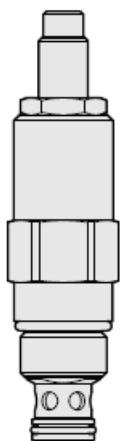




## Overview



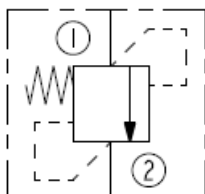
### Description

The RV10-21X is a screw-in, cartridge style, hydraulic relief valve for use as a pressure limiter.

### Operation

The RV10-21X allows flow passage from port 1 to port 2, while normally blocking oil flow in the opposite direction. the cartridge has a fully guided spool which is spring-biased closed until sufficient pressure is applied at port 1 to open to port 2.

### Symbol



## Ratings

### Pressure Ratings

|                 |                     |
|-----------------|---------------------|
| Pressure rating | 69 bar (1000 psi)   |
| Proof pressure  | 138 bar (2000 psi)  |
| Burst pressure  | 896 bar (13000 psi) |

### Flow Ratings

|             |                   |
|-------------|-------------------|
| Flow rating | 75.8 lpm (20 gpm) |
|-------------|-------------------|

### 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)  |                                        |

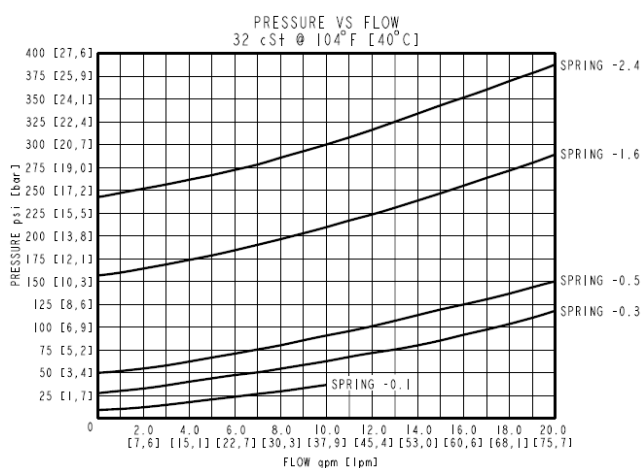
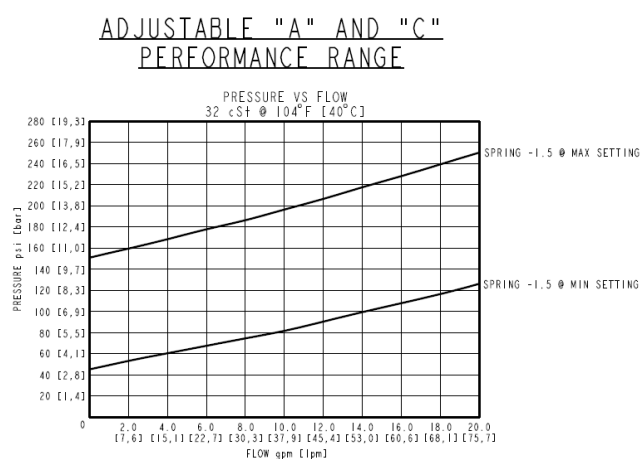
## Operating Parameters

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

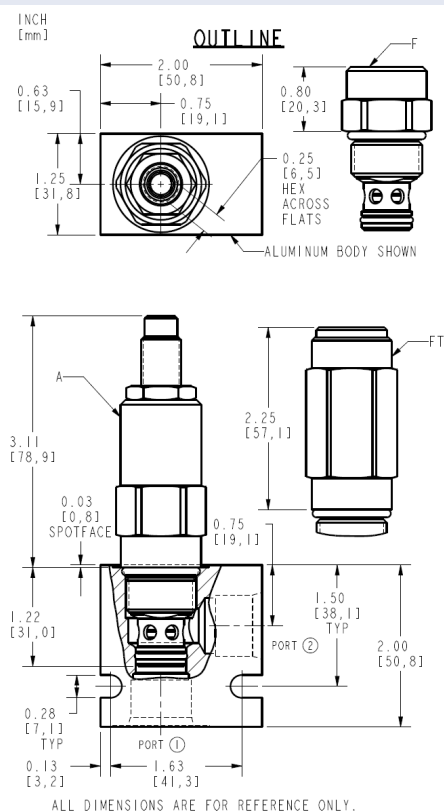
|                                           |                                             |                                                |
|-------------------------------------------|---------------------------------------------|------------------------------------------------|
| Unit weight                               | 0.235 kg (0.52 lb)                          | - <b>Note:</b> A                               |
|                                           | 0.281 kg (0.62 lb)                          | - <b>Note:</b> C                               |
|                                           | 0.109 kg (0.24 lb)                          | - <b>Note:</b> F                               |
|                                           | 0.254 kg (0.56 lb)                          | - <b>Note:</b> FT                              |
|                                           | 0.231 kg (0.51 lb)                          | - <b>Note:</b> H                               |
| Internal wetted surface area              | 90 cm <sup>2</sup> (14.0 in <sup>2</sup> )  | - <b>Note:</b> A, C                            |
|                                           | 69 cm <sup>2</sup> (10.7 in <sup>2</sup> )  | - <b>Note:</b> F                               |
|                                           | 112 cm <sup>2</sup> (17.3 in <sup>2</sup> ) | - <b>Note:</b> FT                              |
|                                           | 115 cm <sup>2</sup> (17.8 in <sup>2</sup> ) | - <b>Note:</b> H                               |
| Pressure change per adjustment screw turn | 0.9 bar (13 psi)                            | - <b>Note:</b> Option A and C, spring code 1.5 |
|                                           | 1.2 bar (17 psi)                            | - <b>Note:</b> Option H, spring code 1.5       |

