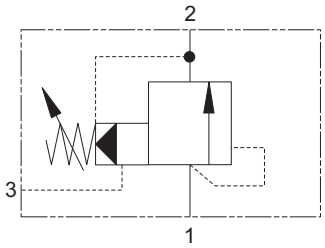
1VR200 - Relief valve

Spool, ventable, pilot operated
200 L/min (52 USgpm) • 350 bar (5000 psi)



Operation

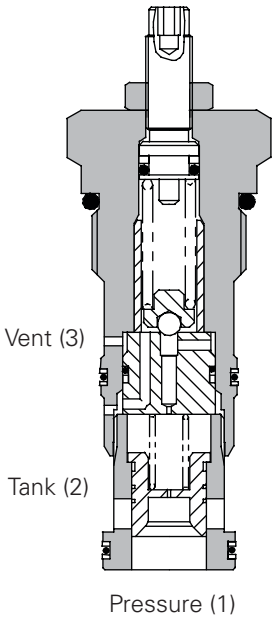
When inlet pressure exceeds the setting of the valve, the pilot section opens. The pilot flow causes a pressure imbalance across the main section spool causing it to open, allowing relief flow to tank.

When 'vented', pilot flow is referenced directly to tank, bypassing the pilot section. This flow through the vent causes a pressure imbalance, opening the main section and dumping the pump at minimum pressure drop.

Features

High accuracy of pilot operated design. Hardened working parts give long, reliable, trouble-free life. Ventable for versatility of application. Cartridge construction for installation into your own manifold.

Sectional view



Performance data

Ratings and specifications

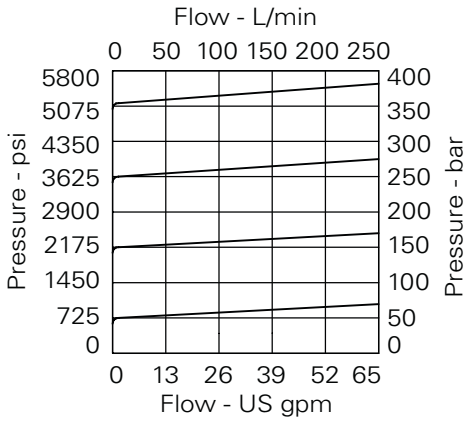
Figures based on: Oil Temp = 40°C Viscosity = 32 cSt (150 SUS)		
Rated flow		200 L/min (52 USgpm)
Max setting		350 bar (5000 psi)
Cartridge material		Working parts hardened and ground steel. External surfaces zinc plated,
Body material		Standard aluminium (up to 210 bar). Add suffix "377" for steel option.
Mounting position		Unrestricted
Cavity		A16102 (See Section M)
Torque cartridge into cavity		100 Nm (73 lbs ft)
Weight	1VR200	0.74 kg (1.6 lbs)
	1VR250	1.82 kg (4.0 lbs
Seal Kit		SK173 (Nitrile) SK173V (Viton®)
Recommended filtration level		BS5540/4 Class 18/13 (25 micron nominal)
Operating temp		-30° to +90°C (-22° to +194°F)
Leakage		35 milliliters/min @ 280 bar
Nominal viscosity range		5 to 500 cSt

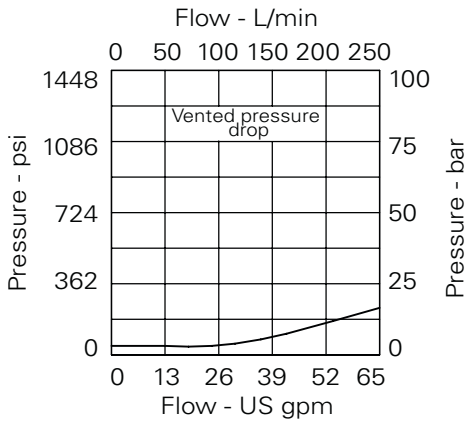
Viton is a registered trademark of E.I. DuPont

Description

This is a ventable, internally pilot operated relief valve designed to limit pressure in a system. Good for continuous duty and accurate pressure control with constant or varying flows. The vent feature can be used with remote pilot section for a two-pressure system or to allow manual or remote 'unloading' of the pump.

