



since 1984®

AIR *fair*

EMISSION MONITORING SYSTEMS

PRODUCT LINE DIRECTORY

MRU Instruments, Inc.

Innovation

Reliability

Quality

Value

Customer Service

Providing innovative handheld, portable and stationary measuring solutions for combustion, emissions, and gas analytics for over 30 years, MRU's instruments are designed and manufactured in Germany.

Support, service, and calibrations are handled in our Houston location, where a strong reputation has been established by providing fast and reliable customer service.



MRU Plant #1
Administration, R&D, Service



MRU Plant #2
Manufacturing

The MRU Story

Founded on June 1st, 1984 with just 2 employees, MRU has grown into an internationally respected enterprise. Headquartered in Neckarsulm - Obereisesheim, Germany, MRU develops and manufactures the highest in quality and reliability portable and stationary gas analyzers for combustion, emissions, and biogas.

The initial focus of the company was based on saving energy. Because large furnace operators were so impressed with how they could so quickly and easily they could improve fuel efficiency, they would place orders while the analyzers were being demonstrated on-site. In 1988, a new German directive for small combustion sources came into effect. Their official technicians, chimney sweepers, were now required to make combustion measurements. This multiplied demand for flue gas analyzers nearly overnight. As Germany took a leading role in this movement, which spread across the globe. The markets grew, and new analyzers, often tailored to country specific requirements, were developed.

Protecting the environment, has not always been a driver to the analyzer market, but it has always been important to MRU. As the world realized the need to monitor and control harmful emissions, MRU was already focused to address these needs with both portable and stationary solutions. Continuous innovation is a driving force imbedded in MRU's objectives, and a primary reason for MRU's market success. Just as important, the company never falters on its philosophy that MRU's well-being and success is directly tied to its employees. They are the enforcers and defenders of our high quality and everlasting brand.

Always focusing on the future, with no time to rest on success. With the leadership of MRU's Founder and Managing Director, Erwin Hintz, the company continues its search for new products, new markets, and new ways to serve our customers.



The MRU team and family members

DM 9600

Multifunction, Precision Manometer for Pressure, Draft, Differential Pressure and more

Main features:

- Large 2.8" Color, touch screen
- Temperature compensated pressure sensor
- Automatic zeroing for long-term stability
- Two (2) K type thermocouple sockets
- Simultaneous display of pressure and temperature readings
- 1000 points and 500 sites data memory
- Micro SD card slot
- USB charging and data download
- Hands free operation via magnetic back case
- 20-hour Lithium battery



300 HC / 300 CO

Digital gas detectors for HC or CO with programmable alarm settings

Main features:

- AA battery operated
- Big and bright display
- Menu guided software and function keys
- Light and small
- Interface for external printer
- Programmable alarm settings
- Visual and audible alarm



400 GD

Gas detector for combustible gases as well as stack back pressure gases

Main features:

- Dependable gas leak detection
- Large color graphic display
- Durable and dirt resistant key pad
- Exchangeable, pre calibrated sensors
- Visual alarm at both sensor head and analyzer display
- Adjustable alarm settings
- Micro SD card slot
- IR interface for external printer
- Integrated SD card reader for additional memory and easy data handling



AMPRO 2000

The most powerful Handheld gas analyzer

The **AMPRO 2000** is a true 7-sensor handheld emission analyzer which can measure up to **7** gas components simultaneously

Main features:

- Emission calculations such as mass flow calculated or True NO(x), plus O₂ ref. to user defined values
- High energy Li-Ion battery
- Large condensate separator with PTFE coated filter
- Stainless steel gas and pressure connectors
- Air purging pump for CO-sensor protection
- Internal data storage for up to 16000 measurements
- Large color graphic, backlit display with zoom function
- Customizable screen settings
- Durable and dirt resistant key pad
- IR interface for external printer
- Integrated SD card reader for additional memory and easy data handling



NOVA *compact*

For professionals who are looking for an extremely compact and rugged analyzer

Fast and accurate measurements
for all gas, oil and solid fuel
applications

Main features:

- Simultaneous measurement of up to 4 gases
- Easy intuitive operation
- Large condensate separator with PTFE coated filter
- OPTIONAL - Peltier gas cooler
- Suitable also for CHPs
(cogeneration heat and power engines)
- Differential temperature measurement
- Differential pressure measurement
- Built-in speed printer with easy paper loading
- Rugged transport case



