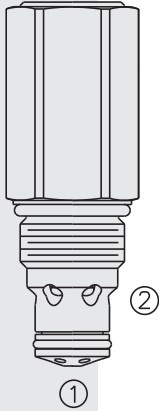
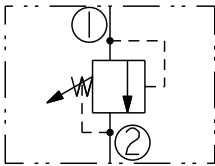


RVD50-20P Relief, Poppet-Type, High Pressure

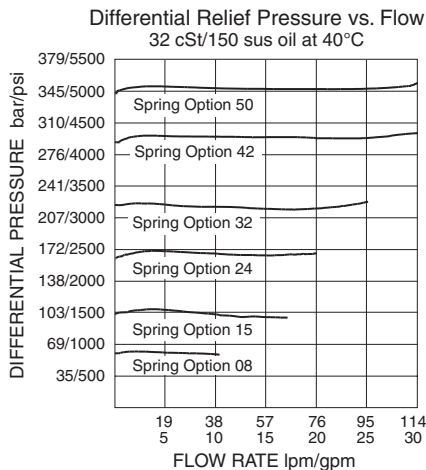
European
Commission (EC)
Pressure
Equipment
Directive
PED
97/23/EC
CE



ISO SYMBOL



PERFORMANCE (Cartridge Only)



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. The pressure setting is factory-set and non-adjustable.

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 ASTM B117 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) at port 1; 10 bar (145 psi) at port 2.

Proof Pressure: 517.1 bar (7500 psi)

Burst Pressure: 1379 bar (20000 psi)

Flow Rating: Port 1 to 2: 113.6 lpm (30 U.S. gpm) at max pressure.

Note: 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 ml/minute (5 drops/minute) max. to 80% of nominal setting

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

Reseat Pressure: Nominal 85% of crack pressure. Leakage to 1 ml/min. (20 drops/min.)

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

See To Order section.

Operating Temperature: -40 to 100°C (-40 to 212°F) with Buna N seals;

-26 to 204°C (-15 to 400°F) with Fluorocarbon seals;

-40 to 107°C (-40 to 225°F) with Polyurethane and Urethane 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 and stamped parameters on the side of the valve remain visible when installed. 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. Pressure setting is factory-set and non-adjustable. Pressure setting must NOT be changed in the field. If the HF-stamped epoxy plug on the top of the valve is missing, the valve setting may have been tampered with and the valve must be replaced.

For additional installation instructions; See page 9.020.1

Cavity: VC10-2; See page 9.110.1

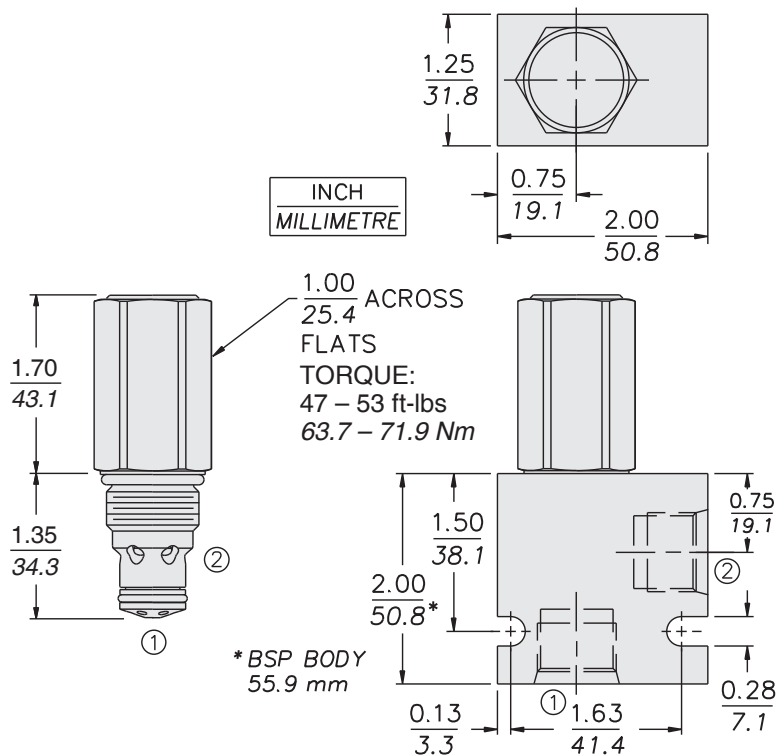
Cavity Tool: CT10-2XX; See page 8.600.1

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

PED-certified as Safety Accessory

RVD50-20P

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.20 kg. (0.44 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

RVD50-20P - - - /

Porting

Cartridge Only	0
SAE 6	6T
SAE 6	6TD
SAE 8	8T
SAE 8	8TD
1/4 in. BSP*	2B
1/4 in. BSP*	2BD
3/8 in. BSP*	3B
3/8 in. BSP*	3BD
1/2 in. BSP*	4B
1/2 in. BSP*	4BD

*BSP Body; U.K. Mfr. Only

Seals

Pressure on Port 1 Only:

N	Buna N (Std.)
V	Fluorocarbon
HV	90 Durometer Fluorocarbon
P*	Polyurethane
U*	Urethane

*Recommended for operation over 241 bar (3500 psi)

Pressure Setting

Specify, for example:

M210	210 bar
30	3000 psi

Note: Pressure setting is factory-set and non-adjustable. Pressure setting must NOT be changed in the field. If the HF-stamped epoxy plug on the top of the valve is missing, the valve setting may have been tampered with and the valve must be replaced.

Spring Range

08	13.7 to 58.6 bar (200 to 850 psi)
15	41.4 to 103.4 bar (600 to 1500 psi)
24	96.5 to 165.5 bar (1400 to 2400 psi)
32	137.9 to 220.6 bar (2000 to 3200 psi)
42	206.8 to 289.6 bar (3000 to 4200 psi)
50	275.8 to 350 bar (4000 to 5075 psi)