



**ecotech**

environmental monitoring solutions

# Customised roadside monitoring solutions.

**Taking Action.  
Tackling Pollution.**

# A global problem that can't be ignored

**Traffic-related air pollution is a major environmental issue around the world and its effects on human health and wellbeing are extremely serious.**

Road traffic produces a variety of critical pollutants, such as NO<sub>2</sub>, NO, CO, SO<sub>2</sub>, hydrocarbons and fine particles due to exhaust emissions and road dust.

With the introduction of mitigation measures such as green taxes, ride-sharing programs and improved vehicle designs, many people believe that the problem is being addressed, however motor vehicles are still one of the biggest contributors to air pollution in urban areas. As populations and vehicle ownership continue to grow, the underlying issue is only getting worse.

It is therefore critical that society takes whatever action it can to monitor and reduce the effects of vehicle emissions on human health.





# Leaders in environmental monitoring since the 1970s

Nothing matters more to us than protecting the environment, its workforces and communities. That's why we've played a leading role in air quality monitoring for over four decades.

Our global footprint includes over 53 distributors, 2 manufacturing facilities and 9 branch offices across 80 countries.

We understand the various challenges of meeting regulatory standards for roadside monitoring – that's why we carefully create fully integrated, bespoke solutions, for each project. This approach helps ensure your environmental monitoring will meet your objectives and unique requirements.

After all, your reputation is on the line. As is ours. We offer an array of specialist roadside monitoring instruments to ensure that you will always have the right equipment for the job – whatever your industry, whatever your requirements.



## SPAIN

**Project:**

Compact roadside monitoring enclosures

**Customer:**

SISTEM Group Spain

**Instruments supplied:**

Serinus 30 (CO), Serinus 40 (NO<sub>x</sub>), Spirant BAM (PM<sub>10</sub>), weather station and sound meter



## PERU

**Project:**

Mobile monitoring station in Cusco

**Customer:**

UNSAAC

**Instruments supplied:**

Serinus 10 (O<sub>3</sub>), EC 9820 (CO<sub>2</sub>), Serinus 40 (NO<sub>x</sub>), Serinus 50 (SO<sub>2</sub>) and Serinus gas calibrator



## SYRIA

**Project:**

Walk in shelter for roadside monitoring, Damascus City, Syria

**Customer:**

Damascus Municipality

**Instruments supplied:**

Serinus 10 (O<sub>3</sub>), Serinus 30 (CO), Serinus 40 (NO<sub>x</sub>), Serinus 50 (SO<sub>2</sub>), Spirant BAM (PM<sub>10</sub>), met sensors and Serinus gas calibrator

# Your roadside monitoring project is like no other

Environmental monitoring is our specialty. It's also our passion.

Ecotech and our distributors are trusted partners to government and industry. We design and manufacture roadside systems all over the world, from compact enclosures and fixed walk-in systems to mobile monitoring stations equipped with all the instruments you need.

Today, we are solving even more complex problems and meeting tougher demands than ever before, but our commitment to the environment and the people we protect is as strong as ever.



## GREECE

### Project:

Two AQMS stations in Solomos & Tripoli, Peloponnese, Greece

### Customer:

Moreas

### Instruments supplied:

Serinus 30 (CO), Serinus 40 (NO<sub>x</sub>) and Serinus 50 (SO<sub>2</sub>)



## AUSTRALIA

### Project:

Beercroft Road, Sydney

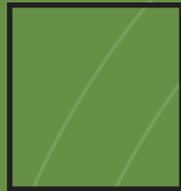
### Customer:

Supplied by Ecotech, NSW

### Instruments supplied:

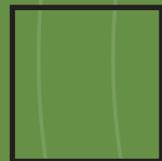
Serinus 10 (O<sub>3</sub>), Serinus 30 (CO), Serinus 40 (NO<sub>x</sub>), Serinus 50 (SO<sub>2</sub>), Spirant BAM (PM<sub>10</sub> and PM<sub>2.5</sub>), met sensors and VOC

