

Gas Analyzing System NGA5



NGA5 Components

- Wall-mounted cabinet
- Use of up to 4 measuring channels
- Cabinet fan and internal heater
- Fault monitoring of fan
- Inspection switch
- Measuring gas fine filter
- Measuring gas cooler
- Condensate pump
- Flow indicator with precision regulation valve
- Flow control with alarm switch
- Special filter for moisture protection
- Measuring gas pump
- Change-over switch for calibration gas
- Potential-free alarm contacts
- Galvanic separation of measurements

The **gas analyzing system NGA5** 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, and the oxygen and hydrogen sulphide analysers are provided with electrochemical sensors.

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

The specific use of an 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 exit of the system by condensate pumps.

The system is optionally available with 1-4 channels.

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

In case of measuring, an oxygen measuring cell reaches an operating life of approx. 2 to 4. In case of measuring intervall, a hydrogen sulphide cell reaches an operating life of approx. 1 to 2 years.



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Technical Data

Gas analyser CH₄/CO₂ Type / Measuring principle: Measuring range: Accuracy: Response time:	GAE CH ₄ , GAE CO ₂ / infrared absorption 0-100 % by vol. +/- 2% of full scale < 5 seconds
Gas analyser O₂ Type / Measuring principle: Measuring range: Accuracy: Response time:	GAE-O ₂ / electrochemical or paramagnetic 0-25 % by vol. +/- 1% full scale < 15 seconds
Gas analyser H₂S Type / Measuring principle: Measuring range: Accuracy: Response time:	GAE-H ₂ S / electrochemical 0-2000 ppm +/- 3% full scale < 30 seconds
Measuring channels per system:	4 channels maximum
Measuring gas processing :	Gas cooler, measuring gas diaphragm pump with bypass valve, fine filter, flow regulation valve, float-type flow meter, peristaltic pump for the discharge of condensate, membrane filter, deflagration arresters
Monitoring	Control of gas analysis circulation with flow alarm, group alarm output
Calibration:	Manually by means of a three-way change-over switch to calibration gas Inspection key switch
Pump capacity:	-150 mbar at a flow rate of 60 l/h
Electrical connection:	230 VAC / 50Hz / 10 A
Air-conditioning of cabinet: Temperature range: Pressure range: Mechanical connections:	Heating 1x200W / cooling fan 5°C to 35°C 800-1200 hPa Compression type fitting 6/4mm VA
Alarm outputs: Signal outputs: Air outlet:	Volt-free contacts 4-20mA / apparent ohmic resistance: 500 Ohm Exit filter
Cabinet:	Steel sheet, protection class IP54, dimensions B600xH700xT400mm, colour: RAL7035
Documentation:	One copy established in English or German language
Options:	<ul style="list-style-type: none"> • Limit value outputs for CH₄, O₂, H₂S with plain text shown on internal display • Pressure compensation of the methane measurement • Rain shelter • 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 • Leakage control system LCS1 including automatic shutdown in case of alarm