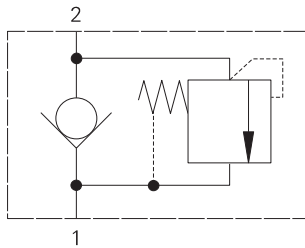


# RV4-10 - Relief valve

Poppet, thermal relief with reverse flow check  
 1 L/min (0.25 USgpm) relief/45 L/min (12 USgpm) check • 350 bar (5000 psi)



## Operation

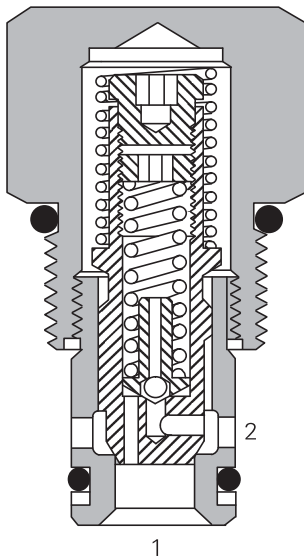
As a check valve the valve remains closed until the pressure at port 1 exceeds the 1.24 bar (18 psi) cracking pressure. The valve will hold pressure in port 2 until the setting of the thermal relief is reached.

Flow will then take place from port 2 to 1. This flow should be limited to that produced due to the thermal expansion of the oil in port 2.

## Features

Very low leakage from port 1 to 2. Hardened and ground working parts. Good re-seat. Compact solution in a single cartridge.

## Sectional view



## Performance data

### Ratings and specifications

Performance data is typical with fluid at 21,8 cSt (105 SUS) and 49° C (120° F)

|  |   |
|--|---|
| Typical application pressure (all ports) | 350 bar (5000 psi)  |
| Rated flow – check valve                 | 45 L/min (12 USgpm)   |
| – relief valve                           | 1 L/min (0.25 USgpm)  |
| Relief cracking pressure ranges          | 28 - 350 bar (400 - 5000 psi)   |
| Check valve cracking pressure            | 1,24 bar (18 psi)   |
| Reseat pressure                          | More than 90% of cracking pressure  |
| Internal leakage, port 2 to port 1       | 0.3 mL/min (5 drops/min) at cracking pressure                                     |
| Cavity                                   | C-10-2  |
| Standard housing materials               | Aluminum or steel   |
| Temperature range                        | -40° to 120°C (-40° to 248°F)   |
| Fluids                                   | All general purpose hydraulic fluids such as:<br>MIL-H-5606, SAE 10, SAE 20, etc. |
| Filtration                               | Cleanliness Code 18/16/13   |
| Weight cartridge only                    | 0,11 kg (0.25 lbs)  |
| Seal kits                                | 565803 Buna-N<br>566086 Viton®  |

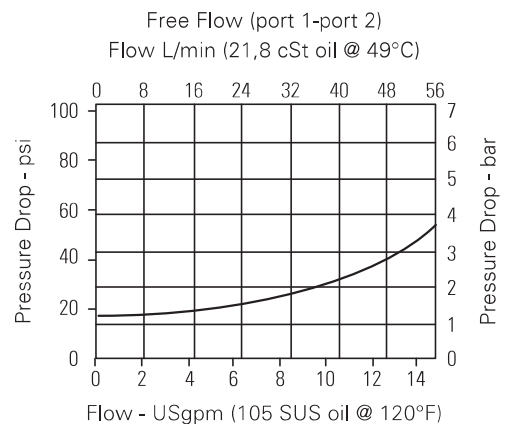
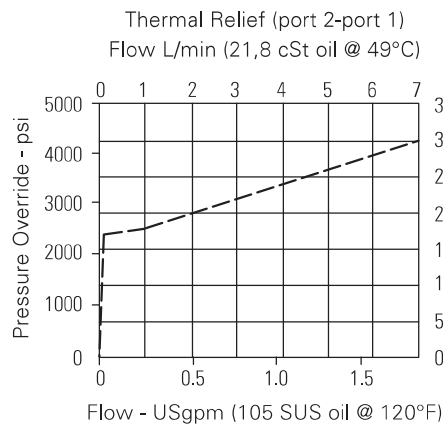
Viton is a registered trademark of E.I. DuPont

## Description

This is a check valve with a built in thermal relief. It is ideal for protecting actuators from damage when ambient temperatures cause the locked in oil pressure to increase. The thermal relief is limited to 4 L/min (1 USgpm) and should not be over-flowed.

