



8 cell liquid system and 4 cell solid system

## Features:

- ❖ 8 bottle modules
- ❖ Magnetic stirrer bases & bars
- ❖ Up to 3 modules run on one interface module.
- ❖ Each module may be used in a different mode simultaneously.
- ❖ Optional thermostatically controlled heater/cooler units
- ❖ Interfaces to your computer



Typical Applications:  
(i) ASP process control  
(ii) Digester input control

## Benefits:

- ❖ Aerobic/Anaerobic, liq/solid phase tests in the same unit
- ❖ Not O<sub>2</sub> limiting enabling long term measurement
- ❖ Measures health of existing sludge cultures
- ❖ Assesses toxic affect of single & sequential discharges
- ❖ Predicts gas/energy production
- ❖ Determines composting completion
- ❖ Assesses success of land remediation

## Applications:

- ❖ Municipal & Industrial ASP monitoring & control
- ❖ Tanker discharge monitoring
- ❖ Digester management control
- ❖ Composting control
- ❖ Land remediation control
- ❖ Reaction kinetics study

**RespSys: AER 200** is a multi-bottle aerobic/anaerobic respirometer for the laboratory measurement of oxygen consumption rate in aerobic cultures or gas production rate in anaerobic environments. Variants are available for both liquid and solid phase sample assessment. The principal of operation is very simple, i.e. counting numbers of gas bubbles, the volume of which has already been calibrated under standard conditions. This technique is equally applicable to aerobic gas utilisation or anaerobic gas generation. Bubble counting is achieved by detecting the interruption of an IR light beam by a photosensitive cell. Each respirometer system comprises four elements: reactor vessels +stirrers and temperature control, Bubble counting module, interface module and computer. 3 bottle sizes and two flow cell sizes are available, and either heating only or heating+cooling systems may be provided. Windows Software is supplied for deployment on your computer, and data files may be manipulated in excel if required. Graphs, tables & reports may be printed out directly. The respirogram or gas production may be viewed in real time on screen. Up to three 8 bottle bases may be deployed at the same time with just one interface unit.



## System Specification

<b>AER – 200:</b>	
<b>Operational Principle:</b>	Gas utilisation or production measurement using gas bubble counting techniques.
<b>Equipment items:</b>	8 cell flow measuring module Interface module Computer/keyboard/monitor – (not provided) MS8-300 Magnetic stirring base Water Bath + Cover Temperature control module Reaction vessel size: 125ml – 1l Electrical requirement: 110-240VAC 50-60 Hz Temperature of operation: 5-70 °C Read out interval: 1-720 mins
<b>Computer System:</b>	Pentium 100MHz CPU with Windows XP or below. 500Mb hard disc drive minimum SVGA colour monitor CD drive
<b>Data Format:</b>	Cumulative gas flow in ml or mg Gas flow rate in ml/hr or mg/hr Real time charts and tables User selectable channels for display in one chart/table. ASCII format (filename.csv) for direct import into excel and equivalent.

## System Performance

	Aerobic Cell	Anaerobic Cell
<b>Min flow detection</b>	Normal cell 0.078 mg Flow cell 0.15 mg	0.06ml Hi 0.12 ml
<b>Max flow capacity</b>	Normal cell 850mg/hr Flow Cell 1600mg/hr	650ml/hr Hi 1250ml/hr
<b>Calibration precision</b>	<1% Cv	< 2% Cv
<b>Measurement precision</b>	<3% Cv	<3% Cv

## Ordering Information

When placing an order it is important to indicate the following requirements to our sales staff:

1. Is the application for aerobic, anaerobic or solid phase application?
2. What reactor sizes are required (std. 500ml), 125ml, 250ml, 1l, also available
3. Is a water bath required?
4. Is heating only or heating and cooling required?
5. Is the standard flow cell or anaerobic flow cell required (540 and 1500 ml/hr max respectively)
6. How many base units are required?
7. What distance is required between flow cells and interface box?

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