DURAG GROUP

ProCeas® Chlorine Production

Trace Gas Monitoring for Chlor-Alkali Process Safety and Control

- **Four critical gases, flexible configuration:** Measures H_2, O_2, CO_2 and H_2O individually or in combination, supporting efficient process control and safe chlorine production
- **Reliable measurements over time:** OFCEAS® technology delivers stable, drift-free performance, reducing calibration needs and maximizing analyzer availability
- **Faster insights than GC:** Continuous measurement detects concentration changes sooner, enabling faster response and more effective process control

Product webpage



PROCEAS® / Multigas Analyzer for Chlorine Production

The ProCeas® Multigas Analyzer provides continuous measurement of H_2, O_2, CO_2 and H_2O in chlorine production, giving operators real time access to critical process information. Based on Optical Feedback Cavity Enhanced Absorption Spectroscopy (OFCEAS®), it measures H_2 down to ppm level with high linearity and no zero drift.

Unlike conventional technologies that require a significant delay after process start-up, ProCeas® provides real time H_2 readings, enabling earlier detection of concentration changes and more responsive process control. Hydrogen monitoring is critical for process safety in chlorine production (risk of explosion), while O_2, CO_2 and H_2O provide valuable insights into process conditions, equipment performance and gas quality.

Fast, reliable measurements help detect process deviations early, optimize process control and maintain safe operation. ProCeas® can monitor these gases individually or combine multiple measurements in one analyzer, providing flexibility to match specific process requirements. Its long-term stability and low maintenance make it particularly suited for continuous trace gas monitoring in demanding chlorine applications.

FEATURES

- Continuous, ultra-precise multi-gas measurement
- Patented OFCEAS® + LPS® technologies for no drift, interference-free measurement and long-term accuracy
- Fast response for rapid process feedback
- No optical moving parts
- Full on-site maintenance capability
- Measures gases directly, no converters required

BENEFITS

- **Faster process insight:** Rapid, continuous H_2, O_2, CO_2 and H_2O measurements enable earlier detection of critical concentration changes
- **Reduced operational costs and complexity:** No zero or carrier gases required, easy to deploy and operate with minimal maintenance
- **Simplified multi-gas monitoring:** Four critical gases measured in one analyzer reduce analytical complexity and provide a more complete process picture

TECHNICAL SPECIFICATIONS

Parameter	Typical range	LOD 3σ 60s
H_2 (ppm)	0 ... 50 000	10
O_2 (%vol)	0 ... 5	0.05
CO_2 (%vol)	0 ... 5	10
H_2O (ppm)	0 ... 1 000	0.03
Linearity: < 1% of reading Repeatability: 3 x LOD or ± 0.5 % relative Other parameters or ranges on request		

ANALYZER	
Technologies patented	**OFCEAS®** (Optical Feedback Cavity Enhanced Absorption Spectroscopy) + **LPS®** (Low Pressure Sampling)
Power supply	110-230 VAC, 50-60 Hz
Power consumption	150 W (max), 80 W (average)
Data outputs	Ethernet, ModBus (TCP/IP, RS), analog, USB
Sample Inlet Connection	OD1/4" or OD6mm Stainless Steel Swagelok® Tube Fitting
Flow rate	<20 L/h
Sample conditions	–40°C to 50 °C (-40°F to 120°F) < 99 % RH non condensing Atm ± 100 mbar (pressure)
Ambient conditions	15°C to 35°C (59°F to 95°F) <99 % RH non condensing
Dimensions	Rack 19", 4U
Weight	approx 20 kg (incl. external pump)

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