## Pressure override & free flow curves

Cartridge only

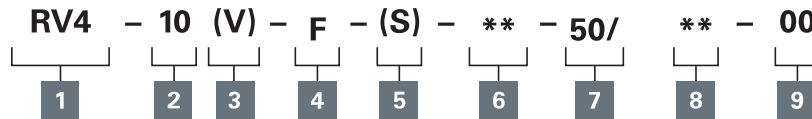


Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

# RV4-10 - Relief valve

Poppet, thermal relief with reverse flow check  
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## Model code



### 1 Function

RV - Check valve with thermal relief

### 2 Size

10 - 10 size

### 3 Seal material

Blank - Buna-N  
V - Viton®

### 4 Adjustment

F - Factory Set

### 5 Valve housing material

Blank - Aluminum  
S - Steel

### 6 Port size

| Code | Port size      | Housing number      |                        |                     |
|------|----------------|---------------------|------------------------|---------------------|
|      |                | Aluminum light duty | Aluminum fatigue rated | Steel fatigue rated |
| 0    | Cartridge only |                     |                        |                     |
| 3B   | 3/8" BSPP      | 02-175462           | -                      | -                   |
| 2G   | 1/4" BSPP      | -                   | 876702                 | 02-175102           |
| 3G   | 3/8" BSPP      | -                   | 876703                 | 02-175103           |
| 6H   | SAE 6          | -                   | 876700                 | -                   |
| 8H   | SAE 8          | -                   | 876701                 | -                   |
| 6T   | SAE 6          | 566151              | -                      | 02-175100           |
| 8T   | SAE 8          | -                   | -                      | 02-175101           |

See section J for housing.

### 7 Cracking pressure range

**Note:** Code based on pressure in psi.

50 - 28-350 bar (400-5000 psi)

### 8 Setting pressure

Within ranges in 7  
User must specify settings in 7 bar (100 psi) steps, Coded as in the following examples:

10 - 70 bar (1000 psi)

25 - 175 bar (2500 psi)

### 9 Special features

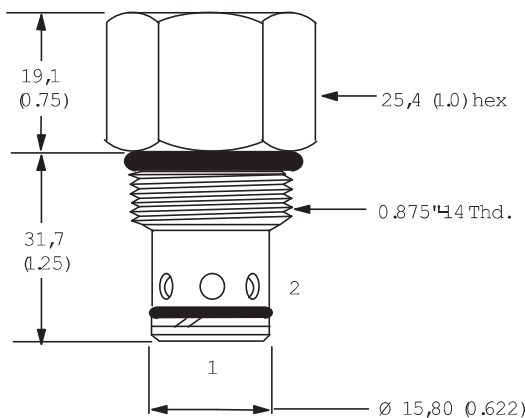
00 - None  
(Only required if valve has special features, omitted if "00.")

## Dimensions

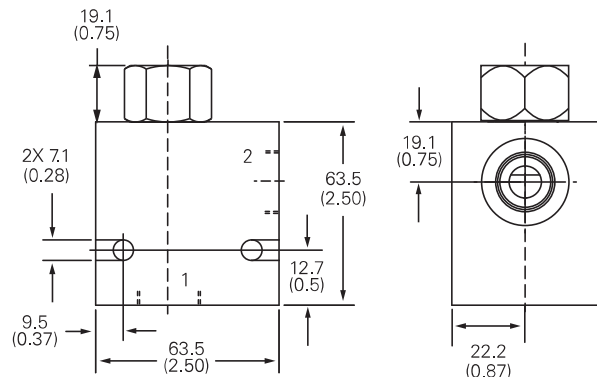
mm (inch)

Torque cartridge in housing  
A - 47-54 Nm (35-40 ft. lbs)  
S - 68-75 Nm (50-55 ft. lbs)

## Cartridge only



## Installation drawing (Steel)



### Warning

Aluminum housings can be used for pressures up to 210 bar (3000 psi). Steel housings must be used for operating pressures above 210 bar (3000 psi).

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