



**Continuous Emission  
Monitoring Systems**

**Compliance made fast, easy,  
accurate and reliable.**

Analyze • Detect • Measure • Control™

**Thermo**  
ELECTRON CORPORATION

## Integrated systems for every monitoring application.

### **We're committed to clearing the air.**

Since 1970 and the original Clean Air Act, Thermo Electron Corporation has been serving industry and protecting the environment with mission-critical monitoring solutions that help keep plants running safely, efficiently and in compliance. Today, we offer the industry's most comprehensive line of air quality instrumentation and systems for detecting a broad range of stack pollutants – not only gases, but particulate, too.

### **The complete emissions monitoring package.**

Thermo offers turnkey solutions for monitoring stack-borne and other pollutants for virtually all utility and industrial applications, including:

- Public utilities
- Refineries
- Waste incinerators
- Lime kilns
- Power boilers
- Cement kilns
- Co-generation
- Turbines
- Wood waste boilers
- Recovery boilers
- Landfills
- Sulfur recovery units

Whatever your application, we have the technical capabilities and the experience to deliver an optimized, custom-configured continuous emission monitoring system (CEMS) – plus a rock-solid guarantee that your system will meet regulatory requirements.

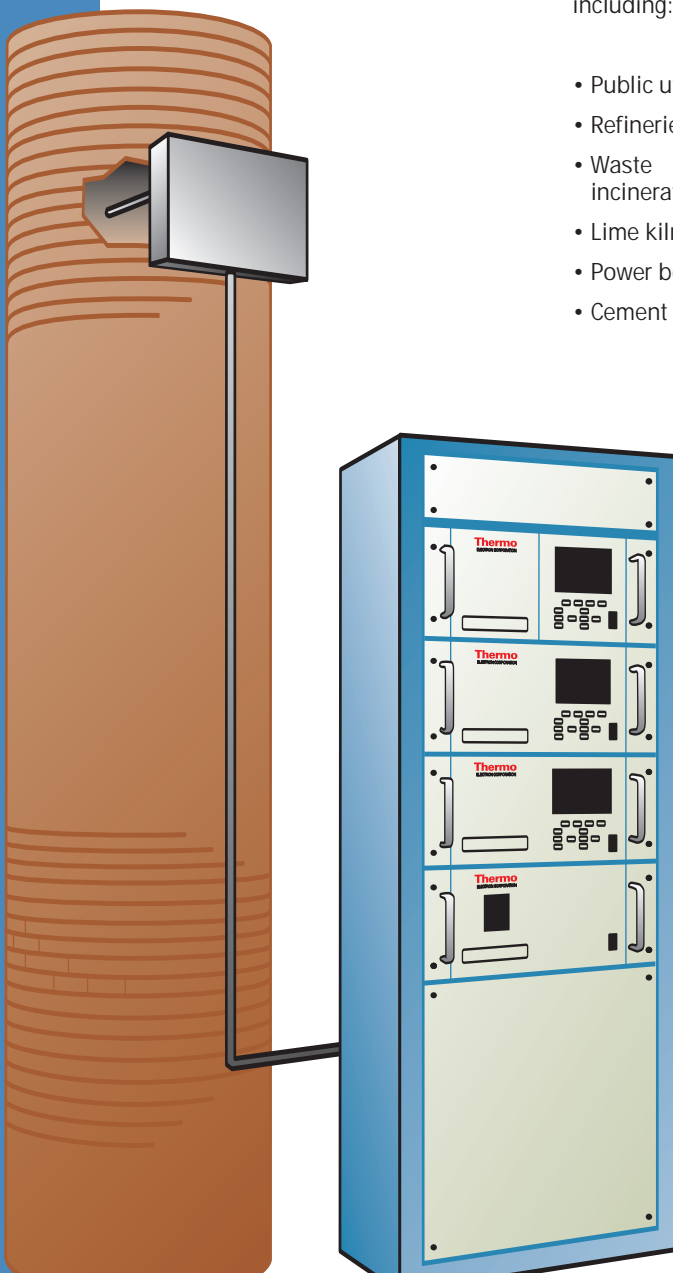
Not only do we integrate systems to meet your specific needs, we manufacture many of the critical components including probes, opacity monitors, and a wide range of gas analyzers. We engineer them for unattended, continuous-duty reliability. And we give you all the connectivity options you need to integrate your Thermo CEMS into your plant's data and control system.