Pressure drop curves





Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

1VR200 - Relief valve

Spool, ventable, pilot operated
200 L/min (52 USgpm) • 350 bar (5000 psi)

Model code

1VR* – F 8W – 35 S**

1 2 3 4 5

1 Function

1VR200 - Cartridge Only
1VR250 - Cartridge and Body

2 Adjustment means

P - Leakproof Screw Adjustment
G - Tamperproof Cap
(See page E-7 for dimensions)

3 Port size

Code	Port size	Housing number - body only	
		Aluminium	Steel
8W	1" BSP	B3496	B3497
16T	1" SAE	B6807	B11555

4 Pressure range @ 14 l/min

Note: Code based on pressure in bar.
20 - 10-210 bar. Std setting 100 bar
35 - 30-350 bar. Std setting 210 bar
Std setting made at 14 L/min

5 Seals

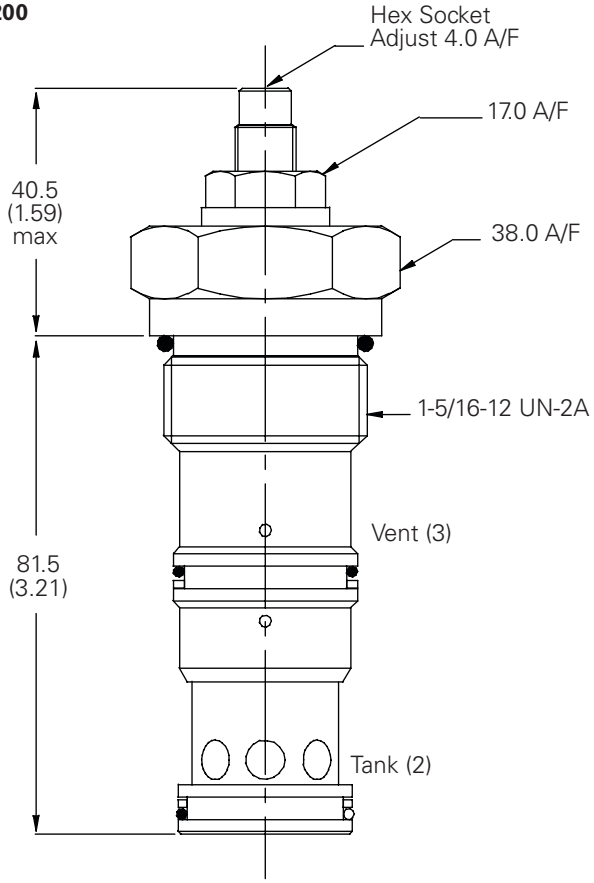
S - Nitrile (For use with most industrial hydraulic oils)
SV - Viton (For high temperature and most special fluid applications)

Dimensions

mm (inch)

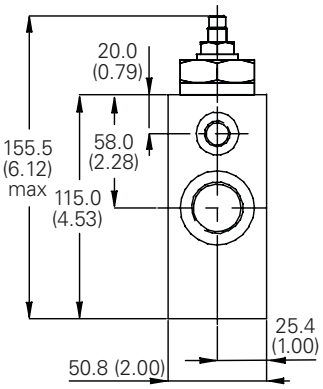
Cartridge only

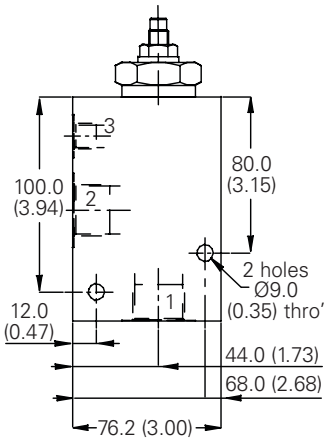
Basic Code
1VR200



Complete valve

3/4" Ports
Basic Code
1VR250





Note: For applications above 210 bar, please consult our technical department or use the steel body option.

