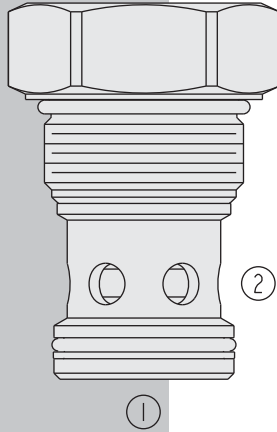


# DIRECTIONAL VALVES

## HCV42-M20 HyPerformance™ Check Valve



### DESCRIPTION

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

### OPERATION

The **HCV42-M20** allows flow from ① to ②, while blocking flow in the opposite direction.

The cartridge has a fully guided poppet which is spring-biased to closed until sufficient pressure is applied at ① to open to 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

**Operating Pressure:** 350 bar (5075 psi); 10% cycle life: 420 bar (6090 psi)

Note: All HyPerformance products are tested for 900K cycles at 350 bar and 100K at 420 bar.

**Fatigue Rating:** 2 million cycles at 420 bar

**Burst Pressure:** 1380 bar (20000 psi)

**Flow:** 303 lpm (80 gpm)

**Max. Internal Leakage:** 0.25 cc/minute (5 drops/minute) at 350 bar (5075 psi)

**Operating Temperature:** -54 to 107°C (-65 to 225°F) with Urethane seals

**Ambient Temperature:** -40 to 90°C

**Filtration:** See page 9.010.1

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of

7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

