300 Series Advantage

<table>
<thead>
<tr>
<th>Description</th>
<th>Advanced Features</th>
<th>Typical Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>The 304 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.</td>
<td>• Chrome-plated brass barstock body Smooth surface finish • Rear panel mountable Easy installation • Pressure ranges 0-15 to 0-500 PSIG Broad range of applications • 3000 PSIG inlet pressure rating Safe use with high pressure cylinders</td>
<td>• Bulk gas distribution systems • Gas and liquid chromatography • High purity carrier gases • Zero, span, and calibration gases • High purity chamber pressurization • Liquefied hydrocarbon gas control • Control of cryogenic gases</td>
</tr>
</tbody>
</table>

300 Series Advantage

- **Capsule® seat**
  Increased serviceability and life
- **316L stainless steel diaphragm**
  No inboard diffusion
- **Low wetted surface area**
  Minimal purge requirements
- **Field-adjustable pressure limit**
  Safeguard downstream equipment
- **Convoluted diaphragm**
  Smooth pressure changes
- **Compact design**
  Easily transported and integrated

**Materials**

- **Body**
  Chrome-plated brass barstock
- **Bonnet**
  Chrome-plated die cast zinc
- **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)
- **Gauges**
  2" diameter chrome-plated
- **Ports**
  ¼" FPT
- **Helium Leak Integrity**
  1 x 10⁻⁹ scc/sec
- **Cv**
  0.1 (Max outlet 50 PSIG or below)
  0.2 (Max outlet about 50 PSIG)
- **Weight** (304-2021-TF4)
  1.7 lbs. (0.78 kg)
### 304 Series

<table>
<thead>
<tr>
<th>Outlet Pressure</th>
<th>Outlet Gauge</th>
<th>Inlet Gauge</th>
<th>Outlet Assemblies</th>
<th>Assemblies/ Gauges</th>
<th>Inlet Connections</th>
<th>Installed Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: 0-15</td>
<td>30'-0-30 PSIG</td>
<td>0: None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2: 0-50</td>
<td>30'-0-100 PSIG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3: 0-100</td>
<td>30'-0-200 PSIG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4: 0-250</td>
<td>0-400 PSIG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5: 0-500</td>
<td>0-1000 PSIG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7: 0-150</td>
<td>30'-0-200 PSIG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**A**: 
- Inlet Options
- **B**: 
  - Inlet Options
- **C**: 
  - Outlet Assemblies
  - **D**: 
    - Assembly/ Gauges
    - **Options**
      - Inlet Connections
      - Installed Options
### 445 Series

**Description**
The 445 Series regulators are intended for secondary pressure control of ultra high purity and corrosive gases or as point-of-use pressure control in high purity gas distribution systems.

**Advanced Features**
- Stainless steel barstock body
- Smooth surface finish
- Front and rear panel mountable
- Versatile system configuration
- Pressure ranges 0-15 to 0-500 PSIG
- Broad range of applications
- 3000 PSIG inlet pressure rating
- Safe use with high pressure cylinders

**Typical Applications**
- Bulk gas distribution systems
- Gas and liquid chromatography
- High purity carrier gases
- Zero, span and calibration gases
- High purity chamber pressurization
- Liquefied hydrocarbon gas control
- Control of cryogenic gases
- Corrosive service