## Shelter types



WALK IN SHELTERS  
Advantages:

- Large work space in a protected environment
- Suitable for all weather conditions
- Room for expansion



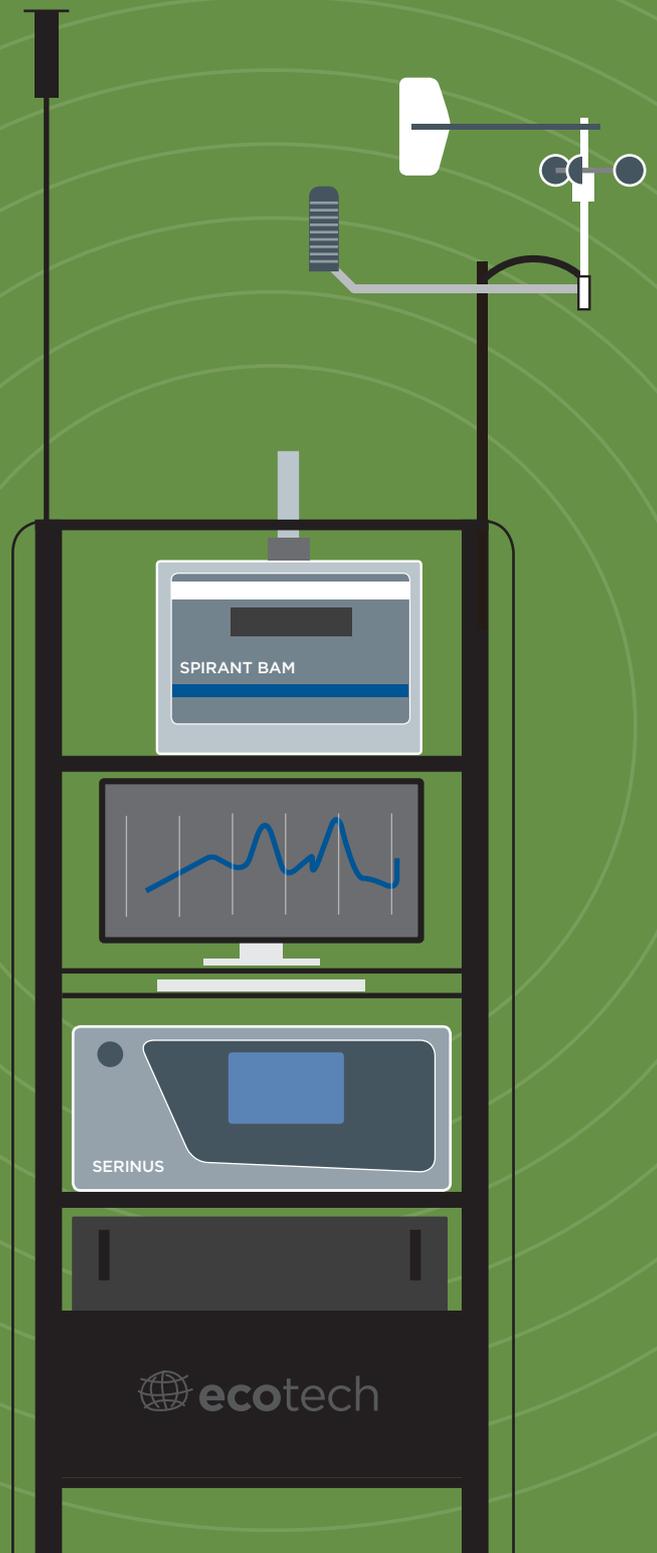
MOBILE MONITORING STATION  
Advantages:

- Relocatable
- Easily deployed for incidents and spot checks
- Retractable roof module



COMPACT ENCLOSURES  
Advantages:

- Cost-effective
- Easily transported
- Low visual impact



NOTE THIS IS A VISUAL REPRESENTATION OF  
A ROADSIDE MONITORING STATION ONLY.

