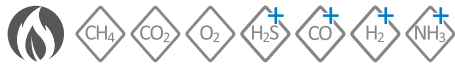


BIOGAS 5000



Geotech

PORTABLE GAS ANALYSER | ANAEROBIC DIGESTION

Easy to use, calibrate and configure and enables consistent collection of data for improved analysis and accurate reporting, whilst helping to check the digester process is running efficiently.



SECTOR



APPLICATIONS

- Farm digester gas monitoring
- Food processing biogas monitoring
- Waste water biogas monitoring
- Methane recovery

FEATURES

- Certified: ATEX, IECEx, CSA, MCERTS and UKAS calibration (ISO17025)
- Robust design for market leading reliability
- CH₄ and CO₂ accuracy ± 0.5% after calibration
- Choice of user settings and simple gas reading function
- Measures % CH₄, CO₂ and O₂
- Modular and upgradeable
- 3 year warranty
- Stores and downloads readings
- User selected languages
- Event log
- Datalogging and profiling function
- Up to 6 gases monitored

BENEFITS

- Enables consistent collection of data for improved analysis and accurate reporting
- No need for self-certification of anemometer
- Easy to use and calibrate
- User configurable operation
- Helps check digester process is running efficiently

OPTIONS (AVAILABLE AT PURCHASE OR LATER)

- H₂S to 0-5,000ppm or 0-10,000ppm
- Additional gases including H₂ and NH₃
- Gas Analyser Manager software for data download
- External flow devices: anemometer (ATEX) / Pitot tubes
- ATEX certified temperature probe

TECHNICAL SPECIFICATIONS

POWER SUPPLY				
Battery type	Rechargeable nickel metal hydride battery pack (not user replaceable)			
Battery life	Typical use 8 hours from fully charged			
Battery charger	Separate intelligent battery charger powered from mains supply (100- 240V)			
Charge time	Approximately 4 hours from complete discharge			
GAS RANGES				
Gases measured	CH ₄ and CO ₂	By dual wavelength infrared sensor with reference channel		
	O ₂	By internal electrochemical cell		
	H ₂ S/H ₂ /CO/NH ₃	By internal electrochemical cell		
Standard gas cells	Cell	Range	Typical accuracy (range : accuracy)	Typical accuracy (range : accuracy)
	CH ₄	0-100%	0-70% : ±0.5% (vol)	70-100% : ±1.5% (vol)
	CO ₂	0-100%	0-60% : ±0.5% (vol)	60-100% : ±1.5% (vol)
	O ₂	0-25%	0-25% : ±1.0% (vol)	
Optional gas cells	Cell	Range	Typical accuracy	
	H ₂ S	0-50ppm	±1.5% FS	
	H ₂ S	0-200ppm	±2.0% FS	
	H ₂ S	0-500ppm	±2.0% FS	
	H ₂ S	0-1,000ppm	±2.0% FS	
	H ₂ S	0-5,000ppm	±2.0% FS	
	H ₂ S	0-10,000ppm	±5.0% FS	
	CO	0-500ppm	±2.0% FS	
	CO	0-1,000ppm	±2.0% FS	
	CO	0-2,000ppm	±2.0% FS	
	CO (H ₂)*	0-2,000ppm	±1.0% FS	
	NH ₃	0-1,000ppm	±10.0% FS	
	H ₂	0-1,000ppm	±2.5% FS	
	Typical accuracies	All typical accuracies quoted are after calibration		
*Hydrogen compensated carbon monoxide measurement	Hydrogen cross gas effect on carbon monoxide approximately 1%. Do not use where hydrogen is in excess of 10,000 ppm.			
Response time, T90	CH ₄	≤10 seconds		
	CO ₂	≤10 seconds		
	O ₂	≤20 seconds		
	H ₂ S	≤30 seconds		
	CO	≤30 seconds		
	NH ₃	≤90 seconds		
	H ₂	<90 seconds		

PUMP

Flow	550 ml/min typically
Flow fail point	-200 mbar vacuum- user settable
Maximum vacuum restart	-250 mbar approximately with flow rate of approx 250ml/min

