



CONTINUOUS EMISSIONS MONITORING SYSTEM

EPA Compliant Engineered solution with Quantum Cascade Laser (QCL) and Process Gas Analyzers (PGA) integrated with Emerson's Data Acquisition System (DAS)

Simple, modular, compact and US EPA 40 CFR Part 60 compliant. The Emerson Continuous Emissions Monitoring System is equipped with the best-in-class analyzers and software, ensuring your EPA compliance requirements meet the latest international standards.

Key Features

- Continuous, extractive measurement of up to five gas components (CO, NO_x, SO₂, CO₂ and O₂)
- Expandable – can be configured with up to three analyzer modules to accommodate different measurement components and ranges
- Can operate at ambient temperature without HVAC and eliminates the need for a temperature-controlled environment reducing cost of ownership

Process Gas Analyzers (PGA)

Area Classified, Class 1 Division 2

- Rosemount™ X-STREAM Enhanced XEFD Continuous Gas Analyzer is flameproof and available in wall-mountable NEMA 4X/IP66 cast aluminum housing.
- Global electrical approvals enable operation in Class I, Zone 1, Group IIB+H2 and Class I Division 2 BCD hazardous areas.

General Purpose

- Rosemount™ X-STREAM Enhanced XEGP Continuous Gas Analyzer measures up to five components simultaneously.
- Versatile rack mount or tabletop enclosure design that allows physical benches to be installed separate from electronics.

Data Acquisition System (DAS)

- DAS is offered with Emerson licensed software platform, PLC, I/O and Industrial PC
- Emissions monitoring and reporting is optimized with advance analytics for multiple gas components
- Highly intuitive graphics, dashboards, and OPC UA communication permits easy data transmission to DCS or any enterprise system
- Calibration and validation can be performed automatically and remotely



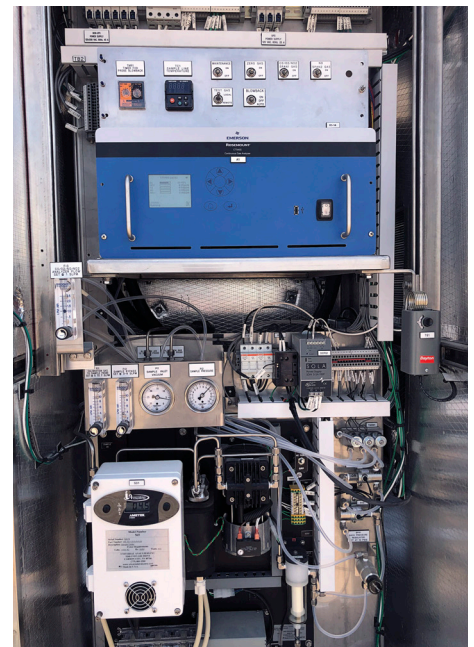
PACSystems™ RSTi-EP CPE220 Controller



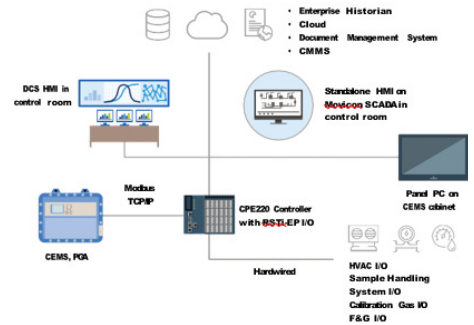
Movicon.NEXT Software Platform



PACSystems™ RXi2-BP Industrial PC



CEMS with Process Gas Analyzer (PGA)



Data Acquisition System (DAS) for CEMS

For more information, visit Emerson.com or contact your local Emerson Sales Representative.



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Quantum Cascade Laser Gas Analyzer (QCL)

Area Classified, Class 1 Division 2

- Rosemount CT5100 Continuous Gas Analyzer is a hybrid, laser-based analyzer designed for hazardous area
- Quantum Cascade Laser (QCL) and Tunable Diode Laser (TDL) technologies combined and housed in flameproof enclosure expand gas analysis to both the near and mid-infrared range for detection of highly sensitive measurement of multiple gases in real time ideal for gas purity and quality applications
- Unique intra-pulse spectroscopic method that enables sub-parts-per-million analysis of up to 10 gases simultaneously in a single instrument, reducing footprint and complexity

General Purpose

- Rosemount CT5400 Continuous Gas Analyzer is a hybrid, laser-based analyzer and combines Quantum Cascade Laser (QCL) and Tunable Diode Laser (TDL) technologies to provide precise and selective measurement of multiple gas components
- General purpose system is housed in a purged and pressurized enclosure for hazardous area installations and non-certified system for standard installations
- Houses up to six lasers to measure up to 10 gases components in real time with measurements consolidated into a single gas analyzer

Gas Sampling

- Heated sample gas probe and PTFE sample gas line
- Low temperature interlocks for the sample gas probe and heated line to avoid condensation in the sample gas lines
- Two-stage sample gas cooler with peristaltic pumps.
- 2 µm fine filter and coalescing filter protect the analyzer from contaminations
- Internal sample gas pump with a bypass and a needle valve for sample gas flow adjustment

System Options

Sample gas probe, swing frame cabinet, glass condensate vessel with level alarm, junction boxes, calibration gas line from cabinet to probe, NO₂ converter with metal-based material and O₂ measurement with paramagnetic module or electrochemical sensor.

Gas Analysis

- Analyzer modules equipped with paramagnetic or electrochemical sensors as well as non-dispersive infrared (NDIR) and non-dispersive ultraviolet (NDUV) photometers
- Up to five components can be measured in one analyzer



CEMS with Quantum Cascade Laser (QCL) Analyzer.

Components Measured and Concentration Levels

CO	0-10, 0-100, 0-1,000 ppm
NO _x	0-10, 0-100, 0-1,000 ppm
SO ₂	0-10, 0-100, 0-1,000 ppm
CO ₂	0-25%
O ₂	0-25%