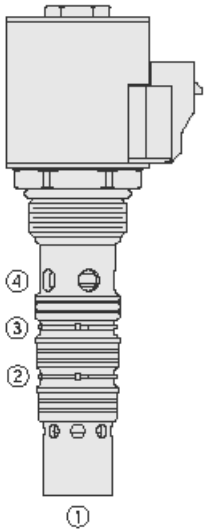




## Overview



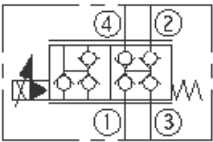
### Description

This SPCL16-40 is a solenoid-operated, 4 port, normally closed, poppet-type, proportional, screw-in hydraulic cartridge valve, designed for low leakage, blocking and load-holding applications. When energized, the poppet lifts to allow flow from port 4 to ports 1,2, and 3, flow at ports 2 and 3 is typical for load sensing applications and includes a check valve for isolation.

### Features

- Industry-common cavity.
- Continuous-duty rated coils.
- Efficient wet-armature construction.
- Optional waterproof E-Coils rated up to IP69K.
- Reduce manifold space claim.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	2.4 to 250 bar (35 to 3625 psi)
Proof pressure	345 bar (5000 psi)
Burst pressure	779 bar (11300 psi)

### Flow Ratings

Flow rating	- <b>Note:</b> See performance graphs	
Maximum internal leakage	5 drops/min	- <b>Note:</b> For ports 1 and 4, at 250 bar (3625 psi)
	15 drops/min	- <b>Note:</b> For ports 2 and 3, at 250 bar (3625 psi)
Hysteresis per cent	10 %	- <b>Note:</b> Of max flow (at max control current)

### 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 viton 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 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

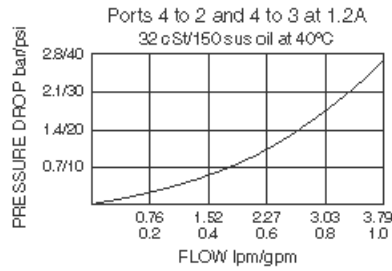
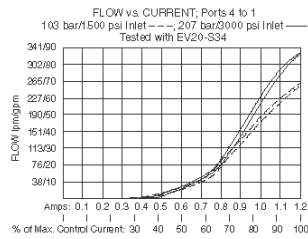
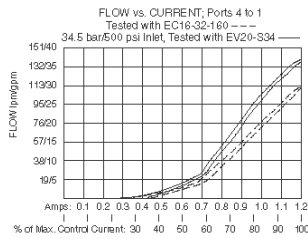
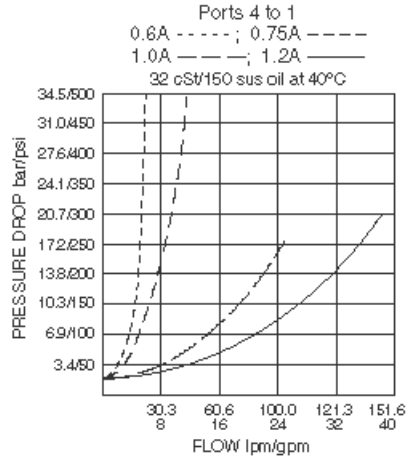
Unit weight	0.50 kg (1.11 lb)
Internal wetted surface area	385 cm <sup>2</sup> (59.7 in <sup>2</sup> )



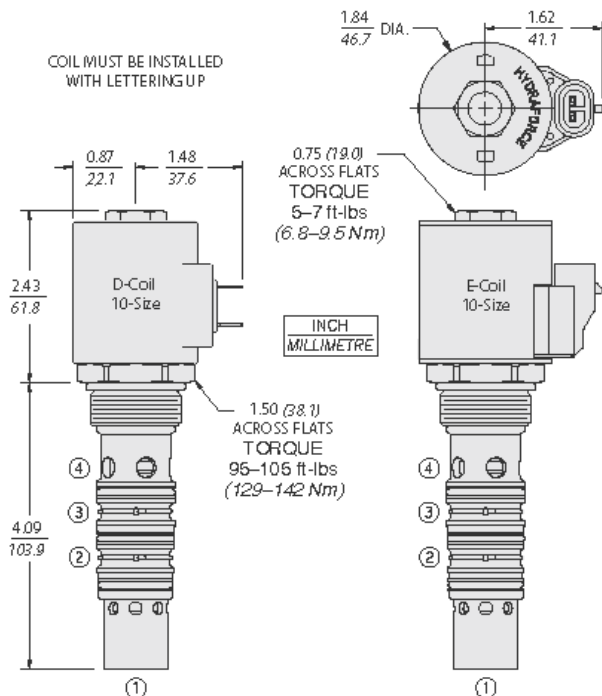
## Electrical Parameters

Valve inductance	173.3 mH	- <b>Note:</b> At 1.2 mA
Maximum control current	1.2 mA	
Threshold current	0.40 to 0.60 mA	- <b>Note:</b> For standard poppet
Dither PWM frequency	100 Hz	- <b>Note:</b> Recommended

## Performance



## Dimensions





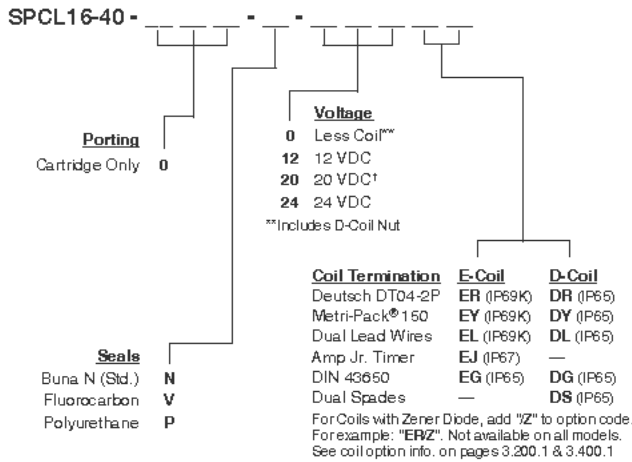
## Installation Specifications

Cavity	VC16-4SPCL
Cartridge installation torque	129 to 142 N-m (95 to 105 ft-lb)
Coil nut torque	6.8 to 9.5 N-m (5 to 7 ft-lb)
Orientation restriction	None

## Accessories

Seal kit SK16-4X-MM - **Note:** X = seal option

## Order Code



## Model Options

### SPCL16-40-H-J-L

#### H Line Body

CODE	DESCRIPTION
0	No Body

#### J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane
U	PPDI Urethane

#### L Coil

CODE	DESCRIPTION
0	No Coil
10DG	10 VDC, D-Coil, DIN 43650
10DL	10 VDC, D-Coil, Dual Lead Wires
10DS	10 VDC, D-Coil, Dual Spade
10EL	10 VDC, E-Coil, Dual Lead Wires
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



CODE	DESCRIPTION
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
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
24DL/W	24 VDC, D-Coil, Dual Lead Wires with Weatherpak
24DP	24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires
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.
24EL	24 VDC, E-Coil, Dual Lead Wires, 18 inches long
24EL/36	24 VDC, E-Coil, Dual Lead Wires, 36 inches long
24ER	24 VDC, E-Coil, Deutsch
24EY	24 VDC, E-Coil, Metri-Pack 150
36DS	36 VDC, D-Coil, Dual Spade