Fractional Flow Control Valves & Regulators

- Low flow control valves
- Heavy duty control valves
- High pressure regulators
- Self-operated pressure regulators
Fractional Flow Control Valves

Mark 708 Series Fractional Flow Control Valves
A line of pneumatic and electric control valves specifically for fractional flow services. Now standard with the quick change trim for applications requiring frequent trim changes without disturbing the actuator setting (Cv’s 0.05 and greater). Inlet pressures up to 5,000 psi (348 bar).

- **Seat Type**: Globe/Needle – Class IV or VI
- **Sizes**: 1/4” – 3/4” (DN8 – DN20)
- **End Connections**: Threaded, Socket Weld, Integral Tube, Welded Flanged
- **Body Materials**: Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
- **Cv (Kv)**: 0.00001 to 4.0 (0.000009 to 3.4)
- **Ranges**: 3-15 or 6-30 psi; split ranges are available with optional positioner

Mark 708BS Series Bellows Stem Seal
The Mark 708 bellows stem seals eliminate fugitive emissions by surrounding the valve stem with a pressure tight barrier, isolating the stem from the process fluid and preventing leakage to the atmosphere. Inlet pressures up to 1,500 psi (103 bar). Top mount positioner standard.

- **Seat Type**: Globe/Needle – Class IV or VI
- **Sizes**: 1/4” – 3/4” (DN8 – DN20)
- **End Connections**: Threaded, Socket Weld, Integral Tube, Welded Flanged
- **Body Materials**: Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
- **Cv (Kv)**: 0.00001 to 4.0 (0.000009 to 3.4)
- **Ranges**: 3-15 or 6-30 psi; split ranges are available; optional side-mounted positioner

Mark 708CR Series Cryogenic Bonnet
The Mark 708 for cryogenic service features an extended bonnet that provides protection for the packing and actuator by preventing ice build-up which can interfere with the movement of the valve stem and affect valve performance. Minimum temperature to -425°F (-254°C).

- **Seat Type**: Globe/Needle – Class IV or VI
- **Sizes**: 1/4” – 3/4” (DN8 – DN20)
- **End Connections**: Threaded, Socket Weld, Integral Tube, Welded Flanged
- **Body Materials**: Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
- **Cv (Kv)**: 0.05 to 4.0 (0.04 to 3.4)
- **Ranges**: 3-15 or 6-30 psi; split ranges are available with optional positioner

Mark 708HT Series with Finned Bonnet
The cooling finned bonnet option is for the protection of the stem packing and actuator from elevated temperatures. Maximum pressure is 3460 psi @ 800°F (238 bar @ 427°C). Top mount positioner standard.

- **Seat Type**: Globe/Needle – Class IV or VI
- **Sizes**: 1/4” – 3/4” (DN8 – DN20)
- **End Connections**: Threaded, Socket Weld*, Integral Tube, Welded Flanged* (*1/2” & 3/4” only)
- **Trim Materials**: Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
- **Cv (Kv)**: 0.05 to 4.0 (0.04 to 3.4)
- **Ranges**: 3-15 or 6-30 psi; split ranges are available; optional side-mounted positioner
Fractional Flow Control Valves

**Mark 708HP Series High Pressure**

The Mark 708HP manufactured in a variety of materials making it the perfect choice for demanding applications in the Oil & Gas industry including subsea, chemical and refinery pilot plants and R & D facilities. Maximum inlet pressure is 8000 psi. Side mount positioner standard.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Specification Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seat Type</td>
<td>Globe/Needle – Class IV</td>
</tr>
<tr>
<td>Sizes</td>
<td>1/2&quot; (DN15)</td>
</tr>
<tr>
<td>End Connections</td>
<td>Threaded (FNPT), Autoclave, Socket Weld, Butt Weld</td>
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<tr>
<td>Body Materials</td>
<td>Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others</td>
</tr>
<tr>
<td>Cv (Kv)</td>
<td>0.05 to 1.25 (0.04 to 1.08)</td>
</tr>
<tr>
<td>Ranges</td>
<td>3-15 or 6-30 psi</td>
</tr>
</tbody>
</table>

**Mark 708LMO Series Motor Valve**

The Mark 708LMO offers many advantages including extreme accuracy, high turndown ratios and repeatability. The features of this high resolution, low hysteresis digitally controlled motor makes the MK708LMO a premiere control valve. Lower cost option to the MK708MV.

