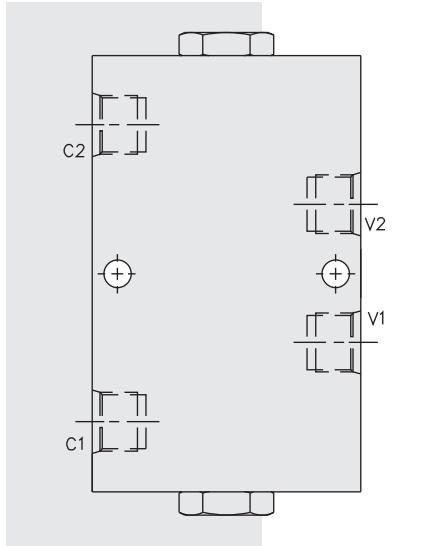


DCV12 Lock Valve



DESCRIPTION

An in-line-housed, double-pilot-operated, hydraulic check valve for use in blocking or load holding circuits.

OPERATION

The DCV12 allows flow from V ports to C ports, while normally blocking flow in the opposite direction. Flow will be allowed from C to V when pressure is applied to the opposite side V port.

The valve has a 4:1 pilot ratio, so at least one-fourth of the load pressure held at either C port is required at the opposite V port to open the flow passage.

The check is spring-biased at 1.7 bar (25 psi) to assure holding in static or no-load conditions. An optional sealed piston with check spring bias of 4.1 bar (60 psi) is available.

FEATURES

- Hardened seat for long life and low leakage.
- Check section serviceable as a cartridge.
- Optional cartridge thermal relief(s).
- Optional sealed piston.
- Optional spring ranges.
- Low pressure drop.

RATINGS

Maximum Operating Pressure: 241 bar (3500 psi)

Flow: See Performance Chart

Internal Leakage Cx to Vx: 0.25 cc/minute (5 drops/minute) max. at 207 bar (3000 psi);

Vx to Vx (without sealed piston): 328 cc/minute (20 cu. in./minute) max. at 240 bar (3500 psi)

Pilot Ratio: 4:1

Check Spring Bias: 1.7 bar (25 psi); with sealed piston option, 4.1 bar (60 psi)

Optional Thermal Relief Factory Setting: 348 ± 38 bar (5050 ± 550 psi)

Thermal Relief Reseat: 207 bar (3000 psi) minimum.

Operating Temperature: -40°C to 120°C (-40°F to 248°F) with standard Buna seals

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

Seal Kit (for CV12-2x): SK12-2x-T (2 required); See page 8.650.1

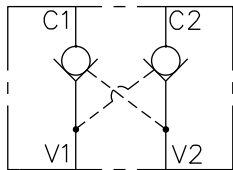
Pilot Piston Service Part Numbers:

O-Ring (1) – Buna 6001115, Fluorocarbon 6003115

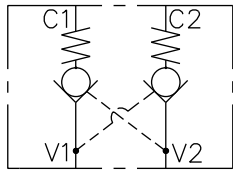
Back-up (2) – Fluorocarbon 6011115 (all)

SYMBOLS

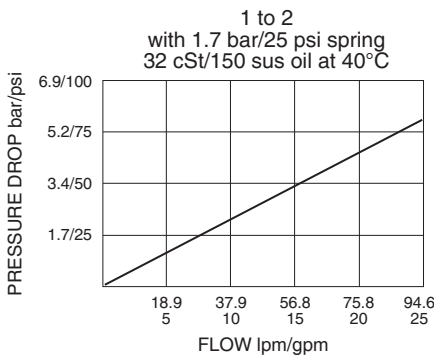
USASI:



