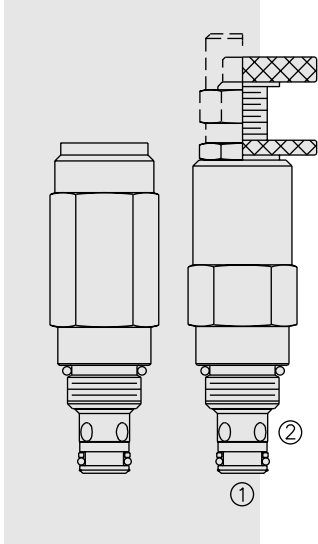


# RV08-22 Relief, Differential Area Poppet



**DESCRIPTION**

A screw-in, cartridge-style, direct-acting, differential area, poppet-type hydraulic relief valve for use as a pressure limiting device in more demanding hydraulic circuits, requiring low hysteresis and low internal leakage.

**OPERATION**

The RV08-22 blocks flow from ② to ① until sufficient pressure is present at ② to force the poppet from its seat.

The cartridge offers smooth transition in response to load changes in common hydraulic circuits.

NOTE: The RV08-22 may be used in cross-over relief applications (back pressure on ①) 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.
- Hardened poppet and cage for long life.
- Optional spring ranges to 221 bar (3200 psi).
- Smooth response to pressure surges.
- Industry common cavity.
- Compact size.

**RATINGS**

**Operating Pressure:** 221 bar (3200 psi)

**Flow:** The Performance Chart illustrates flow handling capacity at maximum 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 85% of nominal setting

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

**Reseat Pressure:** Nominal 90% 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
4	3.45 – 27.59 bar (50 – 400 psi)	41.38 bar (600 psi)
7	6.90 – 62.07 bar (100 – 900 psi)	89.66 bar (1300 psi)
13	6.90 – 117.24 bar (100 – 1700 psi)	158.62 bar (2300 psi)
26	17.24 – 220.69 bar (250 – 3200 psi)	275.86 bar (4000 psi)

**Temperature:** -40 to 120°C

**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

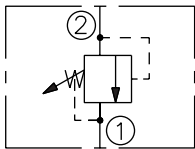
**Cavity Tool:** CT08-2XX; See page 8.600.1

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

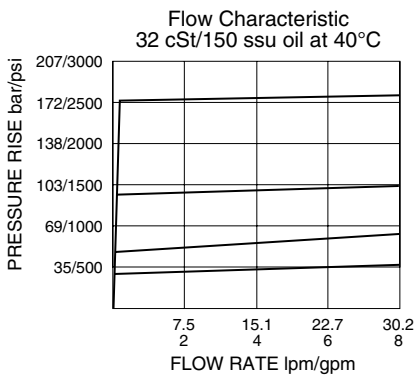
SK08-2X-M (for cross-over relief application)

**SYMBOLS**

**USAS/ISO:**

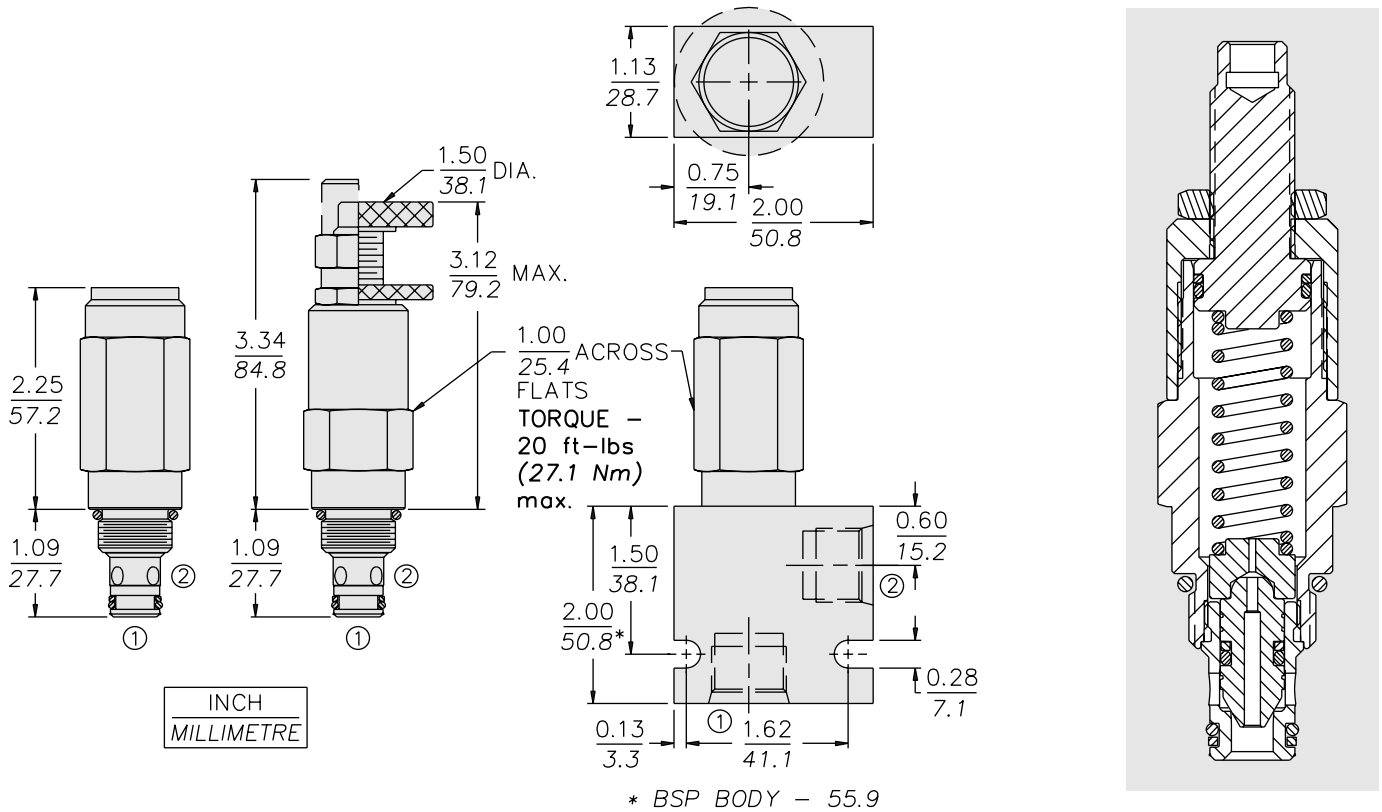


**PERFORMANCE (Cartridge Only)**



# RV08-22

## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.22 kg. (0.48 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and back-up standard. Anodized aluminum knob.

**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

RV08-22 - - - /

### 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<sup>†</sup>

(Blank) for Adjustable, or Specify, for example:

**M25** 25 bar

**M100** 100 bar

### Setting in psi<sup>†</sup>

(Blank) for Adjustable, or Specify, for example:

**9.0** 900 psi

**23.5** 2350 psi

### Spring Range

**4** 3.45 to 27.59 bar (50 to 400 psi)

**7** 6.90 to 62.07 bar (100 to 900 psi)

**13** 6.90 to 117.24 bar (100 to 1700 psi)

**26** 17.24 to 220.69 bar (250 to 3200 psi)

<sup>†</sup>Adjustable valves will be preset to approx. 50% of spring max.