



## LaserCEM<sup>®</sup> Continuous Emissions Monitoring System

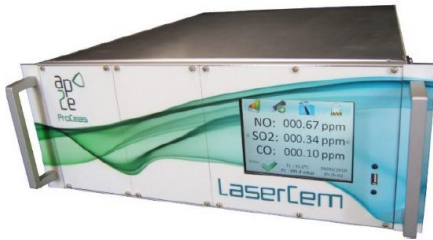
**Description** The LaserCEM is a complete pre-calibrated multicomponent (NO, NO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO, HCl, CO<sub>2</sub>, H<sub>2</sub>O, H<sub>2</sub>S, NH<sub>3</sub>, N<sub>2</sub>O, COS, SO<sub>3</sub>, CH<sub>4</sub>, HF) laser Infrared Spectrometer.

**LPS**



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

**OFCEAS**



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.

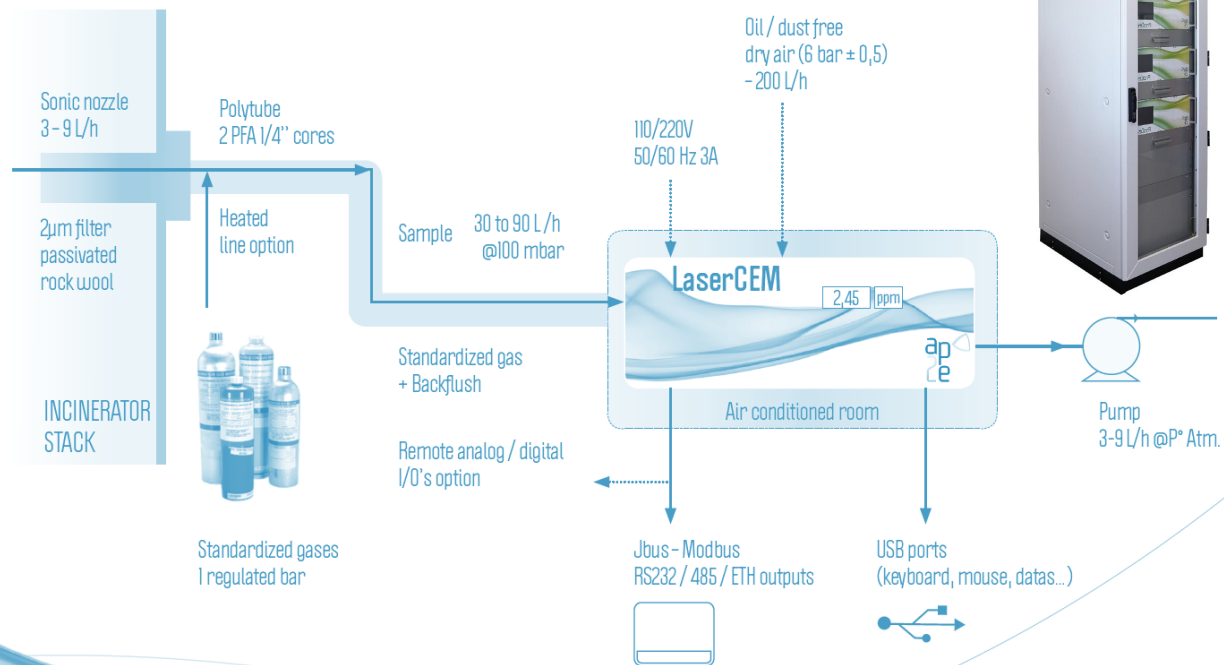
**AP2e** The LaserCEM is designed and manufactured by AP2e in France and uses patented analysis and sampling technologies.



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