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20 Bushes Lane  
Elmwood Park, NJ 07407

## Model RVC05-150 FLG-EX

### Exotic Alloy 150# Flange Pressure Relief Valve



- Hastelloy C276, Monel, Titanium, Alloy 20 (Stainless Steel model can be found here)
- 1/2"-4" flanged (see also threaded NPT model RVC-05)
- Adjustable relief pressures from 30 PSI (2 Bar) to 275 PSI (19 Bar) at 100 °F (38 °C)

## Features

- **Body:** Hastelloy C276, Monel, Titanium, and Alloy 20.
- **Poppet:** Hastelloy C276, Monel, Titanium, and Alloy 20. See pricing pages for choices available.
- **Poppet seal:** Choice of different elastomers including Teflon and Kalrez expands valve usage to a wide range of applications and fluids. Choice of elastomer determines final temperature limitation.
- **Spring chamber:** Hastelloy C276, Monel, Titanium, and Alloy 20
- **Right-angle porting:** Standard construction is bottom inlet, side outlet. Also available with sanitary flanges for low pressures.

## Applications

Use these valves for emergency relief where pressures must be relieved quickly to reduce damage that could result from overpressure in a system. Where the overpressure needs to be controlled more gradually, such as in back pressure or pump bypass applications use our **Bypass valves** which will reduce the probability of pressure spikes that often occur when relief valves are selected for pressure control applications. Valve should only be used selectively where the materials chosen are compatible with the fluid used and will not cause corrosive buildup or crystallization in the close clearances between the piston and body bore, which could keep the poppet from opening freely. Use only clean, strained, or filtered liquids or gases so that the valve can operate without buildup of debris or solid matter which can cause the valve to malfunction. A strainer or filter with the appropriate perf or mesh and pressure rating can be purchased from Straval. Apply only where the discharge piping is not subjected to a high back pressure, as this will affect the relief setting. If the back pressure is steady or constant, compensating for the change in set pressure can be simply made by readjusting the spring load, or by using a different spring selection, or selecting a different valve type designed for this.

Although the valve is typically installed in the position illustrated, it can operate in any position or orientation, vertical horizontal, etc as long as it can be easily accessed for making adjustments.

We now offer some models that meet **NACE MR0175**. These are not priced on line. Consult factory.

These valves do not carry the Canadian CRN or ASME approval stamp and should not be applied where this requirement must be met. However, the valves generally meet or exceed ASME design criteria with wall thicknesses that are much heavier than the minimums required. For an additional charge, valves can be ordered with material certs and with a certified hydro-test certificate and other tests to meet special documentation and acceptance requirements.

Avoid locating the valve where freezing can occur, and if unavoidable, take precautions to insulate or heat wrap valve and piping to keep from freezing.

Standard metal seated valves meet ANSI/FCI Class IV seat leakage standards (0.01% of rated valve capacity, not bubble tight).

## Options

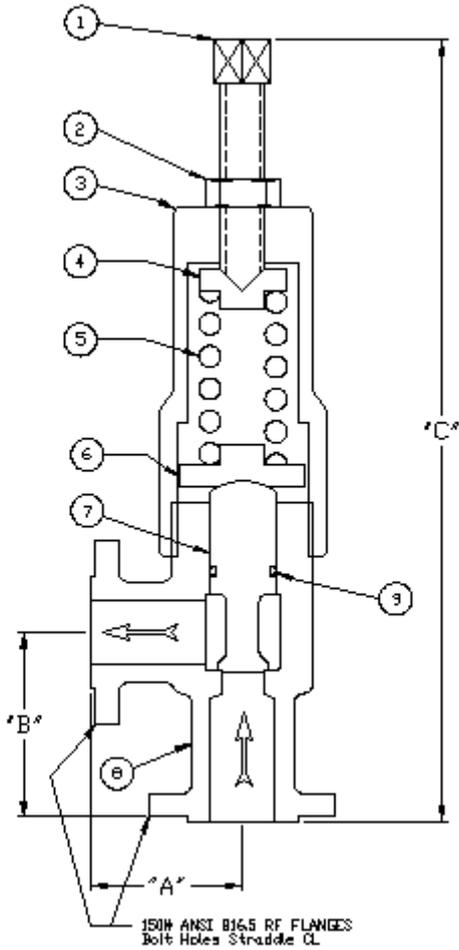
Scroll down below to select the valve size, spring range, material options in the customized pricing and ordering section indicated by the red arrows. You have the ability to customize your valve choices by selecting the wetted and nonwetted materials, and choice of seat materials to suit your shutoff requirements, using the softer seats for improved shutoff, particularly for air or gas applications where they are available at the lower pressures. Once these selections are made a price quote can be generated and printed directly to your computer or immediately e-mailed to you.

