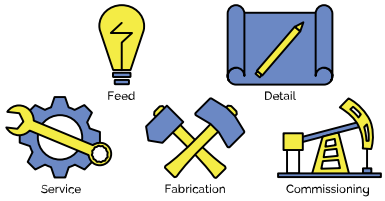
INSIGHT ANALYTICAL | Product Line Card

Systems Integration

Insight Analytical Solutions can facilitate your measurement project through all its phases. From front end engineering design to detail engineering to fabrication/FAT to field commissioning, our talented team of scientists, engineers and technologists are here to help.



Why Insight Integration?

- Sample system excellence and training.
- Impeccable documentation and standards.
- Commitment to results and support.

Amazing Applications

- Custom sample systems.
- Process analyzer integration and implementation.
- Full analyzer buildings, metering skids and LACT units.

Fantastic Features

- Full 3D (Solid-works and 2D (AutoCad) drawing packages.
- Installation and operation manuals.
- World class field support.

Webpage

Verax™ 2C & 4C Analyzers

The Verax™ 2C and 4C analyzers deliver real-time hydrocarbon measurements using advanced NIR laser absorption spectroscopy. Each unit uses two or four in-line flow cells at process temperature and pressure for accurate, stable performance. JP3's proprietary chemometric models provide fast compositional and physical property data for gases and liquids, with no consumables, calibration gas, or shelter required.

Why JP3 Measurements?

JP3's patented NIR technology provides accurate optical analysis across gas and liquid phases without sample systems or calibration gases. The result is zero emissions, zero waste, & reliable real-time data for better process control.

Amazing Applications

- Real-time NGL and crude blending optimization.
- On-line crude tower and stabilizer control.
- Fuel gas and fractionation monitoring.

Fantastic Features

- Dual or quad flow-cell design for multi-stream analysis.
- In-line measurement at process temperature and pressure.
- No consumables, calibration gas, or sample system required.

Webpage | Brochure

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Making Measurements Matter.

Verax™ XSPCT NIR Spectrometer

The Verax™ XSPCT is a rugged, Class I Division 1 explosion-proof analyzer that measures hydrocarbon composition and physical properties of gases and liquids in real time. Installed directly in-line at operating pressure and temperature, it requires no sample conditioning or consumables. Using advanced NIR spectroscopy and proprietary chemometric models, the XSPCT delivers fast, accurate data with minimal maintenance, even in harsh or remote locations. Designed for reliability and simplicity, it enables continuous process monitoring without emissions or calibration gases.

Fantastic Features

- Explosion-proof Class I Division 1 design for hazardous areas.
- In-line measurement at full process pressure and temperature.
- No sample system, consumables, or calibration gases required.

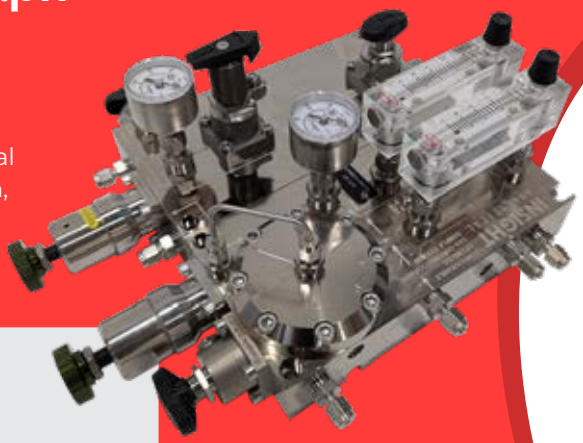
Amazing Applications

- Remote and unmanned wellhead or pipeline monitoring.
- Custody transfer and fuel gas quality control.
- NGL and condensate blending optimization.

Webpage | Brochure

Configurable Optimized Gas Chromatograph Sample System (COGS)

The Insight Analytical COGS (Configurable Optimized Gas Chromatograph Sample System – Patent Pending) is a modular, self-contained conditioning system for gas chromatographs used in demanding applications such as natural gas custody transfer. Built from nickel-plated aluminum blocks, it delivers clean, dry, and stable samples with integrated filtration, regulation, and flow control. COGS minimizes lag, contamination, and leaks while providing fast response, low emissions, and simple maintenance through its compact, modular design.



