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20 Bushes Lane
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Model RVL-20

Stainless Steel Low-Pressure Diaphragm Relief Valve



- Stainless Steel and more (Plastic model is here & Hastelloy, Titanium, Monel Alloy 20 here)
- 1/4"-2" NPT THD (Not all materials available in all sizes, See pricing pages)
- Accurate relief pressures from 0.50 PSI (0.03 Bar) to 75 PSI (5 Bar)

- Adjustable pressures in multiple spring ranges (See pricing table below)

Features

- **Body:** Available in a wide variety of special alloys and high-performance engineered plastics (see above).
- **Elastomeric diaphragm:** Choice of different elastomers includes reinforced Teflon, Viton, Buna, and EPDM (most materials always in stock).
- **Spring chamber:** Standard construction is carbon steel. Alternates: stainless steel, aluminum, and PVC.
- **Right-angle porting:** Side inlet, bottom outlet is standard with this diaphragm valve manufacturer's model. Take a look at our **in-line ported diaphragm valve** which is usually the more preferred piping arrangement that we generally stock, so deliveries are shorter, and are also usually **priced less**. Special threads or ANSI and sanitary flanges (tri-clamp flanges) are also available.

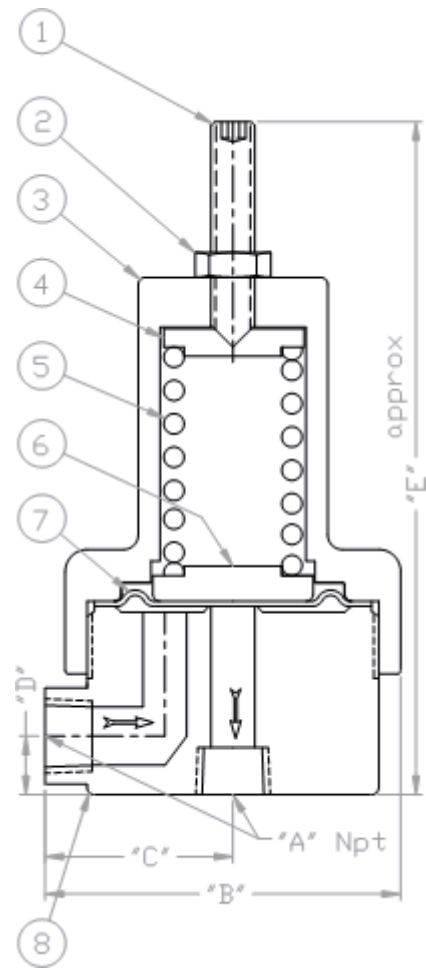
Applications

This safety relief valve can be used for relieving pressures and maintaining upstream line pressures to a specific set pressure. This diaphragm valve can also be used for bypassing fluids or gases. Only clean liquids and gases are recommended. When liquids contain debris or other solid matter that might cause improper operation of the diaphragm valve, a filter or strainer with a fine wire mesh should be installed before the inlet of the valve. Basket strainers or filters can be purchased from Straval to solve this problem. This valve is used where accurate set pressures must be maintained. This is made possible because of the large diaphragm area used to sense the inlet pressure. Compared to higher-pressure piston models, this valve has a very low hysteresis between opening and closing pressures. See available orifice sizes and flow Cv below.

We now offer some models that meet [NACE MR0175](#). These are not priced on line. Consult factory.

Principle of Operation

This is a diaphragm and spring type relief valve where the spring constantly opposes the pressure acting against the diaphragm which seals off the inlet port from the outlet port at the valve seat. The desired relief or bypass pressure is achieved by compressing the spring until the spring force is adequate to balance the pressure force acting against the diaphragm. When the inlet pressure exceeds the set pressure, the diaphragm will open to relieve and bypass the excess pressure. The valve will operate in a vertical orientation as illustrated, horizontal, or any other orientation.



