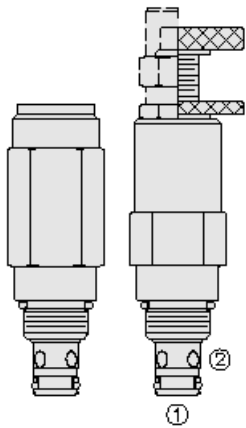
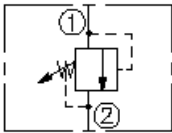




Overview



Symbol



Description

RV08-20X is a screw in, cartridge style, direct acting, poppet type, hydraulic relief valve intended for lower flow circuits requiring low internal leakage

Operation

RV08-20X blocks flow from port 1 to port 2 until sufficient pressure is present at port 1 to force the spring opposed poppet off its seat

Features

- Adjustments cannot be backed out of the valve.
- Variety of pressure adjustment options including non-adjustable factory preset.
- Adjustments options A, B, and C: positive stops prevent springs from going solid.
- Optional spring ranges to 248 bar (3600 psi).
- Rapid response to pressure changes.
- Optional bi-directional pressure (requires bi-directional pressure seal option).
- Compact size.

Notes

Supersession: Existing and new applications.

RVD58-20 is our best-in-class relief valve and can functionally replace this valve in most applications. We strongly encourage you to consider this newer alternative.

Considerations:

- Comparable pressure and flow ratings
- Comparable response rate
- Better pressure rise characteristics
- Smaller size
- No dynamic seal
- Competitive cost
- VC08-2B cavity variation is required. Some manifolds may allow drop-in replacement.
- Assistance is available to evaluate your application

Ratings

Pressure Ratings

Pressure rating	275.8 bar (4000 psi) 482.6 bar (7000 psi)
Burst pressure	896.3 bar (13000 psi)
Relief pressure defined	Pressure evident at 0.95 lpm (0.25 gpm)
Reseat pressure	Nominal 80% of crack

Flow Ratings

Flow rating	22.7 lpm (6 gpm)	- Note: At max pressure
Maximum internal leakage	0.25 ml/min (5 drops/min)	- Note: Max to 75% of nominal setting

Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F) -26 to 204 °C (-15 to 400 °F) -54 to 107 °C (-65 to 225 °F)	- Note: With buna N seals - Note: With fluorocarbon seals - Note: With urethane seals with polyurethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

Operating Parameters

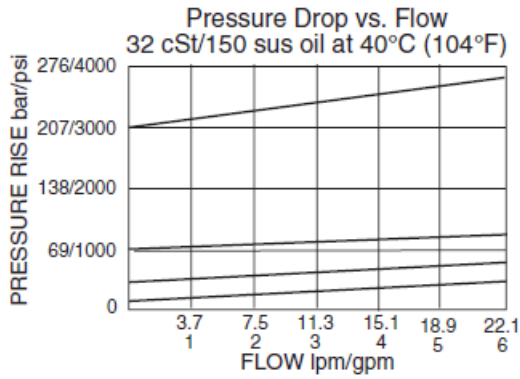
Fluids	Mineral based or synthetic with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406



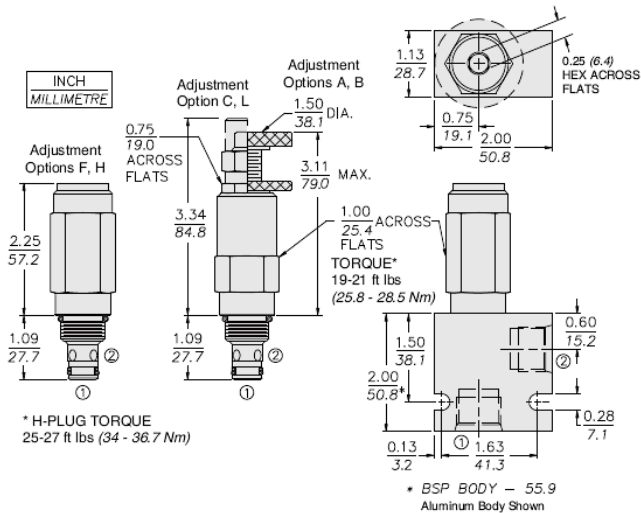
Properties

Unit weight	0.17 kg (0.37 lb)	- Note: A
	0.19 kg (0.42 lb)	- Note: B
	0.22 kg (0.47 lb)	- Note: C I
	0.16 kg (0.35 lb)	- Note: F h
Internal wetted surface area	141 cm ² (21.9 in ²)	- Note: A b c I
	166 cm ² (25.7 in ²)	- Note: F h

Performance



Dimensions



Materials

Materials

Cartridge: Weight: 0.16 kg (0.35 lb) to 0.22 kg (0.47 lb) depending on adjustment option. Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings standard. Anodized aluminum knobs and caps.

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

Adjustment Option Details: See [adjustment options](#)

Installation Specifications

Cavity	VC08-2
Cartridge installation torque	25.8 to 28.5 N-m (19 to 21 ft-lb)
Maximum allowable torque	40.7 N-m (30 ft-lb)
H style plug torque	10.8 to 13.6 N-m (8 to 10 ft-lb) - Note: N V P U 34 N-m (25 ft-lb) - Note: NC VC PC max
Orientation restriction	None



Accessories

Seal kit	SK08-2X-B	- Note: X=seal option
	SK08-2X-M	- Note: X=seal option
	SK08-2U-O	- Note: X=seal option
Housings		

Order Code

POSITION	CODE	DESCRIPTION
		RV08-20F-H-J-R/S
F		Adjustment Option
F	A	1/4" Hex Allen Head
F	B	1-1/2" Diameter Aluminum Knob with Aluminum Lock Knob
F	C	1/4" Hex Allen Head with Cover Cap
F	F	Factory Preset Non-Adjustable
F	H	Factory Preset Hidden Adjustment
F	L	1/4" Hex Allen Head with Cover Cap and Lockwire Holes
H		Line Body
H	0	No Body
H	4T	Aluminum SAE 4
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	3BD	Ductile Iron BSPP 3/8" (3)
J		Seal
J	N	Buna-N
J	NC	Buna-N for Crossover Applications
J	V	Fluorocarbon
J	VC	Fluorocarbon for Crossover Applications
J	P	Polyurethane
J	PC	Polyurethane for Crossover Applications
J	U	PPDI Urethane
R		Spring
R	05	3.4 to 34.5 bar (50 to 500 psi) Spring Range
R	09	6.9 to 75.8 bar (100 to 1300 psi) Spring Range
R	18	17.2 to 158.6 bar (250 to 2300 psi) Spring Range
R	33	17.2 to 251.2 bar (250 to 3600 psi) Spring Range
S		Setting
S	MXXX	Spring Setting in XXX bar
S	XX	Spring Setting in XX psi (x 100)

