



## Landfill

### Applications

- Landfill gas monitoring
- Waste to energy
- Site investigation

### Benefits

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

### Features

- Certified: ATEX, IECEx, MCERTS (applied for), CSA and UKAS calibration (ISO17025)
- Measures % CH<sub>4</sub>, CO<sub>2</sub>, and O<sub>2</sub>
- Peak and previous readings shown
- Simultaneous display of all gases
- 3 year warranty
- CH<sub>4</sub> and CO<sub>2</sub> accuracy ± 0.5% after calibration
- Modular and upgradeable
- Memory: 2,000 IDs\*, 4,000 readings and 2,000 events\* (\* with GAM software)
- Event log

### Options (available at purchase or later)

- Choice of additional gases including H<sub>2</sub>S to 10,000ppm, and H<sub>2</sub> compensated CO
- Borehole gas flow (l/h)
- GPS / field navigator
- Gas Analyser Manager software for data download
- ATEX certified anemometer



## Technical specifications

### GA5000

#### 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 3 hours from complete discharge

#### GAS RANGES

Gases measured	CO <sub>2</sub> and CH <sub>4</sub>	By dual wavelength infrared sensor with reference channel			
	O <sub>2</sub>	By internal electrochemical sensor			
	CO (hydrogen compensated), H <sub>2</sub> S, NH <sub>3</sub> and H <sub>2</sub> (optional)	By internal electrochemical sensor			
	A full range of internal gas cells can be specified at the time of manufacture.				
Oxygen cell lifetime other chemical cell lifetime	Approximately 3 years in air Suitable for sampling applications - not for continuous use				
Range	CH <sub>4</sub> CO <sub>2</sub> O <sub>2</sub> CO H <sub>2</sub> S	0-100% 0-100% 0-25% 0-2,000ppm 0-50ppm up to 0-10,000ppm			
Typical accuracy after calibration	CH <sub>4</sub>	0-70%	±0.5% (vol)	70-100%	±1.5% (vol)
	CO <sub>2</sub>	0-60%	±0.5% (vol)	60-100%	±1.5% (vol)
	O <sub>2</sub>	0-25%	±1.0% (vol)		
	CO	0-500ppm	± 2.0% FS		
	CO (H <sub>2</sub> )*	0-2,000ppm	± 1.0% FS		
	H <sub>2</sub> S	0-50ppm	± 1.5% FS		
		0-200ppm	± 2.0% FS		
0-500ppm		± 2.0% FS			
0-1,000ppm		± 2.0% FS			
0-5,000ppm 0-10,000ppm		± 2.0% FS ± 5.0% FS			
Response time, T90	CH <sub>4</sub> CO <sub>2</sub> O <sub>2</sub> CO H <sub>2</sub> S	≤ 10 seconds ≤ 10 seconds ≤ 20 seconds ≤ 30 seconds ≤ 30 seconds			
*Hydrogen compensated carbon monoxide measurement	Compensated for interference from up to 2,000ppm hydrogen. Hydrogen cross gas effect on CO approximately 1%.				

#### PUMP

Flow	550 ml/min typically
Flow fail point	-200 mbar vacuum - user settable
Maximum vacuum restart	-375 mbar approximately with flow rate of approximately 80ml/ min

## Technical specifications

### GA5000 cont'd.

#### 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 maximum
Barometric pressure measurement	500 to 1500 mbar, ±5 mbar accuracy
GPS sensor	Location and positioning
Available memory	2,000 IDs*, 4,000 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	1.6 kilograms
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	Applied for
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.

