**Solutions for Oil Refineries**

**High Quality Analyzers for Diverse Gas, Water, and Liquid Hydrocarbon Applications**

**Fuel Gas**

- **Applications:**
  - Real-time gas analyzers for environmental compliance and combustion control
  - Rapid response for optimized combustion efficiency, and accurate H₂ blending to reduced carbon emissions
  - Multiple solutions for compliance with regulations such as 40 CFR Part 60, and HRVOC rules
  - H₂S, Total Sulfur, Net Heating Value (NHV), O₂ and CO₂, Wobbe, Specific Gravity, CARI, and full speciated composition

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**Optical / Mass Spectrometers & Heating Value Analyzers**

- **Applications:**
  - Real-time gas analyzers for flare compliance and control
  - H₂S, Total Sulfur, Net Heating Value/BTU (NHV), H₂, and full speciated composition
  - Complete analysis for compliance with regulations such as EMACT, MONMACK, RSR, Subpart Ja, Ontario Reg. 530/18, Korean Facility Management Standards to Reduce Fugitive Emissions, and HRVOC rules

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**Flare Gas**

- **Applications:**
  - Real-time gas analyzers for flare compliance and control
  - H₂S, Total Sulfur, Net Heating Value/BTU (NHV), H₂, and full speciated composition
  - Complete analysis for compliance with regulations such as EMACT, MONMACK, RSR, Subpart Ja, Ontario Reg. 530/18, Korean Facility Management Standards to Reduce Fugitive Emissions, and HRVOC rules

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Sulfur Analysis

- Available in several enclosure options
- ClearView db®

Applications:
- Sulfur analysis in butane, diesel, liquid fuels, LNG, hydrotreaters, blenders and scrubbers
- H₂S, Total Sulfur and Total Nitrogen and Trace Sulfur
- Net Heating Value/BTU (NHV), H₂ and full speciated composition
- Meets ASTM D5453, for compliance with regulations like US EPA Tier III, European Euro 6 or the Indian Bharat VI

Optical Spectroscopy Analyzers

- Fast, Multi-Cycle Total Sulfur Gas Analyzer SGA-1000™
- Real-Time Total Sulfur in Liquids Analyzer SLA-1000™
- 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
- UV-VIS Process Analyzer for H₂S to SO₂ Ratio M508plus™

Applications:
- Real time process analyzers for naphtha conversion, catalytic conversion, upgrading units, isomerization, alkylation, and gasoline and diesel blending
- Monitor catalyst efficiency
- PIONA content of reformate, octane numbers, volatility (RVP, vapor-to-liquid ratio), aromatics content, olefins, oxygen, benzene, distillation parameters, Fuel ID, and Fuel Color + Turbidity

Crude Oil Processing

- Dual Beam Photometer for Continuous PAT Monitoring Available in Several Enclosure Options ClearView db®
- Benchtop NIR Spectrometer for QC lab and Pilot Plant Operations Lab NIR-O™
- Real-Time, Multi-Stream Process NIR Spectrometer NIR-O™
- FTIR/FT-NIR Process Analyzer for Refining Applications ANALECT® RefinIR™
- Process FTIR Analyzer for Refinery Monitoring ANALECT® Hydrocarbon SmartSystem™
Applications:
- Continuous moisture analysis in instrument air and dryers and portable spot checking
- Trace moisture in clean dry air, ppb to %

**Instrument Air & Dryers**

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

- CRDS Analyzer for UHP Moisture in Air
  - Spark™

**Heating Value, Electrochemical & Spectroscopy Analyzers**

- 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 3™
Laboratory, Safety & Compliance

Applications:
- Air and fenceline monitoring compliant with regulations such as OSHA requirements, USEPA Method 320, and the RSR
- $O_2$ deficiency safety monitoring, sulfur and nitrogen in fuels and biofuels, moisture calibration of sensors and standards
- Trace gas analyzers for $H_2O$, $O_2$, $H_2$, $CH_4$, $NH_3$, $CO$, $CO_2$, $N_2$, $Ar$, $He$, and hydrocarbons

Spectrometers, Water Quality, Electrochemical & Chilled Mirror Analyzers

Water Quality Analyzers

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

Water & Wastewater

Percent and Trace Oxygen Analyzers, and Oxygen Deficiency Safety Monitors
Series 3520™ and OXY-SEN™

Chilled Mirror Dew Point Meters
373 Model™

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

Total Sulfur-Total Nitrogen Gas Analyzers
XT-2000™

Percent and Trace Oxygen Analyzers, and Oxygen Deficiency Safety Monitors
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Water Quality Analyzers

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

Water & Wastewater

TOC Water Analyzer for Harsh Wastewater Applications
QuickTOCultra™

TOC Water Analyzer for Clean Water Applications
QuickTOCuvll™

TOC Water Analyzer for Municipal & Cooling Water Applications
QuickTOCeco™

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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Process Insights is committed to solving our customers’ most complex analytical, process, and measurement challenges everyday.

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