



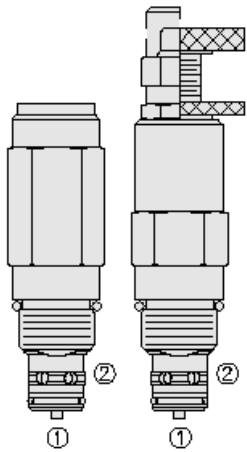
Overview

Description

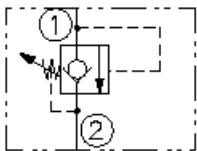
The RV10-28X is a screw-in, cartridge style, pilot operated, relief valve with reverse free flow check valve, intended for use as a pressure limiting device in demanding hydraulic circuits which require fast response, low hysteresis, low leakage, low pressure override and reverse free flow features. The RV10-28X blocks flow from port 1 to port 2 until sufficient pressure is present at port 1. Relief flow path from port 1 to port 2. Reverse flow from port 2 to port 1 occurs when pressure at port 2 is higher than pressure at port 1.

Features

- Variety of adjustment options; adjustments cannot be backed out of the valve.
- Can be operated in relief valve mode or check valve mode.
- Several pressure ranges available.
- Hardened spool and cage for long life.
- Fast response.
- Industry-common size.



Symbol



Ratings

Pressure Ratings

Pressure rating	289.6 bar (4200 psi)
Proof pressure	620.5 bar (9000 psi)
Burst pressure	1241.1 bar (18000 psi)
Pressure setting range	13.8 to 289.6 bar (200 to 4200 psi)
Crack pressure defined	Pressure evident at 7.6 lpm (2.0 gpm) attained
Reseat pressure	Nominal 90% of crack pressure
Crack pressure	2.1 bar (30 psi) - Note: Check valve mode
Approximate pressure increment per adjuster turn	98.6 bar (1430 psi)

Flow Ratings

Flow rating	113.6 lpm (30 gpm) - Note: Port 1 to 2
Maximum internal leakage	0.53 ml/min (10 drops/min) - Note: Max 80% of nominal setting

Other Ratings

Response	0.06 s - Note: RV to CV at 241 bar (3500 psi) 53 lpm (14 gpm)
	0.3 s - Note: CV to RV at 241 bar (3500 psi) 53 lpm (14 gpm)

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

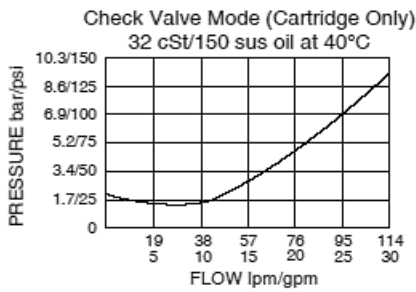
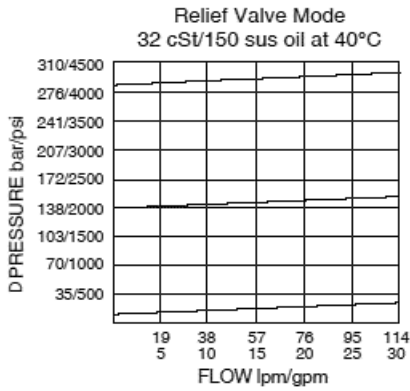
Fluids	Mineral based or synthetic with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406



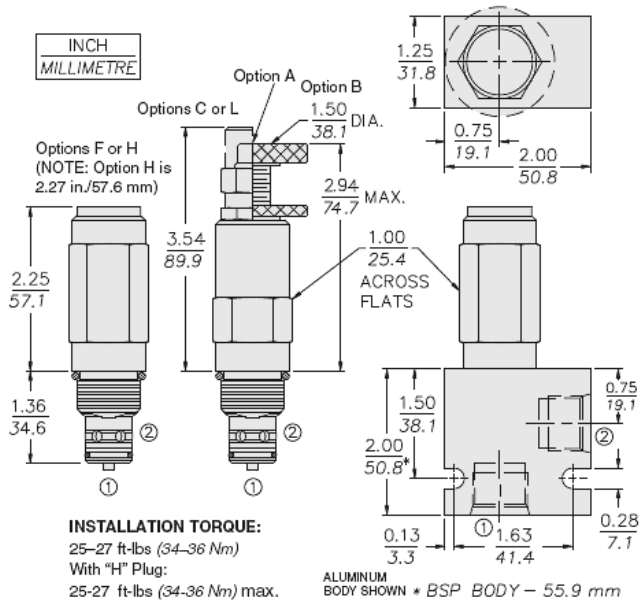
Properties

Unit weight	0.27 kg (0.59 lb)
Internal wetted surface area	187 cm ² (29.1 in ²)

Performance



Dimensions



Installation Specifications

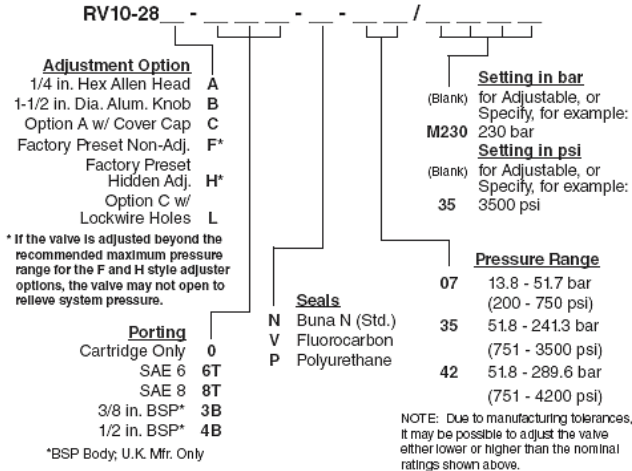
Cavity	VC10-2
Cartridge installation torque	33.9 to 36.6 N-m (25 to 27 ft-lb)
Maximum allowable torque	66.7 N-m (50 ft-lb)
H style plug torque	33.9 N-m (25 ft-lb)
Orientation restriction	None



Accessories

Seal kit SK10-2X-B - Note: X = seal option

Order Code



Model Options

RV10-28F-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
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)
4B	Aluminum BSPP 1/2" (4)
4BD	Ductile Iron BSPP 1/2" (4)

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane
U	PPDI Urethane

R Spring



CODE	DESCRIPTION
07	13.8 to 51.7 bar (200 to 750 psi) Spring Range
35	51.8 to 241.3 bar (751 to 3500 psi) Spring Range
42	51.8 to 289.6 bar (751 to 4200 psi) Spring Range

S Setting

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