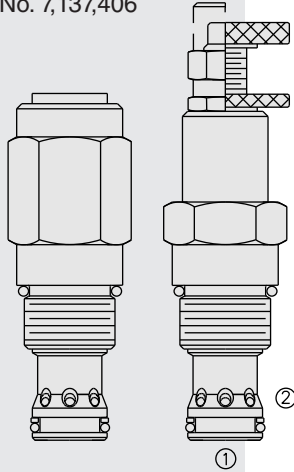


# RV12-26 Relief, Pilot-Operated Spool

U.S. Patent  
No. 7,137,406



## DESCRIPTION

A screw-in, cartridge-style, pilot-operated (two-stage), spool-type hydraulic relief valve, intended for use as a pressure limiting device in demanding hydraulic circuits which require fast response and low hysteresis.

## OPERATION

The RV12-26 blocks flow from 1 to 2 until sufficient pressure is present at 1 to force the piloting relief off its seat, allowing the main (second stage) spool to shift, opening 1 to 2.

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

**NOTE: The RV12-26 cannot be used in crossover relief applications.**

## FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Optional spring ranges to 207 bar (3000 psi).
- Fast, smooth response to pressure surges.
- Cost effective cavity.

## RATINGS

**Operating Pressure:** 207 bar (3000 psi)

**Flow:** See Performance Chart

**Crack Pressure:** Relief pressure attained at 7.6 lpm (2.0 gpm) attained

**Internal Leakage:** 197 ml/minute (12 cu. in/minute) max. to 85% of nominal setting

**Reseat Pressure:** Nominal 90% of crack pressure

**Standard Spring Range:** 6.9 to 206.9 bar (100 to 3000 psi) Shown in To Order section. Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal rating shown. **If the valve is adjusted beyond the recommended maximum pressure range for the F and H style adjuster options, the valve may not open to relieve system pressure.**

**Temperature:** -40 to 100°C (-40 to 212°F) with Buna N seals; -26 to 204°C (-15 to 400°F) with fluorocarbon seals; -54 to 107°C (-65 to 225°F) with polyurethane 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 sus); See Temperature and Oil Viscosity, page 9.060.1

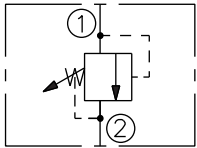
**Installation:** No restrictions; See page 9.020.1

**Cavity:** VC12-2; See page 9.112.1

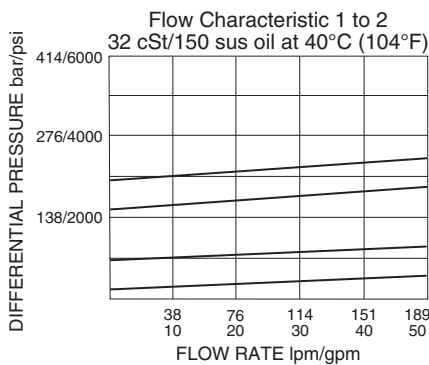
**Cavity Tool:** CT12-2XX; See page 8.600.1