FACILITIES


Temperature measurement	-10°C to +75°C with optional probe
Temperature accuracy	±0.5°C with optional probe
Flow measurement	Via Pitot tube, orifice plate, or anemometer
Alarm	User selectable alarms
Communications	Via USB lead or wireless Bluetooth**
Relative pressure measurement	±250 mbar
Relative pressure accuracy	±4 mbar typically (should be zeroed before reading) to ±15 mbar max
Barometric pressure measurement	500 to 1500 mbar, ±5 mbar accuracy
Available memory	10 IDs**, 500 readings

ENVIRONMENTAL CONDITIONS

Operating temperature range	-10°C to +50°C
Atmospheric pressure range	700 to 1200 mbar
Relative humidity	0-95% non condensing
Case seal	IP65



TECHNICAL SPECIFICATIONS CONTINUED

PHYSICAL	
Weight	1.6kg
Size	L 220mm, W 155mm, D 60mm
Case material	ABS / polypropylene with rubber over-moulding
Keys	Alpha-numeric keypad with 'tactile' membrane
Display	Ultra-clear high resolution 4.3" full colour TFT
Connections	Colour coded gas inlet, outlet and pressure ports. Waterproof USB port, anemometer and charger / temperature probe connections.
Gas sample filters	External user changeable 2.0µm ptfe water traps
CERTIFICATION RATING	
ATEX MARKING	 II 2G Ex ib IIA T1 Gb (Ta = -10°C to +50°C)
MCERTS	MC/130240
ISO17025	Calibration to UKAS certificate number 4533
CSA	Ex ib IIA T1 (Ta = -10°C to +50°C) (Canada), AEx ib IIA T1 (Ta = -10°C to +50°C) (USA)
**Gas Analyser Manager software required.	
Important note: The information in this document is correct at the time of generation. We do however, reserve the right to change the specification without prior notice as a result of continuing development.	

GEM5000



Geotech

GAS EXTRACTION MONITOR | GAS EXTRACTION SITES

The GEM5000 landfill gas extraction monitor for measuring CH₄, CO₂ and O₂. It's an easy to use analyser designed to aid balancing the gas field, maximise power output and ultimately maximise revenue from CH₄ extraction.



SECTOR

 Landfill

APPLICATIONS

- Landfill gas field optimisation
- Landfill gas energy calculation
- Flare / engine output estimation

FEATURES

- Certified: ATEX, IECEx, CSA, MCERTS and UKAS calibration (ISO17025)
- Measures % CH₄, CO₂, O₂
- Records static and differential pressure
- Choice of user settings and simple gas reading function
- Calculates gas flow (m³ / h) and calorific value (KW or BTU) (external flow device and Gas Analyser Manager software required)
- CH₄ and CO₂ accuracy $\pm 0.5\%$ after calibration
- Modular and upgradeable
- 3 year warranty
- Robust design for market leading reliability
- Datalogging and profiling function
- Up to 6 gases monitored

BENEFITS

- Aids balancing of gas field
- Real time adjustments can be made
- Maximise power output from site
- Easy to read
- No need for self-certification of anemometer
- Maximise revenue from CH₄

OPTIONS (AVAILABLE AT PURCHASE OR LATER)

- H₂ compensated CO
- Choice of additional gases including H₂S to 10,000ppm
- GPS / field navigator
- Gas Analyser Manager software for data download
- External gas flow devices: anemometer (ATEX) / Pitot tubes

