Description
A compact, highly accurate, direct acting pressure relief valve. Factory preset to desired crack pressure and/or flow specifications. Internal adjustment provides tamper proof safety against inadvertent pressure changes. Available in vent to atmosphere or inline configurations. Valves feature an encapsulated O-ring seal to prevent extrusion at higher differential pressures.

Features and Benefits
- Accurate and Repeatable Cracking Pressure
- 100% Factory Preset and Tested
- Zero Leakage to 95 – 98% of Set Pressure
- Tamper Proof Adjustment
- Excellent Reseal Performance
- Compact Size

Technical Data
- Set Pressure Range: 150 to 600 Psig (10.3 to 42 bar)
- Inline Valves (Series VRVHI):
  - Proof Pressure: 750 Psig (52 bar)
  - Burst Pressure: >1000 Psig (69 bar)
- Set Pressure Tolerance: Factory preset +/- 5% on increasing pressure:
- Reseal: 90% of Set Pressure
- Temperature Range:
  - -320°F to 350°F (-195°C to 177°C)
  based on seal selection, see ordering information

Materials of Construction

<table>
<thead>
<tr>
<th>Component</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve Body, Stem, O-Ring Cup</td>
<td>Brass, ASTM B16</td>
</tr>
<tr>
<td>Spring Retainer</td>
<td>316 SS, ASTM A479</td>
</tr>
<tr>
<td>Seal¹</td>
<td>As specified, see ordering information</td>
</tr>
<tr>
<td>Spring</td>
<td>302 SS/17-7 PH, ASTM A313</td>
</tr>
<tr>
<td>Locknut</td>
<td>18-8 SS</td>
</tr>
</tbody>
</table>

¹ Lubricated with Krytox™
### Dimensional Data

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>VRVH Dimensions</th>
<th>VRVHI Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPT</td>
<td>A</td>
<td>Hex</td>
</tr>
<tr>
<td>1/8&quot;</td>
<td>.94</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>1.29</td>
<td>5/8&quot;</td>
</tr>
</tbody>
</table>

Dimensional data is stated in inches.

### Flow Data, Series VRVH (Vent to Atmosphere)

<table>
<thead>
<tr>
<th>Nominal Spring</th>
<th>150</th>
<th>250</th>
<th>350-600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve Size</td>
<td>Orifice Flow (SCFM)</td>
<td>Kd</td>
<td>Orifice Flow (SCFM)</td>
</tr>
<tr>
<td>1/8&quot; NPT (VRVH-125)</td>
<td>0.156</td>
<td>7.5</td>
<td>0.12</td>
</tr>
<tr>
<td>1/4&quot; NPT (VRVH-250)</td>
<td>0.250</td>
<td>50</td>
<td>0.22</td>
</tr>
</tbody>
</table>

### Flow Data, Series VRVHI (Inline)

<table>
<thead>
<tr>
<th>Nominal Spring</th>
<th>150</th>
<th>250</th>
<th>500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve Size</td>
<td>Orifice Flow (SCFM)</td>
<td>Kd</td>
<td>Orifice Flow (SCFM)</td>
</tr>
<tr>
<td>1/8&quot; NPT (VRVH-125)</td>
<td>0.156</td>
<td>12</td>
<td>0.18</td>
</tr>
<tr>
<td>1/4&quot; NPT (VRVH-250)</td>
<td>0.250</td>
<td>46</td>
<td>0.27</td>
</tr>
</tbody>
</table>

### Ordering Information

**SERIES**

VRVH - Vent to Atmosphere  
VRVHI - Inline Relief (Male x Female)

**PIPE SIZE (NPT)**

- 125 - 1/8" Male  
- 250 - 1/4" Male  

NPT threads per ANSI/ASME B1.20.1

**MATERIAL CODE**

- B - Brass  

For other materials, consult factory.

**Nominal Set Pressure**

Specify 150-600 Psig. Valves that are not actuated for a period of time may exhibit higher initial crack pressure (first bubble) than subsequent cycles.

**SEAL MATERIAL**

- V - Viton™, -10°F to 375°F (-23°C to 190°C)  
- B - Buna-N, -40°F to 250°F (-40°C to 121°C)  
- N - Neoprene, -40°F to 300°F (-40°C to 148°C)  
- EP - Ethylene Propylene, -65°F to 300°F (-54°C to 148°C)  
- S - Silicone, -70°F to 450°F (-56°C to 232°C)  
- T - PTFE, -320°F to 350°F (-195°C to 176°C)

PTFE Seals may not reseal bubble tight.

**Options**

- Oxygen cleaning, alternative seals and other thread configurations, consult factory.

**Note:** Viton™ and Krytox™ are trademarks of DuPont.

**Proper Component Selection**

When specifying a component, the total system design must be considered to ensure safe and trouble-free performance. Intended component function, materials compatibility, pressure ratings, installation, environment and maintenance are the responsibility of the system designer.

**Contact Information**

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973.838.6500  Fax 973.838.4888

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