## Performance

## FIXED PERFORMANCE



## Dimensions





## Installation Specifications

|                               |                                   |
|-------------------------------|-----------------------------------|
| Cavity                        | VC10-2                            |
| Cartridge installation torque | 32.6 to 35.4 N-m (24 to 26 ft-lb) |
| Orientation restriction       | None                              |

## Accessories

|          |           |                              |
|----------|-----------|------------------------------|
| Seal kit | SK10-2X-O | - <b>Note:</b> X=seal option |
|----------|-----------|------------------------------|

## Order Code

ORDERING INFORMATION:  
RV10-21X-X-XX-XX/XXX

BASE MODEL NUMBER:

ADAPTOR OPTION:

1/4" HEX ALLEN HEAD - A

OPTION A WITH COVER CAP - C

SHORT FACTORY PRESET - F

NON-ADJUSTABLE

TALL FACTORY PRESET - FT

NON-ADJUSTABLE

FACTORY PRESET - H

HIDDEN ADJUSTMENT

PORTING:

CARTRIDGE ONLY - 0

SEAL OPTION:

BUNA N - N

FLUOROCARBON - V

POLYURETHANE - P

SPRING VALUE:

FIXED OPTIONS:

10 psi [ 0,7 bar] - 0.1

30 psi [ 2,1 bar] - 0.3 } F

50 psi [ 3,4 bar] - 0.5

155 psi [10,7 bar] - 1.6 } FT

240 psi [16,5 bar] - 2.4

ADJUSTABLE OPTIONS (A, C, H):

45-150 psi - 1.5

[3,1-10,3 bar]

PRESSURE SETTING:

FOR EXAMPLE:

(IN psi)

10 psi - 0.1

(IN bar)

20 bar - M20

### Model Options

#### RV10-21F-H-J-R/S

#### F Adjustment Option

| CODE | DESCRIPTION                        |
|------|------------------------------------|
| A    | 1/4" Hex Allen Head                |
| C    | 1/4" Hex Allen Head with Cover Cap |
| F    | Factory Preset Non-Adjustable      |
| FT   | Factory Preset Non-Adjustable Tall |
| H    | Factory Preset Hidden Adjustment   |

#### H Line Body

| CODE | DESCRIPTION            |
|------|------------------------|
| 0    | No Body                |
| 6T   | Aluminum SAE 6         |
| 8T   | Aluminum SAE 8         |
| 6TD  | Ductile Iron SAE 6     |
| 8TD  | Ductile Iron SAE 8     |
| 2B   | Aluminum BSPP 1/4" (2) |
| 3B   | Aluminum BSPP 3/8" (3) |



| CODE | DESCRIPTION                |
|------|----------------------------|
| 4B   | Aluminum BSPP 1/2" (4)     |
| 4BD  | Ductile Iron BSPP 1/2" (4) |

### J Seal

| CODE | DESCRIPTION  |
|------|--------------|
| N    | Buna-N       |
| V    | Fluorocarbon |
| P    | Polyurethane |

### R Spring

| CODE | DESCRIPTION                     |
|------|---------------------------------|
|      | Fixed Options (code F)          |
| 0.1  | 0.7 bar (10 psi)                |
| 0.3  | 2.1 bar (30 psi)                |
| 0.5  | 3.4 bar (50 psi)                |
|      | Fixed Options (code FT)         |
| 1.6  | 10.7 bar (155 psi)              |
| 2.4  | 16.5 bar (240 psi)              |
|      | Adjustable Options (A, C, H)    |
| 1.5  | 3.1 to 10.3 bar (45 to 150 psi) |

### S Setting

| CODE | DESCRIPTION                        |
|------|------------------------------------|
| MXXX | Pressure Setting in XXX bar        |
| XX   | Pressure Setting in XX psi (x 100) |