<table>
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<th>Specification</th>
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<tbody>
<tr>
<td>Seat Type</td>
<td>Globe/Needle – Class IV or VI</td>
</tr>
<tr>
<td>Sizes</td>
<td>1/4&quot; – 3/4&quot; (DN8 – DN20)</td>
</tr>
<tr>
<td>End Connections</td>
<td>Threaded, Socket Weld, Integral Tube, Welded Flanged</td>
</tr>
<tr>
<td>Body Materials</td>
<td>Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others</td>
</tr>
<tr>
<td>Cv (Kv)</td>
<td>0.00001 to 4.0 (0.000009 to 3.4)</td>
</tr>
<tr>
<td>Command Signals</td>
<td>Current or Voltage Command, On/Off</td>
</tr>
</tbody>
</table>

**Mark 708MV Series Motor Valve**

The Mark 708MV is a premiere control valve for applications involving chemical injection, dosing, pilot plants and research labs. It offers several advantages including extreme accuracy, high turndown ratios, and repeatability.

<table>
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<tbody>
<tr>
<td>Seat Type</td>
<td>Globe/Needle – Class IV or VI</td>
</tr>
<tr>
<td>Sizes</td>
<td>1/4&quot; – 3/4&quot; (DN8 – DN20)</td>
</tr>
<tr>
<td>End Connections</td>
<td>Threaded, Socket Weld, Integral Tube, Welded Flanged</td>
</tr>
<tr>
<td>Body Materials</td>
<td>Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others</td>
</tr>
<tr>
<td>Cv (Kv)</td>
<td>0.00001 to 4.0 (0.000009 to 3.4)</td>
</tr>
<tr>
<td>Command Signals</td>
<td>Current or Voltage Command, On/Off</td>
</tr>
</tbody>
</table>

**Mark 709 Series Three Way Fractional Flow Control Valves**

The Mark 709 is a lightweight control valve for use as a mixing valve in low flow process applications. Featuring a three-way body design, it is constructed with two inlets to blend two separate flow streams into a common outlet, creating a third fluid.

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<tbody>
<tr>
<td>Seat Type</td>
<td>Globe/Needle – Class IV or VI</td>
</tr>
<tr>
<td>Sizes</td>
<td>1/2&quot; &amp; 3/4&quot; (DN15 &amp; DN20)</td>
</tr>
<tr>
<td>End Connections</td>
<td>Threaded, Socket Weld, Flanged</td>
</tr>
<tr>
<td>Trim Materials</td>
<td>Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others</td>
</tr>
<tr>
<td>Cv (Kv)</td>
<td>1.25 to 4.0 (1.06 to 3.4)</td>
</tr>
<tr>
<td>Ranges</td>
<td>3-15 or 6-30 psi; split ranges are available with optional positioner</td>
</tr>
</tbody>
</table>
Fractional Flow Control Valves

Mark 8000 Series

The Mark 8000 is a group of heavy-duty control valves specifically designed for process applications requiring full flow or fractional flow control. The valve subassembly is manufactured completely from barstock. Inlet pressures up to 6,000 psi (414 bar).

- **Seat Type**: Globe or Angle – Class III, IV or VI
- **Sizes**: 1/2" – 2" (DN15 – DN50)
- **End Connections**: Threaded, Socket Weld, Flanged, Butt Weld
- **Body Materials**: Carbon Steel, Stainless Steel, Brass, Hastelloy C, PVC, Kynar, others
- **Cv (Kv)**: 0.05 to 17 (0.04 to 14.5)
- **Ranges**: 3-15 or 6-30 psi; split ranges are available with optional positioner

Mark 8000 Series Bellows Stem Seal

Bellows stem seals eliminate fugitive emissions by surrounding the valve stem with a pressure-tight barrier, isolating the stem from the process fluid and preventing leakage to the atmosphere. Inlet pressures up to 1,500 psi (103 bar).

- **Seat Type**: Globe – Class III, IV or VI
- **Sizes**: 1/2" & 3/4" (DN15 & DN20)
- **End Connections**: Threaded, Socket Weld, Flanged, Butt Weld
- **Body Materials**: Carbon Steel, Stainless Steel, Brass, Hastelloy C, others
- **Cv (Kv)**: 0.05 to 3.0 (0.4 to 2.6)
- **Ranges**: 3-15 or 6-30 psi; positioner recommended, split ranges available w/ pos.

