



Biogas

Anaerobic Digestion

Waste Water Treatment

Sludge Digestion

## Automated Extraction Monitoring System

The AEMS utilises robust, reliable, field-proven technology for continuous monitoring of biogas in a range of applications.

### Benefits

- Remote monitoring
- Verify gas quality
- Easy to service
- Interface with remote data acquisition software
- Remote maintenance of system
- Assists process control
- Accurate data stored
- On site installation and training
- Helps maximise revenue streams for energy generation

### Features

- CH<sub>4</sub>, CO<sub>2</sub>, O<sub>2</sub> and H<sub>2</sub>S measurement
- 4-20mA output option
- Auto-calibration and manual calibration check options
- Wireless communication
- Gas conditioning
- Accepts inputs from other electronic devices
- Clean air purge and zero
- Multi point sampling option
- Range of comms options



### Applications

- Biogas plants
- Anaerobic digestion
- Waste water treatment plants
- Farm waste AD
- Food waste AD



## Biogas Check

The Biogas Check offers accurate gas analysis in a portable instrument. For use in Biogas applications, user-friendly and robust enabling technicians to make spot-checks of gas quality.

### GENERAL SPECIFICATION

No of gas monitoring points	1 to 4
Gases to be monitored	CH <sub>4</sub> , CO <sub>2</sub> , O <sub>2</sub> , H <sub>2</sub> S (Optional), CO (optional)
Optional input and output channels	Temperature probe Up to eight 4-20mA inputs Up to eight 4-20mA outputs Up to four Thermocouple inputs Up to four RTD inputs
Readings Interval	From every 2 minutes for storing. From every 10 seconds for monitoring - this allows 4-20mA outputs to be updated frequently
Automatic downloading of readings via GPRS Modem, Landline Modem, or Ethernet to Internet	
Power Supply	110 or 230 VAC 50/60Hz
Operating Temperature Range	-10 to +40°C (FSU chamber has heater and optional air conditioning)

### FAU SPECIFICATION

Analyser Instrument	Based on GA2000 Analyser. It can be easily detached to be sent for routine service and calibration, and replaced temporarily by another instrument.
Air Purge and Zero	Allows purging of electrochemical cells, span calibration of O <sub>2</sub> , and zero calibration of CH <sub>4</sub> , H <sub>2</sub> S and CO.
Optional Auto Calibration	Calibrated gas cylinder, typically mix of 60% CH <sub>4</sub> , 40% CO <sub>2</sub> attached to system. Programmable calibration frequency. Allows span calibration of CH <sub>4</sub> and CO <sub>2</sub> , and zero calibration of O <sub>2</sub> .
Pressure Switch	Monitors calibration gas cylinder to warn if a replacement is needed.

### ACCURACY OF MAIN GAS CHANNELS

	Range	Accuracy without autocal (% gas)		
		0 - 5%	5 - 15%	15% - FS
CH <sub>4</sub>	0 - 70%	0.5%	1%	3%
CO <sub>2</sub>	0 - 40%	0.5%	1%	3%
O <sub>2</sub>	0- 25%	1%	1%	1%

### ACCURACY OF OPTIONAL GAS CELLS

H <sub>2</sub> S 500ppm or 5000ppm	10% of FS
CO 500ppm	10% of FS

Accuracy can be improved through use of auto-calibration. Please contact Geotech for details.



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