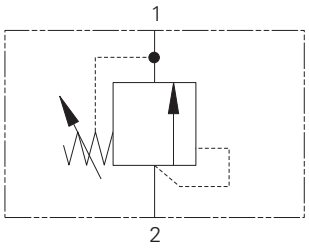
Note: Tightening torque of "F" adjuster locknut - 20 to 25 Nm.

Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

E

1LR300 - Relief valve

Poppet, direct acting, differential area
380 L/min (100 USgpm) • 350 bar (5000 psi)



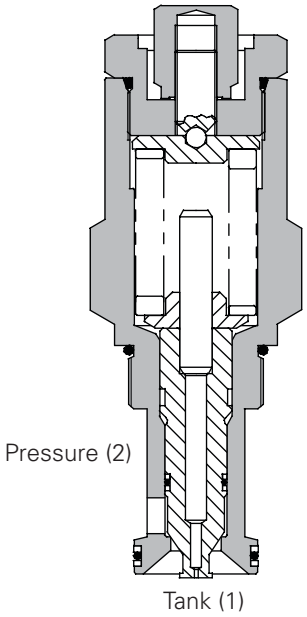
Operation

Pressure acts over the differential area between the seat and seal on the poppet. When the pressure exceeds the setting, the valve opens, allowing relief flow to tank, washing contaminant away from the seat.

Features

Dirt tolerant, robust and consistent with good pressure rise to increase in flow characteristics for a direct acting valve. Cartridge construction provides for maximum flexibility in mounting.

Sectional view



Performance data

Ratings and specifications

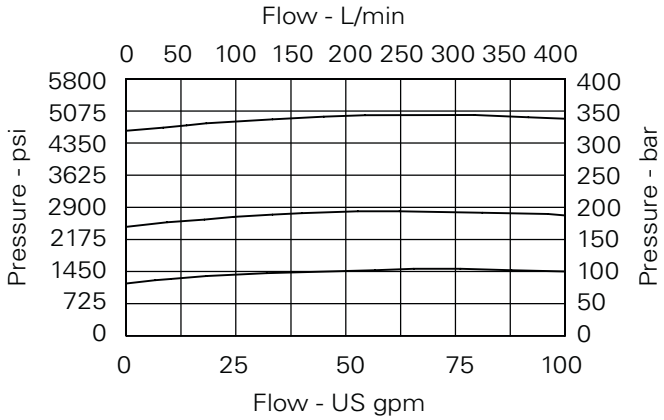
Figures based on: Oil Temp = 40°C Viscosity = 32 cSt (150 SUS)	
Rated flow	380 L/min (100 USgpm)
Max setting	350 bar (5000 psi)
Cartridge material	Working parts hardened and ground steel. External surfaces zinc plated.
Body material	Standard aluminium (up to 210 bar*). Add suffix "377" for steel option.
Mounting position	Unrestricted
Cavity	A1126 (See Section M)
Torque cartridge into cavity	150 Nm (110 lbs ft)
Weight	1LR300 1.04 kg (2.3 lbs)) 1LR350 2.08 kg (4.6 lbs)
Seal kit	SK207 (Nitrile) SK207V (Viton®)
Recommended filtration level	BS5540/4 Class 18/13 (25 micron nominal)
Operating temp	-30°C to +90°C (-22°C to 194°F
Leakage	1 millilitre/min nominal (15 dpm)
Nominal viscosity range	5 to 500 cSt

Viton is a registered trademark of E.I. DuPont

Description

This is a fast, direct acting differential area screw-in cartridge relief valve. Ideal for intermittent duty as protection against overload or surge conditions for all types of actuators. Very fast acting and extremely dirt tolerant.

