

Landfill Gas Monitor

Landtec GEM™ 5000 Portable Gas Analyzer

The GEM™ 5000 is designed specifically for use on landfills to monitor Landfill Gas (LFG) collection and control systems. The GEM™ 5000 samples and analyzes the methane, carbon dioxide and oxygen content of landfill gas with options for additional analysis.

FEATURES

- Measures % CH₄, CO₂ and O₂ Volume, static pressure and differential pressure
- Calculates balance gas, flow (SCFM) and calorific value
- High accuracy and fast response time
- Lighter and more compact
- Certified intrinsically safe for landfill use
- Calibrated to ISO/IEC 17025
- CO and H₂S (on Plus models only)
- 3 year warranty
- Annual recommended factory service
- Available with GPS and additional gas detection

BENIFITS

- Designed specifically for use on landfills to monitor landfill gas (LFG) extraction systems, flares, and migration control systems.
- No need to take more than one instrument to site
- Can be used for monitoring subsurface migration probes and for measuring gas composition, pressure and flow in gas extraction systems
- The user is able to set up comments and questions to record information at site and at each sample point
- Ensures consistent collection of data for better analysis
- Streamlined user experience reduces operational times

APPLICATIONS

- Landfill Gas Collection & Control Systems
- Environmental Compliance
- Landfill Gas to Energy
- Subsurface Migration Probes



GEM 5000 MODELS

Model	Meter Only – No Kit
5000	CH ₄ , CO ₂ , O ₂ , static and differential pressure
5000+	Adds CO (0-2000 ppm), and H ₂ S (0-500 ppm)
5000+1	Adds CO (0-2000 ppm), and H ₂ S (0-1000 ppm)
5000+5	Adds CO (0-2000 ppm), and H ₂ S (0-5000 ppm)
5000+10	Adds CO (0-2000 ppm), and H ₂ S (0-10000 ppm)
5000Nav	Adds Built-in GPS
5000Nav+	Adds Built-in GPS, CO (0-2000 ppm), and H ₂ S (0-500 ppm)
5000Nav+1	Adds Built-in GPS, CO (0-2000 ppm), and H ₂ S (0-1000 ppm)
5000Nav+5	Adds Built-in GPS, CO (0-2000 ppm), and H ₂ S (0-5000 ppm)
5000Nav+10	Adds Built-in GPS, CO (0-2000 ppm), and H ₂ S (0-10000 ppm)
GM5K-Kit	GEM 5000 Kit Includes: Hoses, heavy duty water trap filter, soft case, A.C. battery charger, electronic manual accompanies software, LANDTEC System Gas Analyzer Manager (LSGAM) software, USB download cable and hard-case.

CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc.

2650 East 40th Avenue • Denver, Colorado 80205

(303) 320-4764 • (800) 833-7958 • FAX (303) 322-7242

email: sales@geotechenv.com website: www.geotechenv.com

Landfill Gas Monitor

Landtec GEM™ 5000 Portable Gas Analyzer

SPECIFICATIONS

Gas Ranges

Gases Measured	CH ₄	By dual wavelength infrared cell with reference channel		
	CO ₂	By dual wavelength infrared cell with reference channel		
	O ₂	By internal electrochemical cell		
	CO	By internal electrochemical cell		
	H ₂ S	By internal electrochemical cell		
Ranges	CH ₄	0-100% (vol)		
	CO ₂	0-100% (vol)		
	O ₂	0-25% (vol)		
	CO	0-2000 ppm***		
	H ₂ S	0-500 ppm***		
Gas Accuracy*	CH ₄	0-5% ±0.3% (vol)	0-70% ±0.5% (vol)	70-100% ±1.5% FS
	CO ₂	0-5% ±0.3% (vol)	0-60% ±0.5% (vol)	60-100% ±1.5% FS
	O ₂	0-25% ±1.0% (vol)		
	CO (H ₂)**	0-2000 ppm ±1.0% FS		
	H ₂ S	0-500 ppm ±2.0% FS		

* Typical accuracy after calibration as recommended in the operations manual.

** Hydrogen compensated Carbon Monoxide measurement.

*** Additional ranges available, call for more information.

Other Parameters

	Unit	Resolution	Comments
Energy	BTU/hr	1000 BTU/hr	Calculated from specific parameters
Static Pressure	in. H ₂ O	0.1 in. H ₂ O	Direct Measurement
Differential Pressure	in. H ₂ O	0.001 in. H ₂ O	Direct Measurement

Important Note: The information in this document is correct at the time of generation. Specification may change without prior notice as a result of continuing development.

Pump

Flow	Typically 550cc/min
Flow with 80 in. H₂O vacuum	Approximately 80cc/min

Environmental Conditions

Operating Temperature Range	14°F–122°F (-10°C–50°C)
Operating Pressure	-100 in. H ₂ O, +100 in. H ₂ O (-250 mbar, +250 mbar)
Relative Humidity	0-95% non-condensing
Barometric Pressure	±14.7 in.Hg (±500 mbar) from calibration pressure
Barometric Pressure Accuracy	±1% typically

Power Supply

Battery Life	Typical use 8 hours from fully charged
Charge Time	Approximately 4 hours from complete discharge

Certification Rating

ATEX	II 2G Ex ib IIA T1 Gb (Ta= -10°C to +50°C)
ISO17025	ISO/IEC17025:2005 Accreditation #66916
CSA	Ex ib IIA T1 (Ta= -10°C to +50°C) (Canada), AEx ib IIA T1 (Ta= -10°C to +50°C) USA

CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc.

2650 East 40th Avenue • Denver, Colorado 80205
 (303) 320-4764 • **(800) 833-7958** • FAX (303) 322-7242
 email: sales@geotechenv.com website: www.geotechenv.com