The Model 708-2 has a wide range of applications: anywhere a system must be protected from pressures that are too high (relief) or too low (sustaining). Typical applications include:

- Pump systems
- Municipal distribution systems
- Irrigation systems

MODEL FEATURES

- Relief Valve: Limits inlet pressure by relieving excess pressure
- Pressure Sustaining: Prevents inlet pressure from dropping below a predetermining minimum
- Operates over a wide flow range
- Reduced port design allows use of properly sized valves without separate reducer fittings
- Inlet pressure is adjustable with a single screw
- Quick opening; adjustable closing speed
- Can be maintained without removal from the line
- Factory tested and can be pre-set to your requirements

OPERATION

The normally closed, spring-loaded pilot, sensing upstream pressure, responds to changes in pressure and causes the main valve to do the same. The net result is a constant modulating action of the pilot and main valve to hold the upstream pressure constant. The pilot system is equipped with a closing speed control that fine tunes the valve response to the system variables.

COMPONENTS

The Model 708-2 consists of the following components, arranged as shown on the schematic diagram:

1. Model 785 Basic Reduced Port Control Valve
2. Model 1330 Pressure Relief/Back Pressure Pilot
3. Model 126 Ejector
   Fixed orifice pilot system supply restrictor
4. Model 141-3 Flow Control Valve
   Adjustable closing speed control
5. Model 159 Y-Strainer
   Protects pilot system from dirt/debris
6. Model 141-4 Isolation Ball valves
7. Model 155 Visual Indicator (Optional)

MAX. PRESSURE (Ductile Iron)

<table>
<thead>
<tr>
<th>Flange Size</th>
<th>Pressure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>150# Flanges</td>
<td>250 psi</td>
</tr>
<tr>
<td>300# Flanges</td>
<td>640 psi</td>
</tr>
</tbody>
</table>

The pressures listed below are maximum pressures at 100°F.

SIZING

Pressure sustaining valves and pressure relief valves that operate frequently should be limited to the flow rates shown in the first row of the chart below. Pressure relief valves that operate intermittently may be extended to the flow rates shown in the second row. Please consult the factory for definitive sizing assistance.

<table>
<thead>
<tr>
<th>SIZE</th>
<th>3&quot;</th>
<th>4&quot;</th>
<th>6&quot;</th>
<th>8&quot;</th>
<th>10&quot;</th>
<th>12&quot;</th>
<th>16&quot;</th>
<th>18&quot;</th>
<th>20&quot;</th>
<th>24&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX. CONTINUOUS FLOW, GPM</td>
<td>260</td>
<td>575</td>
<td>1000</td>
<td>2250</td>
<td>3900</td>
<td>6150</td>
<td>8750</td>
<td>13750</td>
<td>15125</td>
<td>16500</td>
</tr>
<tr>
<td>MAX. INTERMITTENT FLOW, GPM</td>
<td>460</td>
<td>1000</td>
<td>1800</td>
<td>4000</td>
<td>7000</td>
<td>11000</td>
<td>15750</td>
<td>24750</td>
<td>26125</td>
<td>27500</td>
</tr>
</tbody>
</table>

Cavitation Note: Relief valves, by their application, are subject to pressure differentials that may induce cavitation. When these conditions exist, it may be only on an intermittent basis, causing minimum concern got valve deterioration. Charts indexing only inlet and outlet pressures do not address the complexity of this phenomenon. OCV can assist you in validating your application.

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Global performance. Personal touch.
**SPECIFICATIONS**  (Typical Water Application)

The <pressure relief><pressure sustaining> valve shall function to <prevent main line pressure from exceeding a predetermined maximum><prevent the upstream pressure from falling below a predetermined minimum.>

**DESIGN**

The valve shall be a single-seated, line pressure operated, diaphragm actuated, pilot controlled, reduced port globe valve. The valve shall seal by means of a corrosion-resistant seat and a resilient, rectangular seat disc. These, and other parts, shall be replaceable without removing the valve from the line. The stem of the main valve shall be guided top and bottom by integral bushings. Alignment of the body, bonnet, and diaphragm assembly shall be by precision dowel pins. The diaphragm shall not be used as a seating surface, nor shall pistons be used as an operating means. The pilot system shall be furnished complete and installed on the main valve. It shall include a closing speed control and an inline strainer. The <pressure relief><pressure sustaining> valve shall be operationally and hydrostatically tested prior to shipment.

**MATERIALS OF CONSTRUCTION**

The main valve body and bonnet shall be ductile iron per ASTM A536, Grade 65-45-12. All ferrous surfaces shall be coated with 4 mils of epoxy. The main valve seat ring shall be low-lead bronze. Elastomers (diaphragm, resilient seats, and o-rings) shall be EPDM. Control pilots shall be low-lead bronze. The closing speed control, Y-strainer and isolation ball valves shall be brass, and control line tubing shall be copper.

**OPERATING CONDITIONS**

The <pressure relief><pressure sustaining> valve shall be suitable for controlling the inlet pressure to a <maximum><minimum> of <X> psi at flow rates ranging from <Y to Z> gpm.

**ACCEPTABLE PRODUCTS**

The <pressure relief><pressure sustaining> valve shall be a <SIZE> Model 708-2, globe pattern, with <150# flanged><300# flanged> end connections, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.