GEM5000

TECHNICAL SPECIFICATIONS

POWER SUPPLY				
Battery type	Rechargeable nickel metal hydride battery pack (not user replaceable)			
Battery life	Typical use 8 hours from fully charged			
Battery charger	Separate intelligent 3A battery charger powered from mains supply (100-240V)			
Charge time	Approximately 4 hours from complete discharge			
GAS RANGES				
Gases measured	CO ₂ and CH ₄	By dual wavelength infrared sensor with reference channel		
	O ₂	By internal electrochemical sensor		
	CO (H ₂ compensated), H ₂ S, NH ₃ and H ₂ (optional)	By internal electrochemical sensor		
	A full range of internal gas cells can be specified at the time of manufacture			
Standard gas cells	Cell	Range	Typical accuracy (range : accuracy)	Typical accuracy (range : accuracy)
	CH ₄	0-100%	0-70% : ±0.5% (vol)	70-100% : ±1.5% (vol)
	CO ₂	0-100%	0-60% : ±0.5% (vol)	60-100% : ±1.5% (vol)
	O ₂	0-25%	0-25% : ±1.0% (vol)	
Optional gas cells	Cell	Range	Typical accuracy	
	CO	0-500ppm	±2.0% FS	
	CO	0-1,000ppm	±2.0% FS	
	CO	0-2,000ppm	±2.0% FS	
	CO (H ₂) +	0-2,000ppm	±1.0% FS	
	H ₂ S	0-50ppm	±1.5% FS	
	H ₂ S	0-200ppm	±2.0% FS	
	H ₂ S	0-500ppm	±2.0% FS	
	H ₂ S	0-1,000ppm	±2.0% FS	
	H ₂ S	0-5,000ppm	±2.0% FS	
	H ₂ S	0-10,000ppm	±5.0% FS	
	NH ₃	0-1,000ppm	±10.0% FS	
	H ₂	0-1,000ppm	±2.5% FS	
Typical accuracies	All typical accuracies quoted are after calibration			
*Hydrogen compensated carbon monoxide measurement	Hydrogen cross gas effect on carbon monoxide approximately 1%. Do not use where hydrogen is in excess of 10,000ppm			
Response time, T90	CH ₄	≤10 seconds		
	CO ₂	≤10 seconds		
	O ₂	≤20 seconds		
	CO	≤30 seconds		
	H ₂ S	≤30 seconds		
	NH ₃	≤90 seconds		
	H ₂	<30 seconds		
PUMP				
Flow	550 ml / min typically			
Flow fail point	-200 mbar vacuum- user settable			
Maximum vacuum restart	-375 mbar approximately with flow rate of approx 80ml / min			

GEM5000

TECHNICAL SPECIFICATIONS CONTINUED

FACILITIES	
Temperature measurement	-10°C to +75°C with optional probe
Temperature accuracy	±0.5°C with optional probe
Flow measurement	Via Pitot tube, orifice plate, or anemometer
Energy measurement	Calculated using gas concentrations, flow, and temperature readings
Alarm	User selectable alarms
Communications	Via USB lead or wireless Bluetooth*
Relative pressure measurement	±500 mbar
Relative pressure accuracy	±4 mbar typically (should be zeroed before reading) to ±15 mbar max
Barometric pressure measurement	500 to 1500 mbar, ±5 mbar accuracy
GPS sensor	Location and positioning
Available memory	2,000 IDs *, 4000 readings, 2,000 events *
ENVIRONMENTAL CONDITIONS	
Operating temperature range	-10°C to +50°C
Atmospheric pressure range	700 to 1200 mbar
Relative humidity	0-95% non condensing
Case seal	IP65
PHYSICAL	
Weight	1.6kg
Size	L 220mm, W 155mm, D 60mm
Case material	ABS / polypropylene with rubber over-moulding
Keys	Alpha-numeric keypad with "tactile" membrane
Display	Ultra-clear high resolution 4.3" full colour TFT
Connections	Colour coded gas inlet, outlet and pressure ports. Waterproof USB port, anemometer and charger / temperature probe connections.
Gas sample filters	External user changeable 2.0µm ptfe water traps
CERTIFICATION RATING	
ATEX	II 2G Ex ib IIA T1 Gb (Ta = -10°C to +50°C)
MCERTS	MC / 130239
ISO17025	Calibration to UKAS certificate number 4533
CSA	Ex ib IIA T1 (Ta = -10°C to +50°C) (Canada), AEx ib IIA T1 (Ta = -10°C to +50°C) (USA)
* Gas Analyser Manager software required.	
Important note: The information in this document is correct at the time of generation. We do however, reserve the right to change the specification without prior notice as a result of continuing development.	



PORTABLE GAS ANALYSER | LANDFILL & CONTAMINATED LAND

The Geotech GA5000 is a landfill and contaminated land portable gas analyser, with available gas measurements of CH₄, CO₂, O₂, H₂S and CO. It is easy to use and calibrate, benefiting from our market leading reliability and helping you to standardise monitoring routines, whilst supporting environmental legislation compliance.