Mark 8000 Series Cryogenic Option

The cryogenic option offers a bonnet extension that provides protection for the packing and actuator by preventing the formation and build-up of ice, which can interfere with movement of the valve stem and affect valve performance. Minimum temperature to -425°F (-254°C).

- **Seat Type**: Globe – Class III, IV or VI
- **Sizes**: 1/2" – 2" (DN15 – DN50)
- **End Connections**: Threaded, Socket Weld, Flanged, Butt Weld
- **Body Materials**: Carbon Steel, Stainless Steel, Brass, Hastelloy C, others
- **Cv (Kv)**: 0.05 to 17 (0.04 to 14.5)
- **Ranges**: 3-15 or 6-30 psi; split ranges are available with optional positioner

Mark 8000 Series Three Way Body

The three-way Mark 8000 can be specified for use on mixing or diverting services. Uses include mixing two separate flow sources into one common line or diverging a single flow path into two separate streams. Inlet pressures up to 6,000 psi (414 bar).

- **Seat Type**: Globe – Class III, IV or VI
- **Sizes**: 1/2" – 1" (DN15 – DN25)
- **End Connections**: Threaded, Flanged, Socket Weld
- **Body Materials**: Carbon Steel, Stainless Steel, Brass, Hastelloy C, others
- **Cv (Kv)**: 0.2 to 6.0 (0.17 to 5.1)
- **Ranges**: 3-15 or 6-30 psi; split ranges are available with optional positioner
Fractional Flow Control Valves

**JR Series**

The JR Series have the ability to handle very high pressures and very low flows. Typically used in research and sampling systems for corrosive and specialty gases. Typical applications include gas chromatography and flame ionization detectors. Inlet pressures up to 4000 psi.

- **Seat Type**: PTFE, PEEK
- **Sizes**: 1/4", 3/8", 1/2" (DN8, DN10, DN15)
- **End Connections**: Threaded (NPT), Socket Weld, Flanged
- **Body Materials**: Stainless Steel, Hastelloy C, Monel, Alloy 20, others
- **Diaphragm Materials**: Jorlon
- **Setpoints**: up to 750 psi (up to 52 bar)

**JRC Series**

The JRC Series is ideal for corrosive and non-corrosive gas services. It is designed to handle fluctuations in supply pressure while maintaining precise, accurate outlet pressure control. Inlet pressures up to 4000 psi.

- **Seat Type**: PTFE, PEEK
- **Sizes**: 1/4", 3/8", 1/2" (DN8, DN10, DN15)
- **End Connections**: Threaded (NPT), Socket Weld, CGA
- **Body Materials**: Stainless Steel, Hastelloy C, Monel, Alloy 20, others
- **Diaphragm Materials**: Jorlon
- **Setpoints**: up to 750 psi (up to 52 bar)

**Mark 5800HP Series High Back Pressure Regulator**

The Mark 5800HP Series is a high pressure, back pressure regulator designed to maintain upstream pressure of gases and liquids. As a lightweight product, it is well suited for applications where space and weight are at a premium. Inlet pressures up to 2500 psi (172 bar).

- **Seat Type**: Teflon (standard), PEEK, Delrin
- **Sizes**: 1/2" – 1" (DN15 – DN25)
- **End Connections**: Threaded, Socket Weld, Flanged
- **Body Materials**: 316L Stainless Steel, others
- **Cv (Kv)**: 0.5 to 1.0 (0.4 to 0.86)
- **Setpoints**: 400 - 2500 psi (27.6 - 172 bar)

**Mark 6800HP Series High Pressure Regulating Valve**

A line of self-operated pressure regulating valves for use on high pressure industrial gas and liquid services to 3,800 psi (262 bar). The 6800HP features a balanced piston design for excellent stability even in high pressure drop situations.

- **Seat Type**: Stellite, Vespel, Teflon
- **Sizes**: 1/2" – 1" (DN15 – DN25)
- **End Connections**: Threaded, Socket Weld, Flanged
- **Body Materials**: 316L Stainless Steel, others
- **Cv (Kv)**: 0.5 to 2.5 (0.4 to 2.1)
- **Setpoints**: 250 - 3000 psi (17.2 - 207 bar)
To learn more about LowFlow Valve products and to find the name of a local representative visit: www.lowflowvalve.com

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