# Custom build your roadside monitoring station

SELECT FROM THE CHECKLIST BELOW

## GAS ANALYSERS

### **NITROGEN OXIDES (NO<sub>x</sub>, NO<sub>2</sub>)**

Nitrogen oxides in urban air come primarily from motor vehicles. Nitrogen dioxide contributes to the formation of acid rain and smog, which affects our throats, lungs and the body's defence mechanisms.

### **CARBON MONOXIDE (CO)**

Carbon monoxide is a prevalent pollutant that emanates from the combustion of carbon-containing fuels such as petrol, coal, gas and wood. Readily absorbed into the bloodstream (200 times more readily than oxygen), carbon monoxide affects the amount of oxygen through the body. High levels can be lethal to humans - which is why monitoring is vital.

### **SULPHUR DIOXIDE (SO<sub>2</sub>)**

Because petrol and diesel contain some sulphur, vehicles emit sulphur dioxide. Sulphur dioxide is an irritant gas that affects breathing. Although levels of sulphur in fuels are reducing, it is still important to measure this gas since prolonged exposure can lead to illnesses such as chronic bronchitis.

### **OTHER GAS ANALYSERS**

- BTEX
- VOC
- H<sub>2</sub>S
- TS/TRS
- CO<sub>2</sub>

## PARTICULATE ANALYSERS

Motor vehicles and road dust are the main contributors of particles in the air. High levels of air particles can cause breathing difficulties - which can be particularly dangerous for people with lung and heart disease. Some particles may also contain cancer-causing materials.

### **BAM - PM<sub>10</sub>**

Coarse dust particles (PM<sub>10</sub>) are those with a diameter of between 2.5 to 10 micrometers. These tiny particles are small enough to be inhaled deeply into the lungs which can cause several breathing issues. Sources of these particles include industrial processes, motor vehicle emissions and dust stirred up by vehicles on roads.

### **BAM - PM<sub>2.5</sub>**

Caused by all types of combustion (such as power plants, wood burning and motor vehicles), fine particles (PM<sub>2.5</sub>) have a diameter of 2.5 micrometers or smaller. These fine particles are even more dangerous than coarse dust particles since they stay longer in the air.

## CALIBRATION SYSTEM

Repeatable and traceable calibration equipment ensures the accuracy and precision of a roadside monitoring system.

### **GAS CALIBRATOR**

To check the accuracy of your roadside monitoring system and adjust accordingly, multipoint calibrations must be performed. Ecotech provides several dilution calibrators which enable you to mix source gases with zero air, generate a wide range of calibration gas concentrations and calibrate your system.

### **ZAG**

Clean air free of atmospheric impurities is mixed with source gases to calibrate your roadside monitoring system. Ecotech offers several fixed and portable zero air generators, which can produce zero air at different flow rates for you to use with your calibrator.

## DATA ACQUISITION SYSTEM

A Data Acquisition System (DAS) allows you to collect, store and retrieve data for your roadside monitoring station. We can provide a complete DAS, including both hardware and software.

### **DATA LOGGER**

WinAQMS is Ecotech's logger of choice for roadside monitoring. The Windows® based system provides full control over an entire monitoring station, enabling you to record readings, perform automatic calibrations and monitor system errors.

### **AIRODIS**

Airodis, Ecotech's data validation and reporting software, allows you to:

- Automatically retrieve data from a wide variety of instruments and data loggers
- Perform audited data validation
- Generate a wide range of graphical and tabular reports. This information can then be used to encourage the community to take steps to reduce vehicle emissions.

## OTHER EQUIPMENT

- Wind speed and direction sensors
- Temperature sensors
- Humidity sensors
- Pressure sensors
- Rack mounts
- Manifolds
- Auxiliary parts including pumps, scrubbers and tubing

# Our services

- Technical support
- Expert onsite service and maintenance
- Third party audits
- Calibrations
- In house service and repairs
- Data reporting
- ISO 17025 accredited manufacturing facilities

## Get in touch today

For best-practice in every aspect of your roadside monitoring project, contact Ecotech or your local distributor.



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