FEATURES

- Certified: ATEX, IECEx, CSA, MCERTS and UKAS calibration (ISO17025)
- Measures % CH₄, CO₂, and O₂
- Measures barometric pressure and relative pressure
- Peak and previous readings shown
- Choice of user settings and simple gas reading function
- Simultaneous display of all gases
- 3 year warranty
- CH₄ and CO₂ accuracy ± 0.5% after calibration
- Modular and upgradeable
- Memory: 2,000 IDs* and 4,000 readings (* with GAM software)
- Data logging and profiling function
- Up to 6 gases monitored

BENEFITS

- Easy to use and calibrate
- Supports environmental legislation compliance
- Market leading reliability
- Standardises monitoring routines
- Easy transfer of data

SECTOR

 Landfill

APPLICATIONS

- Landfill gas monitoring
- Waste to energy
- Site investigation

OPTIONS (AVAILABLE AT PURCHASE OR LATER)

- Choice of additional gases including H₂S to 10,000ppm, and H₂ compensated CO
- Borehole gas flow (l / h)
- Flow logging for improved borehole analysis
- GPS / field navigator
- Gas Analyser Manager software for data download
- ATEX certified anemometer



TECHNICAL SPECIFICATIONS

POWER SUPPLY				
Battery type	Rechargeable nickel metal hydride battery pack (not user replaceable)			
Battery life	Typical use 8 hours from fully charged			
Battery charger	Separate intelligent battery charger powered from mains supply (100-240V)			
Charge time	Approximately 4 hours from complete discharge			
GAS RANGES				
Gases measured	CO ₂ and CH ₄	By dual wavelength infrared sensor with reference channel		
	O ₂	By internal electrochemical sensor		
	CO (H ₂ compensated), H ₂ S, NH ₃ and H ₂ (optional)	By internal electrochemical sensor		
	A full range of internal gas cells can be specified at the time of manufacture			
Standard gas cells	Cell	Range	Typical accuracy (range : accuracy)	Typical accuracy (range : accuracy)
	CH ₄	0-100%	0-70% : ±0.5% (vol)	70-100% : ±1.5% (vol)
	CO ₂	0-100%	0-60% : ±0.5% (vol)	60-100% : ±1.5% (vol)
	O ₂	0-25%	0-25% : ±1.0% (vol)	
Optional gas cells	Cell	Range	Typical accuracy	
	CO	0-500ppm	±2.0% FS	
	CO	0-1,000ppm	±2.0% FS	
	CO	0-2,000ppm	±2.0% FS	
	CO (H ₂) +	0-2,000ppm	±1.0% FS	
	H ₂ S	0-50ppm	±1.5% FS	
	H ₂ S	0-200ppm	±2.0% FS	
	H ₂ S	0-500ppm	±2.0% FS	
	H ₂ S	0-1,000ppm	±2.0% FS	
	H ₂ S	0-5,000ppm	±2.0% FS	
	H ₂ S	0-10,000ppm	±5.0% FS	
	NH ₃	0-1,000ppm	±10.0% FS	
	H ₂	0-1,000ppm	±2.5% FS	
Typical accuracies	All typical accuracies quoted are after calibration			
*Hydrogen compensated carbon monoxide measurement	Hydrogen cross gas effect on carbon monoxide approximately 1%. Do not use where hydrogen is in excess of 10,000ppm			
Response time, T90	CH ₄	≤10 seconds		
	CO ₂	≤10 seconds		
	O ₂	≤20 seconds		
	CO	≤30 seconds		
	H ₂ S	≤30 seconds		
	NH ₃	≤90 seconds		
	H ₂	≤90 seconds		
PUMP				
Flow	550 ml / min typically			
Flow fail point	-200 mbar vacuum- user settable			
Maximum vacuum restart	-375 mbar approximately with flow rate of approx 80ml / min			



