The ProCeas® CO is a complete pre-calibrated laser infrared spectrometer for rapid real-time measurement of CO for safety purposes.

- The ProCeas® CO uses the patented OFCEAS (WO 03031949) IR laser technology for enhanced specificity, selectivity, accuracy and stability (no instrumental response drift).
- The ProCeas® CO uses a patented low-pressure sampling system (WO 2010058107) enabling low-cost installation thanks to non-heated lines* and reduced maintenance.
- The ProCeas® CO is a reliable, robust, low-cost and easy-to-use solution for the CO analysis for safety purposes.

**ProCeas® Advantages & Benefits**

- **DIRECT MEASUREMENT**
  No sample pre-treatment
  OFCEAS technology associated with low pressure sampling enables direct measurement. The low pressure in the sampling system removes any risk for chemicals adsorption/desorption and condensation in the line.

- **NO INTERFERENCE**
  OFCEAS technology associated with low pressure sampling provides exceptional selectivity, enabling simultaneous multi-component measurement without interferences, regardless of the matrix.

- **NO RE-ZERO; NO DRIFT**
  The zero information is contained in the signal, enabling automated and intrinsic re-zero of the analyzer.

- **EASE-OF-USE**
  The ProCeas® is pre-calibrated for your application. Initially packaged in a standard 19" rack, it includes a touch screen interface and on-board PC for local / remote control and real time display / recording of results.

- **EASE-OF-INTEGRATION**
  The ProCeas® allows digital (Ethernet, RS485, RS232, ModBus), analog and TDI I/O’s.

- **ROBUSTNESS**
  The ProCeas® contains no optical moving parts and was designed and built strictly for industrial and on-board mobile applications.

- **LOW MAINTENANCE**
  High MTBF.
  In addition to containing no moving optical components, the IR sources (telecom type laser) are characterized by MTBF’s of 5 years.

- **CLEAN LINES / FILTERS**
  The low pressure sampling system enables low flow rates (3-9 L/h) without degrading response time. Accumulation of contaminants lines and filters is greatly reduced.

- **SAFE**
  ATEX compliant configuration available.

---

* Requires ambient temperature > 10°C and H2O < 65 % vol
SAMPLING

Flow Rate: 3-9 L/h
Max. Temp.: 600°C
Max. Humidity: H₂O(g) < 65% vol. - Standard
H₂O(g) > 65% vol. – Study Required
Pressure: 1 atm. ± 100 mbar @ sampling point
Sampling Line:
Ambient Temp. > 10°C et H₂O < 40% vol.
> Simple polytube (no heating)
Ambient Temp. < 10°C et H₂O > 40% vol.
> 80°C heated line

DIMENSIONS

Size: standard 19", 4U rack.
Weight: 20kg
Options: Wall mounted
ATEX compliant integration

ELECTRONICS

Display/Control: 5.7” diagonal color touch screen
PC OS: Windows® XP®
Software: WinProceas ©

INSTALLATION REQUIREMENTS

Operating Temp.: 15-35°C - Standard
10-40°C - Optional
Power supply: 200 W - 110-220VAC - 50-60Hz
Compressed Air: 1-6 bar (oil free). Not provided.

ANALYTICAL SPECIFICATIONS

Gas | Range | LOD
--- | --- | ---
CO | 100 ppm | 1 ppb

Response Time: < 2 seconds
Zero Drift: none

* adjustable range on request
* limit of detection 3 Sigma

SPECTRA (Examples) - 200 equidistant data points over 0,2 nm

LAYOUT FROM SONIC NOZZLE TO ProCes ANALYZER

Sonic nozzle
2 µm filter
passivated rock wool

Polytube
2 PFA 1/4” cores

Heated line option

Sample 30 to 90 L/h
@ 1 atm. mbar

Standardized gas
+ Backflush

Remote analog / digital I/O’s option

Standardized gases
1 regulated bar

Jbus - Modbus
RS232 / 485 / ETH outputs

USB ports
(keyboard, mouse, datas...)

Pump
3-9 L/h@P° Atm

Exhaust

Air conditioned room

Oil / dust free dry air (6 bar ± 0,5)
- 200 L/h

110/220V
50/60 Hz 3A

2µm filter
passivated rock wool

Sonic nozzle
3-9 L/h