When ordering don't forget to state your desired relief set pressure if you expect the valve to relieve at only one pressure. This pressure will be engraved on the valve body. **If the set pressure is not specified, the valve will be set at or below the stated spring range as selected for the order and no set pressure will be stamped on the nameplate.**

## Principle of Operation

This is a direct-operated poppet and spring type relief valve where the spring constantly opposes the pressure acting against the poppet which seals off the inlet port from the outlet port at the valve seat. The desired set pressure or relief is achieved by compressing the spring until the spring force is adequate to balance the pressure force acting against the poppet. When the inlet pressure exceeds the set pressure, the poppet will open to relieve the excess pressure. The valve will operate in a vertical orientation as illustrated, horizontal, or any other orientation. This valve can also be operated by remote pressure adjustment which can be achieved with a dome type air-loaded version. Consult factory.

These valves are not equipped with a manual lever release. However, manual override is accomplished by first locking the spring lock nut to the adjusting screw and backing it out enough to open the poppet to release pressure, and then repositioning it to its original preset locked condition without losing the original set pressure. This procedure is recommended periodically to flush the seat and to check for proper opening of the valve piston.



**RVC05-150# FLG-EX**  
**Hastelloy, Monel, Titanium, Alloy 20**

**Material List and Specification**

#	Item	Materials
1.	Adjusting screw	St Steel or alloy upgrade
2.	Lock nut	St Steel or alloy upgrade
3.	Spring chamber	St Steel or alloy upgrade
4.	Spring pusher	St Steel or alloy upgradel
5.	Adjusting spring	St Steel or alloy upgradel
6.	Spring Carrier	St Steel or alloy upgrade
7.	Poppet	Hastelloy C276, Monel, Titanium, Alloy 20I
8.	Body	Hastelloy C276, Monel, Titanium, Alloy 20

9.	Seal	Viton, Buna, EPDM, Kalrez, Teflon, etc.
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**Dimensions (inches)** These apply to 150# flanges. Request drawing for higher flange ratings

Size	A (in)	B (in)	C (in)
1/2	2-1/2	2-1/2	8-7/8
3/4	2-3/4	2-3/4	9-3/4
1	3-1/2	3-1/2	11-1/8
1-1/4	3-3/4	3-3/4	12-1/4
1-1/2	4	4	13-1/2
2	4 1/2	4-1/2	15-1/2
2 1/2	5	5	18-1/2
3	5-1/2	5-1/2	21
4	6	6	23 max

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

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## 1/2" RVC05-05A-EX

**150 psi ANSI Flange (275 psi max) (19 bar max) Rating**

Multiple Spring Ranges from:15-250 psig (1.03-17.2 barg) Select spring from pricing page

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## 3/4" RVC05-07A-EX

**150 psi ANSI Flange (275 psi max) (19 bar max) Rating**

Multiple Spring Ranges from:15-250 psig (1.03-17.2 barg) Select spring from pricing page

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## 1" RVC05-10A-EX

**150 psi ANSI Flange (275 psi max) (19 bar max) Rating**

Multiple Spring Ranges from:10-250 psig (0.69-17.2 barg) Select spring from pricing page

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## 1-1/4" RVC05-12A-EX

**150 psi ANSI Flange (275 psi max) (19 bar max) Rating**

Multiple Spring Ranges from:10-250 psig (0.69-17.2 barg) Select spring from pricing page

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## 1 1/2" RVC05-15A-EX

**150 psi ANSI Flange (275 psi max) (19 bar max) Rating**

Multiple Spring Ranges from:15-250 psig (1.03-17.2 barg) Select spring from pricing page

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## 2" RVC05-20A-EX

**150 psi ANSI Flange (275 psi max) (~19 bar max) Rating**

Multiple Spring Ranges from:15-250 psig (1.03-17.2 barg) Select spring from pricing page

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## 2 1/2" RVC05-25A-EX

**150 psi ANSI Flange (275 psi max) (19 bar max) Rating**

Multiple Spring Ranges from:15-250 psig (1.03-17.2 barg) Select spring from pricing page

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## **3" RVC05-30A-EX**

**150 psi ANSI Flange (275 psi max) (19 bar max) Rating**

Multiple Spring Ranges from:10-270 psig (0.69-18.6 barg) Select spring from pricing page

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## **4" RVC05-40A-EX**

**150 psi ANSI B16.5 RF Flange (275 psi max) (19 bar max) Rating  
(std 8 hole pattern)**

Multiple Spring Ranges from:15-270 psig (1.03-18.6 barg) Select spring from pricing page

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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.