

# Model A16 Gas Blender

- ✦ Portable
- ✦ Mass flow controller technology
- ✦ Blends ppb calibration standards
- ✦ Highly accurate and repeatable mixing
- ✦ Easy to read/use display and control modules



Model A16-0002 Gas Blender  
with RS-232 Input/Output

The GOW-MAC<sup>®</sup> Model A16-0001 blender is designed for generation of non-corrosive calibration standards for gas analyzers and chromatographs, including N<sub>2</sub>O, atmospheric gases, and hydrocarbons. The highly repeatable mixing is accomplished by two mass flow controllers (MFC) that allow a maximum dilution ratio of 2000:1.

Features of the Model A16-0001 make it ideally suited for blending part per billion (ppb) standards for some of the most sensitive detectors on the market. It is built for accuracy and repeatability.

- ✦ Electro-polished wetted surfaces
- ✦ High purity diaphragm shut-off valves
- ✦ Face seal-type critical tubing connections
- ✦ Zero dead volume

## Specifications

### Performance

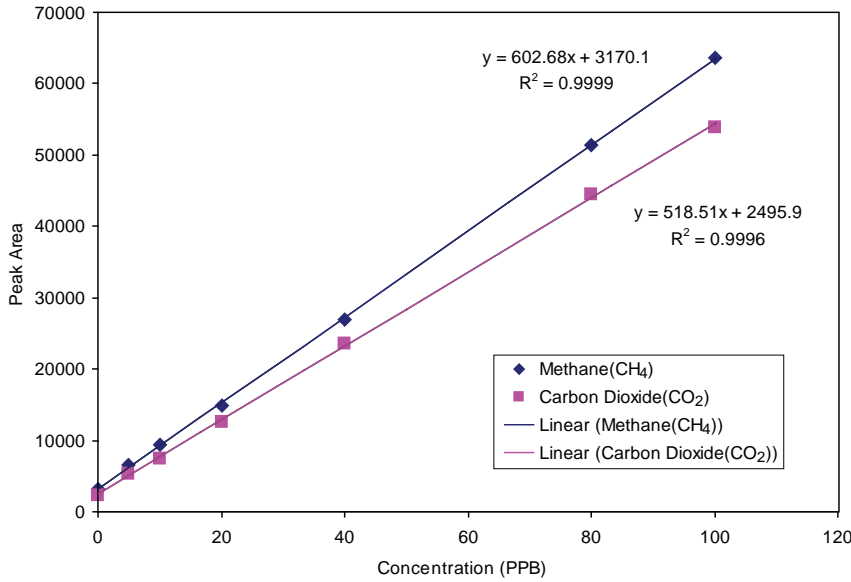
Accuracy	
Concentration:	± 2% of set point
Flow:	± 1% of full scale of each MFC
Sample channel:	± 0.5 ccpm He
Dilution channel:	± 20 ccpm He
Repeatability:	< 0.2% Rd
Gas Supply Pressure (In)	
Minimum:	5 psig (0.4 barg)
Recommended:	65 psig (4.5 barg)
Maximum:	145 psig (10 barg)
Gas Delivery Pressure (Out)	
Minimum:	0 psig (0 barg)
Maximum:	80% of gas supply pressure
Operating Temperature	32 °F to 122 °F (0 °C to 50 °C)
Temperature Sensitivity:	zero: < 0.1 % FS/°C spam: < 0.1 % RD/°C
Warm Up Time:	30 minutes for best accuracy

Specifications and features will vary depending upon system configuration and are subject to change without notice. The above specifications are established during design, but are not to be construed as test criteria for every product.

