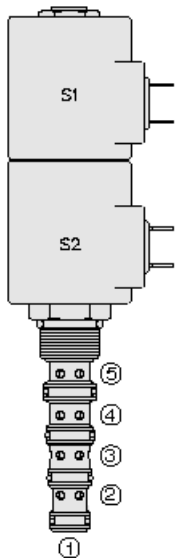




## Overview



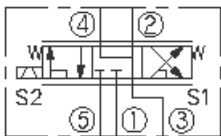
### Description

This valve is a direct - acting 3 position, 5 port proportional directional control. With port 1 as a load sense port it is a screw in cartridge type for use with general purpose hydraulic fluids

### Features

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Cartridges are voltage interchangeable.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating 250 bar (3625 psi)

### Flow Ratings

Flow rating	22.7 lpm (6.0 gpm)	- <b>Note:</b> SP10-57D
	18.9 lpm (5.0 gpm)	- <b>Note:</b> SP10-57DX
Maximum internal leakage	246 ml/min (15 in <sup>3</sup> /min)	- <b>Note:</b> SP10-57D max at 207 bar (3000 psi)
	164 ml/min (10 in <sup>3</sup> /min)	- <b>Note:</b> SP10-57DX max at 207 bar (3000 psi)

### 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 158 °F)	
Ambient temperature	-40 to 70 °C (-40 to 158 °F)	

## Operating Parameters

Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	10 to 420 cSt
Maximum operating contamination level	20/18/14 per ISO 4406

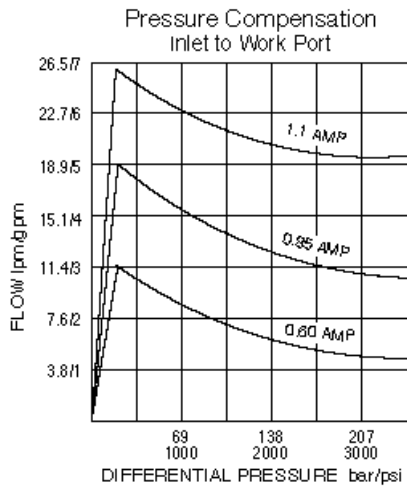
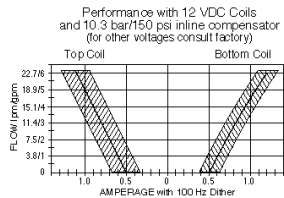
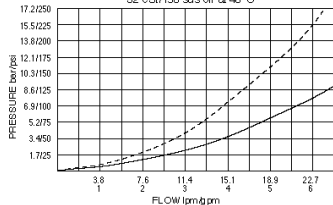
## Properties

Unit weight	0.30 kg (0.65 lb)	- <b>Note:</b> SP10-57D
	0.34 kg (0.74 lb)	- <b>Note:</b> SP10-57DM
	0.35 kg (0.78 lb)	- <b>Note:</b> SP10-57DB
Internal wetted surface area	267 cm <sup>2</sup> (41.4 in <sup>2</sup> )	