TECHNICAL SPECIFICATIONS CONTINUED

FACILITIES	
Temperature measurement	-10°C to +75°C with optional probe
Temperature accuracy	±0.5°C with optional probe
Flow from borehole	0-20 l / hr internal measurement
Flow from borehole accuracy	±0.3 l / hr
Alarm	User selectable alarm levels
Communications	Via USB lead or wireless Bluetooth*
Relative pressure measurement	±500 mbar
Relative pressure accuracy	±4 mbar typically (should be zeroed before reading) to ±15 mbar max
Barometric pressure measurement	500 to 1500 mbar, ±5 mbar accuracy
GPS sensor	Location and positioning
Available memory	2,000 IDs *, 4000 readings, 2,000 events *
ENVIRONMENTAL CONDITIONS	
Operating temperature range	-10°C to +50°C
Atmospheric pressure range	700 to 1200 mbar
Relative humidity	0-95% non condensing
Case seal	IP65
PHYSICAL	
Weight	1.6kg
Size	L 220mm, W 155mm, D 60mm
Case material	ABS / polypropylene with rubber over-moulding
Keys	Alpha-numeric keypad with "tactile" membrane
Display	Ultra-clear high resolution 4.3" full colour TFT
Connections	Colour coded gas inlet, outlet and pressure ports. Waterproof USB port, anemometer and charger / temperature probe connections.
Gas sample filters	External user changeable 2.0µm ptfe water traps
CERTIFICATION RATING	
ATEX	II 2G Ex ib IIA T1 Gb (Ta = -10°C to +50°C)
MCERTS	MC130238
ISO17025	Calibration to UKAS certificate number 4533
CSA	Ex ib IIA T1 (Ta = -10°C to +50°C) (Canada), AEx ib IIA T1 (Ta = -10°C to +50°C) (USA)
* Gas Analyser Manager software required.	
Important note: The information in this document is correct at the time of generation. We do, however, reserve the right to change the specification without prior notice as a result of continuing development.	



CO₂ INCUBATOR ANALYSER | ACCURATE INCUBATOR | VERIFICATION TOOL

CO₂ analyser specifically designed to monitor CO₂ for the verification of incubators in research and pharmaceutical markets. This unit has been developed to incorporate the latest technology and specification requirements, that provide the user with a fast, simple to use and accurate piece of laboratory kit.

FEATURES

- CO₂ 0- 20%
- Options for:
 - O₂ 0-100%
 - Dual temperature probes 0 to 50°C
 - Data storage and download
 - Humidity sensor 0-100%

BENEFITS

- Accurate CO₂ readings
- Quick verification of CO₂ incubator levels
- Time saving with dual temperature probes
- Large data storage and user friendly software and download
- Easy to read large well lit display
- Built in gas moisture removal



SECTOR

 CO₂ monitoring

APPLICATIONS

- IVF
- Research
- Laboratories
- Medical

TECHNICAL SPECIFICATIONS

POWER SUPPLY		
Battery type	Li Ion	
Battery life	12 hours (10 hours with pump)	
Battery lifetime	600 cycles	
Battery charger	5v DC external power supply and internal charging circuit	
Charge time	4 hours	
Alternative power	5Vdc power supply	
GAS RANGES		
Gases measured	CO ₂	By custom dual wavelength infra-red with reference channel
	O ₂ (optional)	By internal electrochemical cell
Oxygen cell lifetime	Approximately 3 years in air	
Range	CO ₂	0-20%
	O ₂	0-100%
Measurement accuracy*	CO ₂	± 1% of range after calibration
	O ₂	± 1% of range after calibration
Response time T ⁹⁰	CO ₂	≤ 20 seconds
	O ₂	≤ 60 seconds
* plus accuracy of calibration gas used		
FACILITIES		
Temperature (optional)	x 2 using optional probes 0°C to +50°C	
Temperature accuracy, typical	± 0.1°C from 32 to 44°C, ± 0.2°C over the rest of the range	
Barometric pressure	800- 1200 mbar	
RH measurement (optional)	RH Probe 0- 100% RH non condensing	
RH accuracy	± 1.5% RH across the range	
Visual and audible alarm	User selectable CO ₂ and O ₂ alarm levels	
Communications	USB type B mini-connector, HID device class	
Data storage	1000 reading sets + 270 events	
PUMP		
Flow	100cc / min typically	
ENVIRONMENTAL CONDITIONS		
Operating temperature	0°C to 50°C	
Relative humidity	0- 95% non condensing (RH probe 0- 100% non condensing)	
Barometric pressure	± 500mbar from calibration pressure	
IP rating	IP40	

PHYSICAL	
Weight	495 grams
Size	L 165mm, W 100mm, D 55mm
Case material	ABS / polypropylene with silicone rubber inserts
Keys	17 resin capped silicone rubber keys
Display	Liquid crystal display, 128 x 64 pixel With RGB LED back-light
Gas sample filters	Built-in gas dryer tube to remove moisture User replaceable PTFE water trap filter
CERTIFICATION	
EN 50270 :2006	Electromagnetic compatibility- electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen
EN61010-1:2010	Safety requirements for electrical equipment for measurement, control, and laboratory use. Part 1: General requirements

CO₂ ANALYSER | SPECIALIST CONTROLLED ATMOSPHERE MONITORING

CO₂ analyser designed to monitor CO₂ for multiple applications, including brewing industry. This unit has been developed to incorporate the latest technology and specification requirements, that provide the user with a fast, simple to use analyser.

