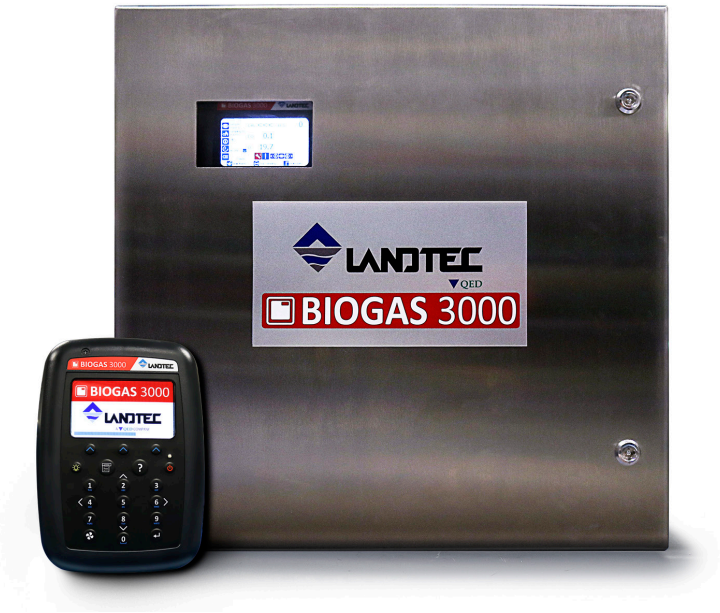
BIOGAS 3000

FIXED BIOGAS AND LANDFILL GAS ANALYSER | ANAEROBIC DIGESTION



THE BIOGAS 3000 BUILDS ON FIELD-PROVEN GAS ANALYSIS TECHNOLOGY TO OFFER COST-EFFECTIVE ONLINE MONITORING.

The BIOGAS 3000 is our next generation fixed analyzer that offers optimal continuous monitoring of the gas production process, using up to four sample ports to monitor CH4, CO2, O2, H2S and H2 levels. The BIOGAS 3000 design builds on previous analyzer strengths and incorporates easy installation with on-site maintenance of all parts, resulting in zero operational downtime for servicing.

The hot swap device saves time and allows you to keep working. The Biogas 3000 works as long as you do.

Easy Installation and operation. Get up and running quickly.

ATEX and CSA certified and meeting Method 21 requirements for regulatory compliance.

*Does not apply to auto calibration section.

QED Environmental Systems Inc.
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FEATURES

- Up to 4 sample points to monitor the complete gas control process
- Monitor before and after desulphurization
- Continuous monitoring Option
- Full Color display
- Calibration to ISO/IEC 17025
- Built-in Liquid level monitoring with dedicated alarm and fault notifications
- IP65 Rated enclosure
- Certified for use in CSA, ATEX and IECeX Zone 2 areas
- Modbus RTU communication
- Optional Profibus and Profinet communication

BIOGAS 3000

TECHNICAL SPECIFICATIONS

GENERAL SPECIFICATION				
Number of sampling points	1-4			
Gases to be monitored	CH_4, CO_2 and O_2 with optional H_2S, H_2 and CO (choice of up to 5)			
Reading intervals	User definable, with a continuous[1] CH_4, CO_2 and O_2 option available			
Operating temperature range	0°C to +50°C without heater,-20°C to +50°C with heater			
POWER				
Power Supply	110-230 VAC 50/60Hz			
Consumption	155W max.			
Backup Memory	Lithium manganese dioxide backup battery for memory retention			
GAS RANGES				
Gases measured	CH_4 and CO_2			
	O_2			
	$H_2S/H_2/CO$			
	Cell	Range	Typical accuracy(range : accuracy)*	
Standard gas cells	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)	
	Cell	Range	Typical accuracy (Range : accuracy)*	
			Internal accuracy	External accuracy
Optional gas cell	H_2S	0-50ppm	±1.5% FS	±1.5%FS
	H_2S	0-200ppm	±2.0% FS	±1.5%FS
	H_2S	0-500ppm	±2.0% FS	±2.0% FS
	H_2S	0-1,000ppm	±2.0% FS	±2.0% FS
	H_2S	0-5,000ppm	±2.0% FS	±100ppm or 5% of reading (if greater)
	H_2s	0-10,000ppm	±5.0% FS	±200ppm or 5% of reading (if greater)
	CO	0-1,000ppm	±2.0% FS	±3.0%FS
	H_2	0-1,000ppm	±2.5% FS	±1.5%FS
			Range	Response time
Response time, T90**	CH_4	≤10 seconds	H_2S (0-50ppm)	≤30 seconds
	CO_2	≤10 seconds	H_2S (0-200ppm)	≤35 seconds
	O_2	≤20 seconds	H_2S (0-500ppm)	≤35 seconds
			H_2S (0-1,000ppm)	≤35 seconds
	H_2	≤90 seconds	H_2S (0-5,000ppm)	≤40 seconds
	CO	≤30 seconds	H_2S (0-10,000ppm)	≤40 seconds
** Times are taken from the point gas enters the BIOGAS 3000 module. Sample times will vary depending on length of sample pipe				
Cell Lifetime	O_2 cell is 3 years in air, all other cells 2 years in air			

*Plus accuracy of calibration gas used

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BENEFITS

- Sample multiple gases simultaneously
- Verify removal of H2S
- Increased data collection
- Easy-to-Read
- Optimum accuracy
- Precise notification and increased saftey
- Highly corrosion resistant
- Use in potentially explosive gas atmospheres- zone 2
- Remote communication
- More flexible system intergration

APPLICATIONS

- Anaerobic Digestion
- Biogas Monitoring
- Landfill Gas Monitoring

QED LANDTEC

BIOGAS 3000

TECHNICAL SPECIFICATIONS CONTINUED

PUMP	
Flow	300ml / min typically
Flow-fail point	Flow rate less than 75ml/min or vacuum greater than 350mbar
Maximum vacuum restart	
COMMUNICATIONS	
Output channels	Up to six analogue 4-20mA output channels that are user configurable for current sink or source inputs plus Modbus RTU digital output.
	Optional Profibus module
	Optional Profinet module
	Optional Ethernet module
	1 x fault relay
	7 x user-configrable alarms that can trigger a relay when above or below a set value. In addition, one can be used to indicate to the operator when the catchpot is full and requires emptying.
Relay outputs	Single pole changeover 6A 24Vdc relay volt free
ENVIRONMENT CONDITIONS	
Operating pressures	350 mbar to +350 mbar
IP rating	IP65
Humidity	0-95% non-condensing humidity
PHYSICAL	
Weight	36.5kg
Size	650 x 600 x 210mm (with supplied wall mounting brackets)
Enclosure	Stainless steel, 600 x 600 x 210mm, IP65 rated
Operation keys	Alpha-numeric keypad with 'tactile' membrane
Display	Ultra-clear high resolution 4.3" full colour TFT
Moisture removal filters	User replaceable microfibre filter and 2.0µm ptfe water traps
Heater option	Optional 100W mains powered ATEX certified heater for 110V or 230V mains supply
CERTIFICATION RATING	
ISO17025	Calibrated under UKAS accreditation (certificate number 4533)
ATEX / IECEx marking	Ex II 3G Ex nA nC IIA T1 Gc (-20°C ≤ Ta ≤ +50°C)
CSA	Ex nA nC IIA T1 Gc
BS EN 61010-1:2010	Safety requirements for electrical equipment for measurement, control, and laboratory use
BS EN 50270:2006	Electromagnetic compatibility- electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen

[1] Continuous option will include a minimum 3 minute daily air purge

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