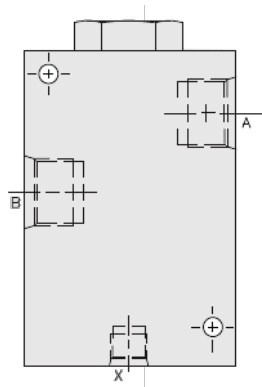




Overview



Description

The HPCV12 is a high pressure pilot operated, hydraulic check valve for use in blocking or load holding circuits

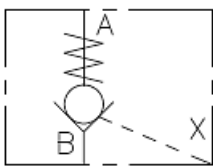
Operation

The valve allows flow from port "b" to port "a", while normally blocking flow in the opposite direction. Flow will be allowed from "a" to "b" when pressure is applied to port "x". The valve has 2.3:1 pilot ratio, so at least 44% of the load pressure held at port "a" is required at port "x" to open the valve

Features

- Hardened seat for long life and low leakage.
- Sealed pilot piston.
- Optional spring ranges.
- Check section is serviceable as a cartridge.
- 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%.

Symbol



Ratings

Pressure Ratings

Pressure rating	420 bar (5075 psi)	- Note: 10% cycle life
Proof pressure	689 bar (10000 psi)	
Burst pressure	1379 bar (20000 psi)	
Pilot ratio	2.3:1	

Flow Ratings

Flow rating	114 lpm (30 gpm)	
Maximum internal leakage	5 drops/min	- Note: Port A to b at 350 bar (5075 psi)
	500 ml/min	- Note: Port x to b at 34.5 bar (500 psi)
	7.6 lpm (2.0 gpm)	- Note: Port x to b at 350 bar (5075 psi)

Other Ratings

Cycle life	One million cycles
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Temperature Ratings

Operating fluid temperature	-54 to 107 °C (-65 to 225 °F)
Storage temperature	-40 to 70 °C (-40 to 160 °F)
Ambient temperature	-40 to 90 °C (-40 to 194 °F)

Operating Parameters

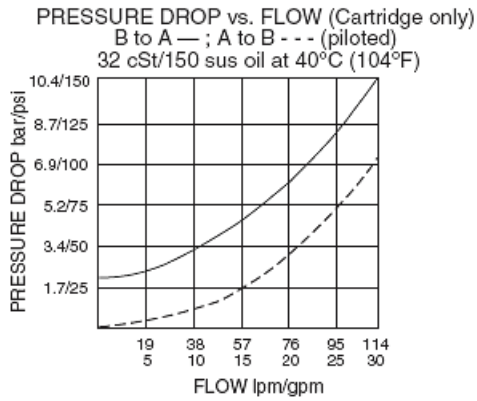
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

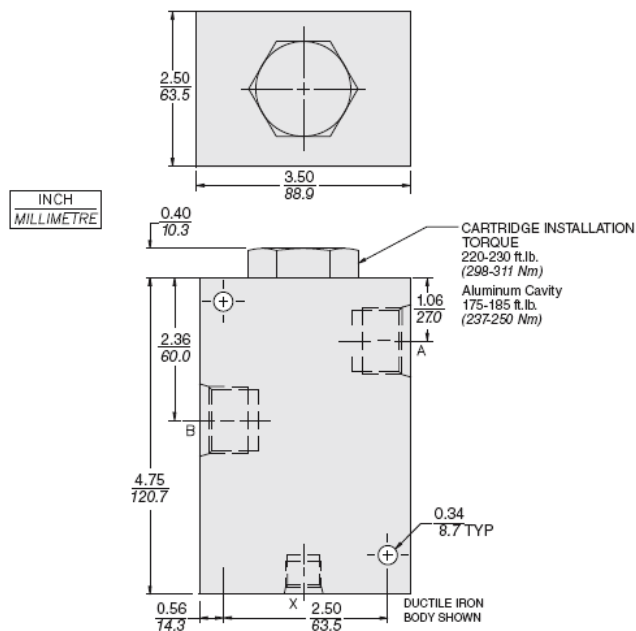
Unit weight	4.66 kg (10.26 lb)
Internal wetted surface area	272 cm ² (42.1 in ²)



Performance



Dimensions



Materials

Materials

Assembly: Weight: 4.66 kg (10.26 lb)

Cartridge:

(HCV12-20) Weight: 0.18 kg (0.40 lb) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Urethane seals standard.

Pilot Piston: Hardened steel.

Ported Body: H-series ductile iron standard. Rated to 345 bar (5000 psi).

Installation Specifications

Cavity	Hvc12-pcv	
Cartridge installation torque	163 to 170 N-m (115 to 125 ft-lb)	- Note: Steel/ductile iron cavity
	122 to 136 N-m (90 to 100 ft-lb)	- Note: Aluminum cavity
Orientation restriction	None	



Order Code

HPCV12 - - - - -

Porting
SAE 10
w/ SAE 6 Pilot **10HT**

Bias Spring
30 2.1 bar (30 psi)
40 2.8 bar (40 psi)
50 3.5 bar (50 psi)
60 4.1 bar (60 psi)
80 5.6 bar (80 psi)

Consult factory for other available options.

Seals
US Urethane with Sealed Pilot Piston
(30 psi spring minimum required)