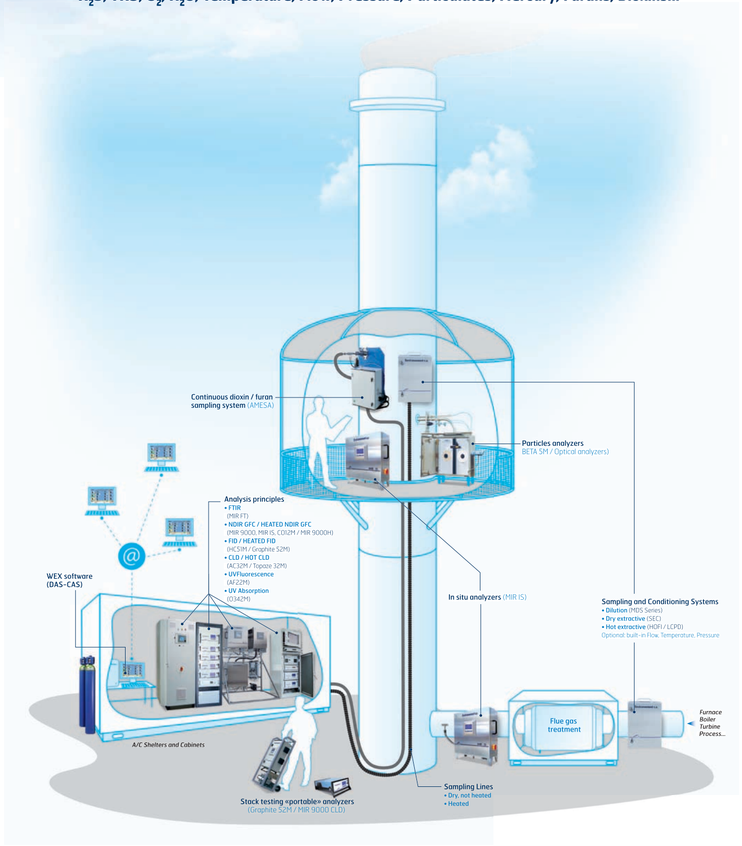
ENVIRONNEMENT S.A, leading analyzer manufacturer, designs and produces a complete range of state of the art analyzers, sampling systems, data acquisition and software's for the measurement and reporting of regulatory pollutants such as: **HCl, SO_2, NO, NO_2, NOx, N_2O, CO, CO_2, CH_4, THC, NmHC, TOC, NH_3, HF, H_2S, TRS, O_2, H_2O, Temperature, Flow, Pressure, Particulates, Mercury, Furans, Dioxins...**



With many years of industrial experience, our turnkey systems are designed and engineered to provide a complete solution-driven approach from extraction of the sample, analysis, system build through the data acquisition and reporting. Each turnkey system is fully configured to meet the ever-changing technical or regulatory needs of our industry or your company's challenges.

AMESA® on stack

MIR 9000 Blue Box

Insitu MIR IS

SEC box on stack

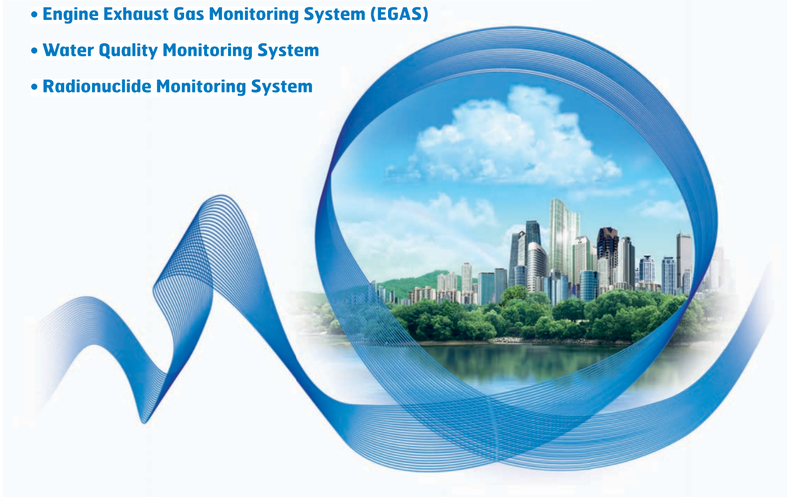
MIR 9000 analyzers

MIR FT rack cabinet

ENVIRONNEMENT S.A is a world-wide designer and manufacturer of high-precision **measuring instruments and analyzers approved by international institutes and authorities**.

