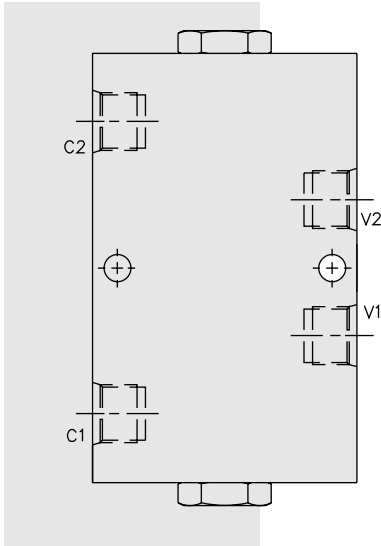


# DIRECTIONAL VALVES

## DCV12 Lock Valve



### DESCRIPTION

An in-line-housed, double-pilot-operated, hydraulic check valve with optional thermal reliefs 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.

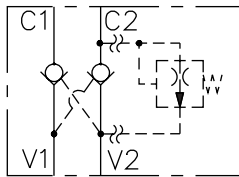
The check is spring-biased at 1.7 bar (25 psi) to assure holding in static or no-load conditions. An optional sealed piston with check spring bias of 4.1 bar (60 psi) is available. Optional thermal reliefs are preset to 214.5 bar (4700 psi) as standard.

### FEATURES

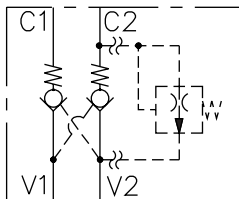
- Hardened seat for long life and low leakage.
- Check section serviceable as a cartridge.
- Optional cartridge thermal relief(s).
- Optional sealed piston.
- Optional spring ranges.
- Low pressure drop.

### SYMBOLS

#### USASI:



#### ISO:



### RATINGS

**Flow:** See Performance Chart

**Optional Thermal Relief Factory Setting:** 214.5 bar (4700 psi) ± 14 bar (400 psi)

**Thermal Relief Reset:** 207 bar (3000 psi) min.

**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)

**Temperature:** -40 to 120°C 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 ssu)

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

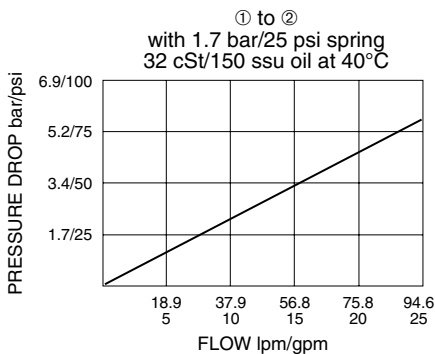
**Seal Kit:** See CV12-2X, page 4.013.1

**Pilot Piston Service Part Numbers:**

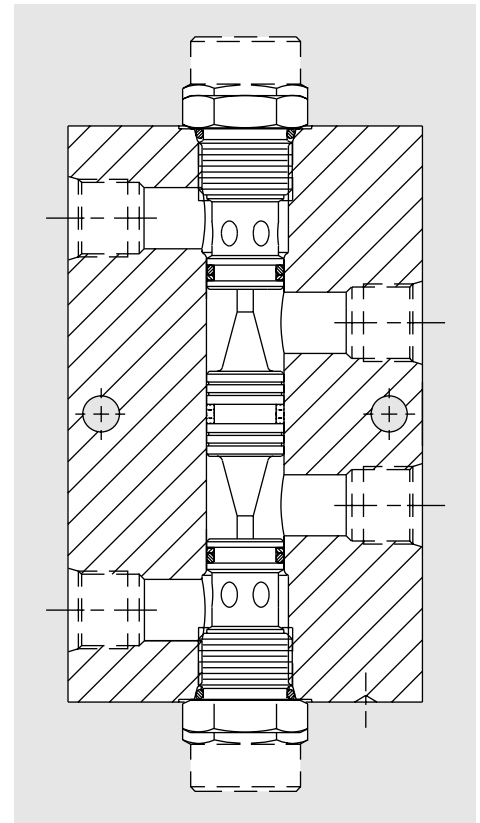
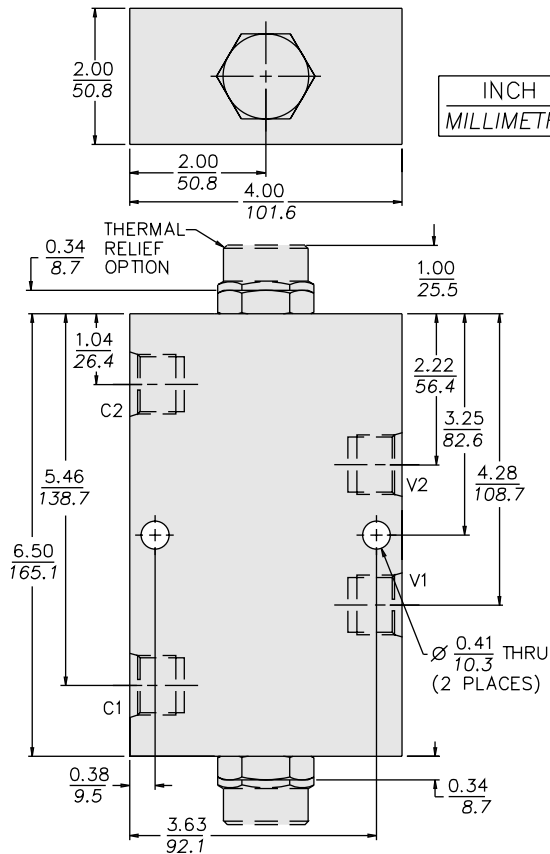
O-Ring (1) – Buna 6001115, Fluorocarbon 6003115

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

### PERFORMANCE (Cartridge Only)



## DIMENSIONS



## MATERIALS

**Cartridge:** (CV12-20; CV12-28): 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 240 bar (3500 psi). See page 8.012.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

**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**  
(100 psi spring minimum required)  
Fluorocarbon w/Sealed Piston **VS**  
(100 psi spring minimum required)

### 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.)\*  
**30** 2.1 bar (30 psi)  
**60** 4.1 bar (60 psi)

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.