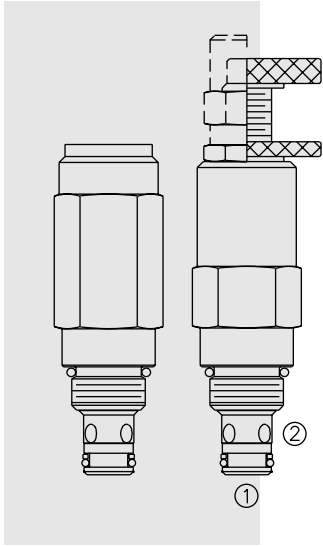


# RV08-20 Relief, Direct-Acting Poppet



**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.

For settings over 228 bar (3300 psi), see model RV58-20.

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.
- Adjustment options A, B, and C: positive stops prevent springs from going solid.
- Optional spring ranges to 248 bar (3600 psi).
- Rapid response to pressure changes.
- Compact size.

**RATINGS**

**Operating Pressure:** 248 bar (3600 psi)

**Flow:** The Performance Chart illustrates flow handling capacity at max. setting for each spring range option. Pressure rise will vary with spring (range) and with setting within range due to flow forces. Consult factory for specific flow characteristic values.

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

**Crack Pressure Defined:** bar (psi) evident at 0.95 lpm (0.25 gpm) attained

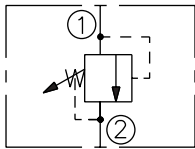
**Reseat Pressure:** Nominal 80% of crack pressure

**Standard Spring Ranges:** Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown below.

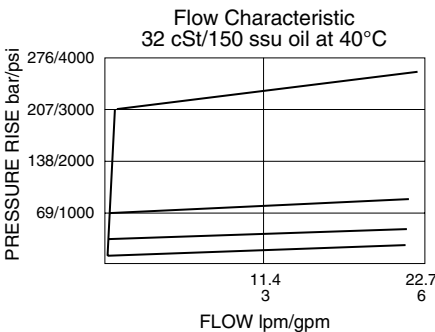
Spring Model Code	Nominal Factory Rating	Maximum Solid Adjustment
5	3.45 – 34.48 bar (50 – 500 psi)	48.28 bar (700 psi)
9	6.90 – 75.86 bar (100 – 1100 psi)	103.45 bar (1500 psi)
18	17.24 – 158.62 bar (250 – 2300 psi)	200 bar (2900 psi)
33	17.24 – 248.28 bar (250 – 3600 psi)	303.45 bar (4400 psi)

