POLLUTION
ANALYTICAL EQUIPMENT

FlexiGC
FENCELINE MONITOR

Analyzer for industrial plant monitoring

POLLUTION GUARDIAN: THE CLOUD SOLUTION FOR REMOTE REAL-TIME DATA ACCESS

FlexiGC seamlessly integrates with the «**Pollution Guardian**» cloud service for **monitoring and managing acquired data**. The Pollution Guardian software automatically stores and archives analytical data, enables real-time data visualization and data history analysis (with customizable tables, charts, and statistical analysis). It also allows users to define alarms on collected data and send notifications via SMS, email, or push messages to smartphones through the dedicated app. Remote access for FlexiGC diagnostics is made simple by Pollution Guardian.

ULTRASONIC ANEMOMETER FOR HIGH PERFORMANCES IN ALL ENVIRONMENTAL CONDITIONS

An **optional multiparametric ultrasonic anemometer** can be paired with FlexiGC, ideal for applications requiring comprehensive environmental condition monitoring. The device accurately measures wind speed and direction, temperature, relative humidity, atmospheric pressure, and solar radiation.

Its robust and compact design, combined with an integrated heater, ensures **consistent performance even in harsh climates**, while the electronic compass with tilt angle detection allows accurate positioning, suitable for both fixed and mobile installations.

Thanks to these features, **the anemometer enhances FlexiGC's potential**, providing a reliable and versatile solution for a wide range of industrial and environmental monitoring applications.

FLEXIGC, THE ANALYZER FOR INDUSTRIAL PLANT MONITORING

FlexiGC is the carrier-gas-free gas chromatograph for monitoring BTEX (Benzene, Toluene, Ethylbenzene, and Xylene), in compliance with EN14662-3:2015, as well as H_2S. Its architecture ensures flexibility, accuracy, and reliability.

FLEXIGC: THE GAS CHROMATOGRAPH FOR INDUSTRIAL PLANT MONITORING

FlexiGC is an air quality gas chromatograph designed for continuous and remote monitoring of BTEX compounds, and other analytical compounds, in compliance with EN14662-3:2015. Its design combines compactness, precision, and ease of use, also allowing integration with an optional module for hydrogen sulfide (H_2S) analysis.

The main application of FlexiGC is the monitoring of industrial plants. Installed either along the perimeter or within the site, the system enables:
- Real-time detection and quantification of specific VOCs and, optionally, H_2S.
- Early identification of operational anomalies or emergency events.
- Documentation of air quality to protect worker safety, surrounding communities, and the environment..

Thanks to its integrated cloud connectivity and the ability to create scalable, distributed monitoring networks, FlexiGC becomes the ideal tool to ensure regulatory compliance, improve plant management, and communicate transparency to stakeholders.

MODULAR ARCHITECTURE FOR MAXIMUM FLEXIBILITY

FlexiGC is designed with **a modular architecture** that guarantees maximum flexibility and easy handling, structured into four functional groups:

1. **Pump group** – ensures proper sampling and gas flow handling.

2. **Analytical module** – the system's core, combining miniaturized size and high sensitivity through proprietary technologies: the Micro-Electro-Mechanical Fluidic System (MEMS) applied to the selective preconcentrator and chromatographic column, and a miniaturized Photoionization Detector (PID) for peak quantification.

3. **Check-standard group** – automated calibration verification and update system with integrated span gas canister.

4. **PC group** – dedicated to data management and transmission, offering LAN, Wi-Fi, and 4G connectivity for local access and cloud integration through the **Pollution Guardian** platform, plus MODBUS Ethernet for automated control.

This structure makes FlexiGC a compact, versatile, and always-connected instrument capable of adapting to complex and distributed air monitoring scenarios.

APPLICATION FLEXIBILITY

A single instrument for multiple needs: from industrial emissions monitoring to air quality, from sensitive sites to odor and environmental impact assessment.

ANALYTICAL FLEXIBILITY

FlexiGC easily adapts to various operational conditions, expanding the range of detectable compounds through optional modules: H_2S and weather station.

USAGE FLEXIBILITY

FlexiGC can be used in both fixed installations and emergency or field surveys. It requires no laboratory or complex infrastructure and provides fast, accurate, and reliable analyses anywhere.

