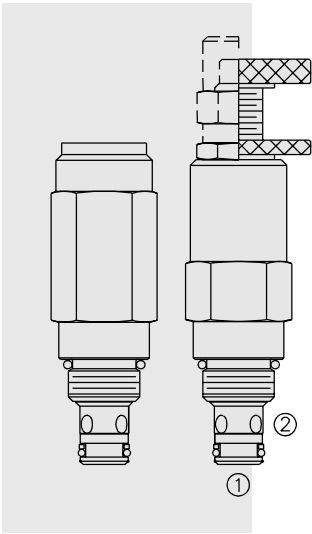


RV08-20 Relief, Direct-Acting Poppet



DESCRIPTION

A screw-in, cartridge-style, direct-acting, poppet-type, hydraulic relief valve intended for lower flow circuits requiring low internal leakage.

OPERATION

The RV08-20 blocks flow from 1 to 2 until sufficient pressure is present at 1 to force the spring-opposed poppet from its seat.

Note: The RV08-20 may be used in cross-over relief applications (back pressure on 2) with the use of the "C" double back-up ring seal option. See Ordering Table.

FEATURES

- Adjustments cannot be backed out of the valve.
- Variety of pressure adjustment options including non-adjustable factory pre-set.
- Adjustment options A, B, and C: positive stops prevent springs from going solid.
- Optional bi-directional pressure (requires bi-directional pressure seal option).
- Optional spring ranges to 248 bar (3600 psi).
- Rapid response to pressure changes.
- Compact size.

RATINGS

Operating Pressure: 275.8 bar (4000 psi)

Proof Pressure: 482.6 bar (7000 psi)

Burst Pressure: 896.3 bar (13000 psi)

Flow Rating: 22.7 lpm (6 gpm) at maximum pressure

Relief Pressure Setting Defined: Bar (psi) evident at 0.95 lpm (0.25 gpm)

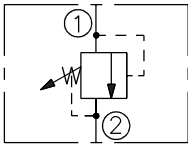
Internal Leakage: 0.25 ml/minute (5 drops/minute) max. to 75% of nominal setting

Reseat Pressure: Nominal 80% of crack pressure

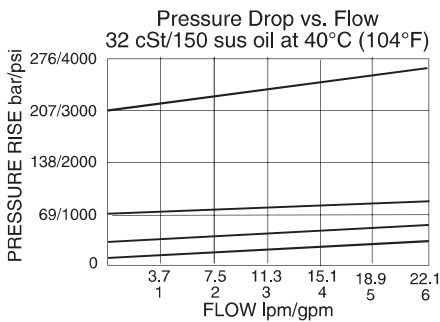
Standard Spring Ranges: 3.4 to 278.8 bar (50 to 4000 psi)

Shown in To Order section. Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown. **If the valve is adjusted beyond the recommended maximum pressure range for F and H style adjuster options, the valve may not open to relieve pressure.**

ISO SYMBOL



PERFORMANCE (Cartridge Only)



Spring	Pressure/Turn	
	Pressure Adjustment Options A, B, C and L	Options F and H
-5	6 bar/86 psi	7.4 bar/107 psi
-9	11 bar/162 psi	14 bar/203 psi
-18	21.4 bar/310 psi	26.7 bar/387 psi
-33	39 bar/565 psi	48.7 bar/706 psi

Temperature: -40 to 100°C (-40 to 212°F) with standard Buna seals;

-26 to 204°C (-15 to 400°F) with fluorocarbon seals;

-54 to 107°C (-65 to 225°F) with polyurethane and urethane 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 sus); See Temperature and Oil Viscosity, page 9.060.1

