Monitor and optimize your biogas plant

Check gas composition and optimize production quantity

mobile & stationary

Improve quality and reliability with the Multitec® BioControl device combination

The base station
BioControl 2/4/8

The mobile unit
Multitec® 545/540

Measurement automation – stationary

+ up to 8 measuring locations
+ simple documentation
+ easy integration into your plant

Increase in methane content

+ continuous monitoring of gas composition
+ measure up to 5 gases

⟩ Save time and money

⟩ Optimize your substrate usage
Calculate plant efficiency at any time. This makes it easier to adapt the substrate.

⟩ Maintain the insurance coverage
Document gas parameters more reliably thanks to automation.

The BioControl 2 | 4 | 8 stationary base station offers even more

Optimizing processes
and increasing safety
at biogas plants:

+ Automated monitoring at several measuring locations, e.g. at the fermenter, during gas purification and preparation

+ Perfect for your requirements: flexible configuration of measurement locations, measuring cycles, storage intervals and limits

+ Merges mobile and stationary measured values

+ Flowmeter for determining the exact volume of biogas produced in standard cubic metres (Nm3) – the essential base value for calculating motor efficiency

+ Seamless documentation as all measurement values are saved independently on a regular basis

+ Automatic sensor calibration using test gas

+ Modbus TCP is standard equipment so there are no additional costs for fieldbus communication with TCP/ IP protocol

+ Optional fieldbus communication module: PROFIBUS (serial) and PROFINET (Industrial Ethernet System for higher speeds and more flexibility)

+ In addition, BioControl 4 and BioControl 8 also permanently monitor the flow volume, gas temperature and gas volume

Even more advantages of the Multitec® 545 | 540 mobile measuring device

Scan for
detailed product
information:

+ Effectively monitor and analyse gas mixtures

+ Measure methane and carbon dioxide precisely, without cross-interference from other gases

+ There is also the option to measure the following gases: Oxygen, carbon monoxide, hydrogen and hydrogen sulphide (Multitec® 540: up to 2,000 ppm; Multitec® 545: up to 5,000 ppm)

+ With explosion protection:
TÜV 07 ATEX 553353 X:
II 2G Ex db eb ib IIB T4 Gb, for: CH_4, C_3H_8, C_4H_{10}, C_9H_{20}, H_2S, CO (basic device without leather bag)
II 2G Ex db eb ib IIC T4 Gb, for: CH_4, C_3H_8, C_4H_{10}, C_9H_{20}, H_2S, CO, H_2 (basic device with leather bag)

+ Ready to measure shortly after switching on Easy to adjust using test gas

+ Monitoring the film interspace according to the technical rules for plant safety

3

Monitoring the film interspace

Mobile measurement even at remote measuring points

Check values from a distance

„For me, it's important that the plant runs reliably. That means as little downtime as possible and that I am able to detect potential undesirable developments, such as increased sulphur levels, quickly in order to prevent damage.

The Multitec® BioControl system is a great help in this regard. It also helps me optimize the plant. For example, I know exactly when I need to change the activated carbon. That saves money. And thanks to Multitec® BioControl I am always ready with information for my service providers and the authorities. That builds trust."