**Installation:** No restrictions; See page 9.020.1

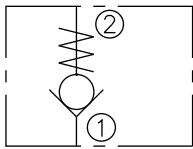
**Cavity:** HVC42-M2; See page 9.142.1

**Cavity Tool:** HCT42-M2XX; See page 8.600.1

**Seal Kit:** SK42-M2X-X; See page 8.650.1

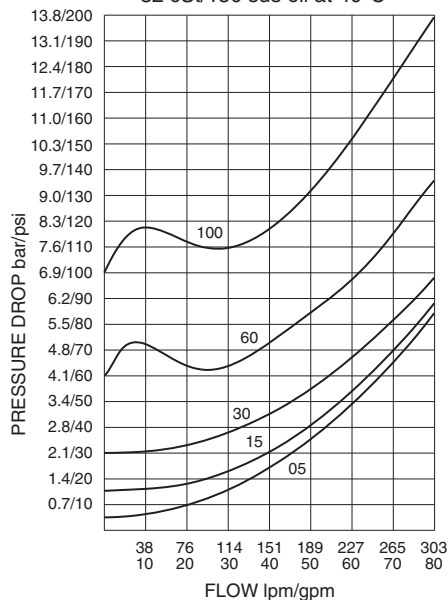
### SYMBOLS

#### USAS/ISO:

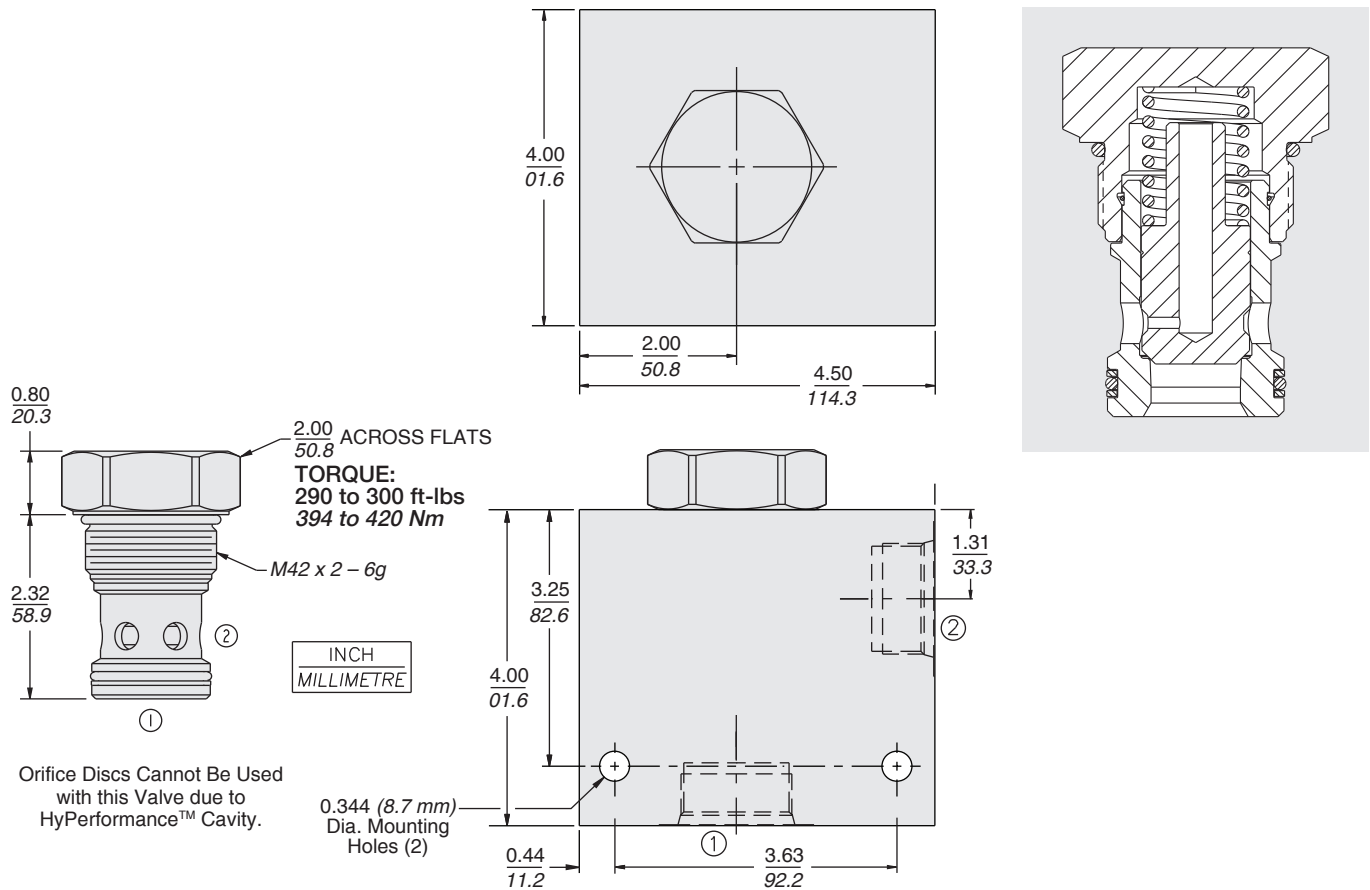


### PERFORMANCE (Cartridge Only)

Pressure Drop vs. Flow  
for each Spring Code Option  
32 cSt/150 sus oil at 40°C



## DIMENSIONS



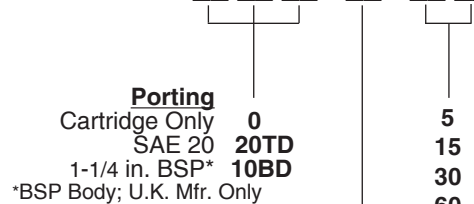
## MATERIALS

**Cartridge:** Weight: 0.68 kg. (1.50 lbs.)  
Steel with hardened work surfaces.  
Zinc-nickel plated exposed surfaces.  
PPDI Urethane seals with no backup  
rings standard.

**Ported Body:** Weight: 7.21 kg.  
(15.89 lbs.); HyPerformance™  
Ductile iron (code 'D') standard.  
Rated to 345 bar (5000 psi).

## TO ORDER

HCV42-M20 -



### Bias Spring Value

5	0.35 bar (5 psi)
15	1.0 bar (15 psi)
30	2.1 bar (30 psi)
60	4.1 bar (60 psi)
100	6.9 bar (100 psi)

### Seals

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