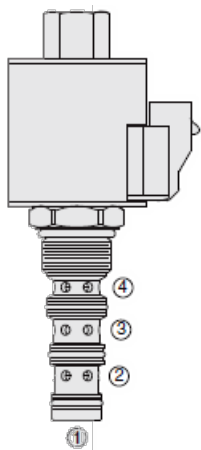
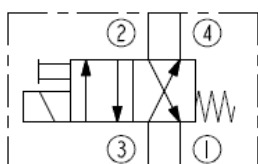




## Overview



### Symbol



### Description

The HSV12-40RB is a high pressure, 4 port, 2 position, spool type, screw-in, cartridge style, hydraulic, direct acting, solenoid valve intended for use in fan drive applications when shifting at maximum rated flow is not necessary. The spool has an open transitional state.

### Operation

When de-energized, flow is allowed from port 3 to 4 and from port 2 to port 1. When energized, flow is allowed from port 3 to port 2 and from port 4 to port 1.

### Manual Override Operation

To activate the manual override, turn the knurled adjustment knob clockwise until the valve shifts. To deactivate, turn the adjustment knob counterclockwise until it stops.

### Features

- Manual override option.
- Hardened precision spool and cage for long life.
- Waterproof Eâ€™Coils rated up to IP69K; optional voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage-interchangeable.
- Corrosion-resistant plating.
- All HyPerformance products are tested to the rigorous standards of the NFPA specification T2.6.1.
- All HyPerformance valves are tested at a verification level of 90% and an assurance of 99%.

## Ratings

### Pressure Ratings

Pressure rating	350 bar (5075 psi) 420 bar (6090 psi)	- <b>Note:</b> 10% cycle life
Proof pressure	690 bar (10000 psi)	
Burst pressure	1380 bar (20000 psi)	

### Flow Ratings

Flow rating	60 lpm (16 gpm)	- <b>Note:</b> Max de-energized or energized see performance graph for shifting limits
Maximum internal leakage	246 ml/min (15 in <sup>3</sup> /min)	- <b>Note:</b> Ports 3-1 at 350 bar (5075 psi)

### Other Ratings

Cycle life	One million cycles	
Response	23 ms	- <b>Note:</b> Energized (first indication of change of state with 100% voltage applied to the coil with flow at 24 lpm (6.3 gpm), with inlet at port 3, ports 2 and 4 looped, port 1 to tank)
	38 ms	- <b>Note:</b> De-energized (first indication of change of state with 100% voltage applied to the coil with flow at 24 lpm (6.3 gpm), with inlet at port 3, ports 2 and 4 looped, port 1 to tank)
Corrosion protection	960 hr salt spray per ASTM b117	

### 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 urethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 90 °C (-40 to 194 °F)	



## Operating Parameters

### Fluids

Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties	
Fluid viscosity range	7.4 to 420 cSt	
Maximum operating contamination level	18/16/13 per ISO 4406	

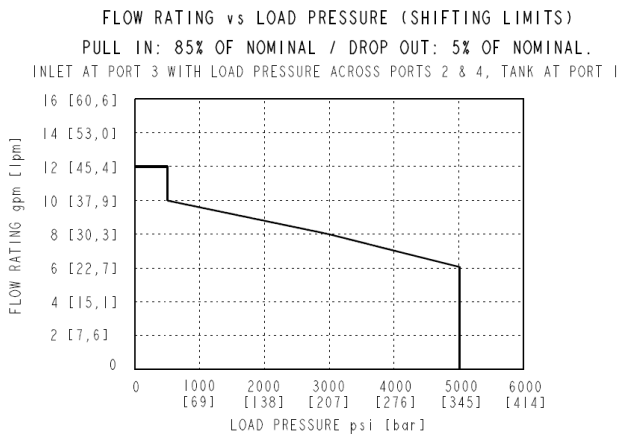
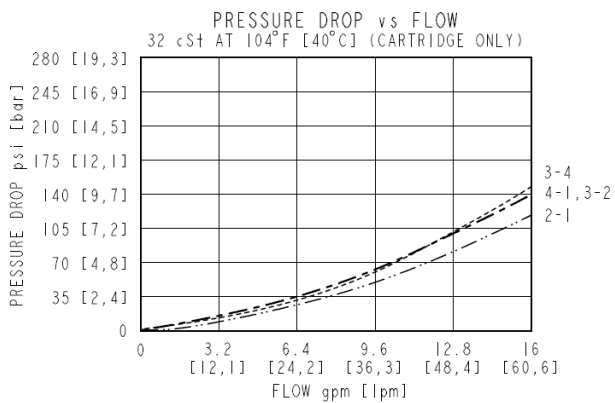
## Properties

Unit weight	0.4 kg (0.89 lb)	- <b>Note:</b> (without coil and nut)
Internal wetted surface area	297 cm <sup>2</sup> (46 in <sup>2</sup> )	- <b>Note:</b> HSV12-40RB
	298 cm <sup>2</sup> (46.3 in <sup>2</sup> )	- <b>Note:</b> HSV12-40RBT

