



Landfill

Gas Extraction

Pre-engine/flare monitoring

Automated Extraction Monitoring System

The AEMS is designed to offer continuous analysis of landfill gas on gas extraction systems.
Operates remotely with secure data reporting.

Benefits

- Remote monitoring
- Field-proven technology
- Easy to service
- Secure interface with remote data acquisition software
- Remote system diagnostics and maintenance
- Provide signals for engine/flare control
- Onsite installation and training
- Collect data from other onsite devices e.g. flow meter
- Helps maximise site efficiency and revenue

Features

- CH₄, CO₂, O₂ measurement
- H₂S and CO measurement options
- 4-20mA output
- Auto-calibration option - increases accuracy, validates results
- Wireless communication
- Fully auditable data trail
- Analysis & reporting of all data collected on site
- Range of comms options
- Mutli point sampling option
- Clean air purge and zero
- Gas conditioning
- Connect to other onsite devices



Applications

- Landfill gas analysis
- Engine control
- Remote monitoring and data acquisition



GEM2000 Plus

The GEM2000 Plus provide accurate gas quality measurement and extraction flow monitoring in a portable instrument. Includes new technology to provide more stable CO readings. Certified to relevant standards for ATEX and MCERTS.

GENERAL SPECIFICATION

No of gas monitoring points	1 to 4
Gases to be monitored	CH ₄ , CO ₂ , O ₂ , H ₂ 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 ₂ , and zero calibration of CH ₄ , H ₂ S and CO.
Optional Auto Calibration	Calibrated gas cylinder, typically mix of 60% CH ₄ , 40% CO ₂ attached to system. Programmable calibration frequency. Allows span calibration of CH ₄ and CO ₂ , and zero calibration of O ₂ .
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 ₄	0 - 70%	0.5%	1%	3%
CO ₂	0 - 40%	0.5%	1%	3%
O ₂	0- 25%	1%	1%	1%

ACCURACY OF OPTIONAL GAS CELLS

H ₂ 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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