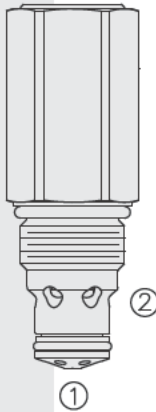


RVD50-20P Relief, Poppet-Type, High Pressure

European Commission (EC) Pressure Equipment Directive PED 97/23/EC
CE



DESCRIPTION

A screw-in, cartridge-style, direct-acting, poppet-type, hydraulic safety relief valve intended for use as a pressure limiting device for common hydraulic circuit protection. The RVD50-20P is suitable for use as a safety accessory in Category IV Group 2 applications according to the European Commission (EC) Pressure Equipment Directive (PED) 97/23/EC.

OPERATION

The RVD50-20P blocks flow from 1 to 2 until sufficient pressure is present at 1 to force the poppet from its seat. The cartridge offers fast response to load changes in typical hydraulic circuits requiring low hysteresis, low pressure rise and low internal leakage.

FEATURES

- PED-Certified to European Commission Pressure Equipment Directive 97/23/EC.
- Suitable for use as a safety accessory in PED Category IV Group 2 applications.
- Salt spray protection to meet 1000 hour specifications.
- Hardened poppet and cage for long life.
- No maintenance required (or allowed).
- Rapid response to pressure surges.
- Industry common cavity.
- Spring ranges from 13.7 bar (200 psi) to 350 bar (5075 psi).
- Poppet developed using computational fluid dynamics to ensure dynamic response with minimal friction.

RATINGS

Maximum Operating Pressure: 385 bar (5575 psi)

Proof Pressure: 517.1 bar (7500 psi)

Burst Pressure: 1379 bar (20000 psi)

Flow: The Performance Chart illustrates flow handling capacity at maximum setting for each spring range option. Pressure rise will vary with spring (range) and with setting within range due to flow forces. Consult factory for specific flow characteristic values.

Internal Leakage: 0.25 cc/minute (5 drops/minute) max. to 80% of nominal setting

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

Reseat Pressure: Nominal 85% of crack pressure

Standard Spring Ranges: Available from 13.7 bar (200 psi) to 350 bar (5075 psi).

See To Order section. Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown.

Operating Temperature: -40°C to 100°C (-40°F to 212°F) with Buna N seals;
 -26°C to 204°C (-31°F to 400°F) with Fluorocarbon seals;
 -40°C to 107°C (-40°F 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

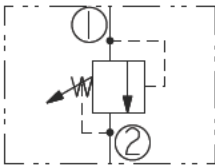
Installation: Valve must be installed so that pressure is at port 1. Improper porting will result in loss of safety function of valve. Pressure at port 2 must be at 0 bar (0 psi) for valve to open at the marked pressure setting. Pressure at port 2 is additive to the pressure setting. For additional installation instructions; See page 9.020.1