Fantastic Features

- Low internal volume for faster response and reduced emissions.
- Easy installation, maintenance, and full system swaps.
- Modular block design with integrated filtration, pressure regulation, and flow control.
- Meets GPA and ASTM performance standards.

Amazing Applications

- Natural gas custody transfer and metering systems.
- Analyzer shelter or field-mounted GC installations.
- Carrier and calibration gas management for process GCs.

Brochure

Webpage

Available Options

Optional Regulator Panel available for the Type 3 COGS system for carrier gas cylinder changeover/pressure regulation and calibration gas pressure regulation.

Optional Mounting Bracket available for mounting any of the three system types and also pipe-mountable GCs such as the ABB NGC8206.

Optional Vent Block combines up to 4 GC vents into a single manifold connection.

Moisture Generator Block

The Insight Analytical Moisture Generator ensures precise gas analyzer validation with a compact, portable design. It uses high-pressure sample gases for accurate results, stabilizes quickly, and requires no costly components, providing reliable performance in any conditions.

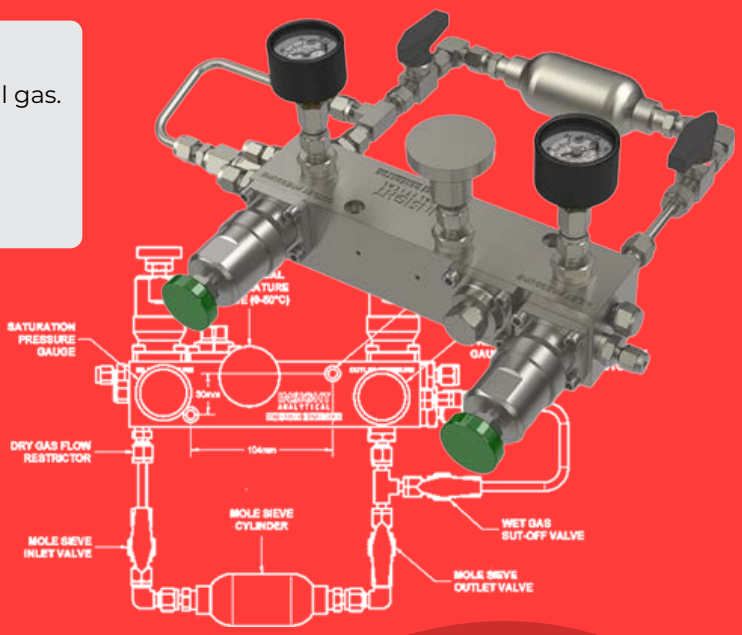
Fantastic Features

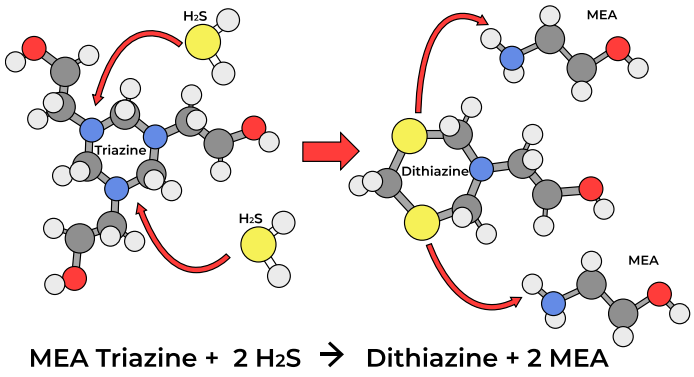
- Validates with high-pressure gases, including natural gas.
- Stabilizes quickly with saturation pressure.
- Supports various high-pressure gas sources.
- Unaffected by analyzer pressure.
- Cost-effective, no expensive components.

Amazing Applications

- Portable for field “bump testing.”
- Integrates into sample systems.
- Monitors water vapor in air or gas.
- Ensures quality in industrial processes.
- Prevents corrosion in refineries.
- Supports compliance in gas processing.

