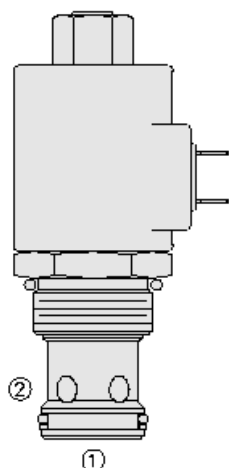




Overview



Description

A solenoid-operated, 2 way, normally open, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load-holding or blocking valve in applications requiring low internal leakage

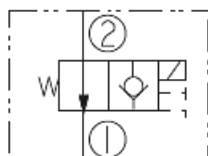
Operation

When de-energized, the SV16-21 poppet lifts to open the port 2 to port 1 flow path. In this mode, flow from port 1 to 2 is severely restricted. When energized, the port 2 to port 1 flow path is closed. In this mode, the valve acts as a check valve, allowing flow to pass from port 1 to port 2 after overcoming the solenoid force (requires 50 to 100 psi [3,4 to 6,9 bar])

Features

- Continuous-duty rated coil. Hardened seat for long life and low leakage. Optional coil voltages and terminations. Efficient wet-armature construction. Cartridges are voltage interchangeable. Unitized, molded coil design. Manual override option. Optional waterproof E-Coils rated up to IP69K. Industry-common cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating	207 bar (3000 psi)	
Static pressure rating	250 bar (3650 psi)	- Note: Based on 1 million cycles
Proof pressure	345 bar (5000 psi)	
Burst pressure	965 bar (14000 psi)	

Flow Ratings

Flow rating	See performance chart
Maximum internal leakage	3 drops/min - Note: Max at 207 bar (3000 psi)

Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- Note: With buna N seals
	-26 to 204 °C (-15 to 400 °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

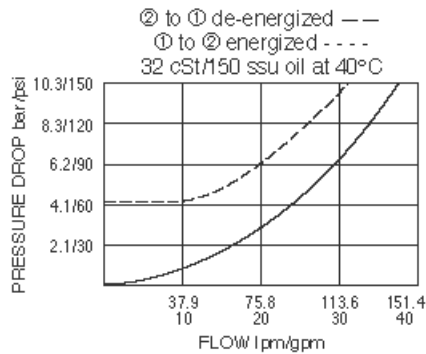
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	20/18/14 per ISO 4406

Properties

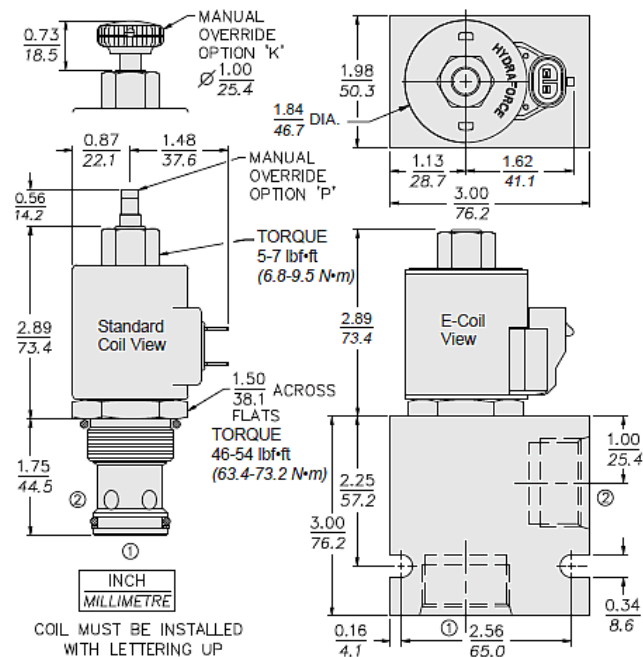
Unit weight	0.37 kg (0.81 lb)
Internal wetted surface area	239 cm ² (37 in ²)



Performance



Dimensions



Materials

Materials

Cartridge: Weight: 0.31 kg (0.69 lb); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and polyester elastomer back-up standard.

Standard Ported Body: Weight: 0.57 kg (1.25 lb); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi); Ductile iron bodies available; dimensions may differ.

Standard D-Coil: Weight each: 0.27 kg (0.60 lb); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.