NOVA *plus*

**PORTABLE EMISSIONS ANALYZER
for industrial combustion / emissions
tuning, compliance reporting
or trouble-shooting**

**Bluetooth communications between
BASE unit and REMOTE control unit**

Main features:

- Simultaneous measurement of up to 8 gases
- Automatic calculations and data logging
- Easy operation via intuitive Remote Control Unit
- Rugged design for extreme field conditions
- Accuracy and reliability on numerous applications
- Large condensate separator with PTFE coated filter
OPTIONAL - Peltier gas cooler
- High energy Li-Ion battery
- Built-in speed printer with easy paper loading
- Compact and rugged transport case



VARIO *luxx*

PORTABLE EMISSIONS ANALYZER

For tuning, trouble-shooting, compliance reporting or long-term, semi-continuous monitoring of nearly any combustion/emission application

Main features:

- Simultaneous measurement of up to 9 gases
- Linux operating system
- 7" high contrast, color touchscreen with graphical data display
- Emission calculations such as mass flow calculated or True NO(x), plus O₂ ref. to user defined values
- Integrated Peltier cooler with automatic condensate drain pump
- Automatic zeroing via 3-way solenoid valve
- Internal sample flow monitoring
- Strong, regulated sample pump
- Data transfer over LAN Ethernet or USB
- AND MUCH MORE



VARIO *luxx* SYNGAS

The potable SYNGAS analyzer

Long-term process gas analysis for specialty gases

PORTABLE / VERSATILE / RUGGED

Suitable for semi-continuous measurements of "syngas" including the following applications:

- Steel industry: coke oven gas, blast furnace gas
- Biomass or coal catalytic oxidation (gasification)
- Waste gasification process, plasma gasification process
- Steam reforming of liquid hydrocarbons (refinery gas etc.)
- Flare gases
- Research ... and others



MGA *luxx*

Heavy duty flue gas emission analyzer for long time measurements of industrial combustions, large boilers, gas engines and turbines, furnaces and many more

Main features:

- Precise measuring technique using non dispersive infrared (NDIR) technique
- Up to **6** gas NDIR measurement: CO/CO₂/NO/NO₂/SO₂/HC and O₂ with either long-life O₂-ECS or O₂-PM (paramagnetic cell)
- Linux operating system
- 7" high contrast, color touchscreen with graphical data display
- Emission calculations such as mass flow calculated or True NO(x), plus O₂ ref. to user defined values
- Integrated DUAL Peltier cooler with automatic condensate drain pump
- AND MUCH MORE



MGA *prime*

HIGH END flue gas emission analyzer for long time measurements of industrial combustions, large boilers, gas engines and turbines, furnaces and many more

Main features:

- Precise and very stable offset measuring technique using special non dispersive infrared (NDIR) technique, for enhanced long time measurements
- Up to **8** gas NDIR measurement: CO/CO₂/NO/NO₂/SO₂/CH₄/C₃H₈/N₂O and O₂ with either long-life O₂-ECS or O₂-PM (paramagnetic cell)
- Linux operating system
- 7" high contrast, color touchscreen with graphical data display
- Integrated DUAL Peltier cooler with automatic condensate drain pump
- AND MUCH MORE



OMS 420

**IN-SITU combustion optimization monitor
Flue Gas Oxygen & Combustibles transmitter
Superior design for superior results**

Main features:

- Combination of O₂ & COe for improved combustion
- Real-time measurements
- Stable, long-life Zirkonium sensor
- Unique, heated solid electrolyte combustible sensor
- Easy access to sensor for fast and simple service
- Suitable for high-dust particulate applications
- High temperatures to 3,000°F
- Probe lengths to 6'
- Optional AUTO-CAL