Webpage | Brochure | Video





MEA Triazine + 2 H_2S → Dithiazine + 2 MEA

Insight Dithiazine Testing

It is very common in the hydrocarbon processing industry to use MEA-Triazine to remove Hydrogen Sulfide (H2S) from produced fluids. The reaction product of this is a chemical called Dithiazine. Dithiazine has been known to precipitate in pipelines, compressor stations, distillation towers and methanol removal systems. Insighthas commercialized two unique measurement solutions to address these problems.

Brochure | Webpage

Amazing Applications

- Determination of dithiazine in natural gas pipelines.
- Protection of rotating equipment / compressors.
- Identification of solid & liquid contamination.

Fantastic Features

- Measurement at parts per billion levels.
- Easily deployed in the field.
- Test kits identify dithiazine deposits in minutes.

Process Insights
Premium Insights Into Process

EXTREL™
Quadrupole Mass Spectrometers

Extrel's products help organizations continuously identify and quantify various molecular components in process environments to ensure safe operations, increase process efficiency and product quality, reduce disruptions and downtime, and attain compliance with numerous regulatory requirements.

Video
Brochure
Webpage

Why EXTREL™ ?
- 55 year history that's devoted to perfecting a single technology.
- Speciated, full composition analysis with updates in seconds.
- A proven process for unparalleled customer and project support.

Fantastic Features
- PPT detection limits.
- Extremely fast analysis time.
- Multi-port sample system for entire site monitoring.
- High precision and accuracy for safety/regulatory.

Amazing Applications
- Toxic chemical release.
- TWA exposure limits.
- CCUS Applications
- Explosive limit analysis.
- BTU.

COSA XENTAUR™
Wobbe Index, BTU, and CARI

With cutting edge technology based on aggressive internal development and a wide range of partners, COSA Xentaur delivers robust cost-effective instrumentation solutions. The COSA Xentaur portfolio ranges from dew point measurement solutions, analytical laboratory equipment, NMR technology, WOBBE and BTU index analyzers.

Fantastic Features
- Industry proven residual oxygenmethod.
- Fast response.
- Wide measurement range.
- Low maintenance.

Amazing Applications
- SAGD steam generators.
- Gas turbine control.
- Fuel blending control.

Webpage
Brochure
Video

ATOM INSTRUMENT™
Lab & Elemental Analyzers

Atom Instrument offers the industries most versatile Total Sulfur Analyzer with the fastest response time of any commercially available analyzer. ATOM utilizes patented Excimer UV Fluorescence technology – the most simple and practical low-level sulfur analytical technique, with high purity emission and longer lamp life.

Fantastic Features
- Fast response, standard cycle 100 sec.
- Reliable & longer life cycle.
- No carrier gas or 02.
- Higher spectral purity.
- Higher relative sensitivity.
- Highly reduced nitrogen interference.

Amazing Applications
- Total sulfur in natural gas/LNG products.
- Total sulfur in diesel and liquid fuels.
- Total sulfur & total nitrogen in fuels & chemicals
- Trace sulfur in butane & other gas/LNG applications.

Webpage
Brochure

TIGER OPTICS™
CRDS Gas Analyzers

Cavity Ring-Down Spectroscopy (CRDS) analyzers from Tiger Optics deliver ultra-sensitive, calibration-free gas measurements for moisture, impurities, and trace contaminants. Built for both laboratory precision and rugged industrial environments, they provide drift-free performance across critical gas applications in refining, gas processing, hydrogen, and electronics.

Fantastic Features

- Calibration-Free – No reference gas needed.
- Ultra Low Detection – ppt to ppb sensitivity.
- Fast Response – Instant, reliable feedback.
- High Stability – Immune to drift or cross-interference.
- Compact Form Factor – Ideal for lab or field.

Amazing Applications

- Natural Gas – Prevent hydrates & corrosion.
- Pipelines – Ensure gas quality & compliance.
- LNG – Monitor cryogenic moisture.
- Refining – Optimize process efficiency.
- Compression & Transfer – Maintain integrity.

Webpage

COSA XENTAUR™
Trace Moisture Measurement Solutions

Moisture control is essential in oil and gas operations to prevent equipment damage, maintain product quality, and optimize efficiency. Excess moisture in natural gas, LNG, and petrochemical processes can lead to corrosion, hydrate formation, and regulatory compliance issues. Our trace moisture measurement solutions provide real-time, highly accurate dew point monitoring, ensuring reliable performance in even the most demanding environments.

