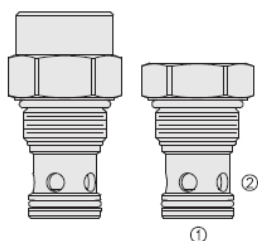
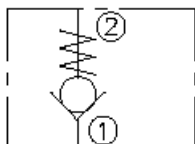




Overview



Symbol



Description

The HCV16-20X 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) | - Note: 10% cycle life |
| | 420 bar (6090 psi) | |
| Proof pressure | 690 bar (10000 psi) | |
| Burst pressure | 1380 bar (20000 psi) | |

Flow Ratings

| | | |
|--------------------------|---------------------------|--------------------------------------|
| Flow rating | 151 lpm (40 gpm) | - Note: At 350 bar (5075 psi) |
| Maximum internal leakage | 0.25 ml/min (5 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) | |

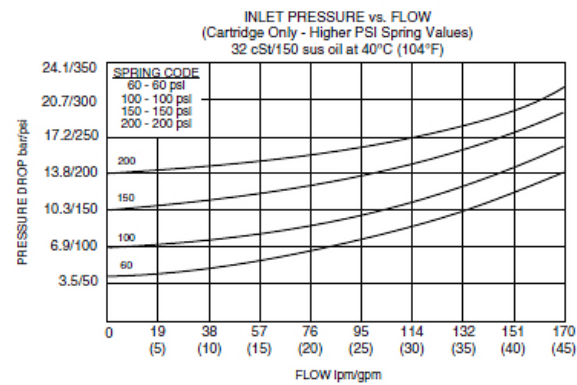
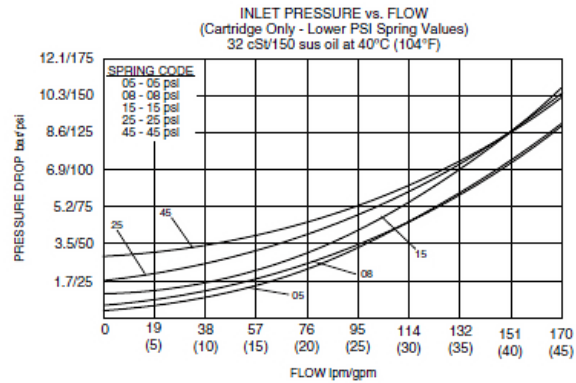
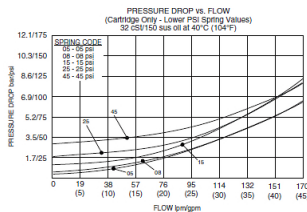
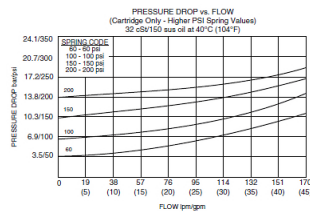
Operating Parameters

| | |
|---------------------------------------|--|
| 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 |

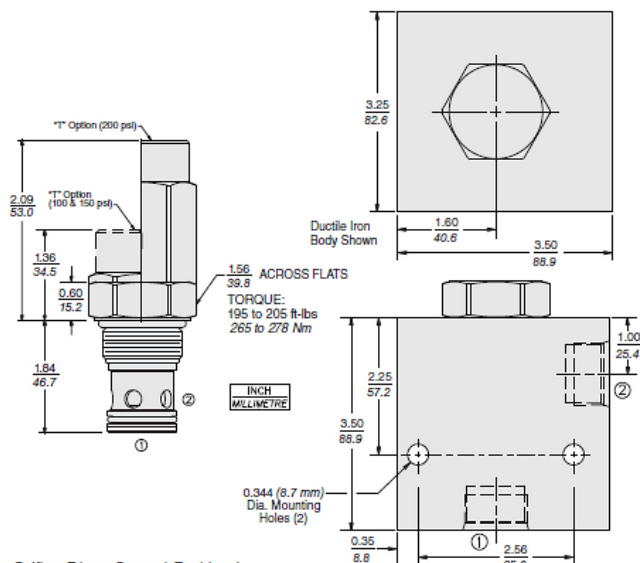
Properties

| | | |
|------------------------------|--|---|
| Unit weight | 0.34 kg (0.74 lb) | - Note: Regular adaptor |
| | 0.46 kg (1.02 lb) | |
| | 0.60 kg (1.32 lb) | |
| Internal wetted surface area | 168 cm ² (26.01 in ²) | - Note: Regular adaptor |
| | 245 cm ² (37.98 in ²) | - Note: Tall adaptor for 100 and 150 psi springs |
| | 290 cm ² (44.89 in ²) | - Note: Tall adaptor for 200 psi spring |

Performance



Dimensions



Installation Specifications

| | | |
|-------------------------------|--|--|
| Cavity | HVC16-2 | |
| Cartridge installation torque | 258 to 285 N-m (190 to 210 ft-lb) 237 to 250 N-m (175 to 185 ft-lb) | - Note: Steel/ductile iron cavity - Note: Aluminum cavity |
| Orientation restriction | None | |

Accessories

| | | |
|----------|-------------------------------------|---|
| Seal kit | SK16-2N-T SK16-2V-T SK16-2U-O | - Note: Buna N - Note: Fluorocarbon - Note: Urethane |
|----------|-------------------------------------|---|



Order Code

HCV16-20

-

-

-

-

Adapter Option

Regular

Blank

**Tall Cap

T

** Required for 6.9 bar (100 psi), 10.3 bar (150 psi) and 13.8 bar (200 psi) spring options

Porting

Cartridge Only

SAE 16

16HT

1 in. BSP*

8HB

0

16HT

8HB

*BSP Body; U.K. Mfr. Only

Bias Spring Value

05

0.35 bar (5 psi)

08

0.6 bar (8 psi)

15

1.0 bar (15 psi)

25

1.7 bar (25 psi)

45

3.5 bar (45 psi)

60

4.1 bar (60 psi)

100

6.9 bar (100 psi)

150

10.3 bar (150 psi)

200

13.8 bar (200 psi)

Seals

U

PPDI Urethane

Note: PPDI Urethane seals are recommended for pressures over 241 bar (3500 psi).

Model Options

HCV16-20-H-J-R

H Line Body

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

J Seal

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

R Spring

| CODE | DESCRIPTION |
|------|--------------------|
| 5 | 5 psi Bias Spring |
| 8 | 8 psi Bias Spring |
| 15 | 15 psi Bias Spring |
| 25 | 25 psi Bias Spring |
| 45 | 45 psi Bias Spring |
| 60 | 60 psi Bias Spring |