OMS 420 *Ex*

**IN-SITU combustion optimization monitor
Flue Gas Oxygen & Combustibles transmitter**

**hazardous area designation of use:
Zone 2 or Class 1, Div. 2, Gr C/D**

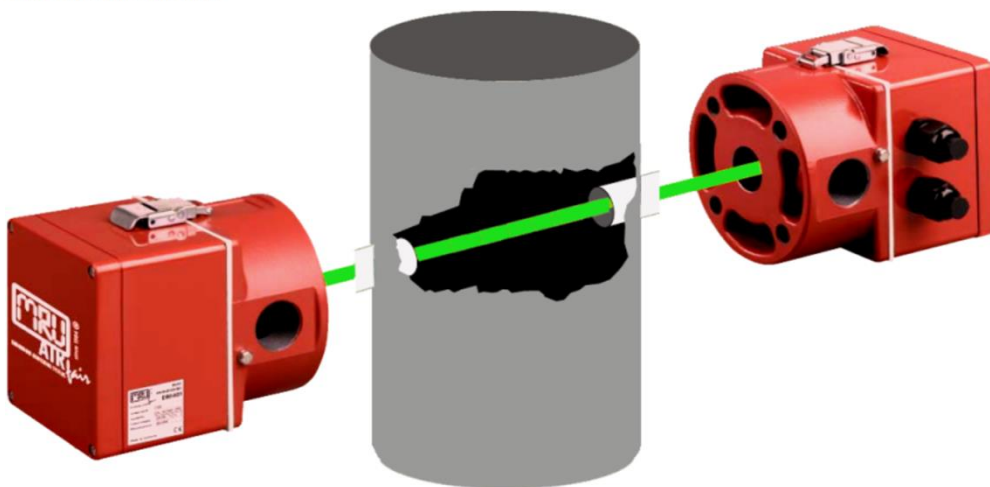
Main features:

- Special IP65 pressurized cabinet and z-purge controller
on site compressed air needed
- Easy access to sensor for fast and simple service
- High temperatures to 1,800°F
- Probe lengths to 6'
- Optional cabinet heater
- Optional ATEX Vortec cooler
- Optional AUTO-CAL



DM 401

**Dust monitoring system
double pass transmission
measurement**



Measures 0 ... 100 % opacity
or 10 ... 1,000 mg/m³ dust (*)
(*) after on site calibration according to VDI 2066

SWG 100 CEM

**Stationary Analyzer for contineous
emission monitoring**

Main features:

- Field replaceable, plud & play pre calibrated sensors
- Very compact industrial design, for up to 6 gas simultaneou measurement
- Using low cost but reliable electro-chemical cells for O₂, CO, NO, NO₂, SO₂
- And infrared module (NDIR) for CO₂ measurements
- Advanced sample gas preparation for fast reliable measurements
- Flexible platform can be used for various combustion applications
- Direct and contineous/discoontineous measurement with pressure and temperature
- Compensation of all main flue gas parameters
- Simple installation, ready to run delievry and easy to maintain



SWG 200-1

Cost-effective analysis technology in a compact design.



- Economical and efficient
- Both infrared modules and electrochemical sensors are used in the SWG 200 -1
- This multi-gas analyzer is appropriate when cost-effective solutions are required for a fixed emissions system
- The compact package uses IR modules and electrochemical sensors to continuously, selectively, and precisely measure gas components in ppm and % ranges (high and low concentrations)

SWG 300-1

Complete CEMS

EMISSIONS MONITORING

PROCESS GAS
OPTIMIZATION

PRECISE -
POWERFUL AND
EFFICIENT

- Ex-zone2 (special model)
- Up to simultaneous 7 gas components
- Up to 5 automatic sampling points (switching)
- Weather proof enclosure IP 65
- Complete / partial air conditioning
- Automatic calibration with test gases
- Easy to service and maintain
- Customized solutions on request



OPTIMA 7 BIOGAS

VERSATILE BIOGAS ANALYZER

Ideally suited Landfills, Digesters, & even
Energy to Waste Engine Tuning

Main features:

- Fast and easy to use with intuitive menus and function buttons
- Large, color, back-lit display with ZOOM features for viewing in any condition
- Customizable screen settings
- Durable and dirt resistant keypad
- High energy Li-Ion battery provides up to 6-8 hours operation
- Large 16,000 measurements internal memory
- Integrated SD card reader for additional data storage easy data handling
- Sample preparation with condensate separator and with Teflon filter
- Gas pressure, flow, and temperature measurements



NOVA plus BIOGAS

PORTABLE BIOGAS ANALYZER

Main features:

- Simultaneous measurement of up to 4 (max. 7) gases
- Biogas measurement: O₂, H₂S, CH₄ and CO₂
- O₂ measurement 0 - 25.00%, using long-life sensor
- Biogas / differential pressure measurement (0 ... +/- 300 mbar)
- Battery and grid power operation
- Internal data storage for up to 16000 measurements
- Mini-USB interface for cable data transfer to PC
- Built in high speed printer
- Large 16,000 measurements internal memory
- Integrated SD card reader for additional data storage easy data handling
- Sample preparation with condensate separator and with Teflon filter (optional gas cooler)



