 VDC, E-Coil, Deutsch
24EY	24 VDC, E-Coil, Metri-Pack 150
36DG	36 VDC, D-Coil, DIN 43650
36DS	36 VDC, D-Coil, Dual Spade