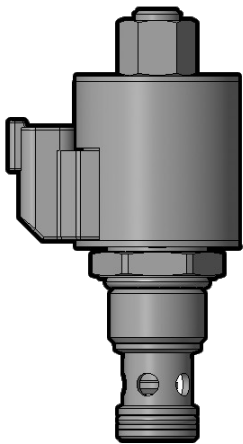




Overview



Description

The HSV12-21X is a high pressure 2-way, piloted, poppet-type, normally open screw in hydraulic cartridge valve designed for low leakage in load holding applications.

Operation

When de-energized, the HSV12-21X allows flow from ports 2 to 1 while severely restricting flow from ports 1 to 2. When energized, the valve's poppet closes on its seat, blocking flow from ports 2-1. In this mode the cartridge will allow flow from ports 1-2 after overcoming the actuator and spring forces (see performance graph).

Manual Override Operation

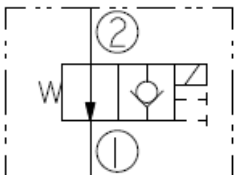
To shift the valve manually, push and hold down manual override button/knob.

Note: The manual override feature 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.
- Unitized, molded coil design.
- Manual override option.
- Waterproof E-Coils rated up to IP69K.
- Cost-effective cavity.
- 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	113.6 lpm (30 gpm)
Maximum internal leakage	7 drops/min - Note: With 350 bar (5075 psi) at port 2

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

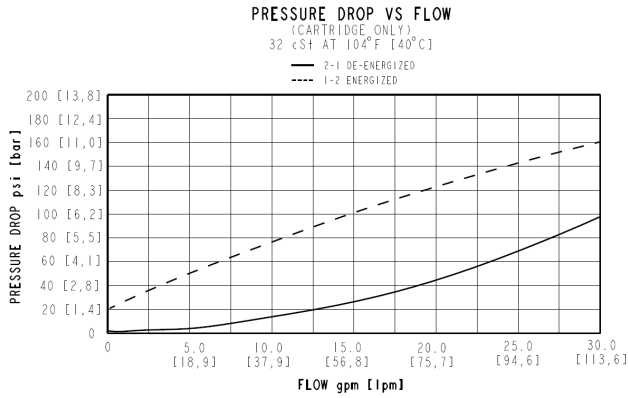
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406



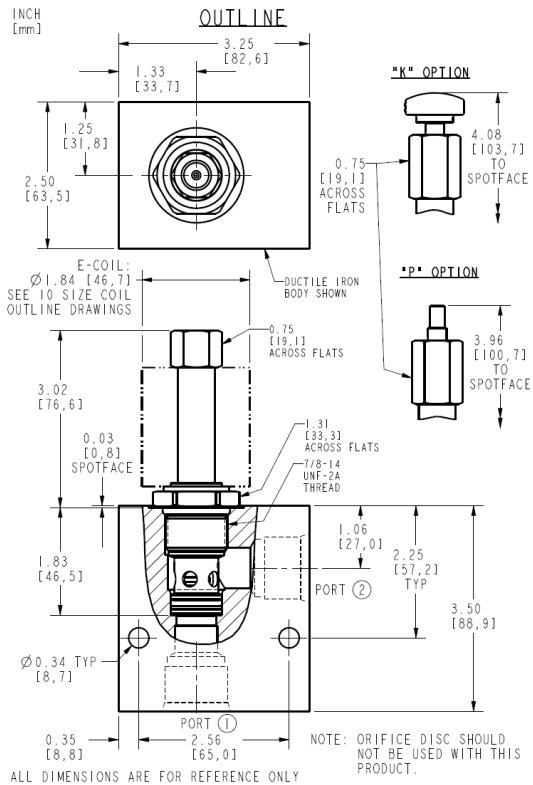
Properties

Unit weight	0.29 kg (0.63 lb)	- Note: Without coil and nut
Internal wetted surface area	205 cm ² (31.8 in ²)	- Note: HSV12-21
	207 cm ² (32.1 in ²)	- Note: HSV12-21P/21K

Performance



Dimensions



Installation Specifications

Cavity	HVC12-2	
Cartridge installation torque	183 to 196 N-m (135 to 145 ft-lb)	- Note: Steel/ductile iron cavity
	122 to 136 N-m (90 to 100 ft-lb)	- Note: Aluminum cavity
Orientation restriction	None	

Accessories

Seal kit	SK12-2N-T	- Note: Buna N
	SK12-2V-T	- Note: fluorocarbon
	SK12-2U-O	- Note: urethane

Order Code



ORDERING INFORMATION

HSV12-21 X-X-X-XX XX

BASE MODEL NUMBER ———

OPTION: ———

NONE - BLANK

MANUAL OVERRIDE - K

MANUAL OVERRIDE - P

PORTING: ———

CARTRIDGE ONLY - 0

SEALS: ———

BUNA N - N

FLUOROCARBON - V

* PPD1 URETHANE - U

** COIL VOLTAGES ———

LESS COIL - 00

12 VDC COIL - 12

24 VDC COIL - 24

** COIL TERMINATIONS ———

METRI-PACK CONNECTOR - EY

DEUTSCH CONNECTOR - ER

DUAL LEADS - EL

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

Model Options

HSV12-21E-H-J-L

E Manual Override

CODE	DESCRIPTION
BLANK	NONE
K	Momentary Push Override, Knob
P	Momentary Push Override, Button

H Line Body

CODE	DESCRIPTION
0	No Body
12HT	Ductile Iron SAE 12

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
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



CODE	DESCRIPTION
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