

Part number:

**HYDROMA**

HYDRAULICKÉ SYSTÉMY

**HIDROMA  
SISTEMS**

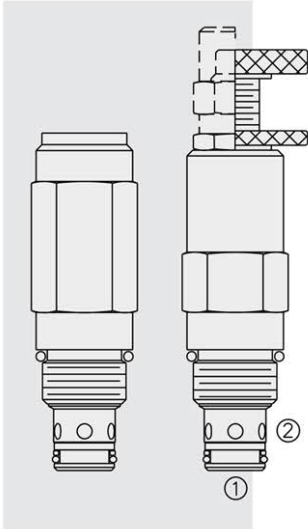
UKŁADY HYDRAULICZNE

**HYDROMA**

ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ

## PRESSURE CONTROLS

# 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

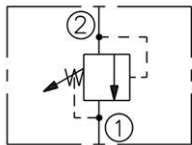
**Cavity:** VC10-2; See page 9.110.1

**Cavity Tool:** CT10-2XX; See page 8.600.1

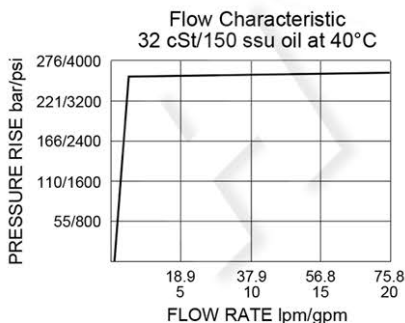
**Seal Kit:** SK10-2P-T; See page 8.650.1

### SYMBOLS

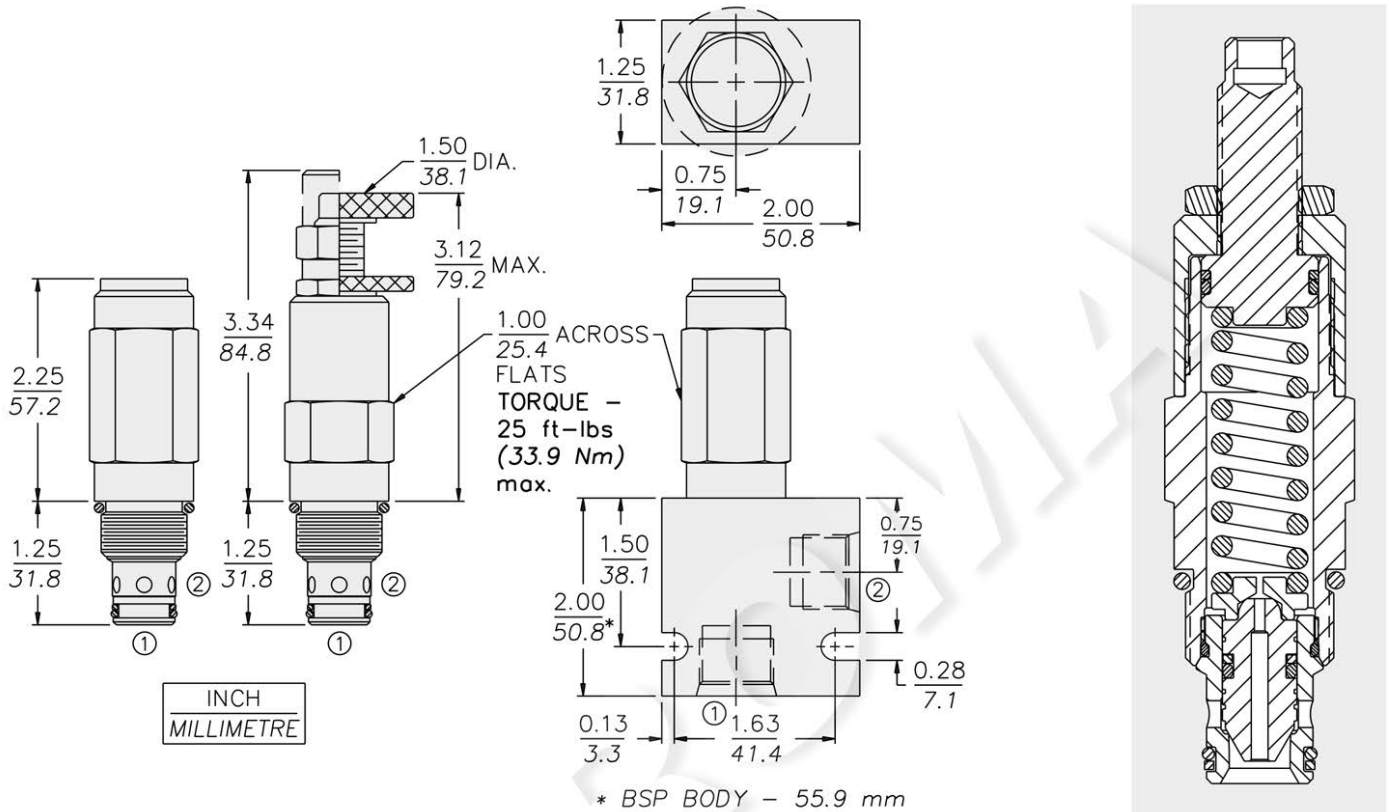
#### USASI/ISO:



### PERFORMANCE (Cartridge Only)



## 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<sup>†</sup>

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

- M45** 45 bar
- M100** 100 bar

### Setting in psi<sup>†</sup>

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

- 29.0** 2900 psi
- 43.5** 4350 psi

<sup>†</sup>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)