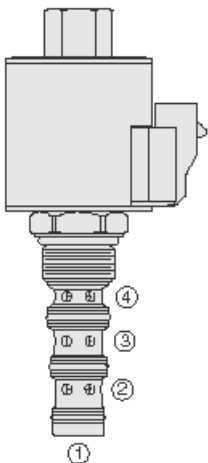




Overview



Description

The HSV10-40RX is a high pressure, spool type, screw-in, cartridge style, hydraulic solenoid valve.

Operation

The HSV10-40RX allows flow from ports 3 to 4 and from ports 2 to 1 when de-energized. When energized, the spool shifts to allow from ports 3 to 2 and from ports 4 to 1. Consult factory for applications where port 4 will be used as the inlet port.

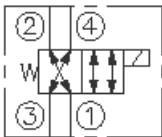
Manual Override Operation

For normal operation (de-energized) the manual override button must be fully rotated counter-clockwise. To shift the valve manually, rotate the manual override button clockwise. Note: the manual override features is intended for emergency use, not for continuous-duty operation.

Features

- Continuous-duty rated coil.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- 960 hour salt-spray rated solenoid tubes and coils.
- All HyPerformance products are tested to NFPA specification T2.6.1 and are tested at a verification level of 90% and an assurance of 99%.

Symbol



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	See performance graph	
Maximum internal leakage	245 ml/min (15 in ³ /min) (5075 psi)	- Note: Port 3 to port 1, at de-energized 350 bar
	164 ml/min (10 in ³ /min)	- Note: At energized 350 bar (5075 psi)
	164 ml/min (10 in ³ /min) (5075 psi)	- Note: Port 1 to port 3, at de-energized 350 bar
	245 ml/min (15 in ³ /min)	- Note: At energized 350 bar (5075 psi)

Other Ratings

Cycle life	One million cycles
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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

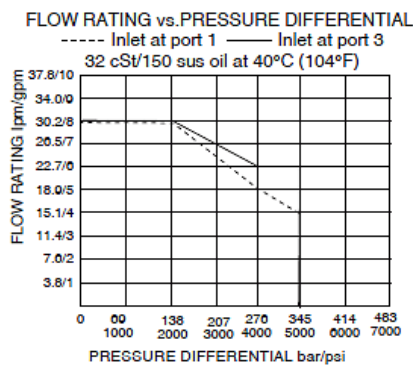
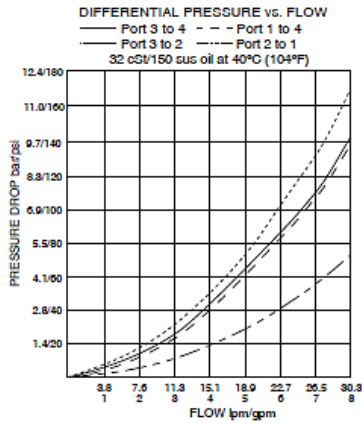
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406



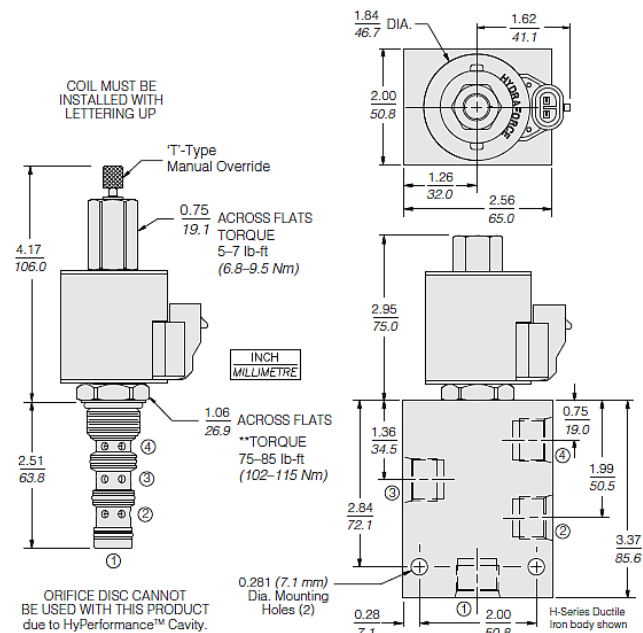
Properties

Unit weight	0.21 kg (0.47 lb)	- Note: (without coil and nut)
Internal wetted surface area	208 cm ² (32.2 in ²)	- Note: HSV10-40R
	209 cm ² (32.4 in ²)	- Note: HSV10-40RT

Performance



Dimensions



**Cartridge torque shown for ductile iron manifold. Torque 60-65 lb-ft (81-88 Nm) in aluminum. Aluminum housing is rated to 207 bar (3000 psi).



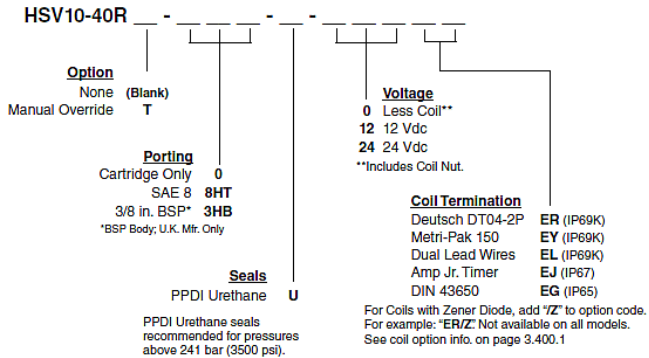
Installation Specifications

Cavity	HVC10-4	
Cartridge installation torque	102 to 115 N-m (75 to 85 ft-lb)	- Note: Steel/ductile iron cavity
	81 to 88 N-m (60 to 65 ft-lb)	- Note: Aluminum cavity
Orientation restriction	None	

Accessories

Seal kit	SK10-4N-MMM	- Note: Buna N
	SK10-4V-MMM	- Note: Fluorocarbon
	SK10-4U-OOO	- Note: Urethane

Order Code



Model Options

HSV10-A40RE-H-J-L-M

A Position Sensor Option

CODE	DESCRIPTION
40R	Standard
P40R	Position Indicator Switch

E Manual Override

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

H Line Body

CODE	DESCRIPTION
0	No Body
8HT	Ductile Iron SAE 8

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
U	PPDI Urethane

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



CODE	DESCRIPTION
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/W/Z	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/W/Z	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

M Position Sensor Termination

CODE	DESCRIPTION
BLANK	No Position Sensor
M3	Neutral Sense, M12-4P, Dual Output NC/NO
N3	Neutral Sense, DT04-4P, Dual Output NC/NO