

**MODULAR OXYGEN MONITOR (MOM™ 5001)**  
&  
**GAS MIXING SYSTEM (GMS 5002)**

**GENERAL DESCRIPTION**

The Billups-Rothenberg, Inc. (BRI) family of Modular Oxygen Monitors (MOM™, GMS) is a range of factory calibrated oxygen sensors which measure ambient pO<sub>2</sub> levels using the principle of fluorescence quenching by oxygen. BRI's sensors benefit from low power operation, traditionally associated with electrochemical sensors, while providing a much longer lifetime due to the non-depleting sensing principle.

All O<sub>2</sub> sensors are oxygen pressure and temperature compensated, enabling accurate operation over a wide environmental range without the need for additional calibration. Unlike other oxygen sensor technologies, the GMS and MOM™ line of oxygen sensing devices, are very stable and do not contain lead or any other hazardous materials.

**ENVIRONMENTAL SPECIFICATION**

Operating Temperature	-30°C to +60°C
Storage Temperature	-30°C to +60°C
Humidity	0-99% Rh (non-condensing)

**PERFORMANCE SPECIFICATION\***

Oxygen Measuring Range	0-25% (O <sub>2</sub> % version)
Response Time	T <sub>90</sub> <30s (Typical)
Accuracy	Better than 2%FS
Resolution	0.01% / 0.1mbar
Lifetime	>5 years
Pressure Measurement	Accuracy +/- 5 mbar

**\*At ambient conditions. All performance measurements are at STP unless otherwise stated. Following extreme temperature fluctuations, re-calibration may be required.**

**BENEITS**

- Rapid & inexpensive mixing of gases
- Small & compact
- Low cost
- Reliable
- Portable
- Measures O<sub>2</sub>% & barometric pressure
- High accuracy
- Low power usage
- Maintenance free
- Long life
- Contains no hazardous materials
- Factory Calibrated (20.85% @ STP)
- Self-Calibrating
- One year warranty

**Operation**

Attach tygon tubing from Dual Flow Meter (DFM3002) to inlet port of Gas Mixing System (GMS 5002). Using power button, turn on GMS 5002. For calibration allow 30 seconds for the device to measure barometric pressure. Open gas tanks and adjust flow rates to obtain the percentage of oxygen required. Example, to obtain a mixture of 5% O<sub>2</sub>, 5% CO<sub>2</sub> and 90% N<sub>2</sub>, adjust flow rate to 47.5 LPM from a gas bottle containing 95% N<sub>2</sub>/5% CO<sub>2</sub>, and adjust flow rate of second bottle containing 95% O<sub>2</sub> and 5% CO<sub>2</sub> to 2.5 LPM. Flush 75-100 liters of the mixing gas through Modular Incubator Chamber (i.e. 50 LPM for 2 minutes).

(At sea level) Depending on barometric pressure (altitude) GMS 5002 should display oxygen percentage at approximately 20.9%.