MOXUS Modular Metabolic System

Precision Performance in Exercise & Resting Metabolic Testing

Accurate, reliable data every time

Modular system excellent for teaching

GOLD STANDARD ANALYZERS FOR OVER 30 YEARS, WORLDWIDE

- The most stable and repeatable respirometry components:

  S-3A/I Oxygen Analyzer; **± 0.01% Accuracy**

  CD-3A Carbon Dioxide Analyzer; **± 0.02% Accuracy**

  Breath Volume Measurement System; **< 1% Accuracy Typical**

- Breath-by-breath measurements using **ultra-fast 100-millisecond** response time analyzers.
- 4.2 Liter Active Mixing Chamber for accuracy.
- Dual-Stage Nafion Dryer for near-ideal water vapor removal.
- 2 Channels of user-defined analog inputs.
- Allows easy use with Douglas Bags for system validation and analysis.
- Canopy System Option available for Resting Energy Testing.
- Windows® software featuring useful features for data collection, report generation, and much more. Export to Excel for further analysis of data.
- Very rugged, heavy-duty cart includes a supplies drawer and an articulating arm.
- Worldwide reputation for excellence in quality and service.

AEI TECHNOLOGIES
Bastrop, TX USA
800-793-7751
sales@aeitechnologies.com
www.aeitechnologies.com

MOXUS Modular Metabolic System

Standard Features:

- S-3A/I Oxygen Analyzer
- CD-3A Carbon Dioxide Analyzer
- Breath Volume Measurement System
- Pump and Flow Controller
- Windows Software and Interface Package
- 2 Channels for external analog instruments
- RS-232 Connection for Treadmills and Ergometers
- Heart Rate Interface with Polar monitor
- 4.2 Liter Active Mixing Chamber
- Efficient Nafion-based desiccant box with molecular sieve & silica gel indicator
- Two-Way Breathing Valve and Tubing Connections with Headgear and Mouthpieces
- Front panel Calibration Port for easier calibration
- Heavy-Duty MOXUS Cart with supplies drawer and articulating support arm
- Laptop Computer and Color Ink Jet Printer

Optional Features:

- System setup, calibration, and training at your facility
- Canopy System (as shown on right)
- Animal Respirometry System
- Desktop Computer; 2GHz or greater with 17” Flatpanel Monitor (as shown on right)
- MOXUS Software and Interface Box available for users with their own analyzers
- System minus computer and/or cart – lower cost and lower shipping charges

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Specifications for S-3A/I Oxygen Analyzer:

Speed of Response: To 90% of final value in less than 100 milliseconds for a step change in oxygen concentration; achieved without electronic anticipation circuitry. The lag or transport time (time needed for sample to travel from source to sensor), and possible mixing of sample gas front, will be greater with increase in sample line length and diameter, and with decrease in flow rate.

Accuracy: ±0.01% O_2 on the percent oxygen scale, within working range

Working Range: Calibration gas value ±5% of full scale value

Stability: ±0.01% oxygen in 24 hours with constant temperature and pressure

Sensitivity: ±0.001% oxygen

Resolution: Digital Display: ±0.01 on each scale

Analog Outputs: Buffered output for 0-100% $O_{2;}$

Ambient Temperature: 0-40°C

Sensor Tubing Connections: (IN/OUT) *1/8*|0.071 inch o.d. stainless steel

Sample Flow Rate: 10-300 ml/min, 250 ml/min recommended for most applications

Specifications for CD-3A Carbon Dioxide Analyzer:

Speed of Response: To 90% of final value in less than 100 milliseconds for a step change in carbon dioxide concentration; the lag or transport time (time needed for sample to travel from source to sensor), and possible mixing of sample gas front, will be greater with increase in sample line length and diameter, and with decrease in flow rate.

Accuracy: ±0.02% carbon dioxide or 1% of the reading, whichever is larger

Sensitivity: ±0.01% carbon dioxide

Resolution: Digital Display: ±0.01% carbon dioxide

Range: 0-15% carbon dioxide

Display: Continuous display of CO2 concentration or End Tidal for each breath

Analog Output: Buffered 0 to 15% CO2

Sample Flow Rate: 10-1000 ml/min

Stability: ±0.02% carbon dioxide at 5% in 8 hours maximum drift

Sensor Tubing Connections: (IN/OUT) 1/8 / 1/8 inch o.d. stainless steel

MOXUS Modular Metabolic System Testimonial

October 24, 2000

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Mr. Henry Ginsberg
AEI Technologies
300 William Pitt Way
Pittsburgh, Pennsylvania 15238

Dear Mr. H. Ginsberg and J. Veltre:

I am writing this letter to let you know that since purchasing your Moxus metabolic cart 8 months ago we have been extremely happy with the performance of this product. Our decision to purchase and AEI system was based on my and my co-worker's past experience with a number of other metabolic carts including the Physiodyne Max-1 cart, Vacumed systems, and various Sensormedics systems. I can honestly say that based on my past experience and my current experience, your system has outperfomed all of the aforementioned systems in the areas of both reproducibility and accuracy (when compared with Douglas bags) of ventilation, V02, and VCO2.

Interestingly, in a recent comparison (using 6 subjects) of both the peak and steady-state VO2, VCO2, and ventilation values and we obtained from a set of AEI's old (both more than 15 years) oxygen and carbon dioxide analyzers the values were within 3±1% of that obtained with the new Moxus cart. This level of stability is no doubt enviable amongst your competitors.

Moreover, I would like to add that the level of service and courtesy that we have received from your company has been over and above that received from both Physiodyne and Sensormedics. I would go so far as to say that your professional and accommodating attitude eclipses that of your competitors! In short, please feel free to use me as a reference for people who may be considering purchasing your system. I would be happy to tell them what a tremendous and highly reliable product you have and what great service you offer.

I wish you continued success at AEI; however, I suspect that with continued service such as you now offer along with solid products I suspect that success will not be a problem.

Sincerely,

Stuart M. Phillips, Ph.D.

Assistant Professor, McMaster University

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