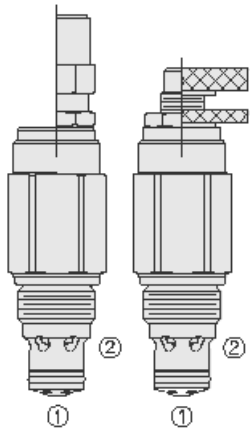




Overview



Description

The xrvd50-20x is a screw-in, cartridge style, direct acting poppet type relief valve intended for use as a pressure limiting device for common hydraulic circuit protection.

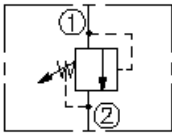
Operation

The xrvd50-20x blocks flow from port 1 to port 2 until sufficient pressure is present at port 1 to force the poppet off its seat. The cartridge offers fast response to load changes in circuits requiring low hysteresis, low pressure rise, and low internal leakage.

Features

- Adjustments cannot be backed out of the valve.
- Height of the adjuster does not change when the pressure setting is adjusted.
- Hardened poppet and cage for long life.
- Optional spring ranges to 345 bar (5000 psi).
- Rapid response to pressure changes.
- Industry-common cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating	413.7 bar (6000 psi)
Proof pressure	785.4 bar (11000 psi)
Burst pressure	1515.8 bar (22000 psi)
Crack pressure defined	Pressure evident at 0.95 lpm (0.25 gpm)
Reseat pressure	Nominal 85% of crack pressure 1 ml/min (20 drops/min)

Flow Ratings

Flow rating	113.6 lpm (30 gpm)	- Note: Port 1 to 2 at max pressure
Maximum internal leakage	0.25 ml/min (5 drops/min)	- Note: To 80% of nominal

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
	-54 to 107 °C (-65 to 225 °F)	- Note: 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 (grvd50-20x)
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Operating Parameters

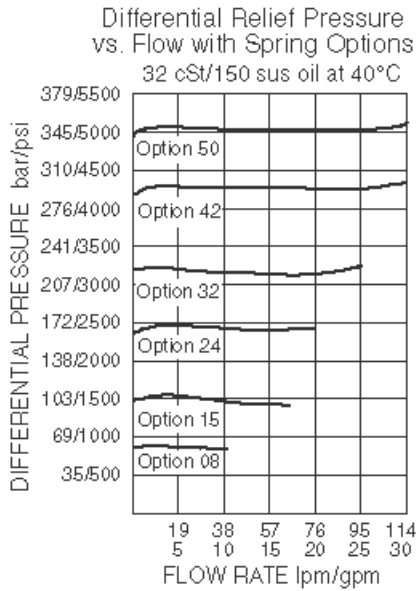
Fluids	Mineral based or synthetic with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406



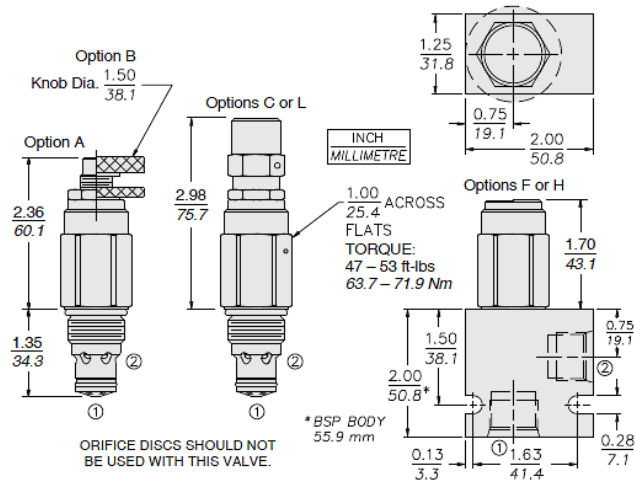
Properties

Unit weight	0.21 kg (0.46 lb)	- Note: A
	0.23 kg (0.51 lb)	- Note: B
	0.25 kg (0.56 lb)	- Note: C I
	0.20 kg (0.44 lb)	- Note: F h
Internal wetted surface area	158 cm ² (24.6 in ²)	- Note: A b c I
	151 cm ² (23.3 in ²)	- Note: F h

Performance



Dimensions



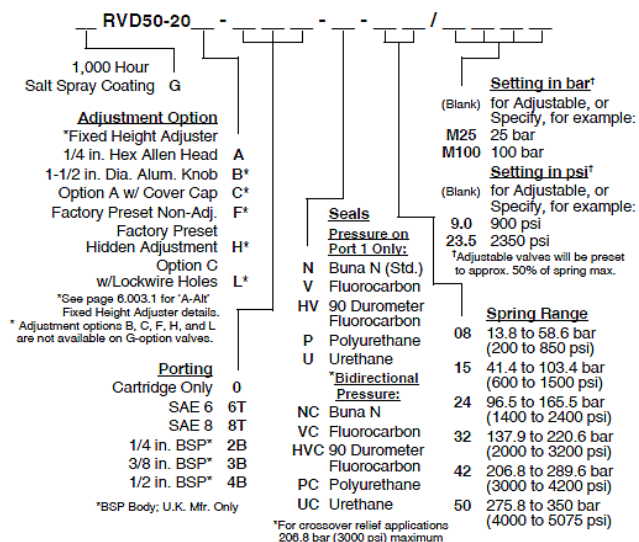
Installation Specifications

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-M	- Note: X = NC, VC, HVC, PC
	SK10-2X-O	- Note: X = U

Order Code



Model Options

RVD50-20F-H-J-R/S

F Adjustment Option

CODE	DESCRIPTION
A	1/4" Hex Allen Head
B	1-1/2" Diameter Aluminum 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
P	PED 2014/68/EC

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
NC	Buna-N for Crossover Applications
V	Fluorocarbon
HV	High Durometer Fluorocarbon
VC	Fluorocarbon for Crossover Applications
P	Polyurethane



CODE	DESCRIPTION
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U	PPDI Urethane
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R Spring

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

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