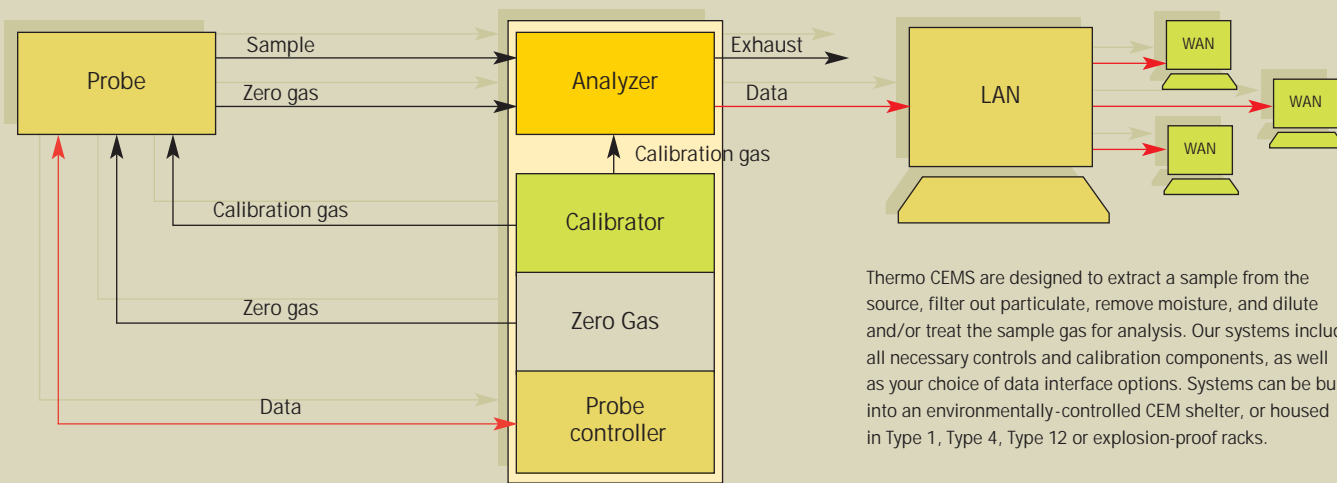
### **Accuracy you can count on.**

The most advanced technology and the longest track record in the industry are part of every system. Operating 24/7 in extreme monitoring environments, Thermo CEM systems deliver the unsurpassed accuracy and reproducibility your plant depends on.

### **Uptime is built into the design.**

For mission-critical monitoring applications, reliability is everything. That's why every Thermo system gives you easy access to components, simplified on-site maintenance and maximum parts interchangeability.





Thermo CEMS are designed to extract a sample from the source, filter out particulate, remove moisture, and dilute and/or treat the sample gas for analysis. Our systems include all necessary controls and calibration components, as well as your choice of data interface options. Systems can be built into an environmentally-controlled CEM shelter, or housed in Type 1, Type 4, Type 12 or explosion-proof racks.

## AT THE STACK

### PROBES

Extractive or dilution, wet basis or dry basis, high temperature, high particulate, high moisture, in-stack or out-of-stack – whatever your sampling environment, Thermo offers a rugged, long-life probe that will maximize your sampling efficiency, while delivering trouble-free, continuous operation.

### OPACITY MONITORS

Stable, accurate stack opacity monitors continuously sample effluent gas for compliance.

## IN THE SHELTER

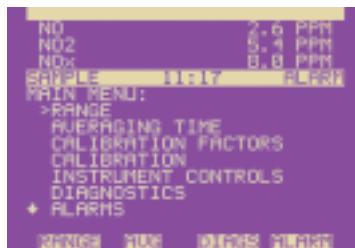
### PROBE CONTROLLERS

Where needed, a microprocessor-driven probe control unit automates probe calibration. It typically monitors probe temperature, measures flow and pressure in the sampling loop, and automates filter blowback.

## GAS ANALYZERS

Thermo offers a broad range of measurement technologies. Our newest generation analyzers are easier to use, easier to maintain, and easier to interface than ever before, and monitor a complete spectrum of gases, including:

HCl	NO <sub>x</sub>	CO <sub>2</sub>	SO <sub>2</sub>	CO
H <sub>2</sub> S	Hydrocarbons	TRS	PM	
THC	Hg	O <sub>2</sub>		



## USER INTERFACE

Featuring fast, intuitive navigation and simple, menu-driven programming, our application-tailored software keeps you informed and in control.

## CALIBRATION

Application specific calibration equipment is provided to deliver exact quantities of target gas for precise daily calibration, periodic linearity tests, and audits.

### ZERO AIR SOURCE

A zero air supply delivers dry, contaminant-free dilution air to the probe where appropriate. It also provides air to the calibrator for sensitive, accurate analyzer calibration.

## IN THE CONTROL ROOM

POWERFUL NETWORKING AND DATA MANAGEMENT CAPABILITIES.

Regulatory requirements for CEM systems demand integratable, adaptable – and validatable – data acquisition and handling systems. With expanded I/O and connectivity capabilities, Thermo instruments fit seamlessly into just about any plant operation and data flow.



**An ongoing commitment to you.**

At Thermo, we want to make it as easy as possible for you to do business with us. So every Thermo instrument comes with one of the largest, most knowledgeable service and support organizations anywhere. Before the sale, after the sale, any time zone, anyplace in the world – our highly trained and experienced customer care, service and support professionals are always ready to help.

**Technical support when you need it.**

Our highly trained and experienced technical support team can help with application advice, and answer any technical questions you might have. They'll work with you to determine the product and configuration that best meets your needs, and they'll be there to keep you up and running if you should need troubleshooting or repair assistance. System installation, set-up and training are available options.

**Call us.**

You can reach us between 7:30 AM and 6:30 PM Eastern Standard Time at 866-282-0430, or 508-520-0430. Contact us by fax at 508-520-2800, or e-mail us at [info.eid@thermo.com](mailto:info.eid@thermo.com).

For more information about Thermo Continuous Emission Monitoring Systems, or any of our other environmental monitoring solutions, visit [www.thermo.com/air](http://www.thermo.com/air).

For ordering information, please contact your local dealer or Thermo representative.

**About Thermo Electron Corporation**

Thermo Electron Corporation is the world leader in analytical instruments. Our instrument solutions enable our customers to make the world a healthier, cleaner, and safer place. Thermo's Life and Laboratory Sciences segment provides analytical instruments, scientific equipment, services, and software solutions for life science, drug discovery, clinical, environmental, and industrial laboratories. Thermo's Measurement and Control segment is dedicated to providing analytical instruments used in a variety of manufacturing processes and in-the-field applications including those associated with safety and homeland security. Based near Boston, Massachusetts, Thermo has revenues of more than \$2 billion, and employs approximately 10,000 people in 30 countries. For more information, visit [www.thermo.com](http://www.thermo.com).