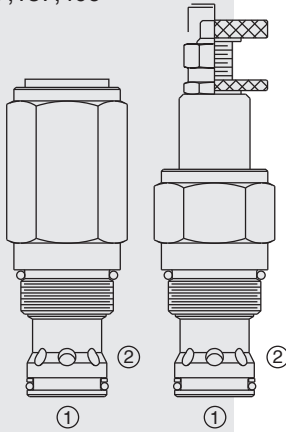


RV16-26 Relief, Pilot-Operated Spool

U.S. Patent
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 RV16-26 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 RV16-26 cannot be used in cross-over 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 275.8 bar (4000 psi).
- Fast, smooth response to pressure surges.

RATINGS

Operating Pressure: 275.8 bar (4000 psi)

Flow: See Performance Chart

Internal Leakage: 115 cc/minute (7 cu. in./minute) max. for pressure settings below 138 bar (2000 psi); 197 cc/minute (30 cu. in./minute) for pressure settings of 138 bar (2000 psi) or higher. Leakage measured at 85% of nominal setting.

Crack Pressure Defined: bar (psi) evident at 7.61 lpm (2 gpm) attained

Reseat Pressure: Nominal 90% of crack pressure

Standard Spring Ranges:

- 03:** 9.66–20.70 bar (140–300 psi);
- 06:** 15.87–41.41 bar (230–600 psi);
- 15:** 36.63–103.52 bar (530–1500 psi);
- 35:** 82.82–241.55 bar (1200–3500 psi)

Temperature: -40 to 70°C (-40 to 160°F)

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

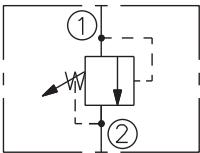
Cavity: VC16-2; See page 9.116.1

Cavity Tool: CT16-2XX; See page 8.600.1

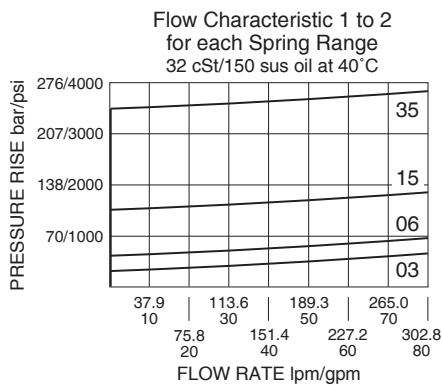
Seal Kit: SK16-2X-B; See page 8.650.1

SYMBOLS

USASI/ISO:

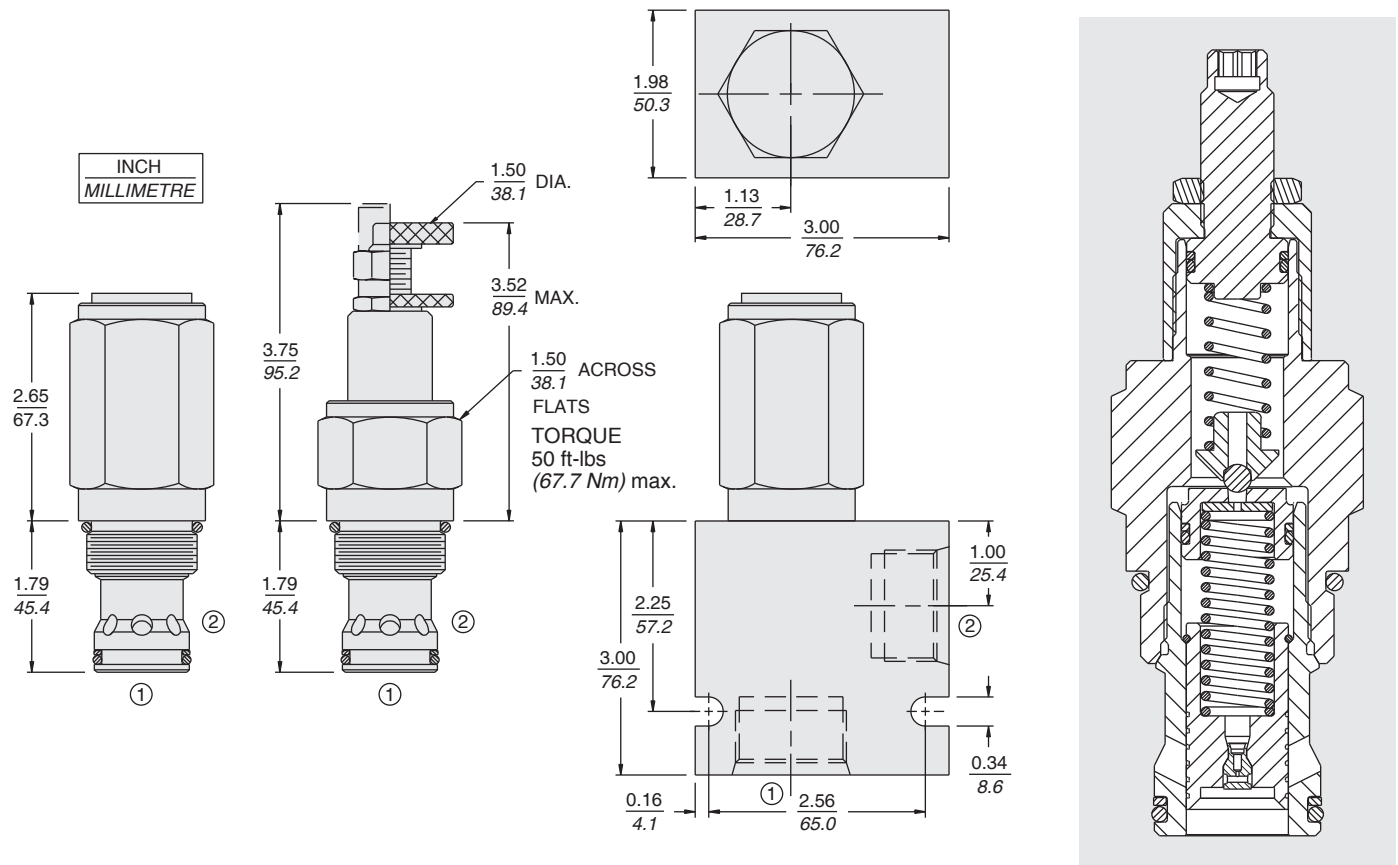


PERFORMANCE (Cartridge Only)



RV16-26

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.73 kg. (1.60 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 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.016.1

TO ORDER

RV16-26 - - - - /

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-Adj. **F**
- Factory Preset Hidden Adjustment **H**
- Option (C) with Lockwire Holes **L**

Setting in bar[†]

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

- M25** 25 bar
- M100** 100 bar

Setting in psi[†]

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

- 9.0** 900 psi
- 23.5** 2350 psi

Porting

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

Seals

- Pressure on P Only:**
- N** Buna N (Std.)
- V** Fluorocarbon
- P** Polyurethane

Spring Range

- 03** 9.7 to 20.7 bar (140 to 300 psi)
- 06** 15.9 to 41.4 bar (230 to 600 psi)
- 15** 36.6 to 103.5 bar (530 to 1500 psi)
- 35** 82.8 to 241.6 bar (1200 to 3500 psi)

*BSP Body; UK Mfr. Only

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