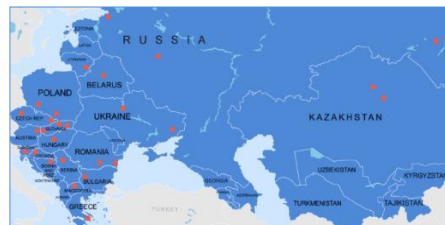


Emission Monitoring Systems

The ECM Group, in close cooperation with leading manufacturers of analytical technology, supplies instrumentation solutions for monitoring particles, gases and liquids.

Since 1991, ECM has been operating in several countries in Central and Eastern Europe and Kazakhstan.



Emission monitoring systems consist of instrumentation for the analysis of gases, HVAC and flow, as well as sensors of auxiliary quantities, equipment for sampling and treatment of samples, as well as data systems. Wherever required, the instrumentation will be in compliance to EN 14181.

Gas Analyzers

Depending on the application, gas analyzers are supplied for monitoring SO₂, NO_x, CO, CO₂, O₂, NH₃, HCl, HF, TOC, H₂O and Hg.

In common energy applications, water is usually separated from the monitored flue gas sample, so that the analyzed gas is cold and dry.

The commonly used analyzer is MGA 12.

- multi-component analyzer for monitoring SO₂, NO_x, CO, CO₂ and other components
- QAL1 certification according to EN 15267-3
- compensation for the effect of changes in temperature, pressure and interference
- minimum maintenance requirements



When monitoring emissions from the incineration of waste, biomass and industrial processes, it is also necessary to monitor easily soluble water pollutants.

In this case, the whole analytical assembly must be heated above the dew point temperature of the flue gas components.

The optimal device for most such applications is the MCA 10.

- efficient multicomponent analytical system
- heated measuring cell for analysis on the "wet" principle
- QAL1 and MCERTS certificates according to EN 15267-3
- approval for installations in accordance with the International Emissions Directive IED
- monitoring of up to 11 components + oxygen



Heated cell FID analyzers are designed to measure TOC so that no condensation occurs.

Condensers based on the periodically cooled end of the probe are designed to monitor the acidic components of the flue gas, such as SO_3 or H_2SO_4 .



TZL Monitors

Particle monitors are based on the optical or tribo principle and are designed to monitor TZL behind filtration systems.



Flow monitors

Flow monitors are based on the principle of the Pitot tube, ultrasound or thermal conductivity, and are designed to monitor total emissions of pollutants.



Isokinetic sampling kits

Isokinetic sampling kits are intended to determine the concentration of TZL, but also the content of metals, dioxins and furans.



Mobile and portable devices

This category of devices is intended both for measuring groups and for rapid orientation testing.



Data systems

ECM CEMS is software for collecting, processing and archiving data from analytical instruments, which also performs the required support functions. The system includes a data logger that controls the analytical instruments in the instrument panel, pre-processes the information and increases data security thanks to the additional archiving of measured data.

ECM CEMS - main functions

- Periodic data collection from data loggers or directly from analytical instruments
- Presentation of instantaneous values of pollutants and auxiliary parameters (SO₂, CO, NO_x, CO₂, HCl, HF, NH₃, TOC, dust, flow, O₂, temperature, pressure, humidity and others).



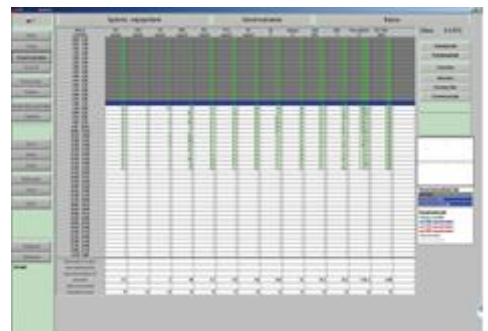
Processing

- Processing of minute averages of all measured quantities
- Processing of half-hour (and / or 10 min) averages
- Daily average values
- Archiving of measurements in standard data-systems (MS SQL, DBase, Access)
- Data retrieval when restoring lost communication with the data logger - protection against loss of emission measurement



Evaluation

- Balance calculation in kg / day (month, year)
- Evidence of emission limits
- Pollution prediction (usually for the current short-term average)
- Warning if limit values are exceeded
- Statistics of excess emissions, measurement failures, outages
- Protocols generated in accordance with EU legislation
- Recording of important events and alarms
- Support for evaluation according to QAL 3



Monitoring

- Monitoring and setting parameters in the central computer
- Presentation of data in tabular and graphical form
- Included web server - the possibility of visualizing monitoring within the corporate Intranet
- Support for a multilingual environment
- System of access rights and passwords

Service

- Possibility of remote access control
- Remote access allows flexible maintenance of host computers and data loggers

ECM CEMS – Optional Functions

- Extension of the measurement system
- Solutions for multi-fuel systems
- Connection to other devices - Modbus TCP / IP, Modbus RTU, AD converters, binary / analog inputs and outputs
- Export data to corporate IS or databases
- Data transfer to DCS and other device control systems
- Adding new local or web clients to the Intranet

DLX1 datalogger

The compact design of the DLX1 combines a firmware package with variable input / output for optimal performance of monitoring systems. DLX1 offers a wide range of communication with higher systems and portable devices of system operators and personal service. The DLX1 data logger is primarily designed for AMS in accordance to EN 14181 standart.



For detailed information on any solutions of your interest we are gladly available on our below contact:

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