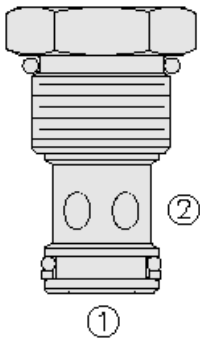




## Overview



### Description

The CV12-20 is a screw-in, cartridge style, hydraulic check valve for use as a blocking or load-holding device.

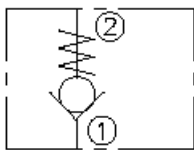
### Operation

The CV12-20 allows flow passage from port 1 to port 2, while normally blocking oil flow in the opposite direction. The cartridge has a fully guided check 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.
- Fully guided check assembly.
- Cost-effective cavity.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating 240 bar (3500 psi)

### Flow Ratings

Flow rating - **Note:** See performance graph  
 Maximum internal leakage 5 drops/min - **Note:** At 240 bar (3500 psi)

### Temperature Ratings

|                             |                               |  |
|-----------------------------|-------------------------------|--|
| Operating fluid temperature | -40 to 100 °C (-40 to 212 °F) | - <b>Note:</b> With buna N seals       |
|                             | -26 to 204 °C (-15 to 400 °F) | - <b>Note:</b> With fluorocarbon seals |
|                             | -54 to 107 °C (-65 to 225 °F) | - <b>Note:</b> With polyurethane seals |
| Storage temperature         | -40 to 70 °C (-40 to 160 °F)  |  |
| Ambient temperature         | -40 to 90 °C (-40 to 194 °F)  |  |

## Operating Parameters

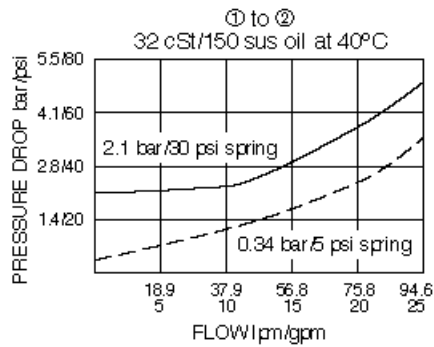
|                                       |  |
|---------------------------------------|--|
| Fluids                                | Mineral based or synthetic hydraulic fluid with lubricating properties |
| Fluid viscosity range                 | 7.4 to 420 cSt   |
| Maximum operating contamination level | 20/18/14 per ISO 4406  |

## Properties

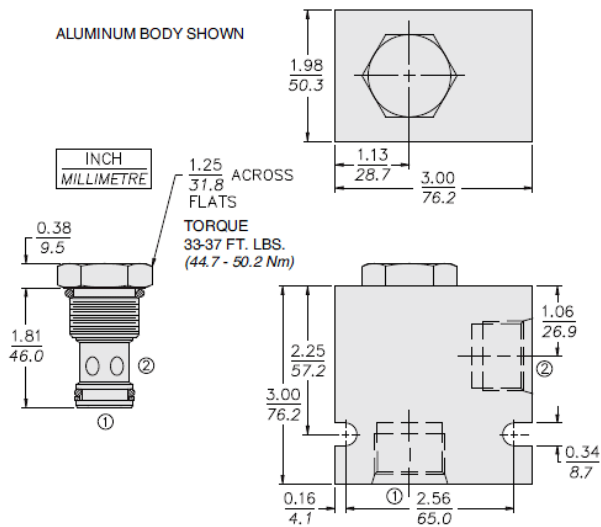
|                              |   |
|------------------------------|---|
| Unit weight                  | 0.17 kg (0.38 lb)                           |
| Internal wetted surface area | 126 cm <sup>2</sup> (19.6 in <sup>2</sup> ) |



## Performance



## Dimensions



## Installation Specifications

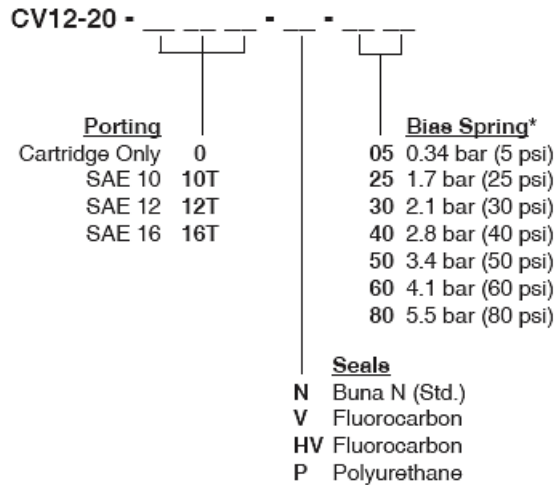
|                               |                                   |
|-------------------------------|-----------------------------------|
| Cavity                        | VC12-2                            |
| Cartridge installation torque | 44.7 to 50.2 N-m (33 to 37 ft-lb) |
| Maximum allowable torque      | 101.7 N-m (75 ft-lb)              |
| Orientation restriction       | None                              |

## Accessories

|          |           |                         |
|----------|-----------|-------------------------|
| Seal kit | SK12-2X-T | - Note: X = seal option |
| Housings |           |                         |



**Order Code**



| POSITION | CODE | DESCRIPTION              |
|----------|------|--------------------------|
|          |      | CV12-20-H-J-R            |
| H        |      | Line Body                |
| H        | 0    | No Body                  |
| H        | 10T  | Aluminum SAE 10          |
| H        | 12T  | Aluminum SAE 12          |
| H        | 16T  | Aluminum SAE 16          |
| H        | 12TD | Ductile Iron SAE 12      |
| H        | 16TD | Ductile Iron SAE 16      |
| H        | 8B   | Aluminum BSPP 1" (8)     |
| H        | 8BD  | Ductile Iron BSPP 1" (8) |
| J        |      | Seal                     |
| J        | N    | Buna-N                   |
| J        | V    | Fluorocarbon             |
| J        | P    | Polyurethane             |
| J        | U    | PPDI Urethane            |
| R        |      | Spring                   |
| R        | 5    | 5 psi Bias Spring        |
| R        | 25   | 25 psi Bias Spring       |
| R        | 30   | 30 psi Bias Spring       |
| R        | 40   | 40 psi Bias Spring       |
| R        | 50   | 50 psi Bias Spring       |
| R        | 60   | 60 psi Bias Spring       |
| R        | 80   | 80 psi Bias Spring       |