Wolfram Wiggert, Haslachhof, Löfflingen, Germany

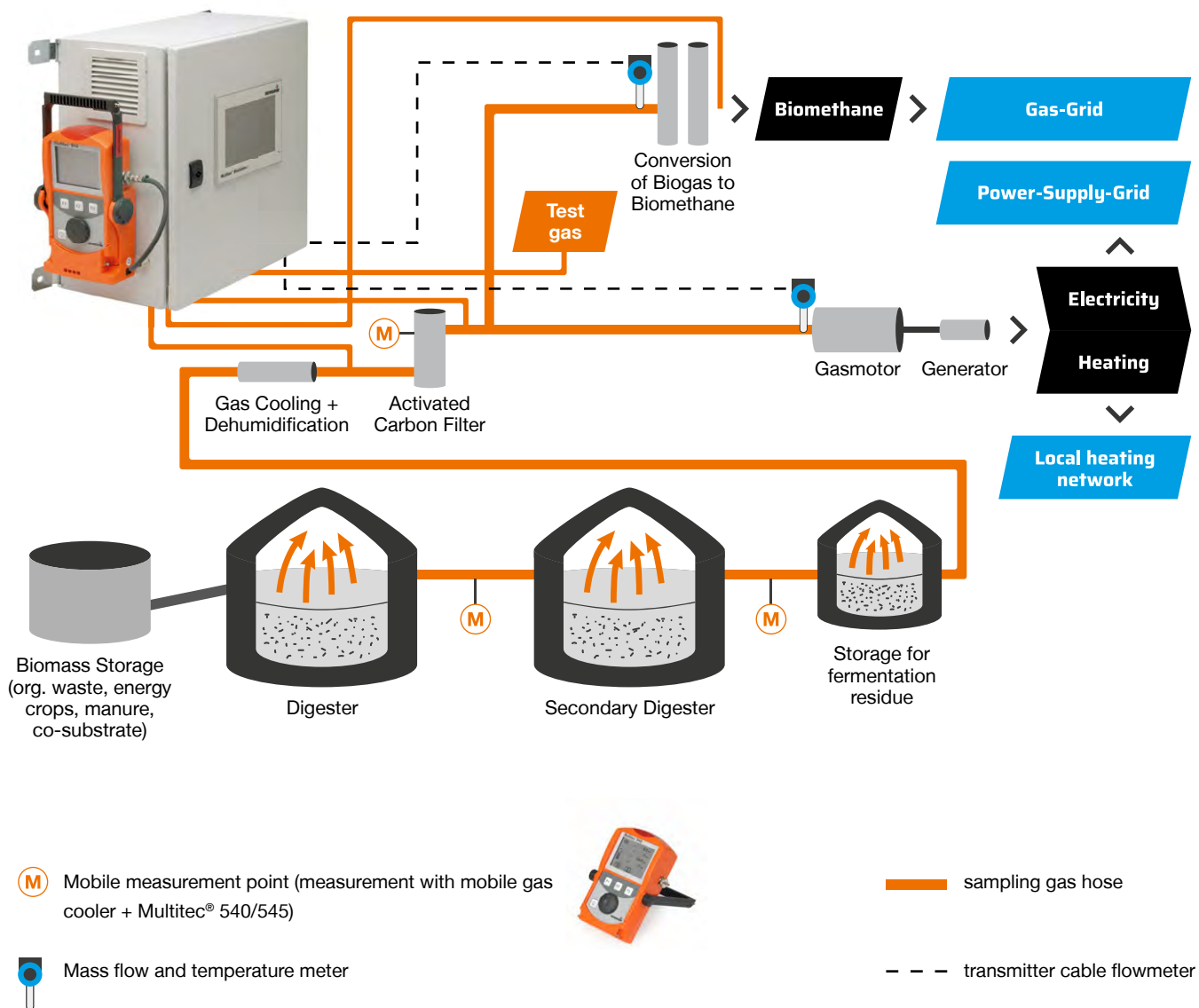Key data for the Wiggert family's biogas plant at Haslachhof in Löfflingen, Germany:

One cogeneration plant (CHP) with 1563 kW and two CHPs, each with 549 kW, 7,063 ft³ buffer, fermentation residue storage with a volume of 236,608 ft³ and a gas storage tank of 176,573 ft³; the total installed electric output is 2.6 MW.

One solution, many possibilities

With the BioControl device combination you can record gas composition and volumes flexibly at any time. Do you only want to measure raw gas and pure gas at the filter to protect your system's motor and to document gas quality? Or would you also like automated measurements at the secondary fermenter and repository in order to increase process efficiency? Both are possible.

Do you run an external, gas-tight, covered fermentation residue storage? No problem! Simply remove the mobile Multitec® from the base station and use it to measure the parameters on the external fermentation residue storage and save the values. As soon as you put the Multitec® back into the holder on the base station and connect, BioControl adds the values to the documentation.

