The 428 Series regulators are intended for secondary pressure control of the highest purity gases or as point of use pressure control in high purity gas distribution systems.

- Single Stage
- 316L Stainless Steel Barstock Body
- Three Port Configuration
- Face Seal Connections

### Typical Applications

- Semiconductor process gases
- Photovoltaic manufacturing
- Ultra-high purity gases
- Pharmaceutical processing
- Aerospace systems
- Nanotechnology research

### Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal-to-Metal Diaphragm Seal</td>
<td>No possibility of gas contamination</td>
</tr>
<tr>
<td>CAPSULE® Seat</td>
<td>Increased serviceability and life</td>
</tr>
<tr>
<td>Butt-Welded Face Seal Connections</td>
<td>Highest leak integrity available</td>
</tr>
<tr>
<td>316L Stainless Steel Barstock Body</td>
<td>Increased corrosion resistance</td>
</tr>
<tr>
<td>Front and Rear Panel-Mountable</td>
<td>Versatile system configuration</td>
</tr>
<tr>
<td>3000 PSIG Inlet Pressure Rating</td>
<td>Safe use with high pressure cylinders</td>
</tr>
<tr>
<td>Pressure Ranges 0-15 to 0-500 PSIG (0-1 to 0-34 BAR)</td>
<td>Broad range of applications</td>
</tr>
</tbody>
</table>

### Materials

- **Body**: 316L stainless steel barstock
- **Bonnet**: Chrome-plated brass barstock
- **Seat**: PTFE
- **Filter**: Patented 10 micron 316 mesh
- **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 stainless steel
- **Ports**: 1/4" face seal connection
- **Helium Leak Integrity**: 1 x 10⁻⁹ scc/sec
- **Cv**: 0.1
  - See page 202 for flow curves
- **Weight (428 3302-001)**: 2.46 lbs. (1.12 kg)
### 400 Series Regulators

#### Installation Dimensions

**Outlet Gauge**
- 2.70 (68.6)
- 5.67-4.96 (144.0-126.0)

**Inlet Gauge**
- 3.0 (76.2)
- 9.53 (241.9)

**Panel Reference**
- Max. Panel Thickness = .375 (9.53)
- Panel Cutout = Ø1.39 (35.3)

**Orientable Captive Vent Kit**
- Optional

**Thread**
- 10-32 UNF
- Ø2.73 (69.3)
- Ø2.13 (54.1)

**Panel Mounting Kit (Optional)**
- 1.27 (32.3)
- .88 (22.4)
- 3.85 (97.8)

### Ordering Information

<table>
<thead>
<tr>
<th>Series 428</th>
<th>Outlet Pressure</th>
<th>Outlet Gauge</th>
<th>Inlet Gauge</th>
<th>Connections - inlet/outlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: 0-15 PSIG (0-1 BAR)</td>
<td>0: None</td>
<td>0: None</td>
<td>1: Female face seal/male face seal</td>
<td></td>
</tr>
<tr>
<td>2: 0-30 PSIG (0-2 BAR)</td>
<td>1: 30”-0-30 PSIG/-1-0-2 BAR</td>
<td>2: 30”-0-60 PSIG/-1-0-4 BAR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3: 0-50 PSIG (0-3.5 BAR)</td>
<td>3: 30”-0-100 PSIG/-1-0-7 BAR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4: 0-100 PSIG (0-7 BAR)</td>
<td>4: 30”-0-200 PSIG/-1-0-14 BAR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5: 0-250 PSIG (0-17 BAR)</td>
<td>5: 0-400 PSIG/0-27 BAR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6: 0-500 PSIG (0-34 BAR)</td>
<td>6: 0-1000 PSIG/0-70 BAR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7: 0-150 PSIG (0-10 BAR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Related Options

<table>
<thead>
<tr>
<th>Options</th>
<th>Order No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel mount kit</td>
<td>550 0002</td>
<td>To mount the regulator using bonnet threads. Material: Nickel-plated brass</td>
</tr>
<tr>
<td>Captured vent kit</td>
<td>550 0001</td>
<td>360° Orientation, pipes vented gases to safe location in the event of diaphragm failure. Material: Nickel-plated brass</td>
</tr>
<tr>
<td>Helium Leak certification</td>
<td>476 0002</td>
<td>Inboard Helium Leak certification to less than 1 x 10^-6 cc/sec</td>
</tr>
</tbody>
</table>
Regulator Flow Curves

Flow Curves for 302, 304, 305, 307, 322, 324, 327, 401, 402, 408, 420, 422, 426, 427, 428, 429 Series

Flow Curves for 312, 315, 332, 411, 412, 414, 415, 430, 432 Series