ProCeas®
BIOGAS analyzer
Complete Monitoring of Methanization

- The ProCeas® Biogas is a complete pre-calibrated laser infrared spectrometer of rapid real-time measurement of H₂S, CO₂ and CH₄ for methanization process monitoring.
- The ProCeas® Biogas uses the patented OFCEAS (WO 03031949) IR Laser technology for enhanced specificity, selectivity, accuracy and stability (no instrumental response drift.)
- The ProCeas® Biogas uses a patented low-pressure sampling system (WO 2010058107) enabling low-cost installation thanks to non-heated lines* and reduced maintenance.
- The ProCeas® Biogas is a complete, reliable, robust, low-cost and easy-to-use solution for the methanization process monitoring, including multiple sampling points throughout the entire methanizer.

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 TDR 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.: 60°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 < 65% vol.  
> Simple polytube (no heating)  
Ambient Temp. < 10°C et H₂O > 80°C heated line  

**DIMENSIONS**

Size: standard 19", 4U rack  
Weight: 20 kg  
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  

**SPECTRA (Examples)** - 200 equidistant data points over 0.2 nm

**LAYOUT FROM SONIC NOZZLE TO ProCeas ANALYZER**

- Sonic nozzle 3 - 9 L/h  
- 2um filter passivated rock wool  
- Polytube 2 PFA 1/4” cores  
- Heated line option  
- Sample 30 to 90 L/h @100 mbar  
- Standardized gas + Backflush  
- Remote analog / digital I/O’s option  
- Standardized gases 1 regulated bar  
- Exhaust  
- Pump 3-9 L/h @P° Atm  
- 110/220V 50/60 Hz 3A  
- 10% CH₄  
- 50 ppm H₂S  
- Output gas: Oil / dust free dry air (6 bar ± 0.5)  
- 200 L/h