### Operation

Flow Ranges	Sample Gas: 1 to 50 sccm Dilution Gas: 40 to 2000 sccm
Displays for Sample and Dilution Flow Control	1.8" color display 4 push buttons for menu operation
Gas Connections:	1/4-inch VCR face seal
Internal particle filter:	2 micron
Manual Shut-Off Valves:	Diaphragm seal, round handle w/ open and closed indication
Wetted Materials:	316L stainless steel Nickel VCR <sup>®</sup> gaskets Viton <sup>®</sup> MFC seals and plunger
User Interface	Model A16-0001: manual control on readout/control modules Model A16-0002: RS-232 In/Out and manual control
Power, display:	External 24 V power supply Input voltage range of 100-200 VAC, 50-60 Hz (UL listed)
Dimensions:	11" W x 8" H x 11" D (28 cm x 21 cm x 28 cm)
Weight:	11.0 lb (5.0 kg)

**Linearity Test (Gas Conc. between 0 and 100 PPB)**



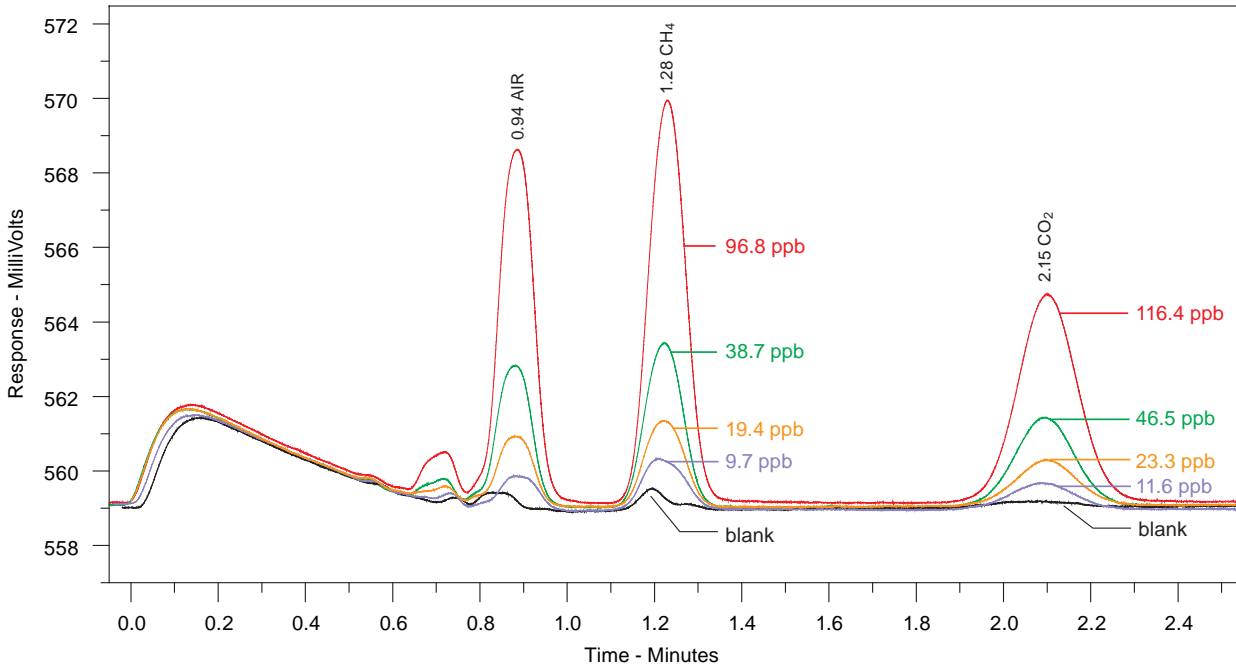
**Instruments used:**

GOW-MAC Series 590 System 3 GC w/  
Discharge Ionization (DID)  
Model A16-0001 Gas Blender

**Conditions:**

Column Temp: 58 °C  
Detector Temp: 44 °C  
Sample Flow Rate (all): 40 mL/min.  
Carrier Gas: 30 mL/min. helium (He)

Detection Limit (3σ):	
Methane (CH <sub>4</sub> )	0.4 ppb
Carbon Dioxide (CO <sub>2</sub> )	1.5 ppb



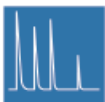
The A16-0001 and A16-0002 blenders are compatible with the following GOW-MAC products:

- + All Gas Chromatographs
- + Series 2300 Total Hydrocarbon Analyzer
- + All Series 200 Beverage-grade CO<sub>2</sub> Analyzers
- + Series 1200, 1300, and 1400 Trace Gas Analyzers

**Ordering Information**

Model A16-0001 Standard

Model A16-0002 w/ RS-232 digital input/output



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