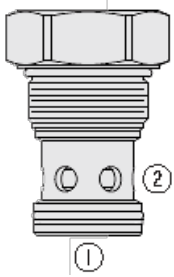
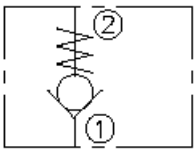




Overview



Symbol



Description

The HCV42-M20 is a screw-in, cartridge style, hydraulic check valve for use as a blocking or load-holding device for high pressure applications.

Operation

The check valve allows flow from port 1 to 2, while normally blocking flow in the opposite direction. The cartridge valve has a fully guided poppet which is spring biased closed until sufficient pressure is applied at port 1 to open to port 2.

Features

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- 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 | 303 lpm (80 gpm) | |
| Maximum internal leakage | 0.25 ml/min (5 drops/min) | - Note: At 350 bar (5075 psi) |

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) | |

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 |

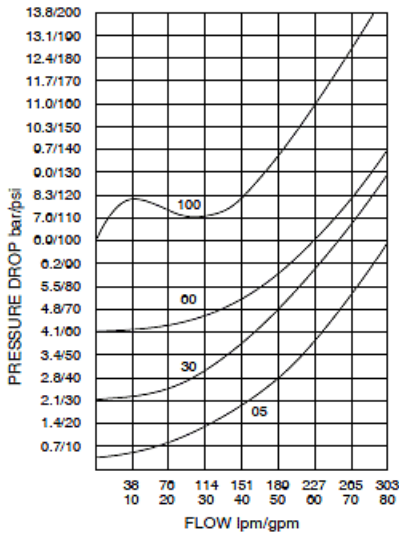
Properties

| | |
|------------------------------|---|
| Unit weight | 0.68 kg (1.50 lb) |
| Internal wetted surface area | 300 cm ² (46.5 in ²) |

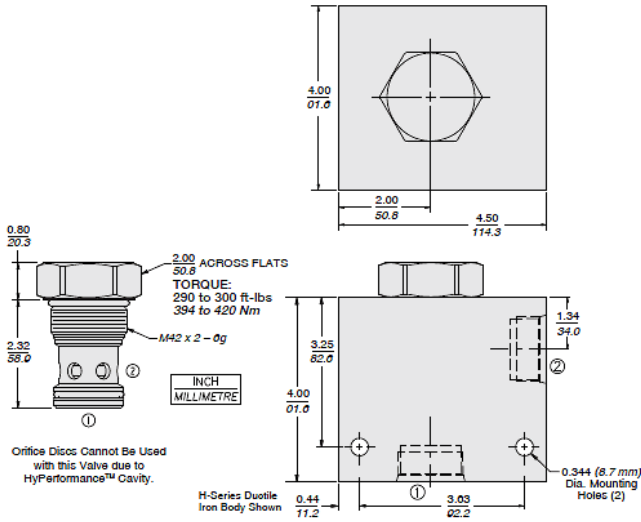


Performance

PRESSURE DROP vs. FLOW
for selected Spring Code Options
32 cSt/150 sus oil at 40°C (104°F)



Dimensions



Installation Specifications

| | | |
|-------------------------------|--|--|
| Cavity | HVC42-m2 | |
| Orientation restriction | None | |
| Cartridge installation torque | 394 to 420 N-m (290 to 310 ft-lb) 298 to 311 N-m (220 to 230 ft-lb) | - Note: Steel/ductile iron cavity - Note: Aluminum cavity |

Accessories

| | | |
|----------|------------|-----------------------------|
| Seal kit | SK42-M2N-M | - Note: Buna N |
| | SK42-M2V-M | - Note: Fluorocarbon |
| | SK42-M2U-O | - Note: Urethane |



Order Code

HCV42-M20 - - -

| | |
|--|---|
| <p>Porting</p> <p>Cartridge Only 0</p> <p>SAE 20 20HT</p> <p>1-1/4 in. BSP* 10HB</p> <p>*BSP Body; U.K. Mfr. Only</p> | <p>Bias Spring Value</p> <p>5 0.35 bar (5 psi)</p> <p>15 1.0 bar (15 psi)</p> <p>30 2.1 bar (30 psi)</p> <p>60 4.1 bar (60 psi)</p> <p>100 6.9 bar (100 psi)</p> |
|--|---|

Seals

U PPDl Urethane — Recommended for pressures above 241 bar (3500 psi)

Model Options

HCV42-M20-H-J-R

H Line Body

| CODE | DESCRIPTION |
|------|---------------------|
| 0 | No Body |
| 20HT | Ductile Iron SAE 20 |

J Seal

| CODE | DESCRIPTION |
|------|---------------|
| N | Buna-N |
| V | Fluorocarbon |
| U | PPDI Urethane |

R Spring

| CODE | DESCRIPTION |
|------|---------------------|
| 5 | 5 psi Bias Spring |
| 15 | 15 psi Bias Spring |
| 30 | 30 psi Bias Spring |
| 60 | 60 psi Bias Spring |
| 100 | 100 psi Bias Spring |