E-Coil: Weight: 0.41 kg (0.9 lb); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

Installation Specifications

Cavity	VC16-2
Cartridge installation torque	62.4 to 73.2 N·m (46 to 54 ft·lb)
Coil nut torque	6.8 to 9.5 N·m (5 to 7 ft·lb)
Orientation restriction	None

Accessories

Seal kit	SK16-2X-T	- Note: X = seal option
Housings		
Coils		



Order Code

POSITION	CODE	DESCRIPTION
		SV16-21E-H-JL
E		Manual Override
E	BLANK	NONE
E	K	Momentary Push Override, Knob
E	P	Momentary Push Override, Button
H		Line Body
H	0	No Body
H	12T	Aluminum SAE 12
H	16T	Aluminum SAE 16
H	12TD	Ductile Iron SAE 12
H	16TD	Ductile Iron SAE 16
H	6B	Aluminum BSPP 3/4" (6)
H	8B	Aluminum BSPP 1" (8)
H	8BD	Ductile Iron BSPP 1" (8)
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	P	Polyurethane
J	U	PPDI Urethane
L		Coil
L	0	No Coil
L	10DG	10 VDC, D-Coil, DIN 43650
L	10DL	10 VDC, D-Coil, Dual Lead Wires
L	10DR/D	10 VDC, D-Coil, Deutsch with Diode
L	10DS	10 VDC, D-Coil, Dual Spade
L	10EL	10 VDC, E-Coil, Dual Lead Wires
L	10ER	10 VDC, E-Coil, Deutsch
L	10ER/Z	10 VDC, E-Coil, Deutsch with Zener Diode
L	12DG	12 VDC, D-Coil, DIN 43650
L	12DL	12 VDC, D-Coil, Dual Lead Wires, 18 inches long
L	12DL/36	12 VDC, D-Coil, Dual Lead Wires, 36 inches long
L	12DL/W	12 VDC, D-Coil, Dual Lead Wires with Weatherpak
L	12DL/W/D	12 VDC, D-Coil, Dual Lead Wires with Weatherpak with Diode
L	12DR	12 VDC, D-Coil, Deutsch
L	12DR/D	12 VDC, D-Coil, Deutsch with Diode
L	12DR/Z	12 VDC, D-Coil, Deutsch with Zener Diode
L	12DS	12 VDC, D-Coil, Dual Spade
L	12EG	12 VDC, E-Coil, DIN 43650
L	12EJ	12 VDC, E-Coil, AMP Jr.
L	12EL	12 VDC, E-Coil, Dual Lead Wires, 18 inches long
L	12EL/36	12 VDC, E-Coil, Dual Lead Wires, 36 inches long
L	12EL/W/Z	12 VDC, E-Coil, Dual Lead Wires with WeatherPak and Zener Diode



POSITION	CODE	DESCRIPTION
L	12EL/Z	12 VDC, E-Coil, Dual Lead Wires with Zener Diode
L	12ER	12 VDC, E-Coil, Deutsch
L	12ER/Z	12 VDC, E-Coil, Deutsch with Zener Diode
L	12EY	12 VDC, E-Coil, Metri-Pack 150
L	12EY/Z	12 VDC, E-Coil, Metri-Pack 150 with Zener Diode
L	20DR/D	20 VDC, D-Coil, Deutsch with Diode
L	20DS	20 VDC, D-Coil, Dual Spade
L	20ER	20 VDC, E-Coil, Deutsch
L	24AG	24 VDC, D-Coil, DIN 43650
L	24AP	24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires
L	24DG	24 VDC, D-Coil, DIN 43650
L	24DL	24 VDC, D-Coil, Dual Lead Wires
L	24DL/W	24 VDC, D-Coil, Dual Lead Wires with Weatherpak
L	24DL/W/D	24 VDC, D-Coil, Dual Lead Wires with Weatherpak with Diode
L	24DP	24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires
L	24DR	24 VDC, D-Coil, Deutsch
L	24DR/D	24 VDC, D-Coil, Deutsch with Diode
L	24DS	24 VDC, D-Coil, Dual Spade
L	24EG	24 VDC, E-Coil, DIN 43650
L	24EJ	24 VDC, E-Coil, AMP Jr.
L	24EL	24 VDC, E-Coil, Dual Lead Wires, 18 inches long
L	24EL/36	24 VDC, E-Coil, Dual Lead Wires, 36 inches long
L	24EL/W/Z	24 VDC, E-Coil, Dual Lead Wires with WeatherPak and Zener Diode
L	24ER	24 VDC, E-Coil, Deutsch
L	24ER/Z	24 VDC, E-Coil, Deutsch with Zener Diode
L	24EY	24 VDC, E-Coil, Metri-Pack 150
L	24EY/Z	24 VDC, E-Coil, Metri-Pack 150 with Zener Diode
L	36DS	36 VDC, D-Coil, Dual Spade
L	115AG	115 VAC, D-Coil, DIN 43650
L	115AP	115 VAC, D-Coil, 1/2" Conduit and Dual Lead Wires
L	230AG	230 VAC, D-Coil, DIN 43650
L	230AP	230 VAC, D-Coil, 1/2" Conduit and Dual Lead Wires