Cavity: VC10-2; See page 9.110.1

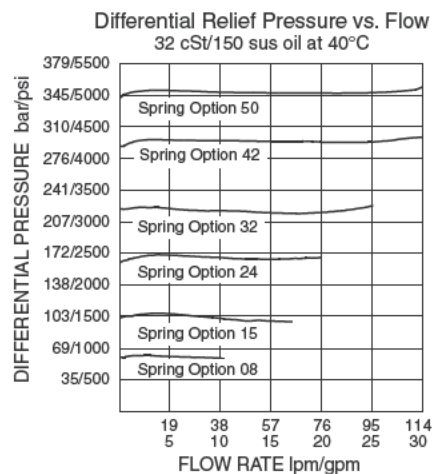
Cavity Tool: CT10-2XX; See page 8.600.1

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

ISO SYMBOL



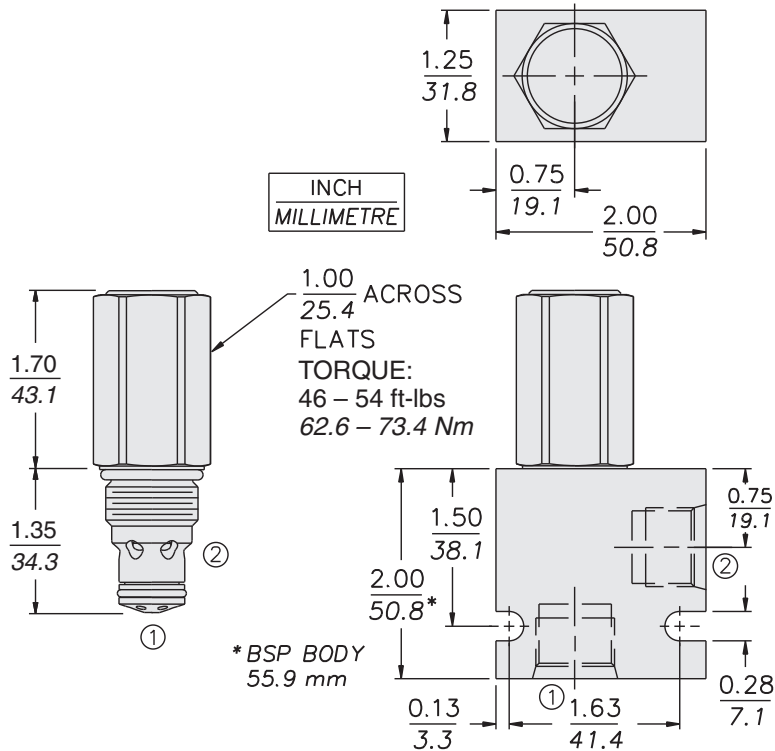
PERFORMANCE (Cartridge Only)



PED-certified as Safety Accessory

RVD50-20P

DIMENSIONS

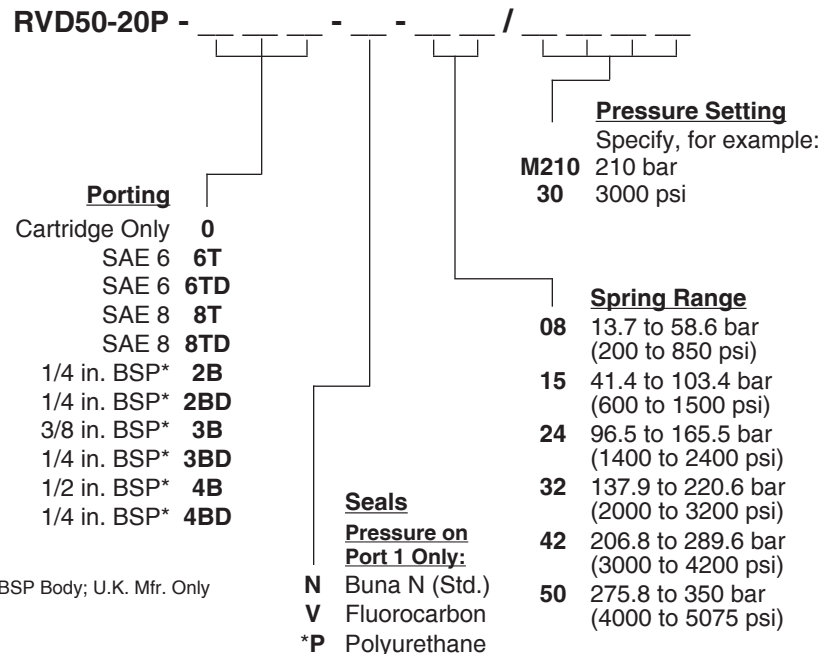


MATERIALS

Cartridge: Weight: 0.25 kg. (0.56 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-up standard.

Standard Ported Body: Weight: 0.16 kg. (0.35 lbs.) Anodized high-strength aluminum alloy rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.010.1

TO ORDER



*BSP Body; U.K. Mfr. Only

*Note: Polyurethane seals are recommended for operation over 241 bar (3500 psi).