Conversion of Biogas to Biomethane

Biomethane

Gas-Grid

Power-Supply-Grid

Test gas

Electricity

Heating

Gasmotor

Generator

Local heating network

Gas Cooling + Dehumidification

Activated Carbon Filter

Biomass Storage (org. waste, energy crops, manure, co-substrate)

Digester

Secondary Digester

Storage for fermentation residue

(M) Mobile measurement point (measurement with mobile gas cooler + Multitec® 540/545)

Mass flow and temperature meter

sampling gas hose

transmitter cable flowmeter

5

Solutions for leak detection in your biogas plant

> **Remote laser detection for short and long distances**
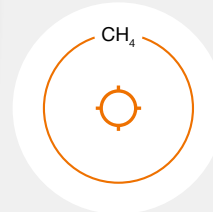> Decide effortlessly whether there is a leak or not.

SR-LD 800 | 200

- Detects methane leaks up to 650 ft. (SR-LD 800) or 390 ft. (SR-LD 200)
- Up to 13 hours of operation for uninterrupted use
- High accuracy by integrated self calibration
- Continuous zero-point updates for reliable detection
- Distance measurement between detector and reflective surface
- Red dot sight for easy aiming at the target
- Lightweight and handy

Scan for detailed product information:

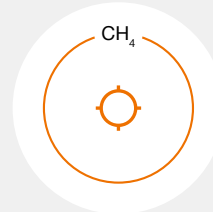# Choose your device

SR-LD 800
Gas detection

+ Range: up to 650 ft
+ Measurement laser resolution: 2.5 ppm*m (Sensitivity mode), 5 ppm*m (Distance mode)

CH_4

SR-LD 200
Gas detection

+ Range: up to 390 ft
+ Measurement laser resolution: 5 ppm*m

CH_4

Choose your device

BioControl 2

Monitors and analyzes gas composition

+ 2 measuring locations

BioControl 4

Monitors and analyzes gas composition

+ 4 measuring locations
+ Up to 4 flowmeter outputs for analog signals

BioControl 8

Monitors and analyzes gas composition

+ 8 measuring locations
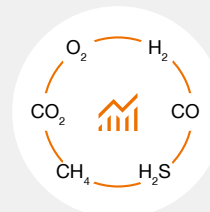+ Up to 8 flowmeter outputs for analog signals

Choose your device

Multitec® 545
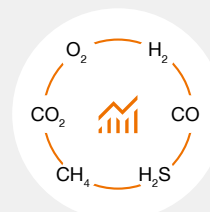Mobile measurement of gas concentrations

+ Explosion protection
+ H_2S measuring range up to 5,000 ppm CH_4, CO_2 and H_2S as standard

Multitec® 540
Mobile measurement of gas concentrations

+ Explosion protection
+ H_2S measuring range up to 2,000 ppm CH_4 and CO_2 as standard

The icons below refer to the applications of the respective device.

Detecting   Warning   Measuring

⟫ *Your CGI device for any gas leak detection challenge*
Reliable gas detection, measurement, and safety testing for all applications.

EX-TEC® PM 580

+ Gas warning, detection, and measurement in one device

+ Simultaneous CGI measurement and leak detection

+ Quick and precise leak localization

+ Automatic measurement recording plus test report storage

+ Intuitive menu and sunlight-readable display

+ Usable with gloves – ideal for cold environments

+ Impact-resistant and built for tough conditions

+ UL/CSA approved

Scan for detailed product information:

Compact Gas Detector for Quick Leak Detection
Easy and simple handling for any operator.

SNOOPER mini

- Detects leaks from 0 - 22,000 ppm
- Super-fast diffusion sensor
- Specialized models for methane, propane, or hydrogen
- Audible and numerical warnings based on gas concentration
- Replaceable sensor filter for extended lifespan
- Fast startup for immediate leak detection
- Bright, backlit LCD for easy reading
- High performance at an affordable price

Scan for detailed product information:

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