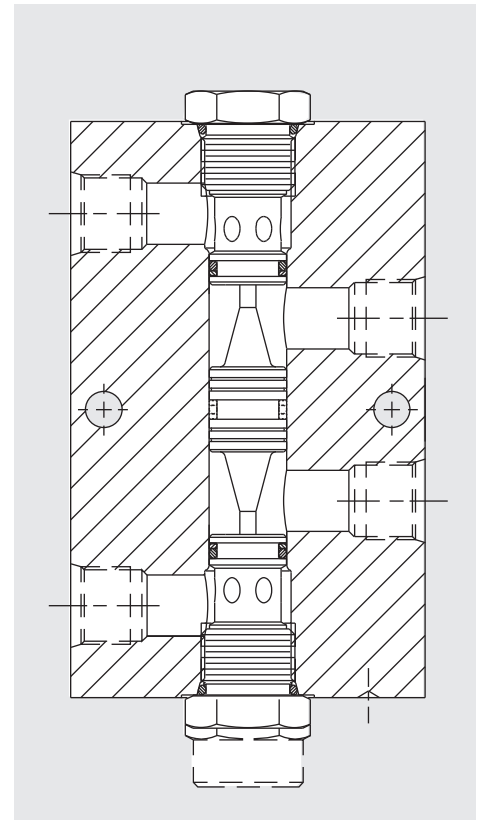
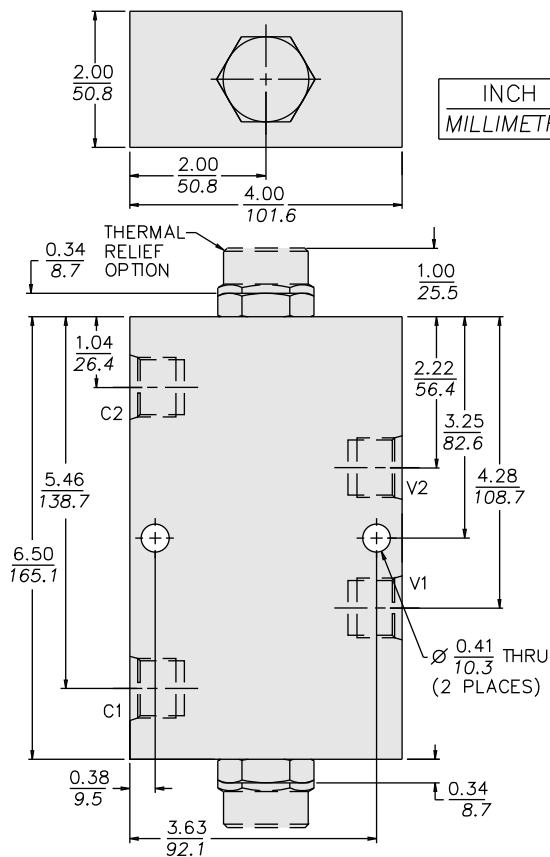
ISO:



PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

Cartridge: (CV12-20): Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

Pilot Piston: Hardened steel.

Standard Ported Body: Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.012.1.

Product Weight: 2.4 kg. (5.3 lbs.)

TO ORDER

DCV12-

Porting

SAE 10 **10T**
SAE 12 **12T**
SAE 16 **16T**

Seals

Buna N (Std.) **N**
Fluorocarbon **V**
Buna N w/Sealed Piston **NS**
(4.1 bar/60 psi spring minimum)
Fluorocarbon w/Sealed Piston **VS**
(4.1 bar/60 psi spring minimum)

Options

None (Blank)
Thermal Relief on C1 **1**
Thermal Relief on C2 **2**
Thermal Relief on C1 and C2 **3**

Bias Spring

(Blank) 1.7 bar (25 psi) (Std.)* N and V
(Blank) Thermal Relief Option
(Blank) 4.1 bar (60 psi) NS and VS
30 2.1 bar (30 psi) N and V
40 2.8 bar (40 psi) N and V
50 3.4 bar (50 psi) N and V
60 4.1 bar (60 psi) N and V
80 5.5 bar (80 psi) N, V, NS and VS

Note: Both check valves must have same spring value.

* DCV12 valves built with standard 25 psi spring are not stamped with spring rating. Other spring ratings are stamped on valve.

Thermal Relief Spring Value: 4.9 bar (65 psi) N, V, NS and VS
Check Valve Spring Value: 1.7 bar (25 psi) N and V
Check Valve Spring Value: 4.1 bar (60 psi) NS and VS