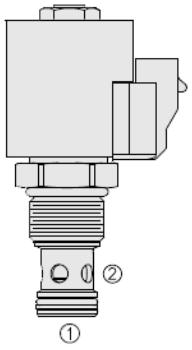
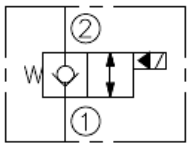
SOLENOID CARTRIDGE VALVE POPPET, 2-WAY, NORMALLY CLOSED

Overview



SYMBOL



Description

The HSV12-22X is a high pressure 2-way, piloted, poppet-type, normally closed screw-in hydraulic cartridge valve designed for low leakage in load holding applications.

Operation

When de-energized, the HSV12-22X blocks flow from ports 2 to 1. In this mode the cartridge will allow flow from ports 1 to 2 after overcoming the spring forces (see performance graph). When energized, the valve will allow flow bi-directionally.

Manual Override Operation

For normal operation (de-energized) the manual override pin must be seated in the lower detent groove. To shift the valve manually, the operator pushes down on the knob and rotates 180 degrees in either direction. When the manual override is actuated, increased flow CAN be achieved by pulling on the 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%.

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

Other Ratings

Cycle life: One million cycles

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)

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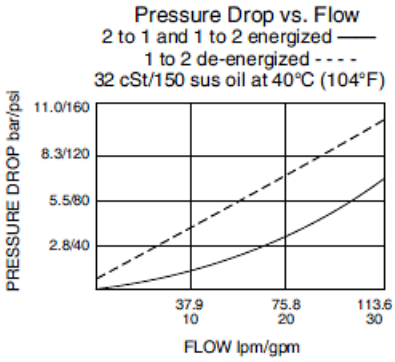
Operating Parameters

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

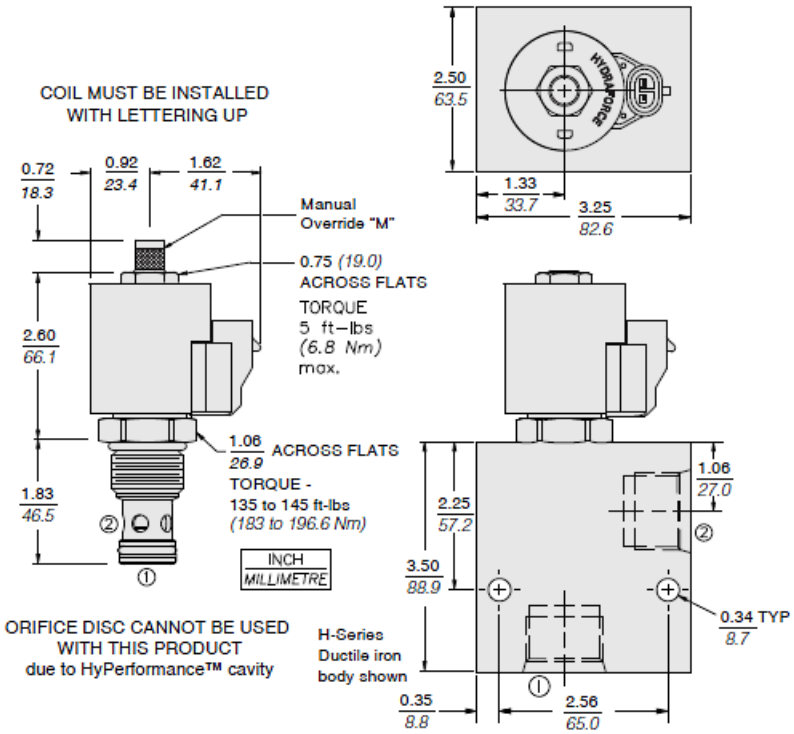
Properties

Unit weight: 0.28 kg (0.63 lb)
Internal wetted surface area: 183 cm^2 (28.4 in^2) note: HSV12-22
188 cm^2 (29.1 in^2) note: HSV12-22M

Performance



Dimensions



SOLENOID CARTRIDGE VALVE POPPET, 2-WAY, NORMALLY CLOSED

Installation Specifications

Cavity: HVC12-2

12-size-2-way Cavities

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

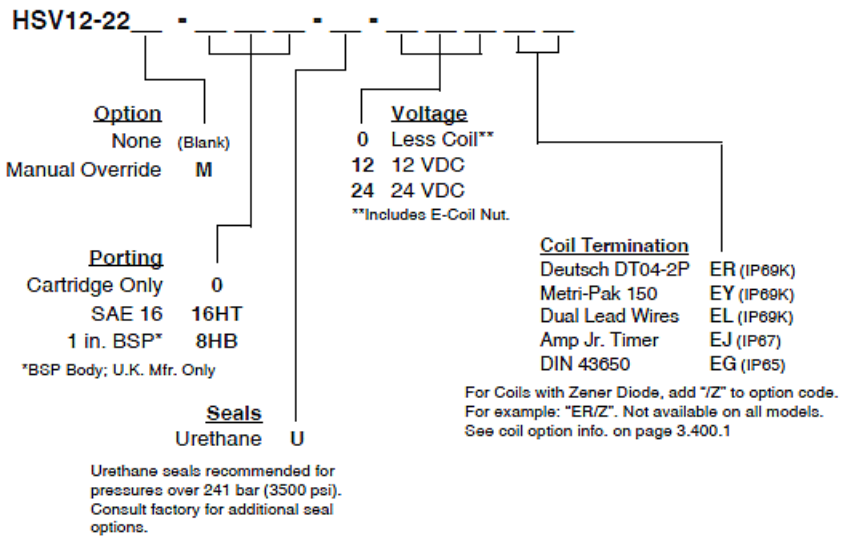
K12-2u-o note: Urethane

Seal kit installation instructions

Housings: Available 12-2w valve bodies

Coils: 10 size E coils

Order Code



Model Options

HSV12-A22AE-H-J-L-M

A Position Sensor Option

CODE	DESCRIPTION
22	Standard
P22A	Position Indicator Switch with Resticted Flow

E Manual Override

CODE	DESCRIPTION
BLANK	NONE
M	Two Position Override, Red Knurled Knob

H Line Body

CODE	DESCRIPTION
0	No Body
12HT	Ductile Iron SAE 12

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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
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