**SYMBOLS**

**USAS/ISO:**



**PERFORMANCE (Cartridge Only)**



**Temperature:** -40 to 120°C with standard Buna 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 ssu)

**Installation:** No restrictions; See page 9.020.1

**Cavity:** VC08-2; See page 9.108.1

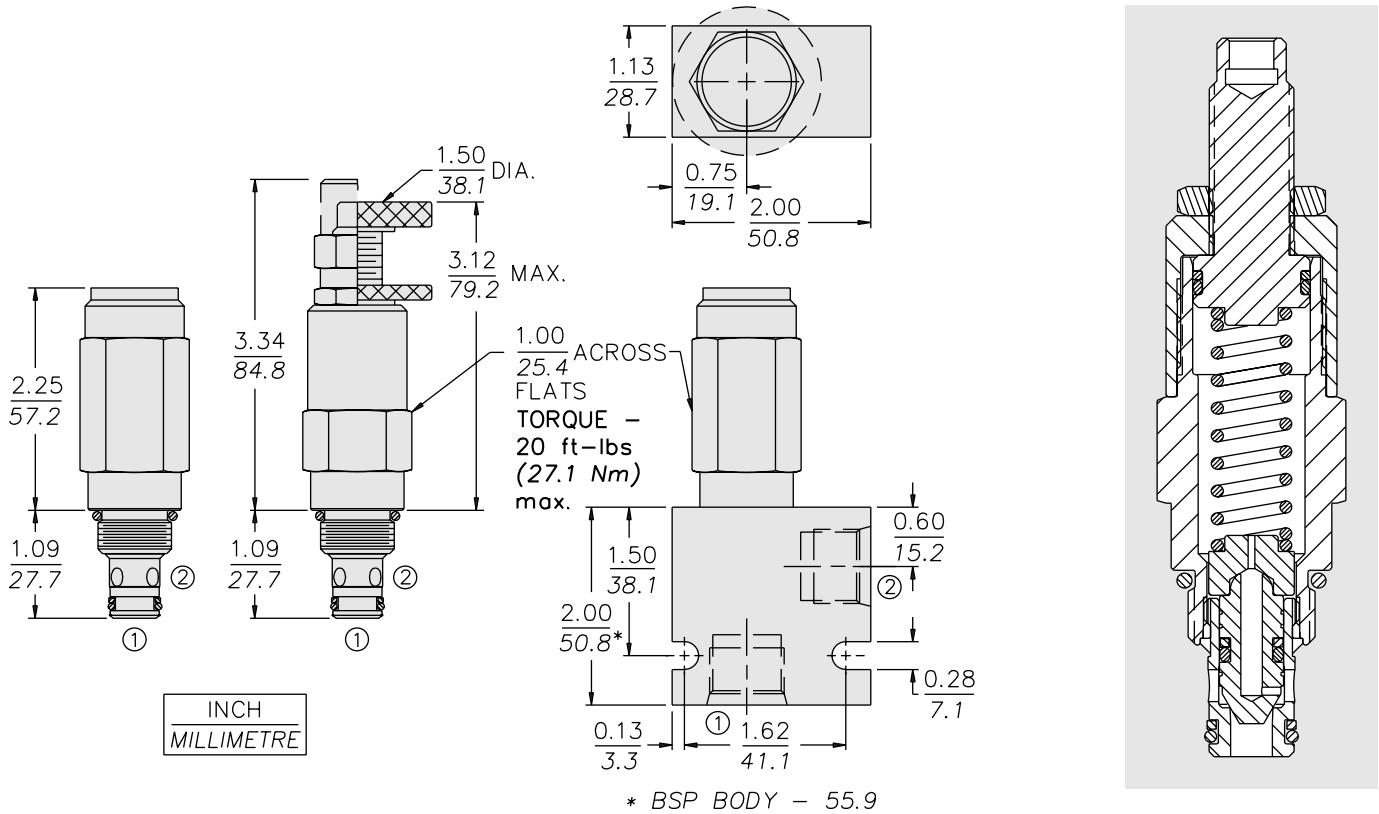
**Cavity Tool:** CT08-2XX; See page 8.600.1

**Seal Kit:** SK08-2X-B; See page 8.650.1

SK08-2X-M (for cross-over relief application)

# RV08-20

## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.23 kg. (0.50 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and back-up standard. Anodized aluminum knobs and caps.

**Standard Ported Body:** Weight: 0.16 kg. (0.35 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); see page 8.008.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

## TO ORDER

RV08-20 - - - /

### 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**

### Porting

- Cartridge Only **0**
- SAE 4 **4T**
- SAE 6 **6T**
- SAE 8 **8T**
- 1/4 in. BSP\* **2B**
- 3/8 in. BSP\* **3B**
- 1/2 in. BSP\* **4B**

\*BSP Body; U.K. Mfr. Only

### Seals

- Pressure on P Only:**
- N** Buna N (Std.)
- V** Fluorocarbon
- Bidirectional Pressure:**
- NC** Buna N
- VC** Fluorocarbon

### Setting in bar†

- (Blank) for Adjustable, or Specify, for example:
- M25** 25 bar
- M100** 100 bar

### Setting in psi‡

- (Blank) for Adjustable, or Specify, for example:
- 9.0** 900 psi
- 23.5** 2350 psi

### Spring Range

- 5** 3.45 to 34.48 bar (50 to 500 psi)
- 9** 6.90 to 75.86 bar (100 to 1100 psi)
- 18** 17.24 to 158.62 bar (250 to 2300 psi)
- 33** 17.24 to 248.28 bar (250 to 3600 psi)

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