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21 Columbus Avenue
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Model VRV-05

Stainless Steel Adjustable Vacuum Relief Valve



- Stainless Steel , Brass (Also available Hastelloy, Monel, Titanium or Alloy 20 Model)
- 1/2"-3" NPT THD
- Adjustable relief pressures from 0.5 PSI (~0.03 Bar) to 15 PSI (~1 Bar)*

Features

- **Body:** Standard materials are 303SS & 316 Stainless Steel
- **Piston:** 303SS & 316 Stainless Steel
- **Spring:** 303SS & 316 Stainless Steel
- **Lock nut:** 303SS & 316 Stainless Steel
- **Elastomeric seal:** Bubble-tight seal is achieved with soft elastomers such as Buna, Viton, and EPDM and Kalrez, to a lesser degree with the harder seal material, Teflon (PTFE) .

- **Tamper-proof construction**-This valve is not externally adjustable & requires removal of the valve to change the pressure setting after the system is depressurized.
- **Adjustable pressure-setting valve** can be factory-set or adjusted in the field. Spare springs can be changed in the field to achieve a different pressure range. Standard set pressure is 1.5 psig (0.10 barg), but can be customized

Applications

This is an In-Line poppet type vacuum relief valve, allowing flow to pass through a pipe line only in one direction. When flow reverses, the poppet will close and prevent flow in the opposite direction. Observe the maximum working pressure listed for each model. Select metal and seat materials from pricing pages.

This valve is normally used for liquids, air, or gases Use only clean filtered or strained liquids or gases. To make sure the valves are protected from dirt and debris which might clog the valve, a strainer with a fine wire mesh should be installed before the inlet of the valve. In-line strainer fittings or basket strainers can be purchased from Straval to solve this problem. When installed in reverse, the valve can be used as a conventional relief valve usually mounted on the side of a Tee or at the end of a pipe run. However, a different spring may be required if operating beyond the 0.5-3 psi (0.03- 0.2 barg) range. For complete spring selections, see relief model series RVI-05.