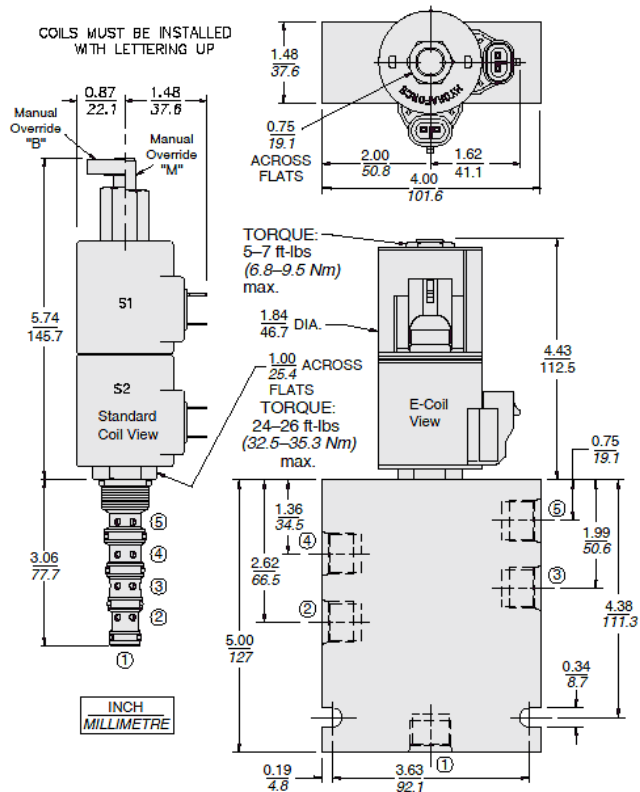


## Performance

ⓐ to ⓐ or ⓑ to ⓑ at 100% current, S1 or S2 energized: - - - - -  
 ⓐ to ⓐ or ⓑ to ⓑ at 100% current, S1 or S2 energized: - - - - -  
 32 cSt/150 sus oil at 40°C



## Dimensions



## Materials

### Materials

**Cartridge:** Weight: 0.36 kg (0.80 lb); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.

**Standard Ported Body:** Weight: 0.41 kg (0.85 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.



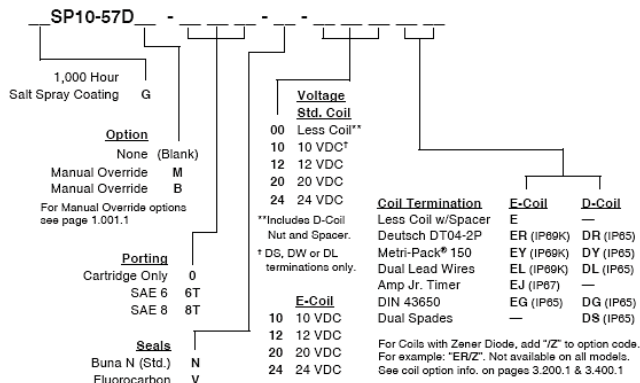
## Installation Specifications

Cavity	VC10-5
Cartridge installation torque	32.5 to 35.3 N-m (24 to 26 ft-lb)
Maximum allowable torque	61 N-m (45 ft-lb)
Coil nut torque	6.8 to 9.5 N-m (5 to 7 ft-lb)
Orientation restriction	None

## Accessories

Seal kit	SK10-5X-MMMM	- Note: X = seal option
Housings		
Coils		

## Order Code



POSITION	CODE	DESCRIPTION
		SP10-57DE-H-J-L
E		Manual Override
E	B	Momentary Push/Pull Override, 1.5" Diameter Aluminum Knob
E	BLANK	NONE
E	K	Three Position Override, 1.5" Diameter Aluminum Knob
E	M	Momentary Push/Pull Override, Red Knurled Knob
H		Line Body
H	0	No Body
H	6T	Aluminum SAE 6
H	8T	Aluminum SAE 8
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	P	Polyurethane
J	U	PPDI Urethane
L		Coil
L	0	No Coil, D-Coil Spacer
L	0E	No Coil, E-Coil Spacer
L	10DG	10 VDC, D-Coil, DIN 43650
L	10DL	10 VDC, D-Coil, Dual Lead Wires
L	10DS	10 VDC, D-Coil, Dual Spade
L	10EL	10 VDC, E-Coil, Dual Lead Wires
L	10ER	10 VDC, E-Coil, Deutsch



POSITION	CODE	DESCRIPTION
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	12DR	12 VDC, D-Coil, Deutsch
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	12ER	12 VDC, E-Coil, Deutsch
L	12EY	12 VDC, E-Coil, Metri-Pack 150
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	24DP	24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires
L	24DR	24 VDC, D-Coil, Deutsch
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	24ER	24 VDC, E-Coil, Deutsch
L	24EY	24 VDC, E-Coil, Metri-Pack 150
L	36DS	36 VDC, D-Coil, Dual Spade