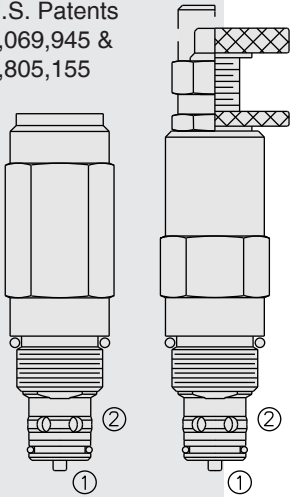
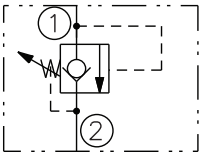


RV10-28 Relief, Pilot-Operated w/Reverse Check

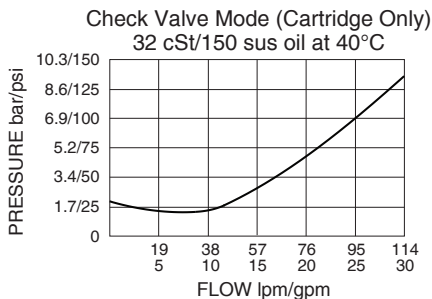
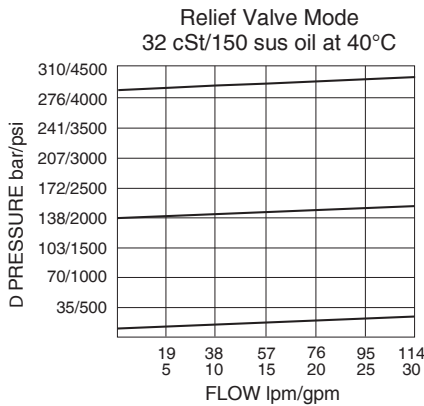
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6,805,155



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, two-stage, hydraulic relief valve with reverse flow check valve. It is intended for use as a pressure limiting device in demanding hydraulic circuits which require fast response, low hysteresis, low leakage, low pressure overshoot and reverse free flow features.

OPERATION

The RV10-28 blocks flow from 1 to 2 until sufficient pressure is present at 1 to force the pilot stage open, allowing the main stage to shift, opening 1 to 2.

The relief flow path is from 1 to 2. Reverse flow, from 2 to 1, occurs when the pressure at 2 is at least 2.1 bar (30 psi) higher than at port 1.

FEATURES

- Adjustments cannot be backed out of the valve.
- Hardened spool and cage for long life.
- Fast response.
- Industry common cavity.

RATINGS: Relief Valve Mode

Pressure Rating: 289.6 bar (4200 psi)

Proof Pressure: 620.5 bar (9000 psi)

Burst Pressure: 1241.1 bar (18000 psi)

Flow Rating: Port 1 to 2: 113.6 lpm (30 gpm)

Internal Leakage: 0.53 ml/minute (10 drops/minute) max. to 80% of nominal setting

Crack Pressure Defined: bar (psi) evident at 7.6 lpm (2.0 gpm) attained

Reseat Pressure: Nominal 90% of crack pressure

Approximate Pressure Increment Per Adjuster Turn: 98.6 bar (1430 psi)

Response Time: Relief to Check switch at 241 bar/53 lpm (3500 psi/14 gpm) condition: 0.6 seconds

RATINGS: Check Valve Mode

Crack Pressure: 2.1 bar (30 psi)

Response Time: Check to Relief switch at 241 bar/53 lpm (3500 psi/14 gpm) condition: 0.3 seconds

RATINGS: Overall

Operating Temperature: with Buna N seals: -40 to 100°C (-40 to 212°F); with Viton seals: -26 to 204°C (-15 to 400°F); with Polyurethane seals: -54 to 107°C (-65 to 225°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: VC10-2; See page 9.110.1

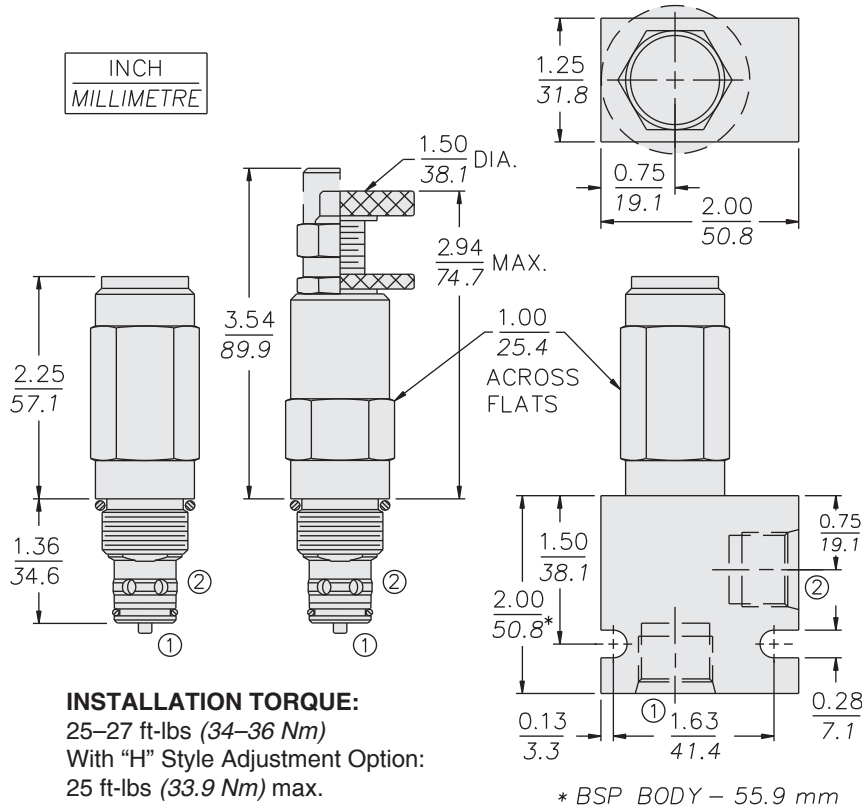
Cavity Tool: CT10-2XX; See page 8.600.1

Seal Kit: SK10-2X-B; See page 8.650.1

Note: This new model RV10-28 should be used instead of the older model RV10-24. For applications that do not require low-overshoot and reverse free-flow features, see model RV10-23 (page 6.060.1).

DIMENSIONS

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INSTALLATION TORQUE:
 25–27 ft-lbs (34–36 Nm)
 With “H” Style Adjustment Option:
 25 ft-lbs (33.9 Nm) max.

MATERIALS

Cartridge: Weight: With Adjustment Options A & B: 0.10 kg. (0.23 lbs.); Options C & L: 0.11 kg. (0.24 lbs.); Options F & H: 0.10 kg. (0.22 lbs.)
 Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard. Anodized aluminum knobs. Optional polyurethane seals with Fluorocarbon back-up recommended for pressures over 240 bar (3500 psi).

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 8.010.1

Adjustment Options: For adjustment options, see page 6.003.1.

TO ORDER

