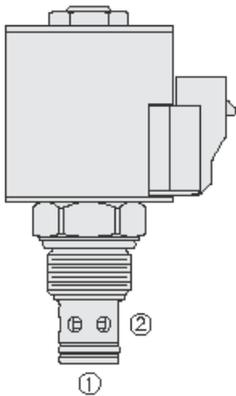




Overview



Description

The HSV10-22X 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

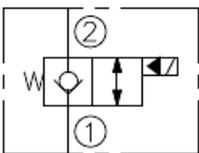
When de-energized, the HSV10-22X blocks flow from ports 2 to 1. In this mode the cartridge will allow flow from ports 1 to 2 after overcoming the spring forces (see performance graph). When energized, the valve will allow flow bi-directionally.

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.

Symbol



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%.

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 | 75.5 lpm (20 gpm) |
| Maximum internal leakage | 5 drops/min - Note: With 350 bar (5075 psi) at port 2 |

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 70 °C (-40 to 160 °F) | |

Operating Parameters

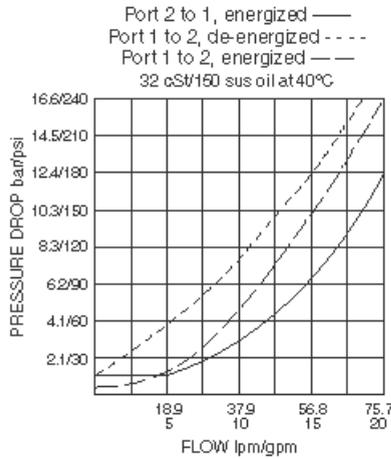
| | |
|---------------------------------------|--|
| Fluids | Mineral based or synthetic hydraulic fluid with lubricating properties |
| Fluid viscosity range | 7.4 to 420 cSt |
| Maximum operating contamination level | 18/16/13 per ISO 4406 |



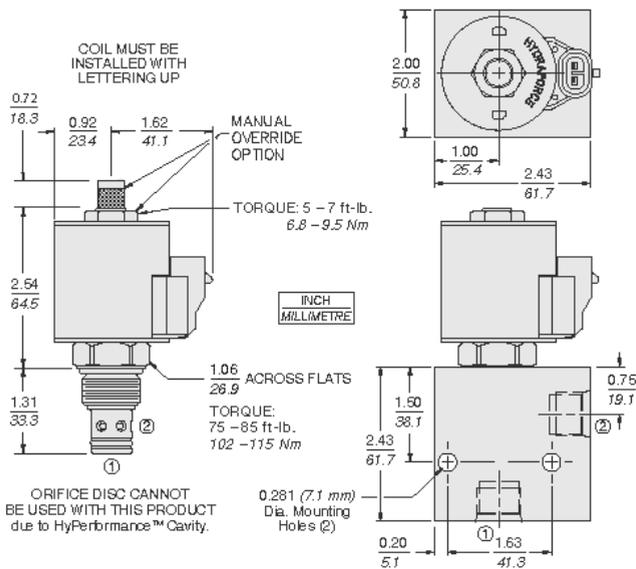
Properties

| | | |
|------------------------------|---|-------------------------------------|
| Unit weight | 0.19 kg (0.41 lb) | - Note: Without coil and nut |
| Internal wetted surface area | 136.63 cm ² (21.18 in ²) | |

Performance



Dimensions



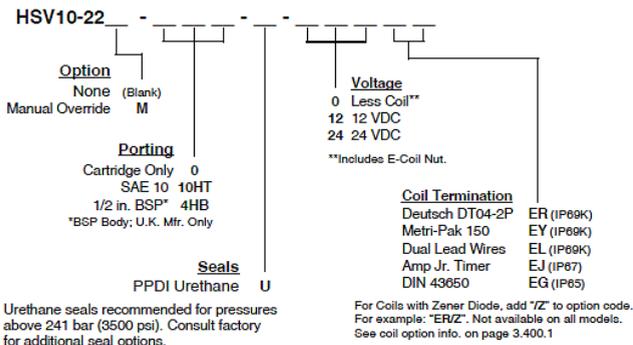
Installation Specifications

| | | |
|-------------------------------|---------------------------------|--|
| Cavity | HVC10-2 | |
| 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 | SK10-2N-M | - Note: Buna N |
| | SK10-2V-M | - Note: Fluorocarbon |
| | SK10-2U-0 | - Note: Urethane |

Order Code



Model Options

HSV10-A22AE-H-J-L-M

A Position Sensor Option

| CODE | DESCRIPTION |
|------|--|
| 22 | Standard |
| P22A | Position Indicator Switch with Restricted Flow |

E Manual Override

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

H Line Body

| CODE | DESCRIPTION |
|------|-------------|
| 0 | No Body |

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 |



| CODE | DESCRIPTION |
|----------|---|
| 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 |