Installation: No restrictions; See page 9.020.1

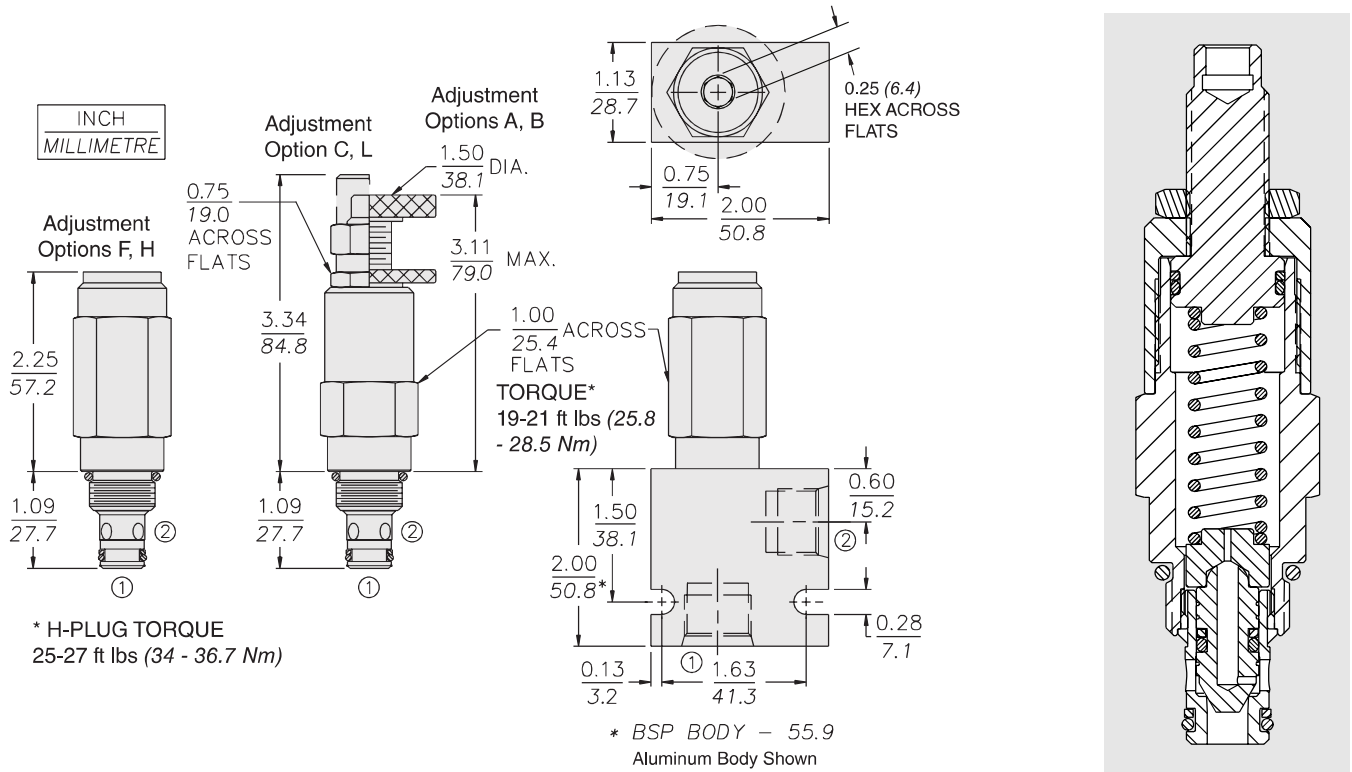
Cavity: VC08-2; See page 9.108.1

Cavity Tool: CT08-2XX; See page 8.600.1

Seal Kit: SK08-2X-B; SK08-2X-M (for cross-over relief application); See page 8.650.1

RV08-20

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.16 kg (0.35 lb) to 0.22 kg (0.47 lb) depending on adjustment option. Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings standard. Anodized aluminum knobs and caps.

Standard Ported Body: Weight: 0.16 kg (0.35 lb); Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.008.1

TO ORDER

RV08-20 - - - - - / **M80**

Adjustment Option
 1/4 in. Hex Allen Head **A**
 1-1/2 in. Dia. Alum. Knob **B**
 Option A w/ Cover Cap **C**
 Factory Preset Non-Adj. **F***
 Factory Preset Hidden Adj. **H***
 Option C w/ Lockwire Holes **L**

* If the valve is adjusted beyond the recommended maximum pressure range for the F and H style adjuster options, the valve may not open to relieve system pressure.

Porting
Cartridge Only **0**
 SAE 4 **4T**
 SAE 6 **6T**
 SAE 6 **6TD**
 SAE 8 **8T**
 SAE 8 **8TD**
 1/4 in. BSP* **2B**
 3/8 in. BSP* **3B**
 3/8 in. BSP* **3BD**

Seals
Pressure on Port 1 Only:
N Buna N (Std.)
V Fluorocarbon
P Polyurethane
U Urethane
Bidirectional Pressure:
NC Buna N
VC Fluorocarbon
PC Polyurethane
U Urethane

Setting in bar
 (Blank)[†] for Adjustable, or Specify, for example:
M150 150 bar
Setting in psi
 (Blank)[†] for Adjustable, or Specify, for example:
03.5 350 psi

Spring Range
5 3.4 to 41.4 ± 6.9 bar (50 to 600 ± 100 psi)
9 6.9 to 89.6 ± 13.8 bar (100 to 1300 ± 200 psi)
18 17.2 to 179.3 ± 20.7 bar (250 to 2600 ± 300 psi)
33 17.2 to 278.8 ± 27.6 bar (250 to 4000 ± 400 psi)

[†]Adjustable valves will be preset to approx. 50% of spring max. potential.

*BSP Body; U.K. Mfr. Only