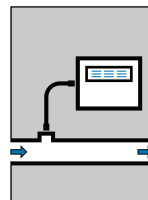




LANDTEC

GEM™ 2000

PORTABLE GAS ANALYZER
Instrumentation



The **GEM™ 2000** combines the GEM™ 500 and the GA-90 into one faster, more accurate, intrinsically safe instrument

The **GEM™ 2000** was designed by **CES-LANDTEC** specifically for use on landfills to monitor landfill gas (LFG) extraction systems, flares, and migration control systems.

The **GEM™ 2000** samples and analyzes the methane, carbon dioxide and oxygen content of landfill gas. The easy-to-read LCD screen shows the results as percentages of CH₄, CO₂, O₂ and "balance" gas. The **GEM™ 2000** calculates and displays gas flow rate. It also measures and displays Btu content, temperature (w/optional probe), relative and atmospheric pressures and CH₄ LEL (Lower Explosive Limit).



GEM™ 2000

"The Future of
Landfill Gas Monitoring"

Performance

New technological advances in hardware and software dramatically improve speed and accuracy.

Safe

Certified Intrinsically Safe for Landfill Use

Efficient

Two operating modes, each with two screens for streamlined functionality

Flexible

DataField Software offers integration with various PC applications

Experience

Built on the success of hundreds of field-tested instruments

"The best just got better!"



COMPATIBLE

GEM™ 2000 Multi-Functional Analyzer

Diverse Field Applications...monitors migration control systems, gas extraction systems, flares, migration probes, and more.

Gas Extraction Monitor Mode...provides automatic sampling and analysis of gas composition % by volume CH₄, CO₂, O₂ and % balance gas, % CH₄ LEL, temperature (with optional probe), static pressure, differential pressure, and barometric pressure. Also calculates gas flow rates (SCFM) as well as Btu rates.

Landfill Gas Analyzer Mode...provides automatic sampling and analysis of gas composition % by volume CH₄, CO₂, O₂ and % balance gas, % CH₄ LEL, temperature (with optional probe), barometric pressure and relative pressure. Can be used for data logging, with user programmed intervals.

Easy to Read Display...extra large backlit LCD shows up to five gases, atmospheric and gas vacuum pressure, temperature, ID code - all at the same time.

Intrinsically Safe...essential for protecting personnel who work with hazardous and explosive landfill gas.

On Site Calibration...rapid calibration checking or adjustment can be carried out on site.

Automatic Purge...automatically purges analyzer with clean air when a new ID is selected. (This feature can be turned off).

Light-Weight Compact Size...easy to carry. Weighs less than five pounds.

Quick Analysis...completes sampling and displays gas analysis and flow results in less than one minute.

Infrared Gas Analyzer...provides accurate measurements of methane (CH₄), and carbon dioxide (CO₂).

Gas Temperature...read when using optional temperature probe or can be entered manually.

Durable Oxygen Sensor...provided by the galvanic cell principle, not influenced by other gases (i.e. CH₄, CO₂ or H₂S).

User Friendly On-Screen Menu...in each mode the user performs most operations in just two screens.

PC Data Downloading...provided by RS232 interface with DataField software (Release 3.0 or later).

Data Storage/Retrieval...stores prior measurements taken for each monitoring point, 900 monitoring points total.

Date/Time Stamp...recorded for all stored data.

Prior Data Recall...allows user to view prior data for each monitoring point.

Methane Analysis...displayed as either % CH₄ by volume or CH₄ LEL (Landfill Gas Analyzer Mode only).

Durable Construction...built of strong, durable plastic material suitable for harsh landfill environments.

All Weather Use...designed to operate in extremes from 32°F to 104°F. Sealed, weather-tight case.

Built-in Adjustable Alarms...allows user to set alarm limits for CH₄ and O₂.

Rechargeable Batteries...internal, rechargeable nickel metal hydride batteries are standard.

Operating Time...approximately 8 hours with normal pump usage (approximately 10 hours without pump running).

Fast Recharge Time...approximately 2 hours from complete discharge.

Battery Check...battery life is continuously displayed.

Monitoring Point ID Codes...provides alphanumeric identification of monitoring points for data storage and recall.

ID Comments...allows user to answer up to 3 questions with a list of 9 potential answers each.

Imperial vs. SI Units...can display measurements in Imperial (USA) or SI (metric) units.

Interfaces to CES-LANDTEC DataField Software...which provides statistical management and reporting of LFG data.

Multiple Flow Meter Analysis...calculates gas flow with Accu-Flo Wellheads, orifice plates and pitot tubes.

Gold Warranty Service Program...ensures that your analyzer is properly maintained for optimum performance. (Optional).

GEM™ 2000 Specifications Accuracy

CONCENTRATION	%CH ₄ BY VOLUME	%CO ₂ BY VOLUME	%O ₂ BY VOLUME
5% (LEL, CH ₄)	±0.3%	±0.3%	±1.0%
Full Scale	±3.0% _(100%)	±3.0% _(60%)	±1.0% _(21%)

	SENSOR RANGE	RESOLUTION
Methane - CH ₄	0-100%	0.1%
Carbon Dioxide - CO ₂	0-60%	0.1%
Oxygen - O ₂	0-25%	0.1%
Pressures (diff)	0-10" W.C.	0.001" W.C.
(static)	0-100" W.C.	0.1" W.C.

Flow Accuracy (50% CH₄ measured in 2" Accu-Flo wellhead)
- ±3% - 5-150 SCFM

Pump Flow Rate - 500cc/min. nominal flow

Vacuum - Up to 80" W.C.

UL - Certified to Class 1, Zone 1, AEx ib d Ila T4



An involved and contributing member of the Solid Waste Association of North America



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