FEATURES

- CO₂ 0 - 100%
- Options for:
 - O₂ 0 - 100%
 - dual temperature probes 0 to 50°C
 - data storage and download
 - humidity sensor 0 - 100%

BENEFITS

- Accurate CO₂ readings
- Quick verification of CO₂ levels
- Time saving with dual temperature probes
- Large data storage and user friendly software for download
- Easy to read large well lit display
- Built in gas moisture removal

SECTOR

 CO₂ monitoring

APPLICATIONS

- Food processing
- Research
- Brewing
- Medical



TECHNICAL SPECIFICATIONS

POWER SUPPLY		
Battery type	Li Ion	
Battery life	12 hours (10 hours with pump)	
Battery lifetime	600 cycles	
Battery charger	5v DC external power supply and internal charging circuit	
Charge time	4 hours	
Alternative power	5Vdc power supply	
GAS RANGES		
Gases measured	CO ₂	By custom dual wavelength infrared cell with reference channel
	O ₂ (optional)	By internal electrochemical cell
Oxygen cell lifetime	Approximately 3 years in air	
Range	CO ₂	0 - 100%
	O ₂	0 - 100%
Measurement accuracy*	CO ₂	± 1% of range after calibration
	O ₂	± 1% of range after calibration
Response time, T ⁹⁰	CO ₂	≤ 20 seconds
	O ₂	≤ 60 seconds
*Plus accuracy of calibration gas used		
FACILITIES		
Temperature (optional)	x 2 using optional probes, range 0°C to +50°C	
Temperature accuracy	± 0.2°C	
RH measurement (optional)	RH probe 0 - 100% RH non condensing	
RH accuracy	± 1.5% RH across the range	
Visual and audible alarms	User selectable CO ₂ and O ₂ alarm levels	
Communications	USB type B mini-connector, HID device class	
Data storage	1000 reading sets + 270 events	
PUMP		
Flow	100cc / min typically	
ENVIRONMENTAL CONDITIONS		
Operating temperature	0°C to 50°C	
Relative humidity	0 - 95% non condensing	
Barometric pressure	500- 1500 mbar from calibration pressure	
IP rating	IP40	
PHYSICAL		
Weight	495 grams	
Size	L: 165mm, W: 100mm, D: 55mm	
Case material	ABS / Polypropylene with silicone rubber inserts	
Keys	17 Resin capped silicone rubber keys	
Display	Liquid crystal display, 128 x 64 pixels	
	With RGB LED back-light	
Gas sample filters	Built-in gas dryer tube to remove moisture	
	User replaceable PTFE water trap filter	
CERTIFICATION		
EN 50270: 2006	Electromagnetic compatibility- electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen	
EN 61010-1: 2010	Safety requirements for electrical equipment for measurement, control, and laboratory use. Part 1: General requirements	

CO2 INDOOR AIR QUALITY ANALYSER | ILLEGAL IMMIGRANT DETECTION

CO₂ analyser designed to monitor CO₂ for all indoor air quality applications. This unit has been developed to incorporate the latest technology and specification requirements, that provide the user with a fast, simple-to-use and accurate piece of environmental field kit.



SECTOR

CO₂ monitoring

APPLICATIONS

- General IAQ
- Environmental site audits
- HVAC System approval
- Illegal immigrant control / detection



FEATURES

- CO₂ 0-10,000 ppm
- Options for:
 - O₂ 0-100%
 - Dual temperature probes 0 to 50°C
 - Data storage and download
 - Humidity sensor 0-100%
 - Preset audible and visual alarms
 - Optional 1m probe (Stowseek)

BENEFITS

- Accurate CO₂ readings
- Quick verification of CO₂ levels for site audits
- Time saving with dual temperature probes
- Data logging for long term application
- Easy to read large well lit display
- Built in gas moisture removal