### 400 Series Advantage

<table>
<thead>
<tr>
<th>Description</th>
<th>Materials</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Metal-to-metal diaphragm seal</td>
<td>Body: 316L stainless steel barstock</td>
<td><strong>Maximum Inlet Pressure</strong> 3000 PSIG (210 BAR)</td>
</tr>
<tr>
<td>No possibility of gas contamination</td>
<td>Bonnet: Chrome-plated brass barstock</td>
<td><strong>Temperature Range</strong> -40°F to 140°F (-40°C to 60°C)</td>
</tr>
<tr>
<td>• Capsule® seat</td>
<td>Seat: PTFE</td>
<td><strong>Gauge</strong> 2” diameter stainless steel</td>
</tr>
<tr>
<td>Increased serviceability and life</td>
<td>Filter: 10 micron stainless steel multi-layer mesh</td>
<td><strong>Ports</strong> ¼” FPT</td>
</tr>
<tr>
<td>• 316L stainless steel diaphragm</td>
<td>Diaphragm: 316L stainless steel</td>
<td><strong>Helium Leak Integrity</strong> 1 x 10⁻⁹ scc/sec</td>
</tr>
<tr>
<td>No inboard diffusion</td>
<td>Internal Seals: PTFE</td>
<td><strong>Cv</strong> 0.1 (Max outlet 50 PSIG or below)</td>
</tr>
<tr>
<td>• Orientable captured vent capable</td>
<td></td>
<td>0.2 (Max outlet above 50 PSIG)</td>
</tr>
<tr>
<td>Safety in any installation</td>
<td></td>
<td><strong>Weight (445-2021-TF4)</strong> 2.57 lbs. (1.17 kg)</td>
</tr>
<tr>
<td>• Low wetted surface area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimal purge requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Field-adjustable pressure limit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safeguard downstream equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Pipe away relief valve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safely vent exhaust gases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Delivery pressure range easily changed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum flexibility</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Flow Performance

![Graph](image)

## Ordering Information and Configuration Options

<table>
<thead>
<tr>
<th>445</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>-Inlet</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series 445</strong></td>
<td><strong>Outlet Pressure</strong></td>
<td><strong>Outlet Gauge</strong></td>
<td><strong>Inlet Gauge</strong></td>
<td><strong>Outlet Assemblies</strong></td>
<td><strong>Assembly/ Gauges</strong></td>
<td><strong>Inlet Connections</strong></td>
</tr>
<tr>
<td>445</td>
<td>0-15</td>
<td>30”-0-30 PSIG</td>
<td>None</td>
<td>0: ¼” FPT Port</td>
<td>0: Bare Body</td>
<td>000: ¼” FPT</td>
</tr>
<tr>
<td></td>
<td>2-50</td>
<td>30”-0-100 PSIG</td>
<td></td>
<td>1: ¼” MPT</td>
<td>1: Standard Assembly (PSIG/kPa Gauge)</td>
<td>TF2: ¼” Tube</td>
</tr>
<tr>
<td></td>
<td>3-100</td>
<td>30”-0-200 PSIG</td>
<td>0: None</td>
<td>2: ½” Tube Fitting</td>
<td>2: Standard Assembly (BAR/PSIG Gauge)</td>
<td>TF4: ½” Tube</td>
</tr>
<tr>
<td></td>
<td>4-250</td>
<td>0-400 PSIG</td>
<td></td>
<td>3: Diaphragm Valve ½” Tube Fitting</td>
<td>4: Cleanroom Assembly (PSIG/kPa Gauge)</td>
<td>TF6: ⅞” Tube</td>
</tr>
<tr>
<td></td>
<td>5-500</td>
<td>0-1000 PSIG</td>
<td></td>
<td>4: Diaphragm Valve ⅞” MPT</td>
<td>5: Cleanroom Assembly (BAR/PSIG Gauge)</td>
<td>M06: 6mm Tube Fitting</td>
</tr>
<tr>
<td></td>
<td>7-150</td>
<td>30”-0-200 PSIG</td>
<td></td>
<td>5: Needle Valve ⅞” MPT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Related Options
- Panel Mount Kit (550-0002)
- Captured Vent Kit (550-0001)
- Helium Leak Certification (476-0002)
- Passivation for Fluorine Service
### 483 Series