XPDM Brochure

ESS-SCVP Brochure

Fantastic Features

- **High Accuracy** – Precise moisture detection.
- **Real-Time Validation** – Continuous self-checking.
- **Fast Response** – Quick, reliable readings.
- **Rugged Design** – Built for harsh conditions.
- **Low Maintenance** – Long sensor life.

Amazing Applications

- **Natural Gas** – Prevent hydrates & corrosion.
- **Pipelines** – Ensure gas quality & compliance.
- **LNG** – Monitor cryogenic moisture
- **Refining** – Optimize process efficiency
- **Compression & Transfer** – Maintain integrity

Reliable & Accurate Dew Point Monitoring

OA-ICOS Laser Gas Analyzers

ABB's OA-ICOS Analyzer platform uses advanced off-axis laser spectroscopy to deliver high-precision, drift-free measurements of trace gases and isotopes. Designed for industrial and research use, these analyzers offer flexible deployment in rugged or lab environments. Real-time data acquisition ensures accurate, continuous monitoring of critical gas parameters like methane, CO_2, moisture, and isotopic content.

Why ABB?

- Industry leader in gas analysis with decades of field-proven performance
- Broad technology portfolio for gas, liquid, and emissions measurement.
- Scalable, modular designs with global support and remote diagnostics.

Fantastic Features

- Real-time, calibration-free laser analysis
- Excellent sensitivity for CH_4, CO_2, H_2O, and more.
- High-resolution isotopic measurements.
- Minimal maintenance and low operating cost.

Amazing Applications

- Greenhouse gas monitoring.
- Hydrogen and CO_2 purity.
- Emissions testing.
- Moisture & isotope ratio analysis.
- Field & lab-based research.

Webpage Brochure

Zirconia In-Situ Oxygen Analyzers

ABB's Zirconia In-Situ Oxygen Analyzers provide rapid, direct measurement of oxygen in combustion environments without the need for sample extraction. Built for high-temperature industrial applications, these probes ensure optimized combustion efficiency and emissions compliance. Their rugged design and fast response make them ideal for safety-critical processes.

Fantastic Features

- Direct in-situ oxygen measurement.
- High-temp zirconia sensors rated up to 1600°C
- Eliminates need for sample conditioning systems.
- SIL2 and dual-sensor configurations available.

Amazing Applications

- Emissions compliance.
- Flue gas monitoring in power plants.
- Fuel efficiency improvement.
- Boiler and furnace combustion control.

Webpage Brochure

Multiwave Process Photometers

ABB's Multiwave Photometers offer precise infrared and ultraviolet absorption measurement of gases and liquids in real-time. Designed for in-line industrial use, they deliver accurate results for process optimization, emissions monitoring, and quality assurance in demanding environments such as refineries and chemical plants.

Fantastic Features

- Real-time IR and UV absorption analysis.
- Long-life light sources with sealed optical paths.
- Compact, modular design for integration flexibility.
- Low-drift optical system with digital outputs.

Amazing Applications

- Flue gas and combustion air monitoring.
- Liquid concentration measurement.
- Refinery hydrocarbon stream analysis.
- Environmental emissions tracking.

Webpage Brochure

Advance Optima AO2000 Gas Analyzers

The ABB Advance Optima AO2000 is a modular gas analysis platform combining extractive measurement techniques with a wide range of sensing technologies. Designed for demanding CEMS and process applications, it supports hot/wet gas analysis, automated calibration, and seamless digital integration—all in a scalable, field-proven system.

Fantastic Features

- Multi-technology platform: NDIR, paramagnetic, FID, TCD, zirconia.
- Hot/wet extractive design with minimal sample prep.
- Built-in diagnostics, auto-calibration, and remote access.
- Proven reliability in continuous emissions environments.

Amazing Applications

- Continuous Emissions Monitoring (CEMS).
- Power plant combustion efficiency.
- Chemical production and refining streams.
- Regulatory NOx and CO monitoring.

Brochure

Webpage

FT-IR & FT-NIR Process Analyzers

ABB's FT-IR and FT-NIR analyzers enable multi-stream, real-time chemical composition analysis in complex process environments. With options for fiber-optic and in-situ deployment, these systems offer unmatched flexibility and reliability in monitoring gases, liquids, and slurries across a wide range of industrial sectors.