We are committed to provide Best Available Techniques (BAT) and highest quality products and services for main **continuous monitoring applications:**

- **Air Quality Monitoring Systems (AQMS)**
- **Continuous Emission Monitoring Systems (CEMS)**
- **Engine Exhaust Gas Monitoring System (EGAS)**
- **Water Quality Monitoring System**
- **Radionuclide Monitoring System**



With more than three decades of activity and experience, our brand name has become internationally renowned and is identified as image of **accuracy, reliability, leading-edge technology and innovation**. Environnement S.A are committed to research and innovation permanent investment for developing new products to meet the ever-changing technical and regulatory needs of our industry.

Our broad analysis products range is also supported by one of the largest worldwide sales and service organisations, through a dynamic and expert network of nearly 80 Companies and Partners. This strong international presence is further supported by our corporate-owned subsidiary organisations in Italy, Germany, China, India and the United States of America.

Environnement SA's factory trained Field Service Team provides expert services (hands-on and technical support) for your equipment all over the world.

As supplier to the environmental fields, we integrate environmental factors into our day-to-day activity. This has resulted in the development of Quality and Environment management systems that meet the requirements of ISO standards **9001** and **14001**.

Environnement s.A

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contact : info@environnement-sa.com

ECOPASS ISO 14001 · BUREAU VERITAS Certification · PEFC

Environnement s.A
Instrumentation for the environment

CONTINUOUS EMISSION MONITORING SYSTEMS

GAS SAMPLING SYSTEMS

No matter what your process conditions are (hot, wet, dusty), we can offer the most suitable sampling solution:

DIL-1 / MS-1

The dilution system

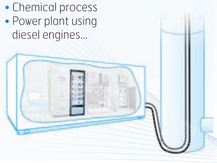
Ideal for mid-high to high concentrations or for sampling locations in hazardous areas

- Dilution probes available in different lengths and materials to suit the sample conditions
- Selectable orifice size for different ranges of dilution ratios
- Sample transfer up to 150 m (diluted / clean & dry sample) by non-heated sampling line
- Fluid control unit for management of 1 to 4 Dilution probes
- Span gas injection at the sampling point
- Automatic backflush function included

To be used with low concentration analyzers (AC32M / CO12M / AF22M / HC51M) or with MIR 9000.

APPLICATIONS:

- Refineries
- Chemical process
- Power plant using diesel engines...



SEC BOX

The dry permeation technique

Designed to meet almost all gas sample conditions using exclusive dry sampling method: ideal for sampling of corrosive gases

- Heated probe with a choice of materials and Probe lengths to suit the application
- Double stage particle filtration
- Built-in exclusive permeation sample dryer system
- Sample transfer up to 100 m (Clean & dry sample) by non-heated sampling line
- Suitable for sample transfer of high soluble gases
- Span and zero gas injection at the sampling point
- Fitted with automatic backflush function

To be used with non heated analyzers such as MIR 9000, MIR 9000 CLD

Wide range of sampling probes available for SEC and HOFI boxes, selection is depending on process conditions (humidity, temperature, dust, stack diameter...)

▶ All probes are available with DTP Option (Temperature, flow rate and pressure measurement)

▶ All our gas sampling systems can be used with dry or heated MVS multiplexing solutions (2 to 4 channels)

HOFI BOX

The hot filtration technique

Designed to feet almost all gas sample conditions using heated sampling universal method: ideal for sampling of corrosive gases

- Heated probe with choice of materials and Probe lengths to suit the application
- Double stage particle filtration
- Sample transfer up to 50 m (Clean & wet Sample) by 140-180°C heated line
- Longer heated sampling line available on request
- Span and zero gas injection at the sampling point
- Automatic backflush function

To be used with heated analyzers such as MIR FT, MIR 9000H, Graphite 52M, Topaze 32M

MAIN APPLICATIONS:

• Waste Incineration (Municipal Energy from Waste or Industrial) • Sludge Incineration • Gas Turbines • Power Plants • Boilers • Paper Mills • Glass Industry • Petro chemistry • Chemical Industry • Cement Plants ...