**high flow, single stage, brass barstock line regulator**

<table>
<thead>
<tr>
<th>Description</th>
<th>Advanced Features</th>
<th>Typical Applications</th>
</tr>
</thead>
</table>
| The 483 Series regulator applications are wide and varied including high flow purging, semiconductor manufacturing, manifold and line regulation. | • Ultra High Flow  
• Bulk gas distribution systems  
• Gas and liquid chromatography  
• High purity carrier gases  
• Zero, span, and calibration gases  
• High purity chamber pressurization  
• Liquefied hydrocarbon gas control | • Brass barstock body  
Smooth surface finish  
• Rear panel mountable  
Versatile system configuration  
• Pressure ranges 0-15 to 0-250 PSIG  
Broad range of applications  
• 3000 PSIG inlet pressure rating  
Safe use with high pressure cylinders |

### 400 Series Advantage

- **Metal-to-metal diaphragm seal**  
  No possibility of gas contamination  
- **Capsule® seat**  
  Increased serviceability and life  
- **316L stainless steel diaphragm**  
  No inboard diffusion  
- **Orientable captured vent capable**  
  Safety in any installation  
- **Low wetted surface area**  
  Minimal purge requirements  
- **Field-adjustable pressure limit**  
  Safeguard downstream equipment  
- **Pipe away relief valve**  
  Safely vent exhaust gases  
- **Delivery pressure range easily changed**  
  Maximum flexibility

#### Materials

- **Body** Brass barstock  
- **Bonnet** Chrome-plated die cast zinc  
- **Seat** PCTFE  
- **Filter** 40 micron 316L stainless steel  
- **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” diameter brass  
- **Ports**  
  ½” FPT (inlet/outlet)  
  ¼” FPT (gauge/relief valve)  
- **Helium Leak Integrity**  
  1 x 10⁻⁸ scc/sec  
- **Cv** 1.0  
- **Weight (483-3001-TF8)**  
  4.79 lbs. (2.17 kg)
### Flow Performance

![Graph of flow performance](image)

### Ordering Information and Configuration Options

<table>
<thead>
<tr>
<th>483 Series</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>-Inlet</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outlet Pressure</strong></td>
<td><strong>Outlet Gauge</strong></td>
<td><strong>Outlet Assemblies</strong></td>
<td><strong>Assembly/ Gauges</strong></td>
<td><strong>Inlet Connections</strong></td>
<td><strong>Installed Options</strong></td>
<td></td>
</tr>
<tr>
<td>1: 0-15</td>
<td>0-30 PSIG</td>
<td>0: ½&quot; FPT Port</td>
<td>Bare Body</td>
<td>000: ½&quot; FPT</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>2: 0-40</td>
<td>0-60 PSIG</td>
<td>1: ½&quot; Tube Fitting</td>
<td>Standard Assembly (PSIG/kPa Gauges)</td>
<td>TF8: ½&quot; Tube</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3: 0-120</td>
<td>0-200 PSIG</td>
<td>P: 12mm Tube Fitting</td>
<td>Standard Assembly (BAR/PSIG Gauges)</td>
<td>M12: 12mm Tube</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4: 0-200</td>
<td>0-400 PSIG</td>
<td>6: Mirror Image Assembly (PSIG/kPa Gauges)</td>
<td>Mirror Image Assembly (PSIG/kPa Gauges)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5: 0-250</td>
<td>0-400 PSIG</td>
<td>7: Mirror Image Assembly (BAR/PSIG Gauges)</td>
<td>Mirror Image Assembly (BAR/PSIG Gauges)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Related Options**: None
484 Series

High flow, single stage, stainless steel barstock line regulator

**Description**
The 484 Series regulator applications are wide and varied including high flow purging, semiconductor manufacturing, manifold and line regulation.

