403 SERIES

The 403 Series regulators are intended for secondary pressure control of non-corrosive, high purity or liquefied gases or as point of use pressure control in high purity gas distribution systems.

- Single Stage
- Chrome-plated Brass Barstock Body
- Four Port Configuration
- 316L Stainless Steel Diaphragm

**Typical Applications**

<table>
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<tr>
<th>Bulk gas distribution systems</th>
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<tr>
<td>Gas and liquid chromatography</td>
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<tr>
<td>High purity carrier gases</td>
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<tr>
<td>Zero, span, and calibration gases</td>
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<tr>
<td>High purity chamber pressurization</td>
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<tr>
<td>Liquefied hydrocarbon gas control</td>
</tr>
<tr>
<td>Control of cryogenic gases</td>
</tr>
</tbody>
</table>

**Features**

- Metal-to-Metal Diaphragm Seal
  - No possibility of gas contamination
- CAPSULE® Seat
  - Increased serviceability and life
- Chrome-plated Brass Barstock Body
  - Smooth surface finish
- Front and Rear Panel-Mountable
  - Versatile system configuration
- Pressure Ranges 0-15 to 0-500 PSIG (0-1 to 0-34 BAR)
  - Broad range of applications
- 3000 PSIG (210 BAR) Inlet Pressure Rating
  - Safe use with high pressure cylinders
- Pipe Away Relief Valve
  - Safely vents exhaust gases

**Materials**

- **Body**
  - Chrome-plated brass barstock
- **Bonnet**
  - Chrome-plated brass barstock
- **Seat**
  - PTFE
- **Filter**
  - 10 micron sintered bronze
- **Diaphragm**
  - 316L stainless steel
- **Internal Seals**
  - PTFE

**Specifications**

- **Maximum Inlet Pressure**
  - 3000 PSIG (210 BAR)
- **Temperature Range**
  - -40°F to 140°F (-40°C to 60°C)
- **Gauge**
  - 2" (53mm) diameter chrome-plated
- **Ports**
  - 1/4" FPT
- **Helium Leak Integrity**
  - $1 \times 10^{-9}$ scc/sec
- **Cv**
  - 0.1 Max outlet 50 PSIG (3.5 BAR) or below
  - 0.2 Max outlet above 50 PSIG (3.5 BAR)
  - See page 203 for flow curves
- **Weight (403 2021-000)**
  - 2.71 lbs. (1.23 kg)
### Installation Dimensions

**Panel Mounting Kit (Optional)**

- Width: 5.67-4.96 (144.0-126.0) mm
- Height: 2.70 (68.6) mm
- Depth: 71 (18.0) mm

**Orientable Captive Vent Kit (Optional)**

- Width: 42.7 (1.676) mm
- Height: 35.3 (1.394) mm
- Depth: 68.6 (2.70) mm

### Ordering Information

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<tr>
<th>Series</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Options</th>
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<tr>
<td>403</td>
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<td><strong>CON</strong></td>
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<tr>
<td>400</td>
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</tr>
<tr>
<td>1: 0-15 PSIG (0-1 BAR)</td>
<td>0: None</td>
<td>0: 1/4&quot; FPT port</td>
<td>0: Bare body</td>
<td>000: 1/4&quot; FPT</td>
<td>D: Deep purge</td>
</tr>
<tr>
<td>2: 0-50 PSIG (3.5 BAR)</td>
<td>30'-0-30 PSIG/ -1-0-2 BAR</td>
<td>1: 1/4&quot; MPT</td>
<td>1: Cleanroom assembly (PSIG/kPa gauges)</td>
<td>TF2: 1/8&quot; tube fitting</td>
<td>M: Protocol station</td>
</tr>
<tr>
<td>3: 0-100 PSIG (0-7 BAR)</td>
<td>30'-0-200 PSIG/ -1-0-7 BAR</td>
<td>2: 1/4&quot; tube fitting</td>
<td>2: Cleanroom assembly (BAR/PSIG gauges)</td>
<td>TF4: 1/4&quot; tube fitting</td>
<td>Q: Protocol purge station</td>
</tr>
<tr>
<td>4: 0-250 PSIG (0-17 BAR)</td>
<td>0-400 PSIG/ -0-27 BAR</td>
<td>3: Diaphragm valve 1/4&quot; tube fitting</td>
<td>3: Mirror image (PSIG/kPa gauges)</td>
<td>TF6: 3/8&quot; tube fitting</td>
<td></td>
</tr>
<tr>
<td>5: 0-500 PSIG (0-34 BAR)*</td>
<td>0-1000 PSIG/ -0-70 BAR</td>
<td>4: Diaphragm valve 1/4&quot; MPT</td>
<td>4: Mirror image (BAR/PSIG gauges)</td>
<td>M06: 6mm tube</td>
<td></td>
</tr>
<tr>
<td>7: 0-150 PSIG (0-10 BAR)</td>
<td>30'-0-200 PSIG/ -1-0-14 BAR</td>
<td>5: Needle valve 1/4&quot; MPT</td>
<td>5: Needle valve 1/4&quot; MPT</td>
<td></td>
<td></td>
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</tbody>
</table>

**Related Options**

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>550 0002</td>
<td>Panel mount kit</td>
</tr>
<tr>
<td>550 0001</td>
<td>Captured vent kit</td>
</tr>
<tr>
<td>476 0002</td>
<td>Helium Leak certification</td>
</tr>
</tbody>
</table>

**Standard assembly does not include relief valve**
Regulator Flow Curves

Flow Curves for 403, 405, 425, 435, 445 Series

Flow Curves for 492, 493 Series