

AQUAGAS



MONITORING
SYSTEMS

LaserCEM[®] Continuous Emissions Monitoring System

Description The LaserCEM is a complete pre-calibrated multicomponent (NO, NO₂, NO_x, SO₂, CO, HCl, CO₂, H₂O, H₂S, NH₃, N₂O, COS, SO₃, CH₄, HF) laser Infrared Spectrometer.



The LaserCEM features the exclusive LPS **Low Pressure Sampling System** enabling installation and reduced operating cost eliminating the need for “heated” sampling system.

The LaserCEM uses the patented **OFCEAS** (WO 03031949) IR laser technology for enhanced specificity, selectivity, accuracy and stability (no span or zero drift).

Applications



The **LaserCEM** is designed for **Continuous Emissions Monitoring** in a large field of application including gas and coal fired power station, pharmaceutical and chemical industries, refineries, cement plants and waste incinerators and more...Highly durable to harsh process conditions, the **LaserCEM** is a field proven, reliable, robust, cost-effective and user friendly solution for Continuous Emissions Monitoring.

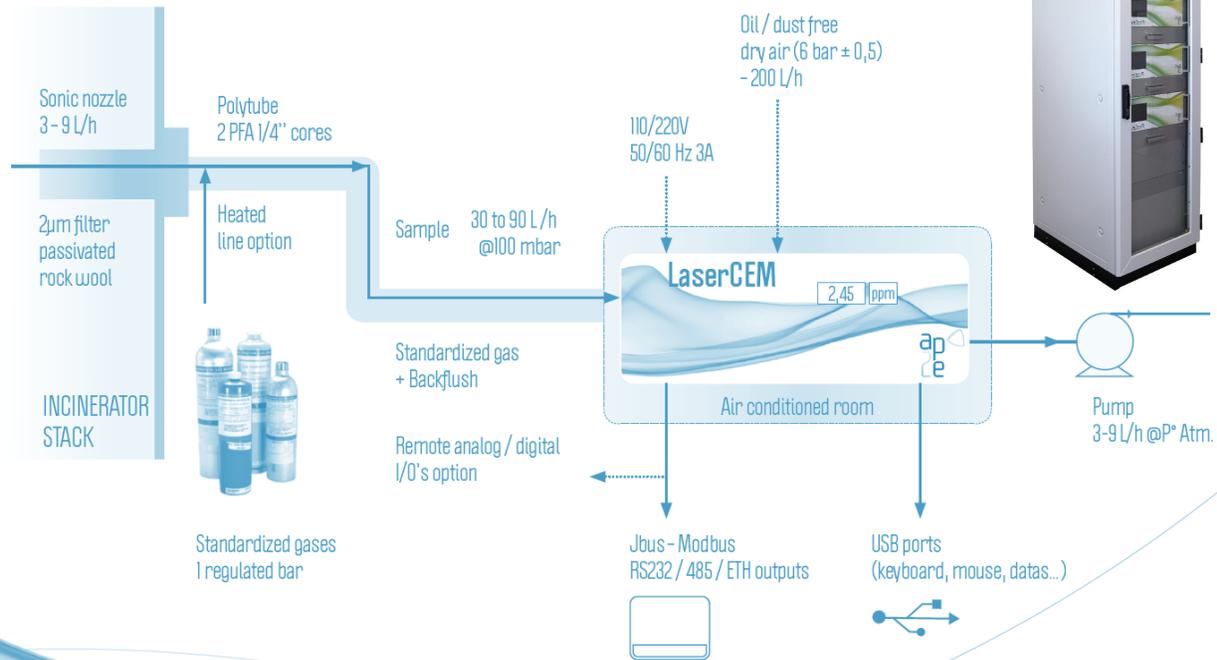
The LaserCEM is designed and manufactured by AP2e in France and uses patented analysis and sampling technologies.

LaserCEM[®] Key Features

- **True Direct Extractive CEMS (No sample treatment)** - 100mbar sampling pressure removes any risk of chemical adsorption, desorption and condensation along the sample line.
- **Ease of integration** - The LaserCEM allows digital (Ethernet, RS485, RS232, ModBus) analogue and TDR IOs.
- **Field proven** - The LaserCEM is free of optical moving part and was designed and built strictly for industrial and on-board mobile applications.
- **Interferences Free** - OFCEAS technology provides exceptional selectivity, enabling simultaneous monitoring of multicomponent without interferences, regardless of the gas matrix.
- **No Drift** - The zero is contained in the signal, enabling automated and intrinsic zero drift compensation.
- **Low maintenance** - The LPS system allows flow low rates within 3 and 9l/h without affecting the response time and reducing considerably dust and materials build-up.



LaserCEM® Continuous Emissions Monitoring System



LaserCEM® Specifications

	INTEGRATION	GAS	RANGES	DETECTION LIMIT
Dimensions	Standard 19" 4U rack unit - 550mm depth	SO2	0 to 25ppm	0.22 ppm
Weight	20kg	NO	0 to 60 ppm	0.09 ppm
Flow	3 to 9 lph	HCl	0 to 10 ppm	0.01 ppm
Sample	Temp 600C	NH3	0 to 10 ppm	0.01 ppm
Sampling Line	Pressure 1 atm. +/- 100mbar at the sampling point	CO	0 to 60 ppm	0.22 ppm
	No heating required if: Ambient temp > 10C and H2O < 40% vol.	H2O	0 to 40 %	0.1 %
	Heating required if: Ambient temp < 10C and H2O > 40% vol.	O2	0 to 25 %	0.05 %
Drift	None	CO2	0 to 20%	0.06 %
Response time	200s max. depending on sample line	SO3	0 to 25 ppm	0.20 ppm
Interface	5.7" touch screen	N2O	0 to 100 ppm	0.09 ppm
	Windows XP / WinProceas	CH4	0 to 100 ppm	0.11 ppm
Output	Ethernet / RS485 / RS232 / ModBus	NO2	0 to 25 ppm	0.08 ppm
Options	ATEX - Wall mount version	HF	0 to 10 ppm	0.01 ppm
Power supply	110-240 VAC 50/60 Hz - 200W			
Operating conditions	Temp 15-35C Pressure 86-108kPa			
	Compressed air 1-6 bar (oil free)			