SWG 100 *BIO-compact*

For biogas measurement

- cost effective stationary biogas analyzer
- accurate measurements, incl. plug&play, pre-calibrated sensors
- safety in use with gas flow restrictor orifice at gas inlet and ventilation
- sampling from low suction up to high pressure gas
- sample gas conditioning for fast and reliable measurements
- no dilution of the sample gas, nor use of compressed air is required
- discontinuous measurement, user settable up to 24 measurements per 24 hours
- up to 2 sites monitoring (time sharing technique) with only 1 analyzer
- IP 54 cabinet for use in harsh environment



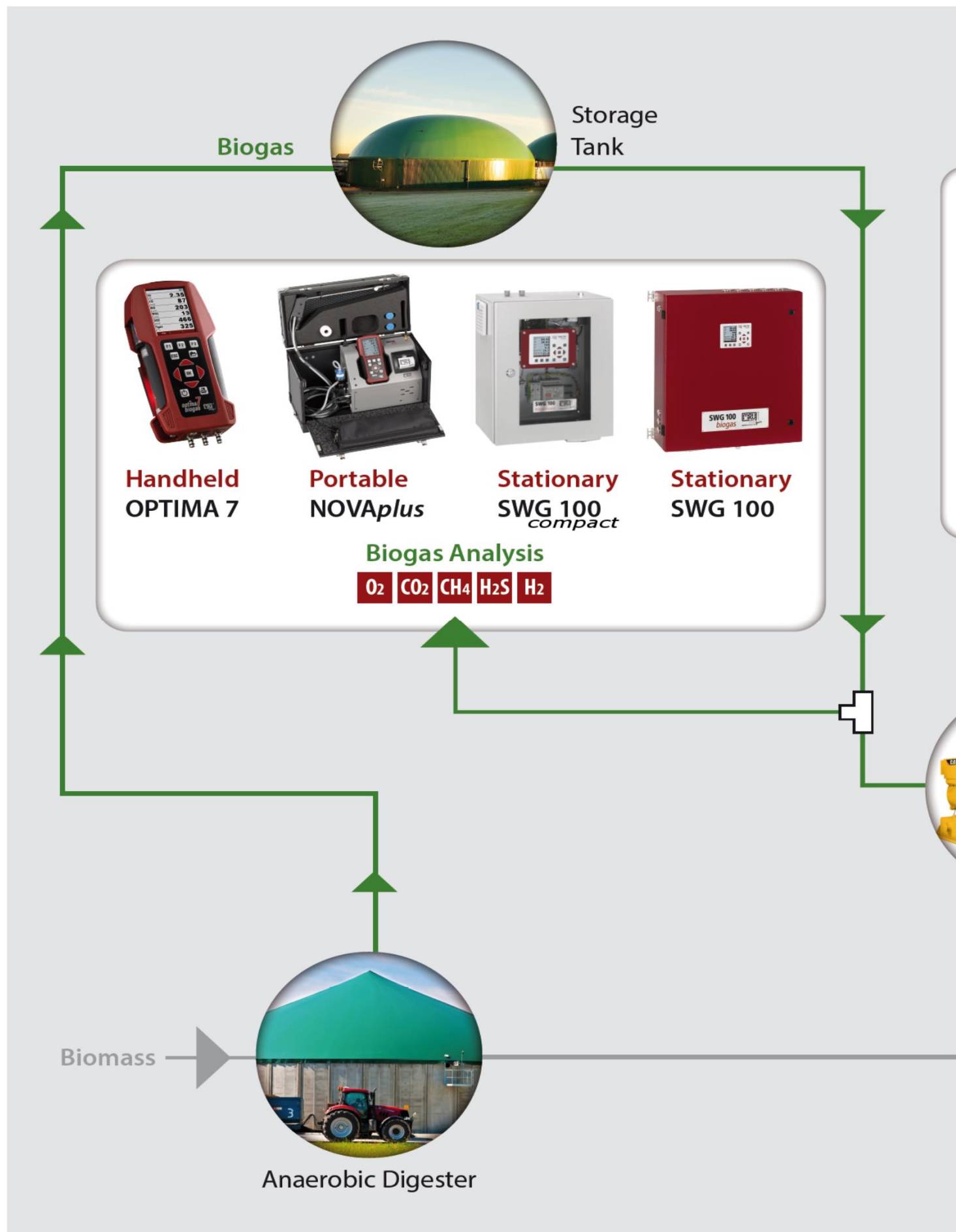
SWG 100 *BIOGAS*

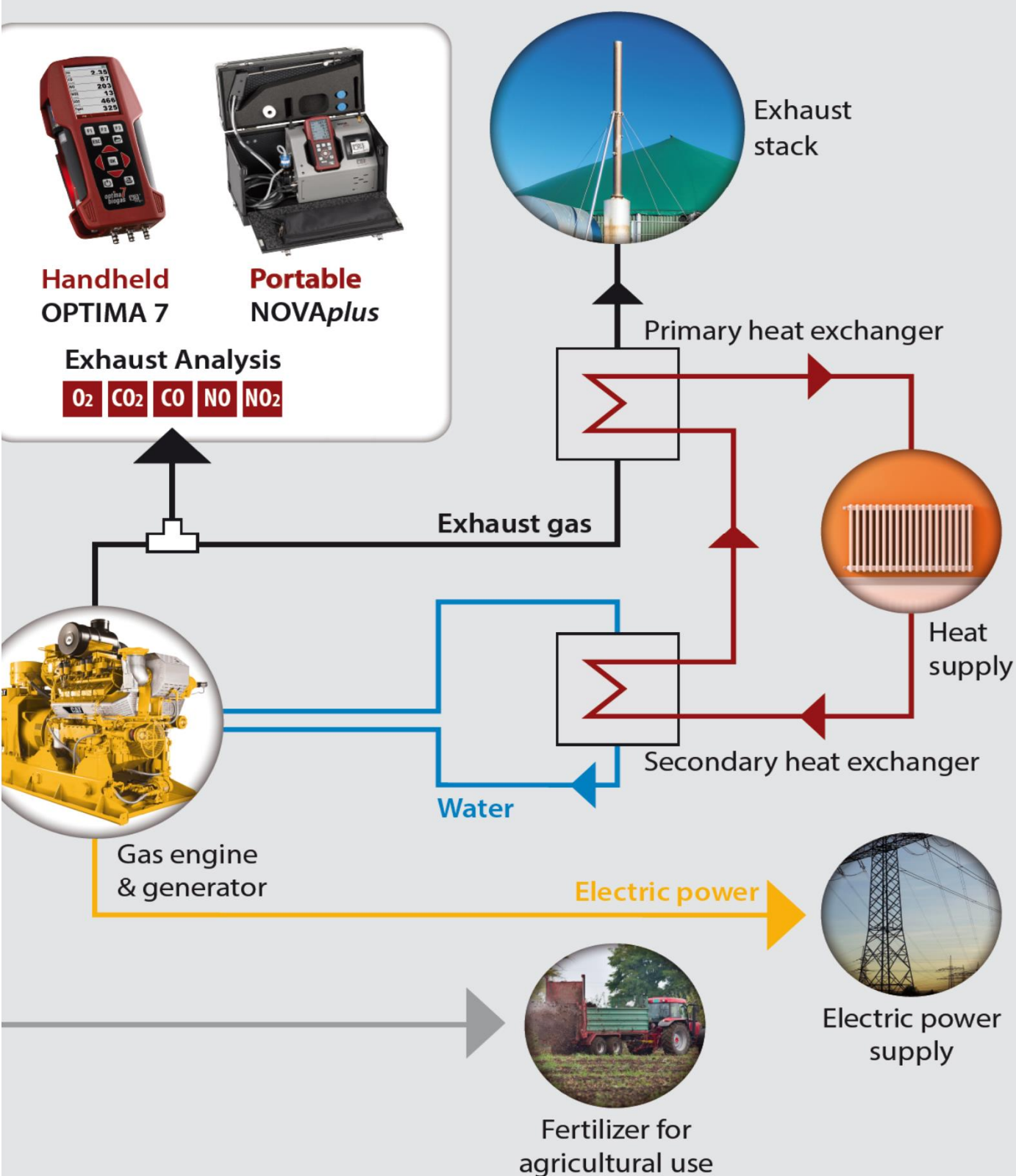
Landfill and Biogas analysis For optimizing production, performance and reporting

Main features:

- Continuous and Semi-continuous operation
- Efficient gas prep provides fast and reliable measurements
- Sampling from low suction to high pressure
- Up to 10 sites monitoring via Time Sharing
- Fresh air auto zero
- Multiple inputs/ outputs of (4) 4-20mA, (2) relays, RS485 Modbus, Ethernet even Profibus
- Safety: Monitored ventilation fan, gas flow restrictor, optional %LEL detector and flame arrester
- Fast & easy installation: Connect and go with no need for compressed air for dilution
- Optional Auto Calibration









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EMISSION MONITORING SYSTEMS

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