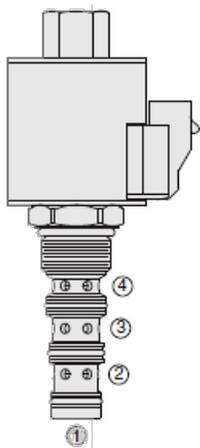
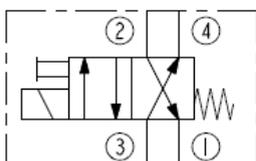




Overview



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 E-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)	- Note: 10% cycle life
Proof pressure	690 bar (10000 psi)	
Burst pressure	1380 bar (20000 psi)	

Flow Ratings

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

Other Ratings

Cycle life	One million cycles	
Response	23 ms	- Note: 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	- Note: 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)	- Note: With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- Note: With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	- Note: 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	

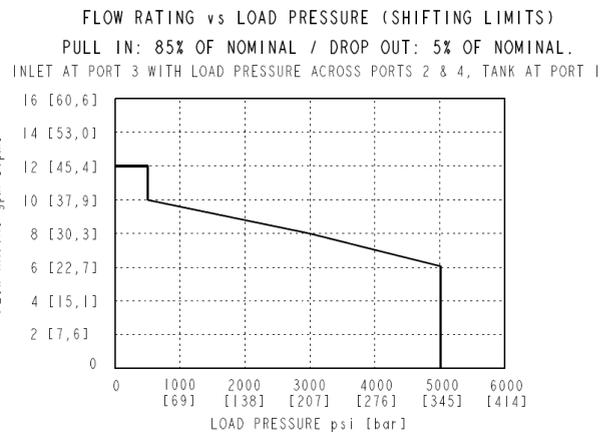
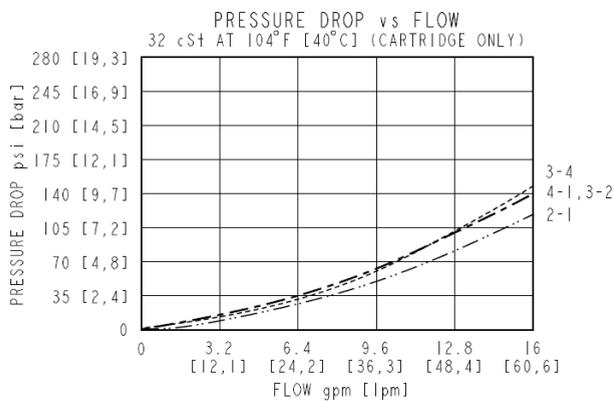
Properties

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

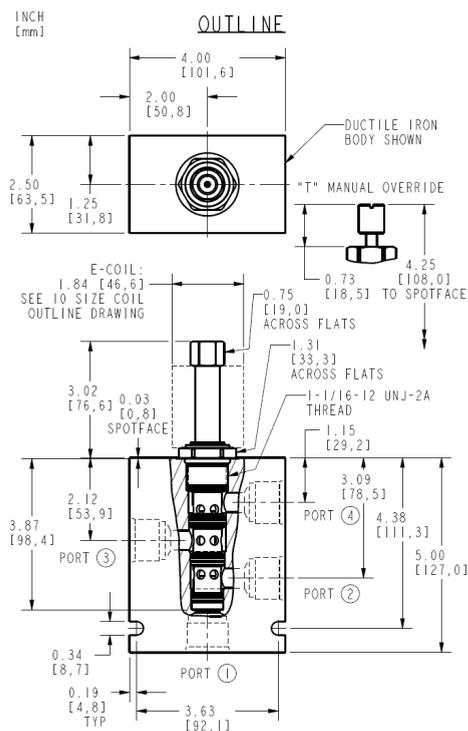
Electrical Parameters

Minimum pull in voltage	10.2 Vdc	- Note: 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)	- Note: Steel/ductile iron cavity - Note: Aluminum cavity
Coil nut torque	5.4 to 6.8 N-m (4 to 5 ft-lb)	
Orientation restriction	None	

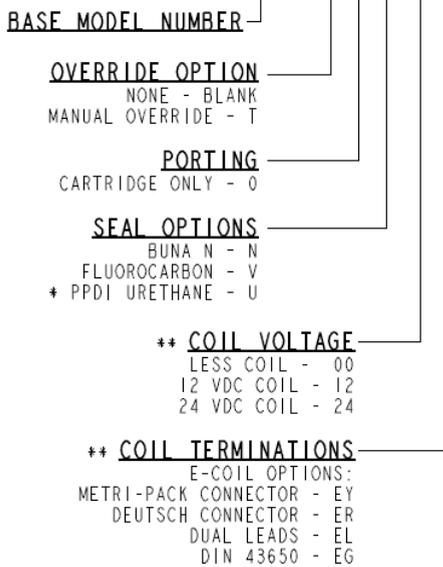
Accessories

Seal kit	HSK12-4N-MMM HSK12-4V-MMM HSK12-4U-000	- Note: Buna N - Note: Fluorocarbon - Note: 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