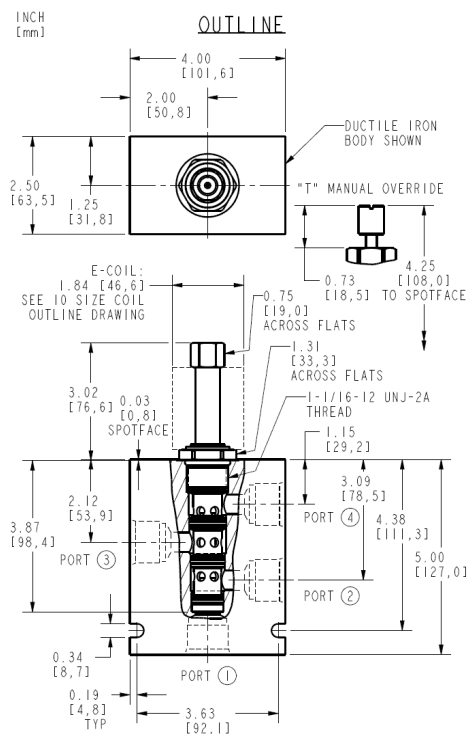
## Electrical Parameters

Minimum pull in voltage	10.2 Vdc	- <b>Note:</b> 12 Vdc coil
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## Performance



## Dimensions



NOTE: ALL DIMENSIONS ARE FOR REFERENCE ONLY.



## Installation Specifications

Cavity	HVC12-4	
Cartridge installation torque	156 to 170 N-m (115 to 125 ft-lb) 122 to 136 N-m (90 to 100 ft-lb)	- <b>Note:</b> Steel/ductile iron cavity - <b>Note:</b> Aluminum cavity
Coil nut torque	5.4 to 6.8 N-m (4 to 5 ft-lb)	
Orientation restriction	None	

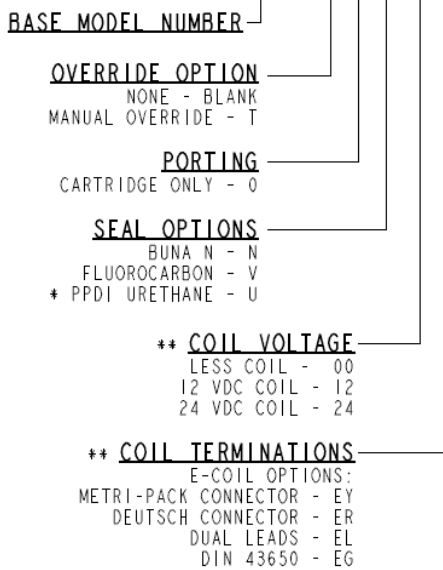
## Accessories

Seal kit	HSK12-4N-MMM HSK12-4V-MMM HSK12-4U-000	- <b>Note:</b> Buna N - <b>Note:</b> Fluorocarbon - <b>Note:</b> Urethane
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## Order Code

### ORDERING INFORMATION

HSV12-40RBX-X-X-XXXX



\* URETHANE SEALS RECOMMENDED FOR OPERATING PRESSURES ABOVE 3500 psi [241 bar].

### Model Options

HSV12-40RBE-H-J-L

#### E Manual Override

CODE	DESCRIPTION
BLANK	NONE
T	Variable Position Override, Red Knurled Knob

#### H Line Body

CODE	DESCRIPTION
0	No Body
12HT	Ductile Iron SAE 12

#### J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon



CODE	DESCRIPTION
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U	PPDI Urethane
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**L Coil**

CODE	DESCRIPTION
0	No Coil
10EL	10 VDC, E-Coil, Dual Lead Wires
10ER	10 VDC, E-Coil, Deutsch
10ER/Z	10 VDC, E-Coil, Deutsch with Zener Diode
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
12EL/WZ	12 VDC, E-Coil, Dual Lead Wires with WeatherPak and Zener Diode
12EL/Z	12 VDC, E-Coil, Dual Lead Wires with Zener Diode
12ER	12 VDC, E-Coil, Deutsch
12ER/Z	12 VDC, E-Coil, Deutsch with Zener Diode
12EY	12 VDC, E-Coil, Metri-Pack 150
12EY/Z	12 VDC, E-Coil, Metri-Pack 150 with Zener Diode
20ER	20 VDC, E-Coil, Deutsch
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
24EL/WZ	24 VDC, E-Coil, Dual Lead Wires with WeatherPak and Zener Diode
24ER	24 VDC, E-Coil, Deutsch
24ER/Z	24 VDC, E-Coil, Deutsch with Zener Diode
24EY	24 VDC, E-Coil, Metri-Pack 150
24EY/Z	24 VDC, E-Coil, Metri-Pack 150 with Zener Diode