

## Real-Time and Fixed Point Solutions for Gas and Water Applications

### Mass Spectrometers & Optical Spectroscopy Analyzers



### Solvent Drying



Industrial Mass Spectrometer for Real-Time, Multi-Stream, Solvent Drying and Endpoint Determination  
**MAX300-BIO™**



Benchtop Mass Spectrometer for Real-Time, Multi-Stream, Solvent Drying and Endpoint Determination  
**MAX300-LG™**



CRDS Trace-Level, Low-Pressure Moisture Analyzer for Lyophilization  
**HALO RP/QR™**

#### Applications:

- Accurate endpoint determination to improve product yield and production efficiency, and minimize waste
- Easily switch streams to monitor multiple chambers using the same, or different solvents
- Optimized sampling for ambient pressures, vacuum drying, and lyophilizers
- Trace moisture analysis and multi-species analysis of solvents, such as IPA, MEK, DCM, ethyl acetate, styrene, acetonitrile, etc.

### Mass Spectrometers & Laser Spectroscopy Analyzers



### Fermentation & Cell Culture Control



Real-Time, Multi-Stream Mass Spectrometer Gas Analyzer for Accurate OUR, CER and RQ  
**MGA 1200CS™**



Benchtop Mass Spectrometer for Real-Time Multi-Stream, Bioreactor Control  
**MAX300-LG™**



CRDS Single-Species, Trace Gas Analyzer for ppb-Level H<sub>2</sub>O, CH<sub>4</sub>, CO, CO<sub>2</sub>, Detection  
**Spark™**

#### Applications:

- Fermenter bioreactor off-gas composition analysis
- Fast and accurate analysis for control parameters such as:  
Oxygen Uptake Rate (OUR)  
Carbon dioxide Evolution Rate (CER)  
Respiratory Quotient (RQ) and fermentation end point
- Continuous monitoring to improve yield / quality and reduce waste - single species or multi-component analysis (e.g. CO<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, Ar, H<sub>2</sub>O, CO, H<sub>2</sub>, He, hydrocarbons, alcohols, aldehydes, sulfurs, etc.)
- Active Pharmaceutical Ingredients (API) and biomolecule production

## Water Quality Analyzers



## Water & Wastewater

### Applications:

- Water influent and effluent discharge control
- Process control, high purity, oil in water, cooling water, condensate return, water-steam cycles, and environmental compliance
- Total Organic Carbon (TOC) in water



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™**



COD Water Analyzer  
for Laboratories  
**QuickTOClab™**

## Spectrometry, Electrochemical & Chilled Mirror Analyzers



## Glove Box Monitoring

### Applications:

- Real time, in situ glove box and incubation monitoring
- Ideal for vessel and climatic chamber monitoring and 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
- Glove box moisture, temperature and dew point sensor validation



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



Aluminum Oxide Dew Point Meters & Transmitters  
with Hyper-Thin-Film Technology for  
Portable/Fixed/Loop-Powered Applications  
**XDT | XPDM | LPDT | LPDT2™**



CRDS Trace Gas Analyzer for  
ppb-Level Detection of H<sub>2</sub>O, CH<sub>4</sub>,  
CO, CO<sub>2</sub> and C<sub>2</sub>H<sub>2</sub>  
**Spark™**



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



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



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

## Mass Spectrometers & Optical Spectroscopy Analyzers



### Evolved Gas Analysis

#### Applications:

- Connects to thermal gravimetric analyzers (TGA) for off-gas monitoring
- Quality control in reaction monitoring, natural product analysis and synthesis studies
- Microreactor off-gas and head-space analysis
- Single species or multi-component analysis (e.g. CO<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, Ar, H<sub>2</sub>O, CO, H<sub>2</sub>, He, hydrocarbons, alcohols, aldehydes, sulfurs, etc.)



CRDS Trace-Level, Low-Pressure Moisture Analyzer  
**HALO RP/QRP™**



CRDS Ambient-Pressure Analyzer for Trace HCl, NH<sub>3</sub>, HF, CO and CH<sub>4</sub>  
**T-I Max™**



CRDS Trace Gas Analyzer for ppb-Level of H<sub>2</sub>O, CH<sub>4</sub>, CO, CO<sub>2</sub>, and C<sub>2</sub>H<sub>2</sub> Detection  
**Spark™**



Benchtop Mass Spectrometer with Heated, Evolved-Gas Inlet for Real-Time, Continuous Off-gas Analysis  
**MAX300-EGA™**

## Spectrometers, Water Quality, Electrochemical & Chilled Mirror Analyzers



### Laboratory, Safety, & Compliance

#### Applications:

- Air and fenceline monitoring
- O<sub>2</sub> deficiency safety monitoring, sulfur and nitrogen in fuels and biofuels, moisture calibration of sensors and standards
- Quality of process gas supplies (CDA, N<sub>2</sub>, CO<sub>2</sub>, etc.)
- Trace gas analyzers for compounds such as 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 and hydrocarbons



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



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



Total Sulfur-Total Nitrogen Gas Analyzers  
**XT-2000™**



Chilled Mirror Dew Point Meters  
**373 Model™**



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



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



TOC Water Analyzers for Pure and Process Water Applications for Laboratories  
**QuickTOCpurity™**



COD Water Analyzer for Laboratories  
**QuickTOClab™**



## GAIN REAL-TIME INSIGHT INTO YOUR PROCESS

Process Insights manufactures and delivers premium sensors, monitors, detectors, analyzers, instrumentation, and software that are mission-critical to keep your operations, personnel, and the environment safe – every day across the globe.

Get the most reliable, precision analytical technologies available on the market today. We will work to match your needs and budget, and provide the optimal, and most stable process analysis solution for your application.

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REVOLUTIONIZING MEASUREMENT

**EVERYWHERE**