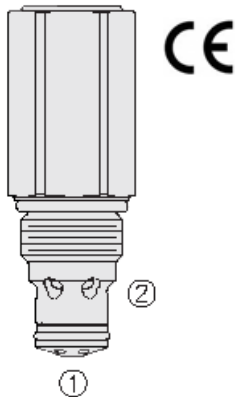
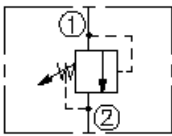




Overview



Symbol



Description

The RVD50-20P is 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 pressure equipment directive (PED) 2014/68/EU.

Operation

The RVD50-20P blocks flow from port 1 to 2 until sufficient pressure is present at port 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 2014/68/EC.
- Suitable for use as a safety accessory in PED Category IV Group 2 applications.
- Salt spray protection to meet 960 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

Pressure Ratings

Pressure rating	385 bar (5575 psi)	- Note: Port 1
	10.0 bar (145 psi)	- Note: Port 2
Proof pressure	517.1 bar (7500 psi)	
Burst pressure	1379 bar (20000 psi)	
Crack pressure defined	Pressure evident at 0.95 lpm (0.25 gpm)	
Reseat pressure	Nominal 85% of crack pressure	

Flow Ratings

Flow rating	113.6 lpm (30 gpm)	- Note: Port 1 to 2 at max pressure
Maximum internal leakage	1 ml/min (20 drops/min)	

Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- Note: With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- Note: With fluorocarbon seals
	-40 to 107 °C (-40 to 225 °F)	- Note: With polyurethane seals with urethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

Other Ratings

Corrosion protection	960 hr salt spray per ASTM b117
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Operating Parameters

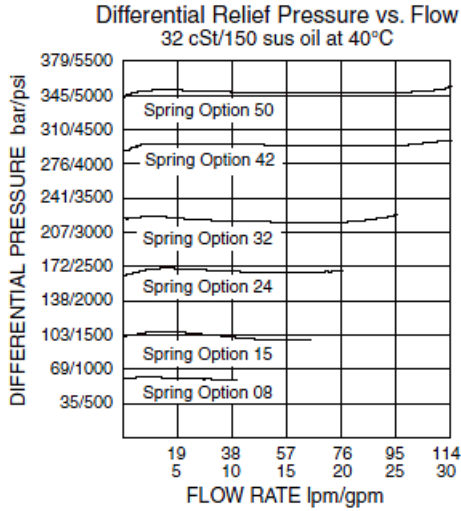
Fluids	Mineral based or synthetic with lubricating properties hydraulic fluids. For other fluids contact HydraForce
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

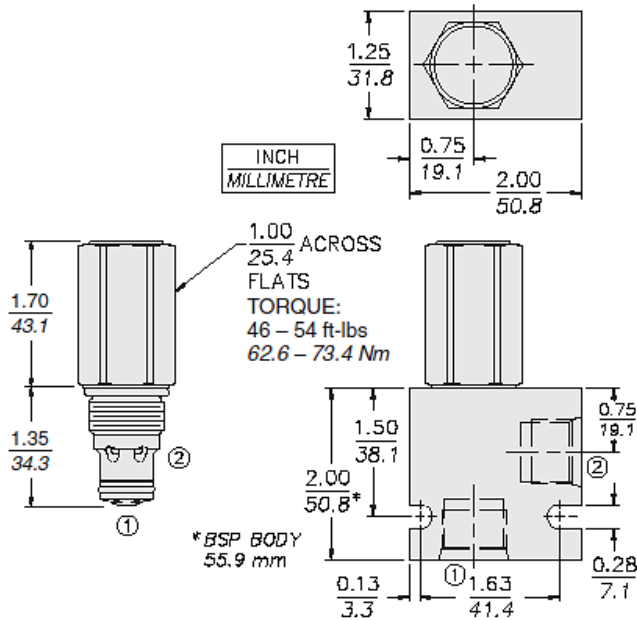
Unit weight	0.20 kg (0.44 lb)
Internal wetted surface area	151 cm ² (23.3 in ²)



Performance



Dimensions



Installation Specifications

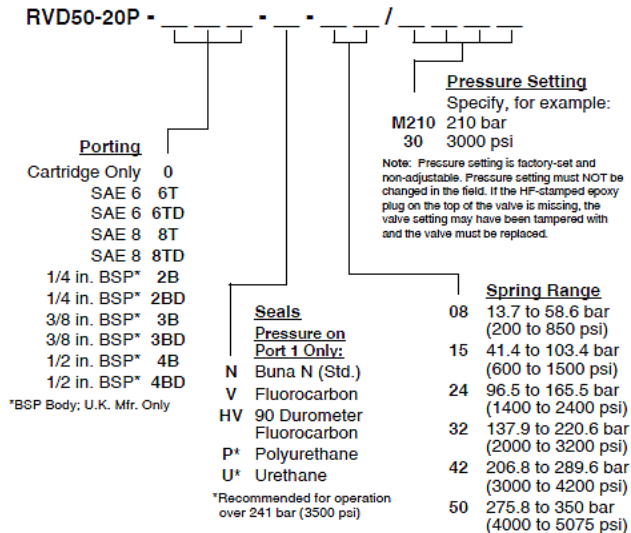
Cavity	VC10-2
Cartridge installation torque	63.7 to 71.9 N-m (47 to 53 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK10-2X-B	- Note: X=n, v, HV, P
	SK10-2X-O	- Note: X=u, bidirectional
Housings		



Order Code



POSITION	CODE	DESCRIPTION
		RVD50-20P-H-J-R/S
H		Line Body
H	0	No Body
H	6T	Aluminum SAE 6
H	8T	Aluminum SAE 8
H	6TD	Ductile Iron SAE 6
H	8TD	Ductile Iron SAE 8
H	2B	Aluminum BSPP 1/4" (2)
H	3B	Aluminum BSPP 3/8" (3)
H	4B	Aluminum BSPP 1/2" (4)
H	4BD	Ductile Iron BSPP 1/2" (4)
J		Seal
J	N	Buna-N
J	NC	Buna-N for Crossover Applications
J	V	Fluorocarbon
J	HV	High Durometer Fluorocarbon
J	VC	Fluorocarbon for Crossover Applications
J	P	Polyurethane
J	U	PPDI Urethane
R		Spring
R	08	13.7 to 58.6 bar (200 to 850 psi) Spring Range
R	15	41.4 to 103.4 bar (600 to 1500 psi) Spring Range
R	24	96.5 to 165.5 bar (1400 to 2400 psi) Spring Range
R	32	137.9 to 220.6 bar (2000 to 3200 psi) Spring Range
R	42	206.8 to 289.6 bar (3000 to 4200 psi) Spring Range
R	50	275.8 to 350 bar (4000 to 5075 psi) Spring Range
S		Setting
S	MXXX	Spring Setting in XXX bar
S	XX	Spring Setting in XX psi (x 100)