TAILORED DESIGN AND ENGINEERING OF YOUR CEMS PROJECTS

- First, we review and study your monitoring requirements.
- Next, we design, engineer and manufacture the best solution to meet your specific needs.
- Prior to shipment we perform a factory acceptance test of the complete system to ensure highest quality and optimal performance.
- Finally, we perform commissioning and start-up of your CEMS.
- From CAD drawings to assembly, testing and commissioning, we provide the complete engineered solution.

Our commitment to your satisfaction continues beyond installation

- After your CEMS is installed, you can rely on our technical staff for on-site user training, certification testing, direct and fast access to spare parts and all necessary support you may require.
- To ensure maximum performance, you can also select monthly, quarterly or yearly maintenance contracts, including QA/QC audits required by regulatory agencies.

▶ Our solutions are in compliance with latest regulations and standards (2010/75/EU (IED) Directive, 2000/76/EC Directive, 2001/80/EC Directive, EN 14181, EN 15267-3....)

▶ Our solutions are worldwide approved and certified (TÜV, MCERTs, CEN, US EPA, NF, J-MOE, KEMA...)

EXTRACTIVE MULTI-GAS ANALYZERS

Thanks to the high range of technologies, Environnement S.A analyzers fits with your application and not the reverse.

MIR 9000

Multi-Gas Infrared GFC

Offers excellent performance for multiple gas measurements, including HCl, NO, NO_2 (NOx), SO_2, CO, CO_2, HC, CH_4 (TOC), HF, N_2O and O_2

- Over 1500 installations world wide, covering many applications and industries
- Designed to measure dry and corrosive sample
- Fast and simultaneous measurements of up to 10 gases
- Measurement is on a dry basis
- Automatic cross interference correction
- Highly accurate, excellent stability with automatic optical stability check
- Intrinsic security with on-board residual H_2O measurement
- On-board paramagnetic cell for long term O_2 measurement
- Available in 19'' Rack or Tight box version
- **MCERTs** and **TÜV** certified to EN15267-3
- **QAL1** as defined by EN14181
- **QAL3 compliance** to EN14181
- Compliant with **U.S. EPA**

MIR 9000 CLD

Multi-Gas Infrared GFC fitted with optional CLD bench

Uses the Standard Reference Method **SRM for the simultaneous measurement of NO, NO_2, NOx, CO, CO_2 and O_2 in a single analyzer**

- Chemiluminescence Standard Reference Method (SRM) for low & ultra low NOx
- Infra-Red Gas Filter Correlation for CO, CO_2 and on-board Paramagnetic for O_2
- Designed to measure dry and corrosive sample
- Fast and simultaneous measurements of up to 10 gases (SO_2 / N_2O can be added to IR GFC module)
- Measures is on a dry basis
- Automatic cross interference correction
- Highly accurate, excellent stability with automatic optical stability check
- Intrinsic security with on-board residual H_2O measurement
- **MCERTs** and **TÜV** certified to EN15267-3
- **QAL1** as defined by EN14181
- **QAL3 compliance** to EN14181
- Compliant with **U.S. EPA**

MIR FT

Fourier Transform Infrared Multi-Gas Analyzer

Based on a leading edge technology for simultaneous, multi-gas measurement of: HCl, NO, NO_2 (NOx), SO_2, CO, CO_2, HC, CH_4 (TOC), NH_3, HF and H_2O

- Multicomponent measurement capability (from a library of 50 gases)
- Specially designed for CEMS (few hundreds of units succesfully in operation for regulatory compliance)
- Designed to measure wet and corrosive sample
- 180°C heated measurement cell
- Fast and simultaneous measurements of up to 14 gases
- Automatic spectral interference correction
- Automatic cross-interference
- Reproducible and accurate
- Excellent calibration stability
- High sensitivity heated sample cell
- **MCERTs** certified to EN15267-3
- **QAL1** as defined by EN14181
- **QAL3 compliance** to EN14181
- Compliant with **U.S. EPA** 40 CFR Part 60 Appendix B - Performance Specification 15

MIR 9000 BLUE BOX

Multi-Gas Infrared GFC

Profitable package for online analysis of mid-high ranges of SO2/NOx/CO/CO2/O2 in Biomass, Boilers and Power plants applications

- Stainless steel sampling probe with heated filtration, integrated in a specific LCPD box
- Clean, hot and wet sample transfer up to 50m
- Possible backflush & span gas injection
- Sampling treatment by cooler
- Fast and simultaneous measurement of up to 6 gases by IR-GFC technology combined with on-board paramagnetic cell for O2
- Zero gas adjustment by ambient air
- Reliable measurement on a dry basis
- Automatic cross interference correction
- **MCERTs** and **TÜV** certified to EN15267-3
- **QAL1** as defined by EN14181
- Compliant with **U.S. EPA**

MIR 9000H

Heated Infrared GFC

Uses the heated Infra-Red Gas Filter Correlation technology, the MIR 9000H is a perfect multi-gas analyzer for DeNOx (SCR/ SNCR) applications.

