

Ambient Air Quality

FULLY INTEGRATED MONITORING SYSTEMS



acoem
CREATING ENVIRONMENTS OF POSSIBILITY



How do you shorten the path between monitoring and informed action?

For more than 50 years we have been designing and manufacturing class-leading multi-parameter environmental monitoring and industrial reliability solutions.

We offer our global customers a complete range of integrated measurement technologies and services, ensuring that your data is always accurate and your equipment operates with maximum efficiency.

We believe in helping you find the right balance between progress and preservation.

Empowering industries, government authorities, scientists and communities to make knowledgeable decisions based on reliable data, our holistic solutions lead to operational excellence and better outcomes.

At Acoem, we create environments of possibility.

Leading the world in ambient air monitoring

WHY USE ACOEM?

The Acoem Air Quality Monitoring System (AQMS) is the class-leading, turn-key solution for your air quality network.

Designed, manufactured, installed, operated and maintained by our team of specialised engineers and technicians, it is the air quality monitoring station of choice, trusted by environmental protection agencies, government authorities and atmospheric researchers worldwide.

Our fully integrated reference quality monitoring stations (also known as Continuous Ambient Air Quality Monitoring Systems – or CAAQMS) adhere to multiple international standards and can be supplied and installed in your choice of weather-resistant shelter.



We customise and tailor components, analysers and features to meet individual monitoring requirements and currently operate thousands of Acoem AQMS stations globally in 80+ countries.

- Acoem has held NATA/ISO/IEC 17025 laboratory accreditation for the operation of ambient air monitoring systems for over 30 years
- Most of the instrumentation used in our system has been developed & manufactured by Acoem. It is designed to work seamlessly with Acoem's data capture & storage software & a range of complementary monitors & sensors from our partner suppliers.
- No matter where you are located, once your system has been installed, an Acoem engineer or highly trained distributor will carry out the final on-site commissioning, to ensure that the system is fully calibrated & that all components are working correctly
- We also offer comprehensive ambient air monitoring system training, either on site or online. Every course is designed to provide you & your team members with the appropriate level of knowledge in areas including the operation, troubleshooting & basic maintenance of the system
- We provide comprehensive system operation & data management contracts. You can perform your own maintenance, an Acoem distributor can maintain your system or our in-house Acoem technical experts can manage all maintenance work. The choice is yours
- Our Environmental Reporting Services (ERS) team of data analysts provides data collection, analysis, validation & reporting services for customers worldwide.



System components that integrate seamlessly

Acoem Serinus® is our signature range of analysers, calibrators and photometers designed to safeguard the air we breathe by accurately detecting and measuring excessive levels of pollutants.

The range includes 10+ different models to monitor O₃, CO, CO₂, NO_x, NH₃, SO₂, TRS, and TS in ambient air.



ADVANTAGES OF SERINUS®:

- Guaranteed performance with a two year warranty
- International – EN & US EPA approved
- Comprehensive data logging & remote monitoring of over 200 operational parameters
- Versatile interfacing through RS232, USB, Bluetooth, analog & optional TCP/IP
- Intuitive Quick Menu easy set up, advanced GUI & large keyboard with tactile keys
- Instant display of operational status using illuminated traffic lights on the front panel
- 12 VDC internal voltage for enhanced safety
- Low cost of spare parts, accessories & consumable items with standard components across the Serinus® range
- Rack slide design makes accessing internal components & servicing the analyser easy
- Low power demand & ability to operate over a wide temperature range.

Experience makes the difference

PARTICULATE MONITORS

We can integrate a variety of different particulate monitors into your AQMS, but our preferred solution is the Acoem Spirant® BAM, offering a high level of performance and international approvals for PM₁₀ and PM_{2.5} monitoring.

METEOROLOGICAL SENSORS

Meteorological sensors used in our systems are sourced from the world's leading manufacturers. We choose the highest quality sensors to ensure trouble-free operation.

AUTOMATIC CALIBRATION SYSTEM

Our air monitoring systems incorporate a state-of-the-art dilution gas calibrator, traceable calibration gases and a high performance zero air generator to calibrate all analysers in the system. Our calibration system is fully automatic and can be remotely configured.

ENCLOSURES

A variety of air-conditioned shelters is available for the system, including mobile vans, caravans and relocatable shelters. If required the system can be installed in your pre-existing shelter.

Our most popular shelter is our relocatable unit which is designed to be permanently sited but can be easily transported from one site to another on the back of a suitable truck or permanently mounted on a truck for mobile air monitoring studies.

CONGREGO® DATA ACQUISITION

Our next generation total data control and logging hardware/software solution for air quality and continuous emission systems, Acoem Congrego® is engineered from the ground up to achieve accurate, reliable, real-time data logging specifically for ambient air and continuous emission monitoring systems.

SERVICE CONTRACTS

You can choose to operate your own monitoring systems or take advantage of an Acoem's service contract. Our contracts are fully customisable and can include maintenance, calibration and data reporting services.

In many cases Acoem customers rely on us to provide a complete package of services which then allows us to offer NATA-endorsed data reports (refer to our Environmental Reporting Services brochure or contact us for more information).

Measurement parameters

Acoem Ambient Air Quality Monitoring Systems are capable of measuring almost any gas present in the atmosphere, as well as a wide range of meteorological parameters.

COMPOUND	RANGE	ACCURACY	TECHNIQUE EMPLOYED
Oxides of Nitrogen	0–20 ppm	0.5 ppb	Chemiluminescence
Sulphur Dioxide	0–20 ppm	0.3 ppb	Fluorescence
Ozone	0–20 ppm	0.5 ppb	UV photometrics
Carbon Monoxide	0–200 ppm	50 ppb	NDIR gas filter wheel correlation
Carbon Dioxide	0–3000 ppm	50 ppb	NDIR gas filter correlation
Benzene, Toluene, Xylene	0–5 ppm	0.5 ppb	Gas chromatography
Non Methane Hydrocarbons	0–1000 ppm	0.01 ppb	Flame ionisation detection
Methane	0–1000 ppm	0.01 ppb	Flame ionisation detection
Particulates (PM ₁₀ , TSP, PM _{2.5})	0–5 g / m ³	0.1 ug / m ³	High volume gravimetric sampling Beta attenuation mass monitoring
Local Visual Distance	0–50 km	± 10 %	Integrating nephelometry
Wind Speed	0–70 ms ⁻¹	0.22 ms ⁻¹	Propeller or sonic anemometer
Ambient Temperature	–50 to 100 °C	0.5 ppb	Solid state thermistor
Relative Humidity	0–100 %	0.5 ppb	Thin film capacitor
Barometric Pressure	800–1200 mb	0.5 ppb	Solid state transducer
Precipitation	N/A	0.5 ppb	Tipping bucket rain gauge

About Acoem

At Acoem, we create environments of possibility — helping organisations find the right balance between progress and preservation — safeguarding businesses and assets, and maximising opportunities while conserving the planet's resources. We deliver unrivalled, interoperable AI-powered sensors and ecosystems that empower our customers to make enlightened decisions based on accurate information.

Together with 150 distributors, our 800+ employees work across 27 offices, 5 manufacturing facilities and 3 R&D centres in 11 countries, to provide trusted, holistic data solutions for customers worldwide.

Acoem links possibilities with protection.

For more information visit acoem.com



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