H₂S MODULE:
COMPLETE MONITORING BEYOND BTEX

In addition to BTEX aromatic compounds, **FlexiGC** can be equipped with an optional module for measuring **hydrogen sulfide (H₂S)**, a corrosive and hazardous gas even at low concentrations.

Thanks to advanced sensors with high sensitivity and stability, the H₂S module enables:
- Continuous and real-time detection.
- Expansion of the instrument's application range, making FlexiGC ideal for monitoring near chemical and petrochemical plants, landfills, and waste treatment site
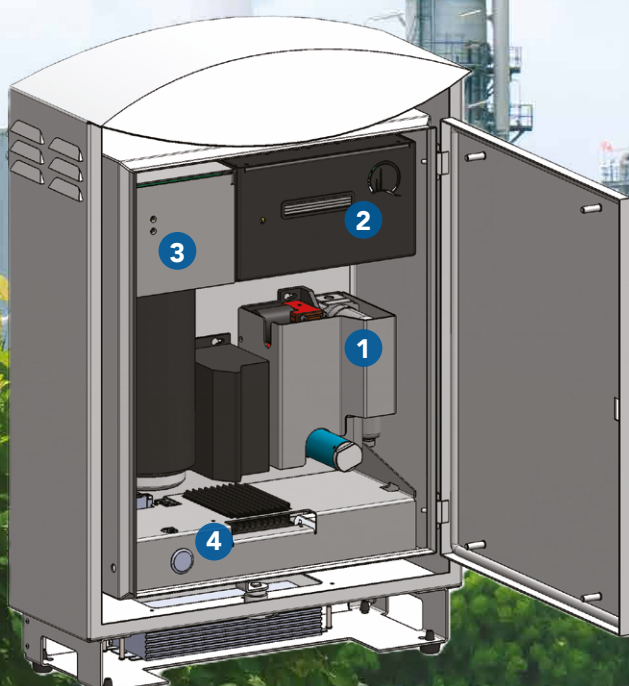
This extension provides **a single integrated system for BTEX and H₂S control**, simplifying environmental and industrial monitoring activities.

APPLICATIONS

- Monitoring of perimeter emissions from industrial plants
- Monitoring of diffuse emissions in industrial plantsi
- Monitoring of fugitive emissions in industrial plants
- Continuous air quality monitoring
- Monitoring of industrial sites near cities
- Monitoring of sensitive locations (schools, hospitals, parks, etc.)
- Monitoring during the remediation of polluted sites
- Support in monitoring odorous emissions

MAIN FEATURES

- Proprietary miniaturized MEMS GC technology
- PID detector
- Ambient air is used as carrier gas, no cylinders required
- Compliant with EN14662-3:2015
- Cloud-based control and management software
- Weather station (optional)

TECHNICAL SPECIFICATIONS

Dimensions	420mm x 620mm x 210mm
Weight	19 kg
Operating temperature	from -40°C to 50°C
Analytical control	Analytical module with microcontroller and industrial PC in chassis
Data storage	64 GB internal flash memory
Power supply	100–240 VAC, 50–60 Hz
Max power consumption	~8A (including heaters, PC (2A), check-standard module, and H_2S module)
Carrier gas	Ambient air, <10 sccm He, H_2, Ar, N_2 available on request with different cabinet configuration
Sampling	Sampling flow 50–300 sccm (typ200 sccm)
Detector	Ultra-sensitive PID – Photo IonizationDetector (10.6 eV)
Analyzed gases	Benzene, Toluene, Ethylbenzene, Xylenes, others on request
Analytical range	• 0.2–200 ppb (benzene) with 10-min analytical cycle • 0.5–1000 ppb (benzene) with 6-min analytical cycle
Custom analysis methods	Additional analytical methods available on request
Weather station (optional)	Wind speed/direction, barometric pressure, relative humidity, temperature, solar radiation
H_2S module (Optional)	• 0–2.000 ppb (range) • Lod 2 ppb • Precision: 1% of reading or 3 ppb • Linearity: 0.5%
Connectivity	Ethernet, Wi-Fi, 4G
Instrument control and data access	• Local web server accessible via common browsers (IE, Firefox, Chrome) • MODBUS TCP server • IoT "Pollution Guardian" service"

Environment

THE ANSWER TO YOUR ON-SITE DETECTION CHALLENGES

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