Solutions for Industrial Gas

High Quality Analyzers for Diverse Gas, Water, and Liquid Industrial Applications

**Spectrometers & Electrochemical Analyzers**

**Applications:**
- Bulk gas continuous quality control monitoring (CQC); pre and post-purifier measurements
- Trace gas analyzers for impurities, including $H_2O, O_2, H_2, CH_4, NH_3, CO, CO_2, N_2, Ar, Xe, Kr, Ne, He, and hydrocarbons

**Electronic Gas**

- Quantum Cascade Laser CRDS for CO and CO$_2$, and ppt-Level Analysis for $O_2, H_2O, CH_4, and NH_3$
- Aluminum Oxide Dew Point Meters for Portable/ Fixed/ Loop-Powered Applications XDT / XPDM / LPDT / LPDT2™
- Atmospheric Pressure Mass Spectrometers for Real-Time, ppt-Level Multi-Impurity Analysis VeraSpec™ APIMS

**Electrochemical, Spectroscopy & Chilled Mirror Analyzers**

**Applications:**
- Moisture impurity monitoring in welding gases and specialty gases, including corrosive gases (HCL, HBr, Cl$_2$), rare gases (Xe, Kr, He, Ne), fluorinated gases (SF$_6$, NF$_3$, CF$_4$), hydrides (NH$_3$, PH$_3$, GeH$_4$, AsH$_3$), and pure CO$_2$

**Specialty Gas**

- Aluminum Oxide Dew Point Meters for Portable/ Fixed/ Loop-Powered Applications XDT / XPDM / LPDT / LPDT2™
- CRDS for Corrosive, Rare, and Fluorinated Gases HALO 3 H2O™
- CRDS with the Lowest LDL for H$_2$O in NH$_3$ ALOHA+ H2O™
Applications:
- Process control, quality control, truck fill, safety, and compliance
- Continuous moisture analysis in instrument air and dryers, and portable spot checking
- Trace analyzers for H₂O, O₂, CH₄, CO₂, CO, C₂H₂, and other gases with detection capabilities from ppb to % level

Hydrogen / Syngas

Laser Spectrometers & Electrochemical Analyzers

Air Separation

Applications:
- HyCO process control, hydrogen purity analysis, feed forward control, and flare gas analysis
- Increased accuracy and efficiency for all stages of the hydrogen economy: generation, storage and delivery
- Hydrogen purity to meet ISO14687/SAE J2719 standards
- Gas analyzers for H₂O, CO, CO₂, H₂, N₂, CH₄, H₂S, and hydrocarbon, BTU, Wobbe, CARI and Density

Heating Value, Electrochemical & Spectroscopy Analyzers

Applications:
- Process control, quality control, truck fill, safety, and compliance
- Continuous moisture analysis in instrument air and dryers, and portable spot checking
- Trace analyzers for H₂O, O₂, CH₄, CO₂, CO, C₂H₂, and other gases with detection capabilities from ppb to % level

Hydrogen / Syngas

Applications:
- HyCO process control, hydrogen purity analysis, feed forward control, and flare gas analysis
- Increased accuracy and efficiency for all stages of the hydrogen economy: generation, storage and delivery
- Hydrogen purity to meet ISO14687/SAE J2719 standards
- Gas analyzers for H₂O, CO, CO₂, H₂, N₂, CH₄, H₂S, and hydrocarbon, BTU, Wobbe, CARI and Density

Integrated, Custom Sample Systems Available

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

CRDS Analyzer for Trace Gas Detection of
H₂O, CH₄, CO, CO₂, and C₂H₂
Spark™

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

Industrial Mass Spectrometers for Real-Time, Multi-Stream Process Control
MAX300-RTG™ 2.0

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

Portable and Fixed Aluminum Oxide Dew Point Meters
XPDM™

Real-time Cavity Ring Down Spectroscopy (CRDS) Impurity Analyzers
for H₂O, CO, CH₄ and CO₂
CO-rekt™ and Prismatic™
Applications:

- Air and fence line monitoring
- O₂ deficiency safety monitoring, sulfur and nitrogen in fuels and biofuels, moisture calibration of sensors and standards
- Trace gas analyzers for H₂O, O₂, H₂, CH₄, NH₃, CO, CO₂, N₂, Ar, He and hydrocarbons