GA5000

Geotech

PORTABLE GAS ANALYSER | LANDFILL & CONTAMINATED LAND

The Geotech GA5000 is a landfill and contaminated land portable gas analyser, with available gas measurements of CH_4, CO_2, O_2, H_2S and CO. It is easy to use and calibrate, benefitting 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 % CH_4, CO_2, and O_2
- 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
- CH_4 and CO_2 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 H_2S to 10,000ppm, and H_2 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
- Bluetooth communications for data download

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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_2S, 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_2S	0-50ppm	±1.5% FS	
	H_2S	0-200ppm	±2.0% FS	
	H_2S	0-500ppm	±2.0% FS	
	H_2S	0-1,000ppm	±2.0% FS	
	H_2S	0-5,000ppm	±2.0% FS	
	H_2S	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 plus accuracy of calibration gas used.			
**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_2S	≤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			

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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	High impact ABS composite 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 / IECEx	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. Bluetooth is an optional extra.	
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.	

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