TECHNICAL SPECIFICATIONS

POWER SUPPLY		
Battery type	Li Ion	
Battery life	12 hours (10 hours with pump)	
Battery lifetime	600 cycles	
Battery charger	5v DC external power supply and internal charging circuit	
Charge time	4 hours	
Alternative power	5v DC power supply	
GAS RANGES		
Gases measured	CO ₂	By custom dual wavelength infra-red cell with reference channel
	O ₂ (optional)	By internal electrochemical cell
Oxygen cell lifetime	Approximately 3 years in air	
Range	CO ₂	0-10,000 ppm
	O ₂	0-100%
Measurement accuracy*	CO ₂	0-10,000 ppm
		± 1.5% of range after calibration (typically ± 10 ppm at 500 ppm CO ₂ after user calibration)
	O ₂	± 1.0% of range after calibration
Response time T ⁹⁰	CO ₂	≤ 20 seconds
	O ₂	≤ 60 seconds
* plus accuracy of calibration gas used		
FACILITIES		
Temperature (optional)	x 2 using optional probes 0°C to +50°C (not available if humidity is selected)	
Temperature accuracy	± 0.2°C	
Barometric pressure	800- 1200 mbar	
RH measurement (optional)	RH probe 0- 100% RH non condensing	
RH accuracy	± 1.5% RH across the range	
Visual and audible alarms	User selectable CO ₂ and O ₂ alarm levels	
Communications	USB type B mini-connector, HID device class	
Data storage	1000 reading sets plus 270 events	
PUMP		
Flow	100cc / min typically	
ENVIRONMENTAL CONDITIONS		
Operating temperature	0°C to 50°C	
Relative humidity	0- 95% non condensing (RH probe 0- 100% non condensing)	
Barometric pressure	± 500mbar from calibration pressure	
IP rating	IP40	



TECHNICAL SPECIFICATIONS CONTINUED

PHYSICAL	
Weight	495 grams
Size	L 165mm, W 100mm, D 55mm
Case material	ABS / polypropylene with silicone rubber inserts
Keys	17 resin capped silicone rubber keys
Display	Liquid crystal display, 128 x 64 pixel With RGB LED back-light
Gas sample filters	Built-in gas dryer tube to remove moisture User replaceable PTFE water trap filter
Note: Due to Geotech's continuous programme of improvement, this specification is subject to change without prior notice	
CERTIFICATION	
EN 50270 :2006	Electromagnetic compatibility- electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen
EN61010-1:2010	Safety requirements for electrical equipment for measurement, control, and laboratory use. Part 1: General requirements

N₂O GAS ANALYSER | MEDICAL STAFF SAFETY

The G200 N₂O analyser is designed to safety check background and breathing zone levels of N₂O (0-1000ppm) in medical applications.

SECTOR

 Medical gas

APPLICATIONS

- Operating theatres
- Dental practices
- Veterinary clinics
- X-ray departments

FEATURES

- 0- 1000 ppm N₂O
- Leak detection
- Storage for 1000 readings
- TWA calculated
- EH40 occupational exposure limits calculated
- User settable alarms
- Data download for graphing and reporting (optional)

BENEFITS

- Accurate verification of exposure limit breaches
- Dual purpose background analyser or personal analyser.
- Leak detection for N₂O storage
- Easily portable
- Can be changed to measure 0-10000ppm for leak detection mode