**Advanced Features**
- Ultra High Flow
- Bulk gas distribution systems
- Gas and liquid chromatography
- High purity carrier gases
- Zero, span, and calibration gases
- High purity chamber pressurization
- Liquefied hydrocarbon gas control

**Typical Applications**
- 316L stainless steel barstock body
- Smooth surface finish
- Rear panel mountable
- Versatile system configuration
- Pressure ranges 0-15 to 0-250 PSIG
- Broad range of applications
- 3000 PSIG inlet pressure rating
- Safe use with high pressure cylinders

---

400 Series Advantage

- **Metal-to-metal diaphragm seal**
  No possibility of gas contamination
- **Capsule® seat**
  Increased serviceability and life
- **316L stainless steel diaphragm**
  No inboard diffusion
- **Orientable captured vent capable**
  Safety in any installation
- **Low wetted surface area**
  Minimal purge requirements
- **Field-adjustable pressure limit**
  Safeguard downstream equipment
- **Pipe away relief valve**
  Safely vent exhaust gases
- **Delivery pressure range easily changed**
  Maximum flexibility

**Materials**
- **Body**
  316L stainless steel barstock
- **Bonnet**
  Chrome-plated die cast zinc
- **Seat**
  PCTFE
- **Filter**
  40 micron 316L stainless steel
- **Diaphragm**
  316L stainless steel
- **Internal Seals**
  PTFE

**Specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Materials</th>
<th>Specifications</th>
</tr>
</thead>
</table>
| **Body** 316L stainless steel barstock | **Maximum Inlet Pressure**
  3000 PSIG (210 BAR) |
| **Bonnet** Chrome-plated die cast zinc | **Temperature Range**
  -40°F to 140°F (-40°C to 60°C) |
| **Seat** PCTFE | **Gauge**
  2" diameter stainless steel |
| **Filter** 40 micron 316L stainless steel | **Ports**
  ½" FPT (inlet/outlet) ¼" FPT (gauge/relief valve) |
| **Diaphragm** 316L stainless steel | **Helium Leak Integrity**
  1 x 10⁻⁸ scc/sec |
| **Internal Seals** PTFE | **Cv**
  1.0 |
| **Specifications** | **Weight (484-3011-TF8)**
  4.52 lbs. (2.05 kg) |
Equipment

Flow Performance

484 Series High Flow Regulator

Ordering Information and Configuration Options

<table>
<thead>
<tr>
<th>484</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series 484 Outlet Pressure Outlet Gauge Inlet Gauge Outlet Assemblies Assembly/ Gauges</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1: 0-15</td>
<td>0-30 PSIG</td>
<td>0: None</td>
<td>0: ½” FPT Port</td>
<td></td>
</tr>
<tr>
<td>2: 0-40</td>
<td>0-60 PSIG</td>
<td></td>
<td>1: ½” Tube Fitting</td>
<td></td>
</tr>
<tr>
<td>3: 0-120</td>
<td>0-200 PSIG</td>
<td></td>
<td>P: 12mm Tube Fitting</td>
<td></td>
</tr>
<tr>
<td>4: 0-200</td>
<td>0-400 PSIG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5: 0-250</td>
<td>0-400 PSIG</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assembly/ Gauges
0: Bare Body
1: Standard Assembly (PSIG/kPa Gauges)
2: Standard Assembly (BAR/PSIG Gauges)

Inlet Connections
000: ½” FPT
TF8: ½” Tube
M12: 12mm Tube

Installed Options
None

Related Options
None
# 428 Series

## Single stage, stainless steel barstock line regulator

### Description
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.

### Advanced Features
- Butt-welded VCR® connections
- 316L stainless steel diaphragm seal
- Increased corrosion resistance
- Front and rear panel mountable capsules
- Increased serviceability and life
- Orientable captured vent capable
- Safety in any installation
- Low wetted surface area
- Minimal purge requirements
- Field-adjustable pressure limit
- Safeguard downstream equipment
- Pipe away relief valve
- Safely vent exhaust gases
- Delivery pressure range easily changed
- Maximum flexibility

### Typical Applications
- Semiconductor process gases
- Gas and liquid chromatography
- Ultra-high purity carrier gases
- Zero, span and calibration gases
- Liquefied hydrocarbon gas control
- Control of cryogenic gases

