

FAQ's

AWITE GAS ANALYSIS SYSTEMS SERIES 10

- Decision criteria for purchase - Which areas need to be compared:

Which gases can be determined in which measuring ranges?

- CH₄ 0-100 vol.-%
- CO₂ 0-100 vol.-%
- H₂S 0-20/ 200/ 1500/ 3000/ 5000 ppm directly, up to 50000 ppm via dilution
- O₂ 0-25 vol.-%
- H₂ 0-2000/ 5000/ 10000/ 20000/ 50000 ppm (directly), up to 100 vol.-% via dilution

Measuring methods

- Multi-point calibration for all sensors; thereby any non-linearities are eliminated and overall a higher accuracy of measurement is achieved across the whole measuring range.
- Infrared 2-beam sensors with temperature compensation for CH₄ and CO₂ without any cross-sensitivity to other biogas components, no influences by water vapour, ageing, etc.
- Electrochemical sensors for O₂, H₂S and H₂
- Comment for measuring methods like heat tone or thermal conductivity: Due to cross-sensitivity to other gases we do not recommend using these methods with multi-component mixtures (biogas consists of 6 and more gas components with very different physical and chemical characteristics!).
- Pressure compensation of all sensors.
- Air flushing between the measurements to increase the sensor life.
- Detection of overloads and temporary switch-off.
- Automatic selection and switching of measurement range, e.g. for measurement of H₂S.
- Evaluation of signal limits – optimal measuring period.

Life-span of sensors

- Infrared 2-beam: Several years, mainly dependent on the life-span of the light source.
- Electrochemical: 2 to 4 years (inexpensive exchange of sensor, 130 - 400 EUR for new sensor).

Frequency of measurement and measuring points

- Up to 50 measurements/day with a guaranteed life-span of 12 months for discontinuous systems.
- Continuous systems for special applications (gas feeding, sale of raw biogas, monitoring processes...) with redundant pumps for automatic monitoring and switching.
- Frequent measurements important for process control and regulation of oxygen supply.
- Number of measuring points freely selectable (more than 100 measuring points for a system already implemented).
- Standard: Measurement of ambient air/intake air for leak monitoring.
- Check measuring points for flow, blockage, ...
- Monitor pumps and exhaust air.

Gas conditioning

- Gas cooler as a standard for AwifLEX
 - Specifically important with humid gas. (e. g. fermenter)
 - Enhancement of measurement accuracy, same conditions for all measuring points.
 - Decrease of aging, tear and wear and contamination of the sensors.
- Standard: condensate trap.
- Visual check of liquids with emergency stop in every system.

Special features

- Automatic calibration with monitoring of signal limits, signal increase, plausibility check, multiple measurements, monitoring of composition of calibration gas and primary pressure.
- Integrated data logger: endless data storage
- Menu navigation and documentation in multiple languages: DE, EN, IT, CZ, ES, HU, PL, FR, SLO, SK, RUS, TR, BG, RU, CN
- Extendibility: All AwifLEX Cool+ systems can be extended based on customer's needs.
- Connection of external sensors for flow, pressure, temperature etc.
- Other calculations, e.g. of nominal flow, energy value, calorific value.

Fuzzy-logic desulphurization

- Complete package with compressor, valves, non-return valves.
- Monitoring of O₂ concentration.
- Automatic air dosage for multiple tanks.
- Minimal necessary oxygen demand.
- Compressor monitoring

Component selection and pricing for gas analysis systems

- Starting at ~4,000 EUR (AwiECO), depending on the specifications.
- High price stability guaranteed.
- Long availability of spare parts (many years) due to the use of industrial components.
- Low wear and tear/high durability of the components.
- Many options available (more information on demand).

Bus connection and data exchange

- Connection with many industrial bus systems and interfaces possible, e.g. Profibus, Profinet, Modbus, Ethernet, RS232, RS485, USB.
- PC interfaces, AwiView software for further data processing and data export in e.g. MS EXCEL.

Maintenance and follow-up costs

- Maintenance always necessary for measuring devices.
- Maintenance intervals 12 months, in some cases 6 months.
- Fixed prices for travel and calibration.
- Low drift rates.
- No costs for filter and wear parts between maintenance intervals.
- No tasks or effort for the operator.

Awite Service

- Customer-specific systems, pre-startup consultancy, plant-related optimization.
- Initial operation of every gas analysis system on-site.
- Comprehensive support during further operation, full maintenance service contracts on request.
- Calibration service on-site.
- Deadline monitoring for maintenance intervals.
- Hotline 01805-AwiGas
- Availability 365 days a year