TECHNICAL SPECIFICATIONS



POWER SUPPLY		
Battery type	Li Ion	
Battery life	12 hours (10 hours with pump)	
Battery lifetime	600 cycles	
Battery charger	5v DC external power supply and internal charging circuit	
Charge time	Approximately 4 hours from complete discharge	
Alternative power	5Vdc power supply	
GAS RANGES		
Gases measured	N ₂ O	By custom dual wavelength infrared cell with reference channel
Range	N ₂ O	0 - 1000ppm
		0 - 10000ppm (leak detection mode, indication only)
Measurement accuracy*	N ₂ O	Resolution: 1ppm
		± 5ppm for 0- 100ppm after calibration
		± 1.5% of range for 101ppm and above, after calibration
Response time, T ₉₀	N ₂ O	≤ 40 seconds
*Plus accuracy of calibration gas used		
FACILITIES		
Visual and audible alarm	User selectable N ₂ O and TWA alarms	
Communications	USB type B mini-connector, HID device class	
Data Storage	1000 reading sets + 270 events	
	50 site IDs and 300 sample point IDs	
PUMP		
Flow	100cc / min typically	
ENVIRONMENTAL CONDITIONS		
Operating temperature	0°C to 50°C	
Barometric pressure	500 to 1500mb	
Relative humidity	5% to 95% non condensing	
IP rating	IP40	
PHYSICAL		
Weight	500 grams	
Size	L 165mm, W 100mm, D 55mm	
Case material	ABS / polypropylene with silicone rubber Inserts	
Keys	17 resin capped silicone rubber keys	
Display	Liquid crystal display, 128 x 64 pixel	
	With RGB LED back-light	
Gas Sample Filters	User replaceable PTFE water trap filter, G1.10 - Soda lime CO ₂ filter	
CERTIFICATION		
EN 50270: 2006	Electromagnetic compatibility- electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen	
EN 61010-1: 2010	Safety requirements for electrical equipment for measurement, control, and laboratory use. Part 1: General requirements	
Note 1: Due to Geotech’s continuous programme of improvement, this specification is subject to change without prior notice. Note 2: For optimum performance during continuous monitoring, a 45 minute warm-up period is recommended.		



0-100% N₂O GAS ANALYSER | PIPED MEDICAL GAS VERIFICATION

The G210 is specifically designed for highly accurate measurement and verification of the quality of piped N₂O and O₂ gases in hospitals.



FEATURES

- 0 - 100% N₂O
- 0 - 2000 ppm CO₂
- User alarms
- Options for:
 - 0 - 100% O₂
 - 0 - 500 ppm CO
 - data download (via ADM software)

BENEFITS

- 4 gases measured in one analyser
- Easy user calibration
- Quick verification of gas quality
- Enter specific site and IDs for monitoring points
- Identify contaminants CO and CO₂

SECTOR

- Medical gas

APPLICATIONS

- Hospital piped gases



TECHNICAL SPECIFICATIONS

POWER SUPPLY		
Battery type	Li Ion	
Battery life	12 hours (10 hours with pump)	
Battery lifetime	600 cycles	
Battery charger	5v DC external power supply and internal charging circuit	
Charge time	4 hours	
Alternative power	5Vdc power supply	
GAS RANGES		
Gases measured	N ₂ O	By custom dual wavelength infrared cell
	CO ₂	By custom dual wavelength infrared cell
	O ₂ (optional)	By internal electrochemical cell
	CO (optional)	By internal electrochemical cell
Oxygen cell lifetime	Approximately 3 years in air	
CO cell lifetime	Approximately 2 years in air	
Range	N ₂ O	0 - 100%
	CO ₂	0 - 2000ppm
	O ₂	0 - 100%
	CO	0 - 500ppm
Measurement accuracy*	N ₂ O	± 1% of range after calibration
	CO ₂	± 3% of range after calibration
	O ₂	± 0.5% of range after calibration
	CO	± 2ppm for 0 - 20ppm after calibration ± 5% of range from 21 - 500ppm after calibration
Response time T ₉₀	N ₂ O	≤ 20 seconds
	CO ₂	≤ 20 seconds
	O ₂	≤ 60 seconds
	CO	≤ 60 seconds
* plus accuracy of calibration gas used		
FEATURES		
Visual and audible alarm	User selectable N ₂ O, CO, CO ₂ and O ₂ alarm levels	
Communications	USB type B mini-connector, HID device class	
Data storage	1000 reading sets plus 270 events 50 site IDs and 300 sample point IDs	

TECHNICAL SPECIFICATIONS *CONTINUED*

PUMP	
Flow	100cc / min typically
ENVIRONMENTAL CONDITIONS	
Operating temperature	0°C to +50°C
Relative humidity	5% to 95% non condensing
Barometric pressure	500 to 1500mb
IP rating	IP40
PHYSICAL	
Weight	500 grams
Size	L 165mm, W 100mm, D 55mm
Case material	ABS / polypropylene with silicone rubber inserts
Keys	17 resin capped silicone rubber keys
Display	Liquid crystal display, 128 x 64 pixel With RGB LED backlight
Gas sample filters	User replaceable PTFE water trap filter
CERTIFICATION	
EN 50270:2006	Electromagnetic compatibility - electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen
EN 61010-1:2010	Safety requirements for electrical equipment for measurement, control, and laboratory use. Part 1: General requirements