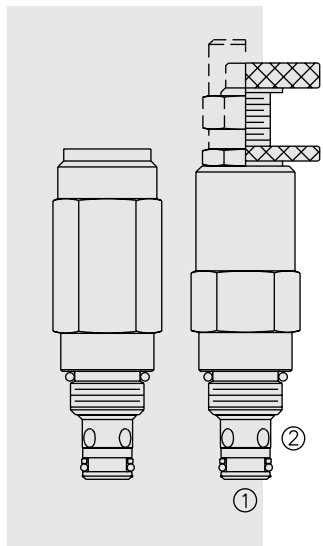


# RV08-22 Relief, Differential Area Poppet



## 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.

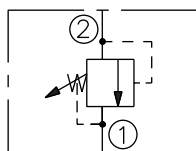
NOTE: The RV08-22 may be used in cross-over relief applications (back pressure on ①) with the use of the "C" double back-up ring seal option. See Ordering Table.

## FEATURES

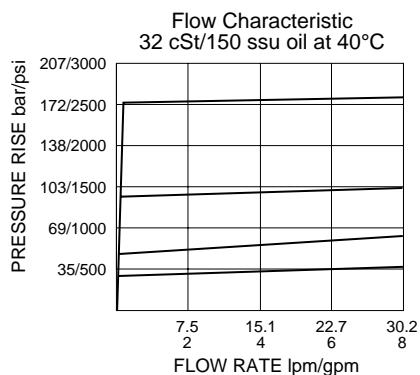
- Adjustments cannot be backed out of the valve.
- Adjustment options A, B, and C: positive stops prevent springs from going solid.
- Hardened poppet and cage for long life.
- Optional spring ranges to 221 bar (3200 psi).
- Smooth response to pressure surges.
- Industry common cavity.
- Compact size.

## SYMBOLS

### USAS/ISO:



## PERFORMANCE (Cartridge Only)



## RATINGS

**Operating Pressure:** 248 bar (3600 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 field-adjust the valve higher than the nominal ratings shown below.

Spring Model Code	Nominal Factory Rating	Maximum Solid Adjustment
4	3.4 – 27.6 bar (50 – 400 psi)	41.4 bar (600 psi)
7	6.9 – 62.1 bar (100 – 900 psi)	89.7 bar (1300 psi)
13	6.9 – 117.2 bar (100 – 1700 psi)	158.6 bar (2300 psi)
26	17.2 – 220.7 bar (250 – 3200 psi)	275.9 bar (4000 psi)
*35	17.2 – 248.3 bar (250 – 3600 psi)	275.9 bar (4000 psi)

\*Spring Code 35 is available with factory pre-set (F and H) options only.