RVL-20

Material List and Specification

#	Item	Materials
1.	Adjusting screw	Steel
2.	Lock nut	Steel & SS
3.	Spring chamber	Steel & SS
4.	Spring Pusher	Steel & SS
5.	Spring	Steel & SS
6.	Spring Carrier	Steel & SS
7.	Diaphragm	Teflon/ Viton/ Buna
8.	*Body	303SS or 316SS

*Body also available in PVC, Monel, Teflon, and Hastelloy (most sizes)

Dimensions

Dimensions (inch)				
A	B	C	D	E
1/4	2.38	1.00	.44	5.56
3/8	2.88	1.25	.50	5.59
1/2	2.88	1.25	.63	5.88
3/4	2.88	1.25	1.25	6.69
1	4.25	2.00	1.50	9.62
1.25	4.25	2.00	3.50	11.5
1.5	6.09	3.75	3.50	12.87
2	6.09	3.75	2.63	13.57

Note: Dimensions are approximate and are subject to change without notice. Request certified dimensions before final product installation.

1/4" RVL20-02T

Low Pressure Group 0.3-25 psi (0.02-1.7 bar)

Multiple Spring Ranges from:0.3-25 psig (0.021-1.72 barg) Select spring from pricing page

High Pressure Group 3-75 psi (0.2-5 bar)

Multiple Spring Ranges from:3-75 psig (0.207-5.17 barg) Select spring from pricing page

3/8" RVL20-03T

Low Pressure Group 0.3-25 psi (0.02-1.7 bar)

Multiple Spring Ranges from:0.3-25 psig (0.021-1.72 barg) Select spring from pricing page

High Pressure Group 3-75 psi (0.2-5 bar)

Multiple Spring Ranges from:3-75 psig (0.207-5.17 barg) Select spring from pricing page

1/2" RVL20-05T

Low Pressure Group 0.3-25 psi (0.02-1.7 bar)

Multiple Spring Ranges from:0.3-25 psig (0.021-1.72 barg) Select spring from pricing page

High Pressure Group 3-75 psi (0.2-5 bar)

Multiple Spring Ranges from:3-75 psig (0.207-5.17 barg) Select spring from pricing page

3/4" RVL20-07T

Low Pressure Group 0.3-25 psi (0.02-1.7 bar)

Multiple Spring Ranges from:0.3-25 psig (0.021-1.72 barg) Select spring from pricing page

High Pressure Group 3-75 psi (0.2-5 bar)

Multiple Spring Ranges from:3-75 psig (0.207-5.17 barg) Select spring from pricing page

1" RVL20-10T

Low Pressure Group 0.3-25 psi (0.02-1.7 bar)

Multiple Spring Ranges from:0.3-25 psig (0.021-1.72 barg) Select spring from pricing page

High Pressure Group 3-75 psi (0.2-5 bar)

Multiple Spring Ranges from:3-75 psig (0.207-5.17 barg) Select spring from pricing page

1 1/4" RVL20-12T

Low Pressure Group 0.3-25 psi (0.02-1.7 bar)

Multiple Spring Ranges from:0.3-25 psig (0.021-1.72 barg) Select spring from pricing page

High Pressure Group 3-75 psi (0.2-5 bar)

Multiple Spring Ranges from:3-75 psig (0.207-5.17 barg) Select spring from pricing page

1 1/2" RVL20-15T

Low Pressure Group 0.3-25 psi (0.02-1.7 bar)

Multiple Spring Ranges from:0.5-25 psig (0.034-1.72 barg) Select spring from pricing page

High Pressure Group 3-75 psi (0.2-5 bar)

Multiple Spring Ranges from:3-75 psig (0.207-5.17 barg) Select spring from pricing page

2" RVL20-20T

All Stainless Steel with V-Band Clamp 2-80 psi (0.2-5.5 bar)

Multiple Spring Ranges from:2-80 psig (0.138-5.52 barg) Select spring from pricing page

The spring ranges listed above are not achievable with one spring, but are compressed to show overall product capability. Select a specific spring range in the pricing pages or specify a set pressure when ordering.