**Seal Kit:** SK12-2X-B; See page 8.650.1

## ISO SYMBOL



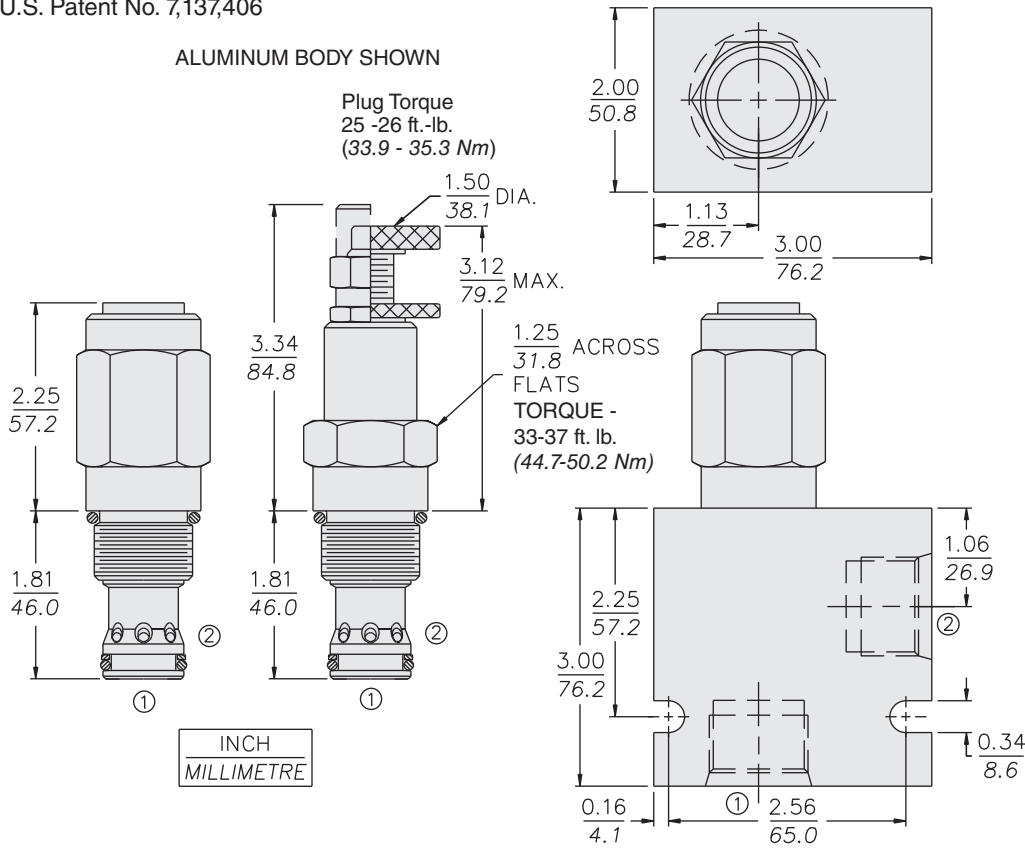
## PERFORMANCE (Cartridge Only)



**DIMENSIONS**

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ALUMINUM BODY SHOWN



**MATERIALS**

**Cartridge:** Weight: 0.34 kg. (0.75 lbs.)  
 Steel with hardened work surfaces.  
 Zinc-plated exposed surfaces.  
 Buna N O-rings and polyester elastomer back-up standard.  
 Anodized aluminum knobs.

**Standard Ported Body:** Weight: 0.57 kg. (1.25 lbs.) Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.012.1

**TO ORDER**

**RV12-26** - - - - /

- 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-Adjst. **F\***  
 Factory Preset **H\***  
 Hidden Adjustment **H\***  
 Option C with Lockwire Holes **L**

\* If the valve is adjusted beyond the recommended maximum pressure range for the F and H style adjuster options, the valve may not open to relieve system pressure.

- Porting**  
 Cartridge Only **0**  
 SAE 12 **12T**  
 SAE 12 **12TD**  
 SAE 16 **16T**  
 3/4 in. BSP\* **6B**  
 1 in. BSP\* **8BD**

- Seals**  
**N** Buna N (Std.)  
**V** Fluorocarbon  
**P** Polyurethane

NOTE: Polyurethane seals required for operation at 345 bar (5000 psi). Consult factory for additional seal options.

- Setting in bar**  
 (Blank)<sup>†</sup> for Adjustable, or Specify, for example:  
**M25** 25 bar  
**M100** 100 bar  
**Setting in psi**  
 (Blank)<sup>†</sup> for Adjustable, or Specify, for example:  
**9.0** 900 psi  
**23.5** 2350 psi

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

- Spring Range**  
**4** 6.9 to 27.6 bar (100 to 400 psi)  
**15** 10.3 to 103.4 bar (200 to 1600 psi)  
**30** 31.0 to 206.9 bar (450 to 3000 psi)

Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal rating shown above.

\*BSP Body; UK Mfr. Only