Brass High-Purity Two-Stage Models

Description: This series of two-stage, high-purity regulators is designed for non-corrosive analytical and process applications requiring precise, stable, delivery pressure control. The two-stage design yields a delivery pressure of less than 0.02/100 psi inlet change.

These regulators come with a CGA nipple that has a special high-purity, non-lubricated check valve incorporated into nose and prevents air and contaminants from entering the gas stream during cylinder change out. This creates consistencies in processes and extends column life in GC applications. This regulator also has both a front and rear panel mount bonnet to allow for easy panel mounting.

Convoluted stainless steel diaphragms with metal to metal seals provide excellent regulating characteristics and allow for internal vacuum purging. The metal-to-metal diaphragm seal prevents contamination by eliminating the need for a soft seal and provides a leak-rate design of less than $2 \times 10^{-8}$ cc/s helium. This minimizes cleanup time in vacuum purging and yields lower residual contaminant levels.

A diaphragm packless outlet valve with a $\frac{1}{4}$" compression fitting is provided for flow control and to maintain system purity. Captured bonnet ports with optional vent adaptors are standard on both stages and allow for the venting of hazardous gases in the event of diaphragm failure. These regulators are ultrasonic ally cleaned for the most demanding high-purity service.

### Design Features
- **Encapsulated Filter Seat Assy** for added gas stream purity and extended service life.
- **Convoluted Stainless Steel Diaphragms** provide superior leak integrity without contamination from a non-metallic liner or seal.
- **Bonnet Vent Ports (with optional bonnet vent adaptors)** allow venting of hazardous gases in the event of diaphragm failure.
- **Metal to Metal Seal for High Purity**
  - **Standard Threaded Bonnet (with optional collar-mount nuts)** for easy panel mounting.
  - **Diaphragm Packless Valve (with $\frac{1}{4}$" Compression fitting)** promotes system purity.
- **Six Outlet Pressure Ranges** provide application pressure compatibility.
- **Panel Mount Bonnets** front and rear.

### Specifications
- **Maximum Rated Inlet Pressure**: 3,500 psig
- **Outlet Pressure Ranges**: 0-25, 0-50, 0-100, 0-250, 0-500 psig
- **Flow Capacity** $C_v = 0.1$
- **Ambient Operating Temperature**: -40° F to +165° F
- **Designed Leak Rate**: $2 \times 10^{-6}$ ccs (helium)
- **Weight**: 5.2 lbs
- **Ports (5)**: $\frac{1}{4}$" FNPT
- **Inlet**: $\frac{1}{4}$" FNPT
- **Outlet**: $\frac{1}{4}$" Compression
- **Decay Inlet Characteristic**: 0.02/100 psi

### Materials
- **Body**: Nickel-Plated Brass
- **Bonnet**: Nickel-Plated Brass
- **Seat**: PTFE
- **Diaphragm**: 316 Stainless Steel
- **Gauges**: 2½" Nickel-Plated Brass
- **Filter**: 316 Stainless Steel
- **Outlet Valve**: Nickel-Plated Brass
- **Trim**: Nickel-Plated Brass

### Ordering Information

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Material</th>
<th>Max Inlet Pressure (psig)</th>
<th>Max Outlet Pressure (psig)</th>
<th>Capacity (scfh @ Max Del. Pressure)</th>
<th>Inlet Gauge Range (psig)</th>
<th>Delivery Gauge Range (psig)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y12-N245A(CGA)</td>
<td>Brass</td>
<td>3,500</td>
<td>25</td>
<td>190</td>
<td>0-4,000</td>
<td>30° Hg-0-30</td>
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<tr>
<td>Y12-N245B(CGA)</td>
<td>Brass</td>
<td>3,500</td>
<td>50</td>
<td>270</td>
<td>0-4,000</td>
<td>0-60</td>
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<tr>
<td>Y12-N245C(CGA)</td>
<td>Brass</td>
<td>3,500</td>
<td>100</td>
<td>380</td>
<td>0-4,000</td>
<td>0-200</td>
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<td>Y12-N245D(CGA)</td>
<td>Brass</td>
<td>3,500</td>
<td>150</td>
<td>525</td>
<td>0-4,000</td>
<td>0-200</td>
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<td>Y12-N245E(CGA)</td>
<td>Brass</td>
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<td>250</td>
<td>850</td>
<td>0-4,000</td>
<td>0-400</td>
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<tr>
<td>Y12-N245F(CGA)</td>
<td>Brass</td>
<td>3,500</td>
<td>500</td>
<td>1000</td>
<td>0-4,000</td>
<td>0-1,000</td>
</tr>
</tbody>
</table>

### Available Options

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y99-CHROMNUT</td>
<td>Panel Mounting Nut</td>
</tr>
<tr>
<td>Y99-BONNETADP</td>
<td>Bonnet Vent Adaptor</td>
</tr>
<tr>
<td>Y99-VCR</td>
<td>$\frac{1}{4}$&quot; VCR connection on Inlet/Outlet (VCR x $\frac{1}{4}$&quot; MNPT)</td>
</tr>
<tr>
<td>Y15-QMB1</td>
<td>Quick Mounting Option for 1 Cylinder</td>
</tr>
<tr>
<td>Y15-QMB2</td>
<td>Quick Mounting Option for 2 Cylinders</td>
</tr>
</tbody>
</table>
FLOW CHART # 9
2000 PSI IN  1000 PSI IN  250 PSI IN
CV=.10