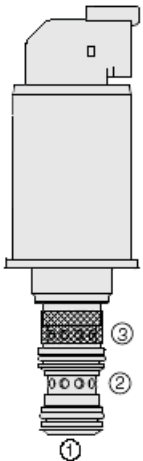




Overview



Description

The SV90-G39X is a direct-acting, spool-type, 2-position, 3-way directional control valve. It is a drop-in, flange mounted, cartridge type valve for use with general purpose hydraulic fluids. The coil is an integral part of the valve and is not serviceable

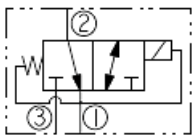
Operation

When de-energized, the SV90-G39X allows flow from port 2 to port 1, while blocking flow at port 3. When energized, the spool shifts to open from port 3 to port 2, while blocking flow at port 1

Features

- Bi-directional operation.
- Reduced leakage.
- Low pressure drop
- Economical drop-in style.
- Fast response.
- Corrosion-resistant plating.
- Inlet port screen option for additional resistance to contamination.
- Higher flow capacity at lower temperatures.
- Integral waterproof coil standard. See page 3.400.1 for a description of tests conducted to verify coil waterproofing.
- Coil voltage range from 10 to 28 VDC.
- Top-mounted coil with several push-on termination options.
- Round flange with optional mounting plates provides more options for orientation.
- Retrofit mounting options also available.

Symbol



Ratings

Pressure Ratings

Pressure rating	45 bar (650 psi)	- Note: All ports
Proof pressure	54 bar (780 psi)	- Note: Port 1
	207 bar (3000 psi)	- Note: Port 2, port 3
Burst pressure	165 bar (2400 psi)	- Note: All ports pressurized
	275 bar (4000 psi)	- Note: Ports 2 and 3 pressurized

Flow Ratings

Flow rating	30 lpm (8 gpm)	
Maximum internal leakage	90 ml/min (5.5 in ³ /min)	- Note: At 45 bar (650 psi)

Other Ratings

Cycle life	Ten million cycles	
Response	30 ms rating	- Note: (pull-in) first indication of change of state with 100% voltage and flow
	30 ms rating	- Note: (drop-out) first indication of change of state with 100% voltage and flow
Environmental rating	Ip69k	
Corrosion protection	960 hour salt spray per ASTM b117	

Temperature Ratings

Operating fluid temperature	-40 to 149 °C (-40 to 300 °F)	- Note: With HNBR seals
	-26 to 204 °C (-15 to 400 °F)	- Note: With fluorocarbon seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 120 °C (-40 to 248 °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



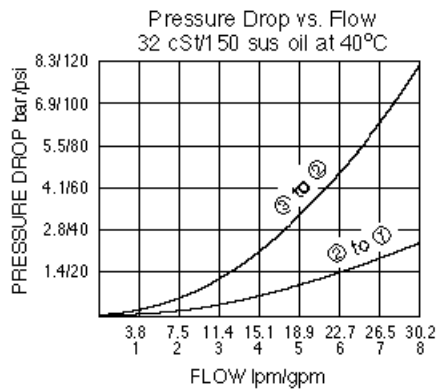
Properties

Unit weight	0.29 kg (0.65 lb)
Internal wetted surface area	314 cm ² (48.6 in ²)

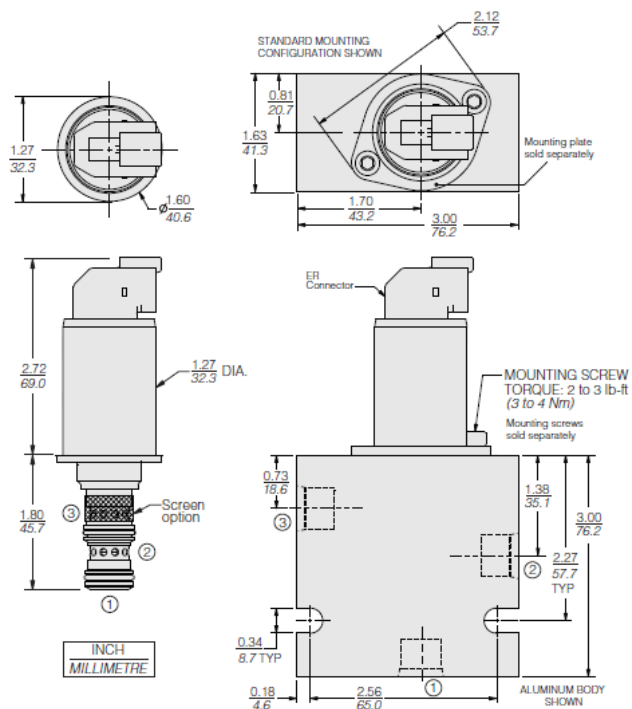
Electrical Parameters

Valve inductance	65 mH	- Note: Coil 10 Vdc
	98 mH	- Note: Coil 12 Vdc
	146 mH	- Note: Coil 14 Vdc
	273 mH	- Note: Coil 20 Vdc
	418 mH	- Note: Coil 24 Vdc
	620 mH	- Note: Coil 28 Vdc

Performance



Dimensions





Materials

Materials

Cartridge: Weight: 0.29 kg (0.65 lb) Steel with hardened work surfaces. Zinc-Nickel plated exposed surfaces. HNBR O-rings standard. Class N high-temperature magnet wire, with zinc-nickel plated shell.

Standard Ported Body: Weight: 0.55 kg (1.22 lb) Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi). Must be ordered separately: Part No. 71607X0.

Note: Retrofit G3 line bodies and mounting plates are also available. Part numbers will differ. Contact HydraForce application engineering for details.

Mounting Plate: Must be ordered separately: Part No. 4595096

Mounting Screws: Must be ordered separately: Part No. 4002609

Installation Specifications

Cavity	VC-G024
Installation type	Flange mounted
Orientation restriction	None
Mounting screw torque	3 to 4 N-m (2.2 to 3.0 ft-lb)
Note	For retro-fitting into older drop-in cavities and other mounting options, see "g3_mounting_options" technical reference

Accessories

Mounting plate	Hf p/n 4595096
Mounting screw	M5 x 0,8 x 12 mm long, hf p/n: 4002609 (sold separately)
Valve body	Hf p/n 71612x0 (sold separately) for retro-fitting into older drop-in cavities and other mounting options, see "g3_mounting_options" outline drawing
Seal kit	SK-G024-X - Note: X = seal option



Order Code

POSITION	CODE	DESCRIPTION
		SV98-G39G-H-J-KL-U
G		Screen
G	BLANK	NONE
G	S	60 Mesh Screen
H		Line Body
H	0	No Body
H	6T	Aluminum SAE 6
J		Seal
J	G	HNBR (Hydrogenated Nitrile Butadiene Rubber)
J	V	Fluorocarbon
J	P	Polyurethane
K		Coil Voltage
K	10	10 VDC
K	12	12 VDC
K	14	14 VDC
K	20	20 VDC
K	24	24 VDC
K	28	28 VDC
L		Coil Termination
L	EJ	E-Coil, AMP Jr.
L	ER	E-Coil, Deutsch
L	EY2A	E-Coil, Metri-Pack 150.2
U		Coil Termination
U	BLANK	None
U	G	Standard Single Valve Plate
U	T	Retro-Fit Plate