Available in 2 versions for the simultaneous and continuous measurement of:

- NH_3 and H_2O
- CO, CO_2, NO, NO_2, SO_2, HCl, HF, O_2 in addition of the NH_3 and the H_2O

- Designed to measure wet and corrosive sample
- Perfect analyzer for ammonia slip detection
- 180°C heated measurement cell
- Automatic spectral interference correction
- Reproducible and accurate, fast response time
- Excellent calibration stability
- Robust and reliable design built in a stainless steel tight box for withstanding the harshest industrial environments
- Compliant with **U.S. EPA**
- Compliant with **QAL1** of EN14181 & EN15267-3

Heated, specific analyzers

Heated Chemiluminescence

Topaze 32M utilises the CLD technique for continuous and simultaneous measurement of NO, NO_2 and NOx in **compliance with EN14792**

- Ranges : 0-10/10 000 ppm
- 180°C heated detector
- Fast response time
- Dual channel NO/NOx

Heated Flame Ionisation Detection

Graphite 52M analyzer is fitted with FID for continuous and simultaneous measurement of Total Hydrocarbons (THC), Non-methanic Hydrocarbons (NmHC) and Methane (CH_4) in compliance with **EN12619 and EN13526**

- Fast response time, designed to measure wet and corrosive sample
- Up to 191°C heated detector for HC measurement
- Integrated zero air catalyser
- **TÜV and MCERTs** certified
- Compliant with **U.S. EPA**

MAIN APPLICATIONS:

• Waste Incineration: Municipal, Hazardous, Industrial, Special, Hospital, ... • Power & Combustion Plants • Gas Turbines • Biomass • Cement Kilns • Pulp & Paper • DeNOx (SNCR, SCR) • Industrial Boilers and Furnaces in Chemical & Petrochemical Plants • Process Control • Accredited Testing Laboratories

IN SITU MULTI-GAS ANALYZER

MIR IS

Multi-Gas Infrared GFC Analyzer

A complete "all in one compact" system based on the tried and tested proven MIR 9000 analyzer and SEC sampling system, for multi-gas measurements.

- Fast and simultaneous measurement from a choice of HCl, NO, NO_2 (NOx), SO_2, CO, CO_2, HC, CH_4 (TOC), HF, N_2O, O_2 at the sampling location
- Heated probe with choice of materials and lengths to suit the application
- Robust and reliable design, built in a stainless steel tight box enclosure
- Designed for measurement of dry and corrosive sample, with built-in exclusive sample dryer system (Same as in SEC Box)
- Integrated air drying and handling system
- Simultaneous measurements of up to 10 gases (on a dry basis)
- Automatic cross interference correction
- Reproducible and highly accurate; excellent calibration stability with automatic optical check
- Intrinsic security with on-board residual H_2O measurement
- On-board paramagnetic cell for long term O_2 measurement
- Powerful remote control and display functions
- **MCERTs** certified to EN15267-3
- **QAL1** as defined by EN14181
- **QAL3 compliance** to EN14181

PARTICULATES ANALYZER

BETA 5 M

ß-ray attenuation Analyzer

The BETA 5M allows continuous precise and representative measurement of particulate mass by Beta attenuation combined with Isokinetic sampling.

- Wide range of heated sampling probe materials and lengths to suit the application
- Fixed or flexible sampling probes available to suit installation
- Isokinetic sampling by built-in Pitot tube within the sampling probe
- Designed for measurement of wet and corrosive sample
- Robust and reliable design for withstanding the harshest of environments
- No interference on measurement due to water or particulate characteristics (size, shape and colour)
- Excellent calibration stability
- Calibration by on-board standard foil into control cabinet (Manual calibration)
- Optional daily calibration system available
- On-board leak check of sampling system as per EPA testing requirements
- Serial link RS232 / RS422
- Compliant with **US EPA** and **ISO** standards

DIOXINS AND FURANS SAMPLER

AMESA-D®

Isokinetic long term Sampler

The AMESA utilises the modified cooled probe method with Isokinetic sampling system coupled with XAD-II adsorbent cartridge for Long-term sampling of dioxins (PCDD), furans (PCDF) and other persistent organic contaminant (POPs).

