

Gas Analyzing System NGA2



The **gas analyzing system NGA2** is designed to continuously measure gases from waste landfill sites, digester gas, mine gas or biogas.

The methane and carbon dioxide analysers are equipped with infrared sensors, the oxygen analyser is provided with a paramagnetic sensor, and the hydrogen sulphide analyser with an electrochemical sensor.

The measured value is displayed and gives an analogous signal of 4 - 20mA.

The specific use of integrated gas processing ensures trouble-free operation. The measuring gas is cooled down to 5 degrees Celsius in a Peltier cooler, thus preventing precipitation of condensate inside the analysers and consequently avoiding corrosion of the measuring cells. The condensate separated in the gas cooler is constantly conveyed to the exits of the system by condensate pumps.

The system is optionally available with 1-8 channels.

A float-type flow meter regulates and indicates the measuring gas flow.

The system calibration will be done automatically. A manual calibration with test-gas is only necessary all 12 months.

NGA1 Components

- Floor-mounted cabinet
- Use of up to 4 measuring channels
- Cabinet fan and internal heater
- Measuring gas fine filter
- Measuring gas cooler
- Condensate pump
- Flow indicator with precision regulation valve
- Flow control with alarm switch
- NAE2 Evaluation unit with alarm output of the gas alarms
- Special filter for moisture protection
- Measuring gas pump
- **Automatic calibration**
- Potential-free alarm contacts
- Galvanic separation of measurements
- 10 litre condensate collector



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Technical Data

Gas analyser Type:	Siemens Ultramat 23
Channel CH₄/CO₂	
Measuring principle:	Infrared absorption
Measuring range:	0-100 Vol%
Accuracy:	+/- 1% of full scale
Response time:	< 20 seconds
Channel O₂	
Measuring principle:	Electrochemical cell
Cell life time:	>2 Jahre
Measuring range:	0-25 Vol%
Accuracy:	+/- 1% of full scale
Response time:	< 20 seconds
Gas analyser H₂S	
Type / Measuring principle:	Electrochemical cell
Cell life time:	ca. 12 month
Measuring range:	0-500 / 0-5000 ppm
Accuracy:	+/- 4% vom Endwert
Response time:	< 100 seconds
Channels per system:	4 channels maximum
Measuring gas processing :	Gas cooler, measuring gas diaphragm pump, fine filter, flow regulation valve, float-type flow meter, peristaltic pump for the discharge of condensate, membrane filter, deflagration arresters
Monitoring	NAE2 evaluation unit with flow alarm, CH ₄ -alarm, CH ₄ -pre-alarm, O ₂ -alarm, O ₂ -pre-alarm, group alarm, alarm suppression during system calibration
Calibration:	Automatic calibration. Manuell calibration with test gas all 12 months
Pump capacity:	-150 mbar at a flow rate of 60 l/h
Electrical connection:	230 VAC / 50 Hz / 10 A
Air-conditioning of cabinet:	Heating 1x200 W / cooling fan
Temperature range:	5°C to 35°C
Pressure range:	800-1200 hPa
Mechanical connections:	Compression type fitting 6/4mm VA
Alarm outputs:	Volt-free contacts
Signal outputs:	4-20 mA / apparent ohmic resistance: 500 Ohm
Cabinet:	Steel sheet, protection class IP54, dimensions B 800 x H 1900 x T 500 mm, colour: RAL 7035
Documentation:	One copy established in English or German language
Options:	<ul style="list-style-type: none"> • Special voltage • Measuring gas pump and bypass control with increased capacity range – 600 mbar at a flow rate of 60 l/h • Moisture detector integrated in the measuring gas circuit provided with alarm outputs and pump switch-off • Air conditioning unit for use at high ambient temperatures • Auxiliary heating • Function monitoring, ventilator • Leakage control system LCS1 including automatic shutdown in case of alarm