**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 sus); See Temperature and Oil Viscosity, page 9.060.1

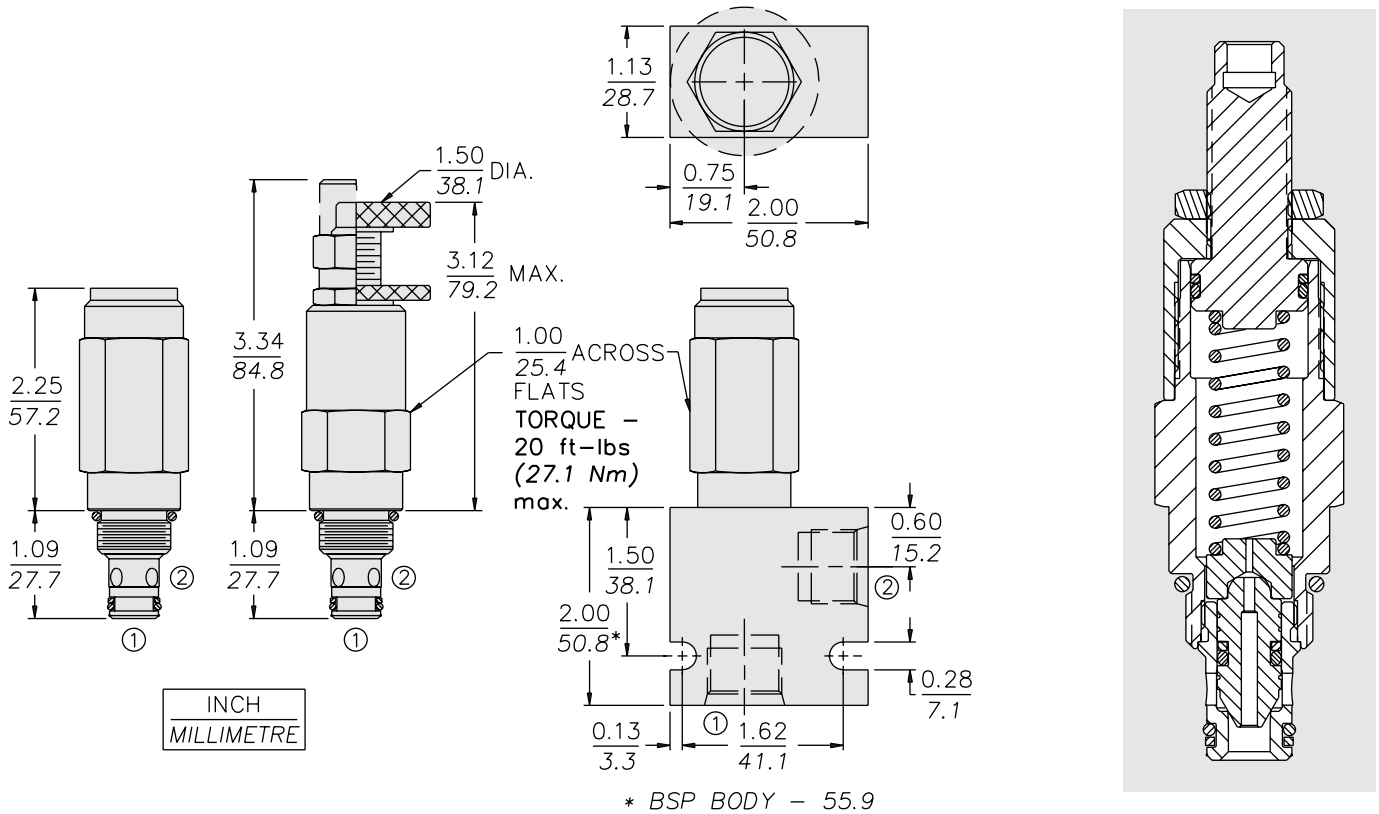
**Installation:** No restrictions; See page 9.020.1

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

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

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

**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 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.008.1

**TO ORDER**

**RV08-22** - - - /

<p><b>Adjustment Option</b></p> <p>1/4 in. Hex Allen Head <b>A</b>                  1-1/2 in. Dia. Alum. Knob <b>B</b>                  Option A w/ Cover Cap <b>C</b>                  Factory Preset Non-Adj. <b>F</b>                  Factory Preset Hidden Adj. <b>H</b>                  Option C w/ Lockwire Holes <b>L</b></p> <p><b>Porting</b></p> <p>Cartridge Only <b>0</b>                  SAE 4 <b>4T</b>                  SAE 6 <b>6T</b>                  1/4 in. BSP* <b>2B</b>                  3/8 in. BSP* <b>3B</b>                  1/2 in. BSP* <b>4B</b></p>	<p><b>Seals</b></p> <p><b>Pressure on P Only:</b></p> <p><b>N</b> Buna N (Std.)  <b>V</b> Fluorocarbon</p> <p><b>Bidirectional Pressure:</b></p> <p><b>NC</b> Buna N  <b>VC</b> Fluorocarbon</p>	<p><b>Setting in bar<sup>†</sup></b></p> <p>(Blank) for Adjustable, or Specify, for example:  <b>M25</b> 25 bar  <b>M100</b> 100 bar</p> <p><b>Setting in psi<sup>†</sup></b></p> <p>(Blank) for Adjustable, or Specify, for example:  <b>9.0</b> 900 psi  <b>23.5</b> 2350 psi</p> <p><b>Spring Range</b></p> <p><b>4</b> 3.4 to 27.6 bar (50 to 400 psi)  <b>7</b> 6.9 to 62.1 bar (100 to 900 psi)  <b>13</b> 6.9 to 117.2 bar (100 to 1700 psi)  <b>26</b> 17.2 to 220.7 bar (250 to 3200 psi)  <b>35</b> 17.24 to 248.3 bar (250 to 3600 psi)</p>
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\*BSP Body; U.K. Mfr. Only

**Note:** Spring Code 35 is available with factory pre-set (F and H) options only.