Pressure drop curves



Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

1LR300 - Relief valve

Poppet, direct acting, differential area
380 L/min (100 USgpm) • 350 bar (5000 psi)

Model code

1LR* – F 10W – 35 S**

1 2 3 4 5

1 Function

1LR300 - Cartridge Only
1LR350 - Cartridge and Body

2 Adjustment means

F - Screw Adjustment

3 Port size

Code	Port size	Housing number	
		Aluminium	Steel
10W	1 1/4" BSP	B5134	B882
20T	1 1/4" SAE	B7783	B11553

4 Pressure range

Note: Code based on pressure in bar.
20 - 35-210 bar.
Std setting 100 bar
35 - 70-350 bar.
Std setting 280 bar
Std setting made at 30 L/min

5 Seals

S - Nitrile (For use with most industrial hydraulic oils)

SV - Viton® (For high temperature and most special fluid applications)

E

Dimensions

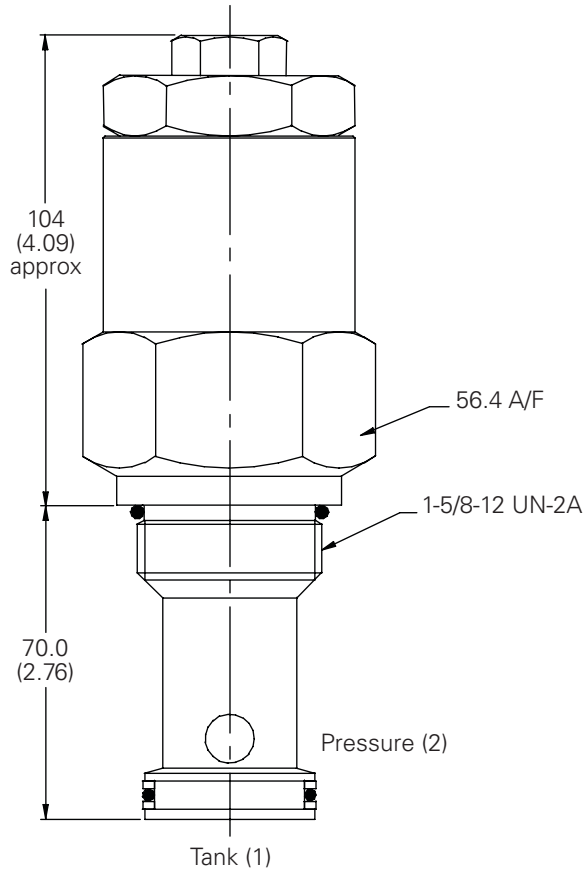
mm (inch)

Note: Tightening torque of "F" adjuster locknut - 20 to 25 Nm.

Note: For applications above 210 bar please consult our technical department or use the steel body option.

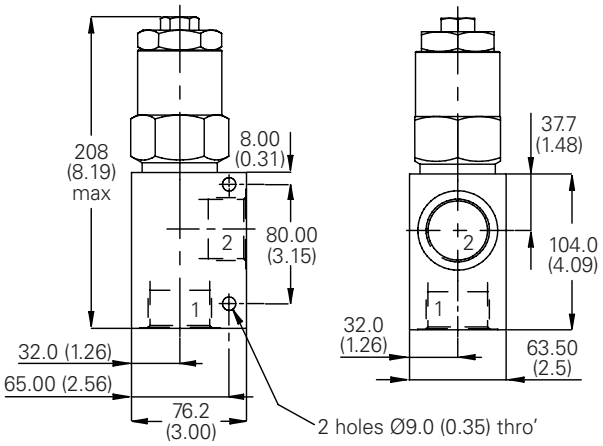
Cartridge only

Basic Code
1LR300



Installation drawing

1 1/4" Ports
Basic Code
1LR350



Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.