---

### Materials

<table>
<thead>
<tr>
<th>Body</th>
<th>316L stainless steel barstock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonnet</td>
<td>Chrome-plated brass barstock</td>
</tr>
<tr>
<td>Seat</td>
<td>PTFE</td>
</tr>
<tr>
<td>Filter</td>
<td>10 micron stainless steel multi-layer mesh</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>316L stainless steel</td>
</tr>
<tr>
<td>Internal Seals</td>
<td>PTFE</td>
</tr>
</tbody>
</table>

### Specifications

- **Maximum Inlet Pressure**: 3000 PSIG (210 BAR)
- **Temperature Range**: -40°F to 140°F (-40°C to 60°C)
- **Gauge**: 2” diameter stainless steel
- **Ports**: ¼” VCR®
- **Helium Leak Integrity**: $1 \times 10^{-9}$ scc/sec
- **Cv**: 0.1
- **Weight (428-1302)**: 2.46 lbs. (1.12 kg)
Flow Performance

400 Series Single Stage Regulator

Ordering Information and Configuration Options

<table>
<thead>
<tr>
<th>Series 428</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outlet Pressure</td>
<td>Outlet Gauge</td>
<td>Inlet Gauge</td>
<td>Connections</td>
<td></td>
</tr>
<tr>
<td>1: 0-15</td>
<td>0: None</td>
<td>0: None</td>
<td>1: FVCR in/MVCR out</td>
<td></td>
</tr>
<tr>
<td>2: 0-30</td>
<td>1: 30&quot;-0-30 PSIG</td>
<td>2: 30&quot;-0-60 PSIG</td>
<td>2: MVCR in/MVCR out</td>
<td></td>
</tr>
<tr>
<td>3: 0-50</td>
<td>2: 30&quot;-0-60 PSIG</td>
<td>3: 30&quot;-0-100 PSIG</td>
<td>3: MVCR in/FVCR out</td>
<td></td>
</tr>
<tr>
<td>4: 0-100</td>
<td>3: 30&quot;-0-100 PSIG</td>
<td>4: 30&quot;-0-200 PSIG</td>
<td>4: FVCR in/FVCR out</td>
<td></td>
</tr>
<tr>
<td>5: 0-250</td>
<td>5: 0-400 PSIG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6: 0-500</td>
<td>6: 0-1000 PSIG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7: 0-150</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Related Options

<table>
<thead>
<tr>
<th>Option</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 for easy piping of vented gases to a 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 10⁻⁸ scc/sec</td>
</tr>
<tr>
<td>Special Treatment 0.01 micron filter</td>
<td>550-0003</td>
<td>Regulator preconditioned in actual gas usage (required for some fluoridated compounds)</td>
</tr>
<tr>
<td></td>
<td>580-2001</td>
<td>Attached at outlet for low particle count gases (with ¼&quot; VCR® connections only)</td>
</tr>
</tbody>
</table>
### 429 Series
**corrosion resistant, single stage, stainless steel barstock line regulator**

![Image of regulator](image)

**Description**

The 429 Series regulators are intended for primary pressure control of the highest purity gases or for applications where minor fluctuations in outlet pressure due to diminishing inlet supply pressure can be tolerated.

**Advanced Features**

- Semiconductor process gases
- Gas and liquid chromatography
- Ultra-high purity carrier gases
- Zero, span and calibration gases
- Liquefied hydrocarbon gas control
- Control of cryogenic gases

**Typical Applications**

- Butt-welded VCR® connections
- Highest leak integrity available
- 316L stainless steel barstock body
- Increased corrosion resistance
- Front and rear panel mountable
- Versatile system configuration
- 3000 PSIG inlet pressure rating
- Safe use with high pressure cylinders

---

### 400 Series Advantage

- **Metal-to-metal diaphragm seal**
  No possibility of gas contamination
- **Capsule® seat**
  Increased serviceability and life
- **316L stainless steel diaphragm**
  No inboard diffusion
- **Orientable captured vent capable**
  Safety in any installation
- **Low wetted surface area**
  Minimal purge requirements
- **Field-adjustable pressure limit**
  Safeguard downstream equipment
- **Pipe away relief valve**
  Safely vent exhaust gases
- **Delivery pressure range easily changed**
  Maximum flexibility

