

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 $\pm 1\%$ of full scale accuracy ($\pm 2\%$ on tube No. 1).

Specifications

Maximum Operating Pressure and Temperature: 200 psig at 250°F
 Minimum Operating Temperature: 32°F
 Accuracy: $\pm 5\%$ of full scale from 10% to 100% of range (each tube). Optional $\pm 1\%$ 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



Two Tube Gas Blender with Optional Baseplate

Table I

Part No.	Configuration	End Blocks Material	Inlet/Outlet Adaptor Material
FM-4620-()	With Standard Metering Valves	Aluminum	Aluminum
FM-4621-()	With High Accuracy (NRS) Metering Valves	Aluminum	Aluminum
FM-4630-()	With Standard Metering Valves	316 Stn. Stl.	316 Stn. Stl.
FM-4631-()	With High Accuracy (NRS) Metering Valves	316 Stn. Stl.	316 Stn. Stl.

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

Equipment	Part No.
Baseplate	FM4702
Inlet Filter, 2 micron (2 required)	
Aluminum	FM4741
Type 316 Stainless Steel	FM4746
Floats* (see Optional Equipment Table)	See page 115
$\pm 1\%$ Full Scale Calibration** (one tube, both floats)	CC100

* 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 carbonyl or tantalum.

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