The 7377 is a throttling relief valve to vent overpressure used downstream of pressure regulators. Relief valves are available in ¼", 1", and 2" sizes with spring ranges from 1 psi to 50 psi. Refer to Table 1.

The 1" and 2" sizes feature a Pitot tube booster (Fig. 1) for achieving the highest possible relief capacity with a minimum build-up of system pressure. When selecting any relief valve for installation downstream of a regulator, the capacity of the relief valve should be compared with the wide open capacity of the regulator. Refer to Fig. 2 curves to obtain flow capacities at respective spring settings.

### Table 1. Spring Ranges and Maximum Allowable Inlet Pressure

<table>
<thead>
<tr>
<th>Relief Valve designation</th>
<th>body size</th>
<th>spring relief setting</th>
<th>spring range</th>
<th>max. allowable inlet pressure</th>
<th>capacity at max. inlet pressure (scfh)†</th>
</tr>
</thead>
<tbody>
<tr>
<td>7377-03-2</td>
<td>¼&quot;</td>
<td>2.5 psig</td>
<td>0.72-3 psig</td>
<td>10 psig</td>
<td>950</td>
</tr>
<tr>
<td>7377-03-5</td>
<td>¼&quot;</td>
<td>5</td>
<td>3-13</td>
<td>45</td>
<td>1 750</td>
</tr>
<tr>
<td>7377-03-10</td>
<td>¼&quot;</td>
<td>10</td>
<td>3-13</td>
<td>45</td>
<td>1 750</td>
</tr>
<tr>
<td>7377-1-2</td>
<td>1&quot;</td>
<td>2.5</td>
<td>1-4.5</td>
<td>100</td>
<td>87 000</td>
</tr>
<tr>
<td>7377-1-5</td>
<td>1&quot;</td>
<td>5</td>
<td>4-15</td>
<td>100</td>
<td>87 000</td>
</tr>
<tr>
<td>7377-1-10</td>
<td>1&quot;</td>
<td>10</td>
<td>4-15</td>
<td>100</td>
<td>87 000</td>
</tr>
<tr>
<td>7377-1-25</td>
<td>1&quot;</td>
<td>25</td>
<td>15-50</td>
<td>100</td>
<td>87 000</td>
</tr>
<tr>
<td>7377-4-10</td>
<td>2&quot;</td>
<td>10</td>
<td>4-10</td>
<td>25</td>
<td>81 000</td>
</tr>
</tbody>
</table>

† Values are obtained with no outlet (vent) piping and are for 0.6 specific gravity gas at 60 F vented to atmosphere (14.7 psia).

**WARNING:** Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., are inherent with any combustion application. Parts of this product may exceed 160°F in operation and present a contact hazard. Fives North American Combustion, Inc. urges compliance with National Safety Standards and insurance Underwriters recommendations, and care in operation.
CONSTRUCTION MATERIALS

Valve Body and Spring Case
- 7377-03: Zinc
- 7377-1: Aluminum
- 7377-4: Cast Iron Body with Aluminum Spring Case

Diaphragm
- 7377-03: Neoprene
- 7377-1: Nitrile or Fluoroelastomer
- 7377-4: Nitrile or Fluoroelastomer

Orifice
- 7377-03: Aluminum
- 7377-4: Brass or Stainless Steel

O-Ring Seat:
- 7377-1: Nitrile or Fluoroelastomer
- 7377-4: Nitrile or Fluoroelastomer

O-Ring Seat Holder and Washer:
- 7377-1: Aluminum
- 7377-4: Stainless Steel

Seat Washer
- 7377-1: Aluminum
- 7377-4: Brass or Stainless Steel

Spring Plate
- 7377-03: Zinc
- 7377-1: Zinc-Plated Steel
- 7377-4: Zinc-Plated Steel

Temperature Capabilities
With Nitrile and Neoprene Elastomers: –20 to +150 F
With Fluoroelastomers: +20 to +300 F

Installation
The 7377 Relief Valves can be installed in any position. However, the outlet connection must be protected against the entrance of rain, snow, insects, or any other foreign material. Flow through the valve must be as indicated by the flow direction arrow on the body. Refer to Fig. 3 for relief valve dimensions.