- Isokinetic sampling by built-in Pitot or Prandtl tube on sampling probe
- Automatic continuous sampling from 6 h to 6 weeks (Programmable)
- Adsorption on exclusive XAD-II cartridge
- Dioxins of all 3 phases (gaseous, solid and liquid bounded) are collected in one cartridge
- High efficient dust filter
- Fully automated solution with stored datas on a removable SRAM card or USB flashdrive
- Cooled probe in different materials and lengths to fit the application
- **TUV & MCERTs** certified
- Successfully tested under the **US ETV** verification program
- **EPA** Method 23A compliant
- AMESA-M® version available for continuous Mercury sampling or other contaminants such as heavy metals

- Almost 200 AMESA® in use and more than 16000 sampling's already realised worldwide
- Over 15 years of experience

MAIN APPLICATIONS:

• Municipal, Industrial & Hospital Waste Incinerators • Power & Combustion • Gas Turbines • Biomass • Cement Kilns • Pulp & Paper • DeNOx (SNCR, SCR) • Industrial Boilers & Furnaces in Chemical & Petrochemical Plants • Process Control • Metal & Steel industry...

All our analyzers are equipped with LAN connection for remote control and display functions and embedded Communication Protocol for WEX® Management Software and interactive menu-driven display allowing user-friendly and intuitive interface for the operator.

	HCl	SO_2	NO_x	NO_x (CLD)	N_2O	CO	CO_2 (%)	CH_4	TOC	HF	NH_3	H_2O (%)	O_2 (%)
MIR 9000	0-15 / 5000	0-75 / 5000	0-200 / 5000		0-20 / 1000	0-75 / 10 000	0-10 / 100	0-10 / 1000	0-50 / 5000	0-20 / 300			0-10 / 25
MIR 9000 CLD	0-15 / 5000	0-75 / 5000	0-200 / 5000	0-20 / 2000	0-20 / 1000	0-75 / 10 000	0-10 / 100	0-10 / 1000	0-50 / 5000	0-20 / 300			0-10 / 25
MIR 9000H	0-100 /5000	0-500 /5000	0-200 / 5000			0-75 / 10 000	0-15 / 100			0-40 / 300	0-15 / 500	0-30 / 40	0-10 / 25
MIR IS	0-15 / 5000	0-75 / 5000	0-200 / 5000		0-20 / 1000	0-75 / 10 000	0-10 / 100	0-10 / 1000	0-50 / 5000	0-20 / 300			0-10 / 25
MIR FT	0-15 / 500	0-75 / 2000	0-200 / 2000		0-100 / 500	0-75 / 10 000	0-10 / 30	0-10 / 1000	0-50 / 1000	0-15 / 100	0-15 / 500	0-30 / 40	0-10 / 25
MIR 9000 Blue Box		0-200 / 1500	0-200 / 1500			0-200 / 2000	0-10 / 20						0-10 / 25
Graphite 52M								0-10 / 10 000	0-10 / 10 000				

Lowest / Highest available ranges (others available upon request), expressed in mg/m³ (or % when indicated)

EMISSIONS MANAGEMENT SYSTEM WEX®

Fully compliant with constantly changing international guidelines and standards (EN14181, ISO7168, ISO8258, IED, LCPD, WID, etc.) the WEX® software Suit provides breakthrough features:

- Automatic comparison with mandatory Emission Limit Values (ELVs)
- Automatic management of AMS calibration and QAL3 procedures (control charts Shewhart, EWMA, CUSUM)
- AMS drift and accuracy control (QAL3)
- Predefined regulation compliant reports for local authorities and also defined by users
- Alarms display for raw data, averages, trends, maintenance ...
- Auto backup with more than 10 years of data storage
- Remote diagnosis and support, hotline and secured data hosting
- Integrated automated Computerized Maintenance Management System (CMMS), also generating the work orders

WEX® is the most powerful and smart solution for your entire CEMS.