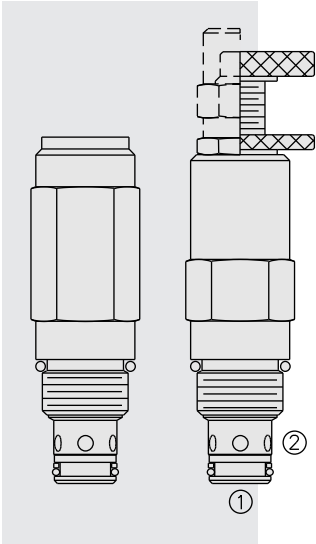


RV50-22 Relief, Differential Area Poppet



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 at high working pressures.

OPERATION

The RV50-22 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 RV50-22 may not be used in cross-over relief applications (back pressure on ①).

FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened poppet and cage for long life.
- Smooth response to pressure surges.
- Industry common cavity.

RATINGS

Operating Pressure: 345 bar (5000 psi)

Flow: The Performance Chart illustrates flow handling capacity at maximum setting. Pressure rise will vary with setting due to flow forces. Consult factory for specific flow characteristic values.

Pressure Rise: 0.34 bar/l (5 psi/g)

Internal Leakage: 0.25 cc/minute (5 drops/minute) max. to 85% of nominal setting

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

Standard Spring Range: 34.5 to 344.8 bar (500 to 5000 psi) at 80% accuracy

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

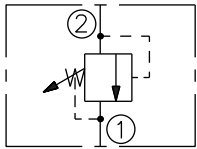
Cavity: VC10-2; See page 9.110.1

Cavity Tool: CT10-2XX; See page 8.600.1

Seal Kit: SK10-2P-T; See page 8.650.1

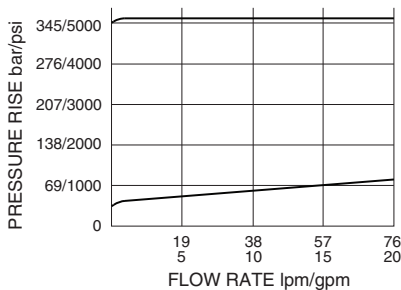
SYMBOLS

USASI/ISO:



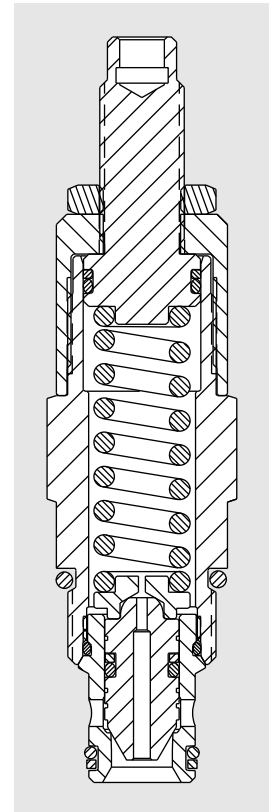
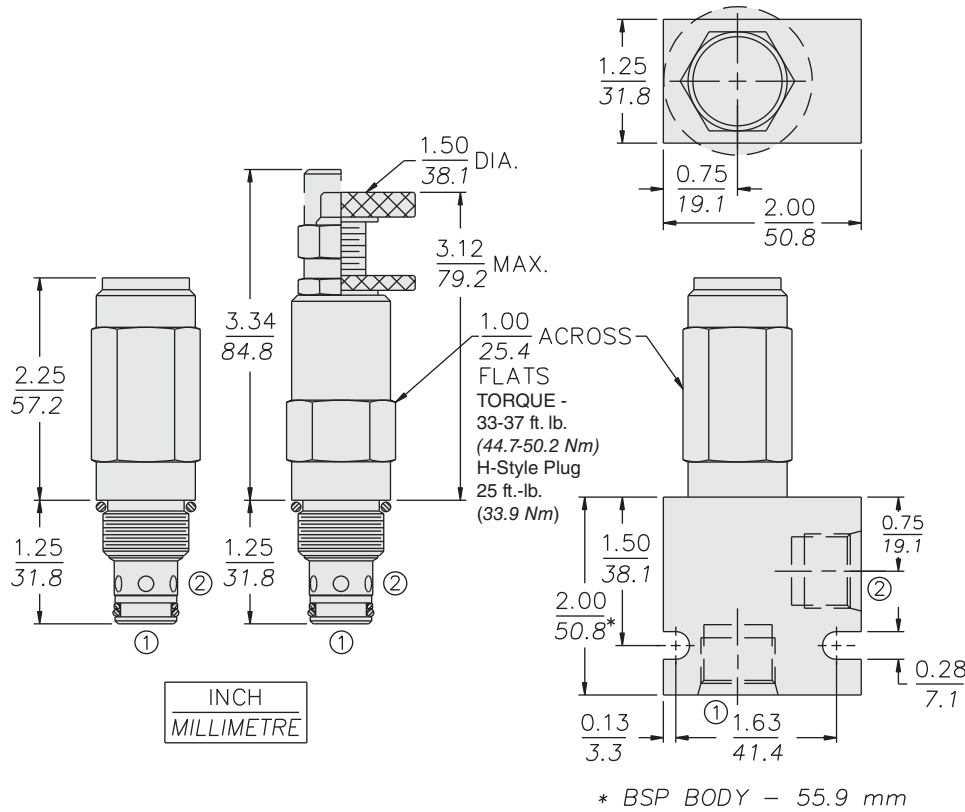
PERFORMANCE (Cartridge Only)

Relief Pressure vs Flow Characteristic
32 cSt/150 sus oil at 40°C (104°F)



RV50-22

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.23 kg. (0.50 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Polyurethane seals with
Fluorocarbon back-ups for
pressures over 240 bar (3500 psi).
Anodized aluminum knob.

Ported Body: Weight: 0.54 kg.
(1.2 lbs.) Ductile Iron (code "D")
standard, consult factory for
weight, dimensions may differ.
Rated to 345 bar (5000 psi).
See page 8.010.1.

TO ORDER

RV50-22 - - - /

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 6 **6TD**
- SAE 8 **8TD**
- 1/4 in. BSP* **2BD**
- 3/8 in. BSP* **3BD**

*BSP Body; U.K. Mfr. Only

Seals

- Pressure on P Only:**
- P Polyurethane (Std.)

Setting in bar[†]

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

M45 45 bar

M100 100 bar

Setting in psi[†]

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

29.0 2900 psi

43.5 4350 psi

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

Spring Range

50 34.5 to 344.8 bar
(500 to 5000 psi)