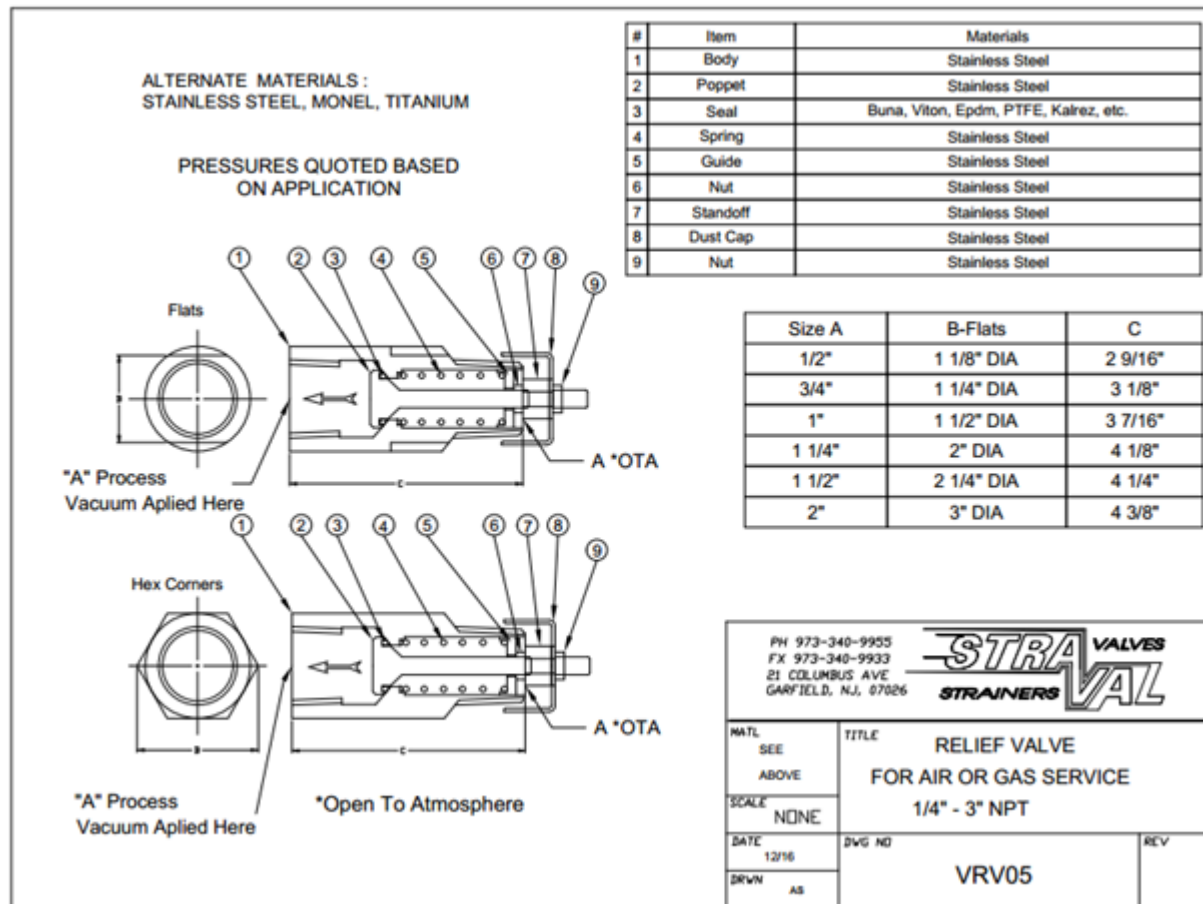
Options

Scroll down below to click on a valve size for pricing and then click on the spring range to see which options are available for that size. After selecting your options you may then print out a price, e-mail it (without having to contact the factory), and then when you are ready, proceed to order.

When ordering don't forget to state your desired crack set pressure if you expect the valve to open at some other pressure than the default setting. There is no extra charge for this. This pressure will be engraved on the valve body. **If the set pressure is not specified, the valve will be set at 1.5 psig (0.10 barg)**

Principle of Operation

This is a poppet (piston) and spring type vacuum relief valve where the spring constantly opposes the pressure acting against the piston which seals off the inlet port. The desired cracking or opening pressure is achieved by compressing the spring until the spring force is adequate to balance the pressure force acting against the poppet. Although the valve is set for a specific cracking pressure at the factory, it can be adjusted in the field by removing the valve from the piping system. It is not externally adjustable. Setting the correct cracking pressure in the field may require several tries, and requires measurement with a pressure gauge to verify. In order to make the pressure adjustment, the valve needs to be unscrewed from its mounting position with pressure removed from the line. Increasing the spring pressure increases the crack pressure and vice versa. A small nut driver, screwdriver or needle nose pliers may be used to make pressure adjustments for low the pressure settings these valves are usually set to. However, ordering the valve to the correct cracking pressure would minimize or eliminate the need for making pressure adjustments in the field.



VRV-05

The flow arrow above is shown in the normal flow position

When flow reverses, the valve closes

Material List and Specification

#	Item	Materials
1.	Body	303SS & 316SS
2.	Poppet	303SS & 316SS
3.	Seal	Buna, Viton, Epdm, Ptf, Kalrez
4.	Spring	302SS & 316SS
5.	Guide	303SS & 316SS
6.	Nut	304SS & 316SS

Dimensions (Inches)

Size A	B-Flats	B-Hex Corners	C
1/2	1 1/8 dia	---	2-9/16
3/4	1-1/4 dia	---	3-1/8
1	1-1/2 dia	---	3-7/16
1 1/4	2' dia	---	4 1/8
1-1/2	2-1/4 dia	---	4-1/4
2	3 dia	---	4-3/8

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

1/2" VRV05-05t

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

3/4" VRV05-07t

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

1" VRV05-10T

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

1 1/4" VRV05-12t

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

1 1/2" VRV05-15t

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

2" VRV05-20t

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 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.