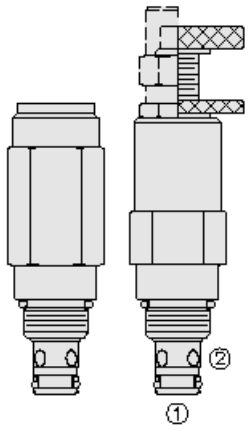
Overview



Description

RV08-22X is a screw in, cartridge style, direct acting, differential area, poppet type, hydraulic relief valve for use as a pressure limiting device in more demanding hydraulic circuits requiring low hysteresis and low internal leakage.

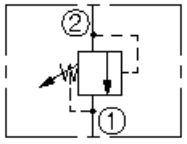
Operation

RV08-22X blocks flow from port 2 to port 1 until sufficient pressure is present at port 2 to force the poppet off its seat.

Features

- Adjustments cannot be backed out of the valve.
- Variety of pressure adjustment options including non-adjustable factory preset.
- Adjustment options A, B, and C: positive stops prevent springs from going solid.
- Optional bi-directional pressure (requires bi-directional pressure seal option).
- Hardened poppet and cage for long life.
- Optional spring ranges to 248 bar (3600 psi).
- Smooth response to pressure surges.
- Industry common cavity.
- Compact size.

Symbol



Ratings

Pressure Ratings

Pressure rating	248.2 bar (3600 psi)
Proof pressure	496.4 bar (7000 psi)
Burst pressure	1037.7 bar (16168 psi)
Relief pressure defined	Pressure evident at 0.95 lpm (0.25 gpm)
Reseat pressure	Nominal 90% of crack

Flow Ratings

Flow rating	30.3 lpm (8 gpm)	**- Note:** At max pressure
Maximum internal leakage	0.25 ml/min (5 drops/min)	**- Note:** Max to 85% of nominal setting

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
	-54 to 107 °C (-65 to 225 °F)	**- Note:** With polyurethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

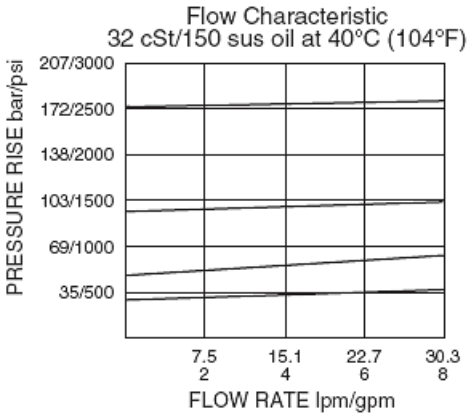
Operating Parameters

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

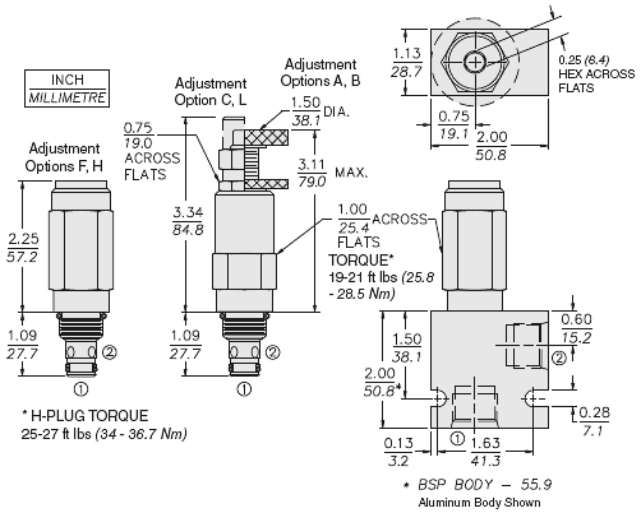
Properties

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	112 cm² (17.4 in²)	**- Note:** A b c I
	122 cm² (19.2 in²)	**- Note:** F h

Performance



Dimensions



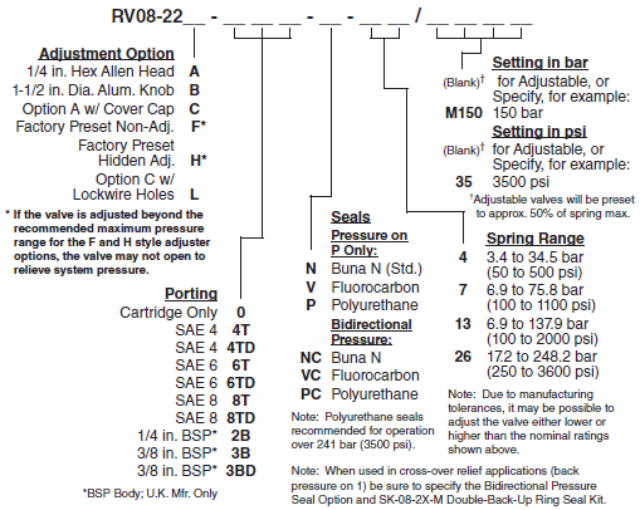
Installation Specifications

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)
Plug torque	33.9 to 36.7 N-m (25 to 27 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK08-2X-T	**- Note:** X=seal options
	SK08-2X-M	**- Note:** X=seal options

Order Code



Model Options

RV08-22F-H-J-R/S

F Adjustment Option

CODE	DESCRIPTION
A	1/4" Hex Allen Head
B	1-1/2" Diameter Aluminum Knob with Aluminum Lock Knob
C	1/4" Hex Allen Head with Cover Cap
F	Factory Preset Non-Adjustable
H	Factory Preset Hidden Adjustment
L	1/4" Hex Allen Head with Cover Cap and Lockwire Holes

H Line Body

CODE	DESCRIPTION
0	No Body
4T	Aluminum SAE 4
6T	Aluminum SAE 6
8T	Aluminum SAE 8
6TD	Ductile Iron SAE 6
8TD	Ductile Iron SAE 8
2B	Aluminum BSPP 1/4" (2)
3B	Aluminum BSPP 3/8" (3)
3BD	Ductile Iron BSPP 3/8" (3)

J Seal

CODE	DESCRIPTION
N	Buna-N
NC	Buna-N for Crossover Applications
V	Fluorocarbon
VC	Fluorocarbon for Crossover Applications
P	Polyurethane
PC	Polyurethane for Crossover Applications
U	PPDI Urethane

R Spring

CODE	DESCRIPTION
04	3.4 to 27.6 bar (50 to 400 psi) Spring Range
07	6.9 to 48.3 bar (100 to 700 psi) Spring Range
13	10.3 to 89.6 bar (150 to 1300 psi) Spring Range
26	17.2 to 248.2 bar (250 to 3600 psi) Spring Range
35	17.2 to 248.2 bar (250 to 3600 psi) Spring Range

S Setting

CODE	DESCRIPTION
MXXX	Spring Setting in XXX bar
XX	Spring Setting in XX psi (x 100)