

Thermo Scientific *i*MEGA Continuous Emissions Monitoring System

The only factory designed NDIR system with five built-in safeguards to protect against moisture.

The Thermo Scientific™ *i*MEGA Continuous Emissions Monitoring System (CEMS) is designed to extract optimal performance from the Model 60i Multi-Gas Analyzer.

- Automatic and continuous moisture measurement via Infrared Absorption
- Lower sample flow rate
- Continuous monitoring of the chiller temperature
- Integrated water slip-sensor
- Direct measurement of NO and NO₂ with a calculated NO_x value



The Thermo Fisher *i*MEGA automates key system functions such as the probe barrel heater control and filter blow-back, calibration of the analyzer and control of sampling system temperatures. The *i*MEGA CEMS design ensures that all of the components will work together the first time, every time, eliminating any concerns regarding existing equipment inter-connectivity.

Model 60i Multi-Gas Analyzer:

- Full extractive, multi-gas analyzer utilizing NDIR optical filter technology
- Measures five gases, in addition to oxygen measurement via either chemical cell or paramagnetic technology

Model 61i Multi-Gas Calibrator:

- Five calibration gases plus zero air and controls the calibration of the analyzer
- Front panel displays gas delivered at any one time

Model 62i Multi-Gas Probe Controller:

- Monitors and controls sampling system temperatures
- Automates probe barrel and filter blow-back

PRO3000 Full Extractive Probe:

- Calibration and blow-back control
- Heated filter and probe barrel

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Model 60i NDIR analyzer						
Gases measured	O ₂	CO	CO ₂	NO	NO ₂	O ₂
Minimum range	0-5%	0-100ppm	0-5%	0-50ppm	0-20ppm	0-20ppm
Full scale range	0-25%	0-2,500ppm	0-25%	0-2,000ppm	0-500ppm	0-10,000ppm
System mode options	Monitors and controls critical system components including the Model 61i Calibrator and Model 62i probe controller					
System options	Zero-air system, Locking doors, Air conditioning, Sampler conditioner					
Sample line						
Options	One sample line and one electrical bundle					
Heater voltage	208-220 VAC or 230-250 VAC					
Heated zones	One of two heated zones for long sample lengths					
Custom length	Up to 300 feet (150 feet per heated zone)					
Probe options						
Probe barrel	Hastelloy of Polytetrafluoroethylene (PTFE) -line 316 stainless steel (applications below 275°F)					
Automatic blow-back frequency	1 minute to 99 days					

Additional Services

Factory Acceptance Test

Following factory assembly, a Factory Acceptance Test (FAT) encompassing calibration and operation of the system, spanning approximately one day, can be conducted. Detailed checklists are jointly reviewed, followed by signing an acceptance agreement. Requested changes will be made and shipping arrangements and special delivery requirements will be finalized.

On-site or factory training

Classes on your premises or at the factory assure that your operations and maintenance personnel have in-depth technical training on the system from day one. Our training course provides the knowledge needed to maintain equipment to factory specifications. A lecture portion includes an overview and theory of operation, plus hands-on training covering instrument assembly, disassembly, set-up, and installation. The lab portion addresses check out and calibration. Participants will learn to troubleshoot and calibrate the analyzer and perform routine preventive maintenance. Copies of all relevant course materials will be given to each attendee.

Installation and startup

Installation and startup is a collaborative process, with a Thermo Fisher Scientific Field Service Engineer assisting your support staff. Services include the verification of proper mechanical installation, correct signal wiring and tubing terminations and power connections as well as:

- Power-up and alignment of the sample-conditioning probe
- Power-up the analyzer rack
- Complete system calibration
- Review of system operation and maintenance requirements
- Verification and setup of requested analog signal outputs

Performance testing assistance

In conjunction with the actual certification of the unit, our Field Service Engineer will arrive at your site at least one day prior to the test team to check out the fully functional system and to calibrate each component prior to starting the performance test. The Field Service Engineer will remain on site during the test to assist the certification team.

To maintain optimal product performance, you need immediate access to experts worldwide, as well as priority status when your air quality equipment needs repair or replacement. We offer comprehensive, flexible support solutions for all phases of the product life cycle. Through predictable, fixed-cost pricing, our services help protect the return on investment and total cost of ownership of your Thermo Scientific products.

For more information, visit our website at thermoscientific.com/air

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This product is manufactured in a plant whose quality management system is ISO 9001 certified.

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