

# Solutions for Environmental Monitoring, Safety and Compliance

#### Real-time Process and Laboratory Analyzers for Air and Water Applications



#### Fuel Gas, Natural Gas & Biofuels

#### **Applications:**

- Real-time gas analyzers for environmental compliance and combustion control
- Rapid response for optimized combustion efficiency and accurate H<sub>2</sub> blending to reduced carbon emissions
- Multiple solutions for compliance with regulations such as 40 CFR Part 60, and HRVOC rules
- H<sub>2</sub>S, Total Sulfur, Net Heating Value (NHV), O<sub>2</sub> and COe, Wobbe, Specific Gravity, CARI, and full speciated composition



Fast, Multi-Cycle Total Sulfur Fuel Gas Analyzer FGA-1000™



Direct Heating Value Analyzer for BTU, CARI, Wobbe and Density 9610™ Calorimeter



In Situ O<sub>2</sub> and COe for Combustion Monitoring for Burner Optimization O2CX™ Monitor



Industrial Mass Spectrometers for Real-Time, Multi-Stream Fuel Compliance and Control MAX300-RTG™ 2.0

#### Spectrometers & Electrochemical Analyzers



**Continuous Emissions Monitoring (CEM)** 

- Multi-gas, oxygen, and COe analyzers for continuous emissions monitoring (CEM) in industrial plants, power generation, refineries, engines, turbines, pulp and paper, cement, etc.
- Stack gas analysis for CEM (LDLs in ppb or ppt of NH<sub>3</sub>, HCl, HF, H<sub>2</sub>S, COe, NO, CH<sub>4</sub>, and more)
- Trace HCl measurements to comply with US EPA rules
- Continuous monitoring of ammonia slip for lower cost of abating NOx
- Automated, multi-point analysis of waste gas and scrubber effluent for efficiency reporting



Handheld Multigas Emissions Analyzer **707**™



In Situ O<sub>2</sub> and COe for Combustion Monitoring for Burner Optimization O2CX™ Monitor



In-Situ, Stack Gas Oxygen Analyzer **Zircomat**™



Real-Time Mass Spectrometer for ppb-Level, Multi-Impurity Analysis MAX300-LG™



CRDS CEMs analyzer for HCI, HF, NH₃ and more **T-I MAX**™

# Optical / Mass Spectrometers & Heating Value Analyzers



#### **Applications:**

- Real-time gas analyzers for flare compliance and control
- H<sub>2</sub>S, Total Sulfur, Net Heating Value/BTU (NHV), H<sub>2</sub>, and full speciated composition
- Complete analysis for compliance with regulations such as EMACT, MONMACT, RSR, Subpart Ja, Ontario Reg. 530/18, Korean Facility Management Standards to Reduce Fugitive Emissions, and HRVOC rules







Injection Style Heating Value Analyzer for Zero-Hydrocarbon Emissions for BTU and Flare control 9800™ Calorimeter



Real-Time Mass Spectrometers for Compliance and Flare Control MAX100-BTU™ and MAX300-RTG™ 2.0

#### Spectrometers & Electrochemical Analyzers



## Fenceline & Ambient Air Analysis

- Monitor ambient air for OSHA compliance for workplace safety
- Real-time analysis of BTEX, acrylonitrile, VCM, EDC, HCl, VOCs, HAPs, solvents, H2O, O2, and LELs in air
- Low-level leak detection of hazardous compounds and EPA method 320 HAPS
- Emissions from industrial or agricultural operations and urban environments
- Refinery benzene fenceline monitoring for Refinery Sector Rule (RSR) compliance



Percent and Trace Oxygen Analyzers, and Oxygen Deficiency Safety Monitors Series 2000™ and ZRO2000™



CRDS for Real-Time, Trace Methane, CO<sub>2</sub>, and Formaldehyde T-I MAX™ AIR



Benchtop Mass Spectrometers for Real-Time, ppb-level, Multi-Impurity Analysis MAX300-LG™



FTIR Environmental Vapor Monitoring Analyzer **ANALECT EVM™** 



Real-Time Air Mass Spectrometer for Environmental Health and Safety MAX300-AIR™

# NIR Photometers & Probes for H<sub>2</sub>O<sub>2</sub> and H<sub>2</sub>O Sterilization & Virus Deactivation

#### **Applications:**

- Measure sterilant gas concentration in real-time under ambient or vacuum conditions
- H<sub>2</sub>O<sub>2</sub>, H<sub>2</sub>O, Ethylene Oxide, NOx under ambient or vacuum conditions for cycle development of sterilization chamber, filling isolators and Resistometers
- Optical RH and relative saturations measurements
- Independent reference for potential load production release



Dual Beam Photometer for Real-Time Hydrogen Peroxide Vapor (HPV) Sterilant Gas Monitoring ClearView db® Hydrogen Peroxide Vapor HPV™



Vapor Probe for H<sub>2</sub>O<sub>2</sub> Analyzer System, Suitable for Vacuum and Positive Pressure (up to 2 atm)