### Materials

- **Body**
  316L stainless steel barstock
- **Bonnet**
  Chrome-plated brass barstock
- **Seat**
  PTFE
- **Filter**
  10 micron stainless steel multi-layer 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)
- **Gauges**
  2" diameter stainless steel
- **Ports**
  ¼" VCR®
- **Helium Leak Integrity**
  1 x 10⁻⁹ scc/sec
- **Cv**
  0.1
- **Weight (429-1312)**
  2.73 lbs. (1.24 kg)
Flow Performance

Ordering Information and Configuration Options

<table>
<thead>
<tr>
<th>Series 429</th>
<th>Outlet Pressure</th>
<th>Outlet Gauge</th>
<th>Inlet Gauge</th>
<th>Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-15</td>
<td>0: None</td>
<td>0: None</td>
<td>1: FVCR in/MVCR out</td>
</tr>
<tr>
<td>2</td>
<td>0-30</td>
<td>1: 30&quot;-0-30 PSIG</td>
<td>1: 0-4000 PSIG</td>
<td>2: MVCR in/MVCR out</td>
</tr>
<tr>
<td>3</td>
<td>0-50</td>
<td>2: 30&quot;-0-60 PSIG</td>
<td>2: 0-400 PSIG</td>
<td>3: MVCR in/FVCR out</td>
</tr>
<tr>
<td>4</td>
<td>0-100</td>
<td>3: 30&quot;-0-100 PSIG</td>
<td>3: 0-1000 PSIG</td>
<td>4: FVCR in/FVCR out</td>
</tr>
<tr>
<td>5</td>
<td>0-250</td>
<td>4: 30&quot;-0-200 PSIG</td>
<td>4: 0-3000 PSIG</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0-500</td>
<td>5: 0-400 PSIG</td>
<td>5: 30&quot;-0-200 PSIG</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0-150</td>
<td>6: 0-1000 PSIG</td>
<td>6: 30&quot;-0-100 PSIG</td>
<td></td>
</tr>
</tbody>
</table>

Related Options

<table>
<thead>
<tr>
<th>Option</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 for easy piping of vented gases to a safe location in the</td>
</tr>
<tr>
<td>Helium Leak Certification</td>
<td>476-0002</td>
<td>event of diaphragm failure. Material: Nickel-plated brass</td>
</tr>
<tr>
<td>Special Treatment</td>
<td>550-0003</td>
<td>Inboard Helium leak certification to less than 1 x 10^-8 scc/sec</td>
</tr>
<tr>
<td>0.01 micron filter</td>
<td>580-2001</td>
<td>Regulator preconditioned in actual gas usage (required for some fluoridated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>compounds) Attached at outlet for low particle count gases (with ¼&quot; VCR®</td>
</tr>
<tr>
<td></td>
<td></td>
<td>connections only)</td>
</tr>
</tbody>
</table>
# Equipment

## Series 3950

demand flow regulator

### Description

This new single stage design using balanced valve stem technology is more sensitive than older two stage technologies providing better performance even with high inlet pressures. This regulator is designed for use with instruments that use a pump to draw the calibration gas into the instrument. The 3950 series demand flow regulator provides the exact amount of calibration gas the instrument pump requires. This simple to use regulator makes calibration quick and easy by eliminating the need for sample bags, flowmeters, or special operator training.

### Features

- Precise delivery of calibration gas required by instrument pump.
- New single stage balanced valve stem technology.
- Simple easy to use operation.
- Various cylinder connections available: C-10, CGA 600, other CGAs.
- 40 micron inlet filter.

