

Gas Analyzing System NAGA2



NAGA1 Components

- Floor-mounted cabinet
- Cabinet fan and internal heater
- Inspection switch
- Pre-separator
- 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
- 10 litre condensate collector
- Automatic calibration
- Potential-free alarm contacts
- Galvanic separation of measurements

NUK NENNING UND KRUMM GmbH Mangenberger Str. 379, D-42655 Solingen www.nuk-gmbh.de

The **exhaust gas analyzing system NAGA2** is designed to continuously measure gases from flares.

The methane analyser is equipped with an infrared sensor and the oxygen 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 of the system. 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 means of condensate pumps. Furthermore, a pre-separator is installed. Before being fed to the analysers, the precleaned gas is additionally cleaned by a fine filter as well as a special absorber.

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

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



| Phone: | +49 212 - 2 68 11 93 |
|--------|-------------------------|
| Fax: | +49 212 - 2 68 11 95 |
| email: | <u>info@nuk-gmbh.de</u> |



Gas Analyzing System NAGA2

Technical Data

| Gas analyser CH₄/O₂ | |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type: | Siemens Ultramat 23 |
| | |
| CHANNEL 1 / CH ₄ | |
| Measuring principle: | Infrared absorption 0-100 Vol% |
| Measuring range: Accuracy: | +/- 1% of full scale |
| Response time | < 20 seconds |
| Nesponse time | |
| CHANNEL 2 / O ₂ : | |
| Measuring principle: | Electrochemical cell |
| Measuring range: | >2 Jahre |
| Accuracy: | 0-25 Vol% |
| Response time | +/- 1% of full scale |
| | < 20 seconds |
| Measuring gas processing: | Pre-separator, 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, absorber filter, membrane filter |
| Monitoring: | Control of gas analysis circulation with flow alarm |
| Calibration: | Automatic calibration. Manuell calibration with test gas all 12 months |
| Pump capacity: | -150mbar at a flow rate of 60l/h |
| Electrical connection: | 230 VAC / 50Hz / 10 A |
| Air-conditioning of cabinet: | Heating 2x800W / fan |
| Temperature range: | -15°C up to 40°C |
| Pressure range: | 800-1200 hPa |
| Mechanical connections: | Compression type fitting 6/4mm VA |
| Alarm outputs: Signal outputs: | Volt-free contacts 4-20mA / apparent ohmic resistance: 500 Ohm |
| Air outlet: | Exit filter |
| | |
| Cabinet: | Steel sheet, protection class IP44, dimensions B800xH1500xT500mm |
| Documentation: | One copy established in English or German language |
| Options: | Air-conditioning unit for the cabinet Stainless steel socket for outdoor installation Special voltage |
| | |

NUK NENNING UND KRUMM GmbH

Mangenberger Str. 379, D-42655 Solingen www.nuk-gmbh.de

 Phone:
 +49 212 - 2 68 11 93

 Fax:
 +49 212 - 2 68 11 95

 email:
 info@nuk-gmbh.de