G-SST™ Vapor Probe

#### Optical Spectrometers & Water Quality Analyzers



Pure Water, Wastewater & Runoff

- On-line water quality analysis for Total Organic Carbon (TOC), Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD)
- Water influent and effluent discharge control for environmental compliance
- Municipal water quality, drinking and surface water toxicity
- Airport deicing fluid capture and remediation
- Industrial stormwater and agricultural runoff



TOC Water Analyzer for Harsh Wastewater Applications QuickTOCultra™



TOC Water Analyzer for Clean Water Applications QuickTOCuvII™



TOC Water Analyzer for Municipal & Cooling Water Applications

QuickTOCeco™



Fast, Continuous, Online Toximeter for Drinking Water and Surface Water ToxAlarm™



UV-VIS Process Analyzer for Triazines and Precursors in Agricultural Runoff **M508***plus*™



COD Water Analyzer for Laboratories QuickTOClab™

#### Optical & Mass Spectrometry Analyzers



#### **Sulfur Analysis**



Fast, Multi-Cycle Total Sulfur Gas Analyzer SGA-1000™



Real-Time Total Sulfur in Liquids Analyzer SLA-1000<sup>TM</sup>

#### **Applications:**

- Sulfur analysis in butane, diesel, liquid fuels, Liquefied Natural Gas (LNG), hydro-treaters, blenders and scrubbers
- Renewable Natural Gas (RNG) and biofuels manufacturing
- H<sub>2</sub>S, Total Sulfur and Total Nitrogen, and Trace Sulfur
- Meets ASTM D5453, for compliance with regulations like US EPA Tier III, European Euro 6 and the Indian Bharat VI



Real-Time Laboratory Total Sulfur and Total Nitrogen in Liquid and Gases **XT-2000™** 



Industrial Mass Spectrometers for Real-Time, Multi-Stream Fuel Compliance and Control MAX300-RTG™ 2.0

#### Heating Value, Spectroscopy & Electrochemical Analyzers



### **Greenhouse Gas/Carbon Emissions**



Injection Style Heating Value Analyzer for Zero-Hydrocarbon Emissions for BTU and Flare Control 9800™ Calorimeter



CRDS Analyzer for the Detection &
Continuous Monitoring of Methane and
Greenhouse Gases (GHG)
T-I MAX™ AIR CH₄

- Monitor emissions of greenhouse gases from various sources such as landfills, gas and oil exploration sites, refineries, chemical plants, and agricultural facilities
- Combustion analyzers for steel, power, petroleum, petrochemicals, ceramics, paper & pulp, food, textiles, garbage incinerators, and boilers
- Optimized combustion control to reduce CO<sub>2</sub>, SOx, and NOx emissions, and prevent global warming and air pollution
- Real-time analyzers for CH4 and CO, CO2, O2, NOx, SO2, and H2S in air



Handheld MultiGas Emissions Analyzer **707**™



In-Situ, Stack Gas Oxygen Analyzer **Zircomat**™



In Situ O₂ and COe for Combustion Monitoring for Burner Optimization O2CX™ Monitor

Spectrometers, Water Quality, Electrochemical & Chilled Mirror Analyzers



Laboratory, Safety, & Environmental Research





Portable and Fixed Trace to Percent Oxygen Monitors Series 3520™ and OXY-SEN™





Aluminum Oxide Dew Point Meters for Portable/Fixed/Loop-Powered Applications HDT / LPDT / LPDT2™



Chilled Mirror Dew Point Hygrometer with Measuring Head for Temperature and RH Measurements 973 Model™



Benchtop Mass Spectrometer for Real-Time ppb-Level to 100% Catalysis, Reaction Monitoring, and Environmental Research MAX300-CAT™

For a complete range of products, applications, systems, and service options, please contact us at: info@process-insights.com

#### **Applications:**

- Full composition and trace gas analyzers for atmospheric chemistry and environmental research
- River water, environmental contamination, and wastewater monitoring
- Climatic chamber and glovebox moisture, temperature, and dew point sensor validation
- PPB to 100% H<sub>2</sub>O and O<sub>2</sub> (aerobic or anaerobic activity), relative humidity and dew point, temperature, and compositional gas analysis
- Trace gas analyzers for H<sub>2</sub>O, O<sub>2</sub>, H<sub>2</sub>, CH<sub>4</sub>, NH<sub>3</sub>, CO, CO<sub>2</sub>, N<sub>2</sub>, Ar, He, VOCs, HAPs, hydrocarbons, etc.





TOC Water Analyzer for Clean Water Applications QuickTOCuvII™

Fast, Continuous, Online Toximeter for Drinking Water and Surface Water ToxAlarm™



CRDS Trace Gas Analyzer for PPB-Level Detection of  $H_2O$ ,  $CH_4$ , CO,  $CO_2$  and  $C_2H_2$   $\mathbf{Spark^{TM}}$ 



Molecular Beam Mass Spectrometer for Pyrolysis and Environmental Research VeraSpec™ MBx

For a complete list of sales & manufacturing sites, please visit: https://www.process-insights.com/about-us/locations/



www.process-insights.com Copyright © 2022 Process Insights, Inc. All Rights Reserved.