### Materials

<table>
<thead>
<tr>
<th>3951</th>
<th>3952</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body</strong></td>
<td><strong>Body</strong></td>
</tr>
<tr>
<td>clear anodized aluminum</td>
<td>clear anodized aluminum</td>
</tr>
<tr>
<td><strong>Bonnet</strong></td>
<td><strong>Bonnet</strong></td>
</tr>
<tr>
<td>clear anodized aluminum</td>
<td>clear anodized aluminum</td>
</tr>
<tr>
<td><strong>Diaphragm</strong></td>
<td><strong>Diaphragm</strong></td>
</tr>
<tr>
<td>Buna-N</td>
<td>Viton®</td>
</tr>
<tr>
<td><strong>Main valve seat</strong></td>
<td><strong>Main valve seat</strong></td>
</tr>
<tr>
<td>Viton® and Teflon®</td>
<td>Viton® and Teflon®</td>
</tr>
<tr>
<td><strong>Inlet Pressure gauge</strong></td>
<td><strong>Inlet Pressure gauge</strong></td>
</tr>
<tr>
<td>stainless steel case with brass socket</td>
<td>stainless steel case with stainless steel socket</td>
</tr>
</tbody>
</table>

### Specifications

<table>
<thead>
<tr>
<th>Outlet hose barb for 3/16&quot; ID hose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flow</strong></td>
</tr>
<tr>
<td>0-3 slpm @ 3&quot; of H2O vacuum</td>
</tr>
<tr>
<td><strong>Inlet pressure gauge</strong></td>
</tr>
<tr>
<td>0-3000 psig with GCA connection</td>
</tr>
<tr>
<td>0-1200 psig with C10 connection</td>
</tr>
</tbody>
</table>

### Ordering Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3951-C10</td>
<td>Demand Flow Regulator with C-10 inlet connection</td>
</tr>
<tr>
<td>3951-600</td>
<td>Demand Flow Regulator with CGA 600 inlet connection</td>
</tr>
<tr>
<td>3951-CGA</td>
<td>Demand Flow Regulator with selected CGA connection</td>
</tr>
<tr>
<td>3952-C10</td>
<td>Demand Flow Regulator with C-10 inlet connection</td>
</tr>
<tr>
<td>3952-CGA</td>
<td>Demand Flow Regulator with selected CGA connection</td>
</tr>
</tbody>
</table>

www.purityplusgas.com
### Description
The 3980 series provides the control of the single fixed flow regulators with the advantage of being able to change flow rates as required for different applications. This regulator eliminates the need to have multiple regulators on-site. Commonly called the “click” regulator it has 12 flow positions, OFF, 0.3, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 5.0, 6.0, 7.0, and 8.0 slpm. There are models suitable for use with non-corrosive gases and mildly corrosive gases.

### Features
- 12 fixed flow settings.
- 0-3000 psig cylinder pressure gauge.
- Max. inlet pressure 3000 psig.
- Available with standard C-10 (5/8”-18 UNF) or a standard CGA cylinder connection.
- 3/16” hose barb outlet.
- 40 micron inlet filter.

### Materials

<table>
<thead>
<tr>
<th>3981</th>
<th>3982</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body</strong></td>
<td>clear anodized aluminum</td>
</tr>
<tr>
<td><strong>Piston</strong></td>
<td>brass</td>
</tr>
<tr>
<td><strong>Orifice Plate</strong></td>
<td>ceramic</td>
</tr>
<tr>
<td><strong>Main valve seat</strong></td>
<td>Teflon®</td>
</tr>
<tr>
<td><strong>Piston Seals</strong></td>
<td>Viton®</td>
</tr>
<tr>
<td><strong>Pressure gauges</strong></td>
<td>SS case with brass socket</td>
</tr>
</tbody>
</table>

### Ordering Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3981</td>
<td>non-corrosive gas regulator with C-10 connection</td>
</tr>
<tr>
<td>3981-CGA*</td>
<td>non-corrosive gas regulator with standard CGA connection</td>
</tr>
<tr>
<td>3982</td>
<td>corrosive gas regulator with C-10 connection</td>
</tr>
<tr>
<td>3982-CGA*</td>
<td>corrosive gas regulator with standard CGA connection</td>
</tr>
</tbody>
</table>

*Specify CGA connection when ordering.