**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

**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 6.020.1

**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
**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**

Cartridge Only
1/4 in. Hex Allen Head
1-1/2 in. Dia. Alum. Knob
Option A w/ Cover Cap
Factory Preset Non-Adj.
Factory Preset Hidden Adj.
Option C w/ Lockwire Holes

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

* 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.

Adjustment Option
A
B
C
F
H
L

Porting
Cartridge Only
SAE 4
SAE 6
SAE 8
SAE 8TD
1/4 in. BSP*
3/8 in. BSP*
3/8 in. BSP*

*BSP Body: U.K. Mfr. Only

**NOTES:**
- Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown above.
- Adjustable valves will be preset to approx. 50% of spring max. potential.
- 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)

NOTE: Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown above.