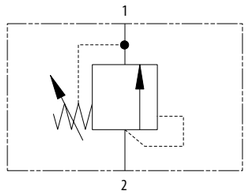
RV3-10 - Relief valve

Poppet, direct acting, differential area
76 L/min (20 USgpm) • 250 bar (3600 psi)



Operation

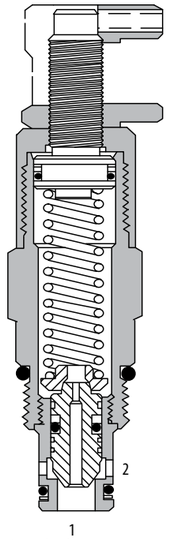
This valve remains closed from port 2 to 1 until the predetermined setting has been reached at port 2.

The pressure acts on the differential area between the seat and the seal diameter on the poppet.

Features

Hardened and ground working parts. Low leakage poppet design. High flow rate for a compact cartridge.

Sectional view



Description

This is a fast, direct acting differential area screw-in cartridge relief valve. The valve is ideal for the protection against shock pressures that can damage actuators.

Performance data

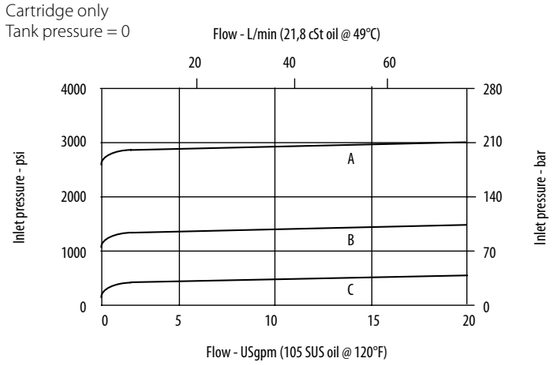
Ratings and specifications

Performance data is typical with fluid at 21,8 cSt (105 SUS) and 49° C (120° F)	
Typical application pressure (all ports)	250 bar (3600 psi)
Cartridge fatigue pressure (infinite life)	210 bar (3000 psi)
Rated flow	76 L/min (20 USgpm)
Internal leakage	0.3 mL/min (5 drops/min) @ 85% of Pressure Setting
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: MIL–H–5606, SAE 10, SAE 20, etc.
Filtration	Cleanliness Code 18/**16/13**
Weight cartridge only	0,22 kg. (0.48 lbs.)
Seal kits – RV3	565803 Buna–N 566086 Viton®
– RV3A (with double backup rings)	565806 Buna–N 889627 Viton®

Viton is a registered trademark of E.I. DuPont

Pressure override curves

Cartridge only
Tank pressure = 0



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

RV3-10 - Relief valve

Poppet, direct acting, differential area
76 L/min (20 USgpm) • 250 bar (3600 psi)

Model code

RV3 A – 10 (V) – * – (*) – ** – **/ ** – 00

1 2 3 4 5 6 7 8 9 10

1 Function

RV3 - Relief valve

2 Cage seals

Blank - Single back-up ring
A - 1/2 thickness back-up ring on each side of o-ring (for cross port relief applications)

3 Size

10 - 10 size

4 Seal material

Blank - Buna-N
V - Viton®

5 Adjustment

C - Cap
F - Factory set
I - Internal
K - Knob
S - Screw

6 Valve housing material

Blank - Aluminum
S - Steel

7 Port size

o - Cartridge only

Code	Port size	Housing number		
		Aluminum light duty	Aluminum fatigue rated	Steel fatigue rated
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
H10H	SAE 10*	–	4997062-001	–
2K10H	SAE 10**	–	4997060-001	–

* Bolt on, dual cross over relief valve package for **Danfoss H or T series motors**

** Bolt on, dual cross over relief valve package for **Danfoss 2000 series motors**

(Note: Two cartridges are installed in this special housing, both are set to the same crack pressure specified in model Code position 9, maximum allowed setting is 210 bar (3000 psi), only available with RV3**A** option and aluminum housing.)

See section J for housing details.

8 Cracking pressure range

Note: Code based on pressure in psi.

3 - 3,5-21 bar (50-300 psi)
6 - 7-41 bar (100-600 psi)
9 - 14.5-62 bar (200-900 psi)
18 - 21-124 bar (300-1800 psi)
36 - 41-250 bar (600-3600 psi)

9 Setting pressure

Within ranges in 8

Blank - Normal factory setting at approximate mid-range. User requested settings in 3,45 bar (50 psi) steps, Coded as in the following examples:

10 - 70 bar (1000 psi)
10.5 - 72,4 bar (1050 psi)

10 Special features

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

SS - 316 Stainless Steel external components

⚠ Warning

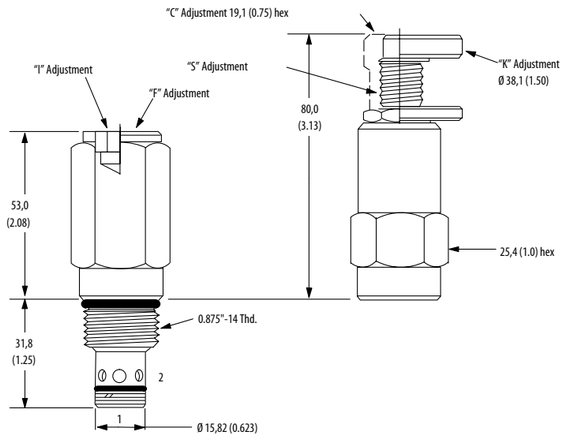
Aluminum housings can be used for pressures up to 210 bar (3000 psi). Steel housings must be used for operating pressures above 210 bar (3000 psi).

Dimensions

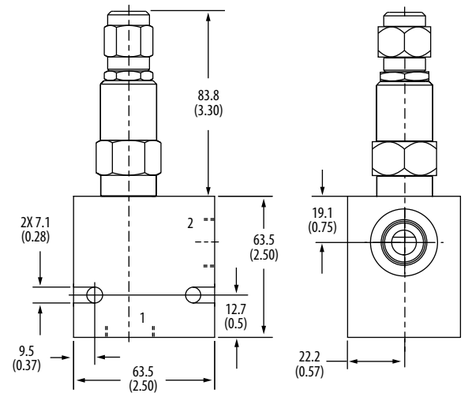
mm (inch)

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)



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