Series 150
150 MM, Two Tube Gas Blenders

Series 150 Two Tube Gas Blenders provide a simplified method of metering and blending two different gases into a homogeneous, two component mixture. The blender consists of two Series 150 Flowmeter Tubes, each with separate inlet fittings and metering valves, which control the flow rate of each gas. The ratio of the flow rates of the two gases determines the ratio of the gas mixture. The two gases flow upward through the metering tubes, then down through the mixing tube (located between the two metering tubes) and exiting at the bottom.

### Standard Features
- Two Floats per Tube (Standard) expand range of blender.
- Ribbed Flow Tubes stabilize floats and improve accuracy and readability.
- Metal Mixing Tube ensures homogeneous mixing while providing a common outlet port for the gas mixture.
- Wide Tube Selection allows gases to be blended in a variety of ratios.
- Linear Scale (10–150 mm) allows each blender to be used with a variety of gases via calibration charts.
- Threaded Fittings with Locking Nuts permit front panel mounting.
- Unique Valve Design allows bubble-tight shutoff.

### Optional Features
- Baseplate with Leveling Screws permits bench use.
- Inlet Filters trap foreign matter, extend flowmeter life and reduce maintenance.
- High Accuracy Valves with Non-Rotating Stems (NRS) allow very fine adjustments to flow settings (see Table I).
- Individual Calibration provides ±1% of full scale accuracy (±2% on tube No. 1).

### Specifications
- Maximum Operating Pressure and Temperature: 200 psig at 250°F
- Minimum Operating Temperature: 32°F
- Accuracy: ±5% of full scale from 10% to 100% of range (each tube). Optional ±1% of full scale calibration is available.
- Repeatability:
  - Within 0.5% of full scale (each tube)
- Tube Graduations: Millimeters (0–150)
- Scale Length: 150 mm
- Inlet and Outlet Connections: 1/8" NPT female (2 inlets, 1 outlet)
- Approximate Weight: 2 lbs

### Materials of Construction
- Tubes: Borosilicate Glass with float stops of Teflon®
- Mixing Tube: Type 316 Stainless Steel
- Floats: Borosilicate Glass and Type 316 Stainless Steel are standard. Other float materials are available—see Tube Selection Table (pages 116 & 117) and Optional Equipment
- End Blocks: See Table I
- Inlet/Outlet Adaptors: See Table I
- Side Plates: Aluminum
- Back Plate: White Plastic
- Front Plate: Clear Plastic
- Seals and Packing: Viton® (other materials available on special order)
- Valves:
  - FM4621: Chrome-Plated Brass
  - All Others: Type 316 Stainless Steel

### Table I

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Configuration</th>
<th>End Blocks Material</th>
<th>Inlet/Outlet Adaptor Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM-4620-( )</td>
<td>With Standard Metering Valves</td>
<td>Aluminum</td>
<td>Aluminum</td>
</tr>
<tr>
<td>FM-4621-( )</td>
<td>With High Accuracy (NRS) Metering Valves</td>
<td>Aluminum</td>
<td>Aluminum</td>
</tr>
</tbody>
</table>

Where “[ ]” is indicated above, complete the part number by inserting the required tube numbers in the order in which they are to be installed. Select tubes from Tube Selection Table on pages 116 & 117. Example: FM4620-12, tube no. 1 will be on the left and tube no. 2 on the right. Order by complete part number.

### Optional Equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseplate</td>
<td>FM4702</td>
</tr>
<tr>
<td>Inlet Filter, 2 micron (2 required)</td>
<td>FM4741</td>
</tr>
<tr>
<td>Aluminum</td>
<td>FM4746</td>
</tr>
<tr>
<td>Type 316 Stainless Steel</td>
<td></td>
</tr>
<tr>
<td>Floats* (see Optional Equipment Table)</td>
<td></td>
</tr>
<tr>
<td>±1% Full Scale Calibration** (one tube, both floats)</td>
<td>CC100</td>
</tr>
</tbody>
</table>

* Tubes are supplied standard with borosilicate glass and stainless steel floats. As an option, the glass float may be replaced by sapphire; the stainless steel float may be replaced by either carboloy or tantalum.

** Specify gas, temperature and pressure when ordering a ±1% calibration. A calibration should be ordered for each of the two tubes. Please note the accuracy for tube No. 1 is ±2%. 