Fantastic Features

- Full-spectrum FT-IR and FT-NIR capability.
- Fiber-optic & in-situ sampling for harsh environments.
- Built-in software with spectral libraries and analytics.
- Fast stabilization with minimal calibration drift.

Webpage

Amazing Applications

- Reaction and crystallization monitoring.
- Polymer and monomer QA/QC.
- Solvent and blend ratio control.
- Slurry and multi-phase composition tracking.

EasyLine Gas Analyzers

ABB's EasyLine series delivers compact, modular gas analysis systems ideal for emissions control and process monitoring. Available with multiple sensor technologies, these analyzers provide accurate, real-time data in a cost-effective platform designed for simple installation, diagnostics, and long-term reliability.

Brochure

Webpage

Fantastic Features

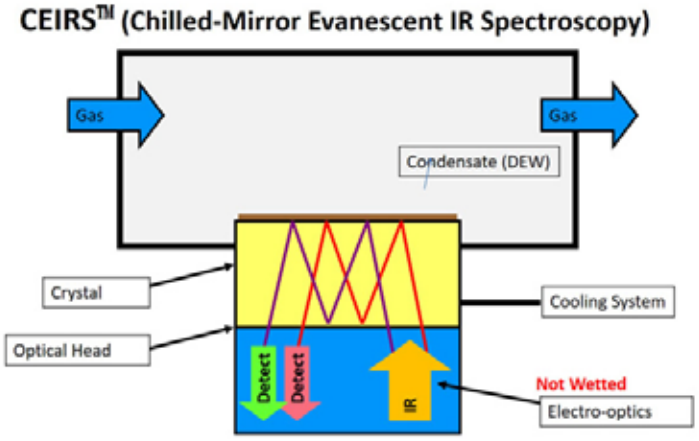
- Modular system supporting NDIR, UV, FID, TDLAS, and paramagnetic sensors.
- Built-in diagnostics and digital communication options.
- Factory pre-calibrated and ready for deployment.
- Minimal maintenance with integrated calibration.

Amazing Applications

- Environmental compliance in power and cement plants.
- Combustion control and gas optimization
- Refinery and chemical plant process gas analysis
- Hydrogen production monitoring.

Dew Point Analyzers

ZEGAZ Instruments products use the patented CEIRS™ (Chilled-mirror Evanescent IR Spectroscopy) that combines the first-principle chilled-mirror method with advanced IR spectroscopy to accurately and unambiguously determine the dew point of water and hydrocarbons in natural gas streams for pressures of up to 2000 psig. These analyzers are rated for Hazardous Location operation.



Amazing Applications

- Natural gas pipeline quality control for water and hydrocarbon dewpoint.
- Boiler and gas turbine protection through measurement of hydrocarbon dewpoint.
- Monitoring chemical plant inlet of hydrocarbon streams for dewpoint protection.

Fantastic Features

- No calibration.
- No consumables.
- Self cleaning.
- Immune to contaminants.
- Robust and highly reliable.

Video

Brochure

Webpage

BARBEN ANALYTICAL

Why Barben Analytical?

- Reliable - in tough conditions
- Remote supervisory management.
- Replaceable sensor caps.
- Hazardous area certifications on analyzer & sensors.

OXYvisor™

ZEGAZ Instruments products use the patented CEIRS™ (Chilled-mirror Evanescent IR Spectroscopy) that combines the first-principle chilled-mirror method with advanced IR spectroscopy to accurately and unambiguously determine the dew point of water and hydrocarbons in natural gas streams for pressures of up to 2000 psig. These analyzers are rated for Hazardous Location operation.

Amazing Applications

- O2 in hydrocarbon streams.
- Vapor recovery units.
- Custody transfer / metering stations.
- Trace level O2 in flare gas.
- Dissolved O2 in liquid/product streams.
- O2 in methanol/ethanol/oil.

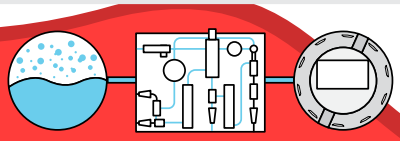
Fantastic Features

- Measures O2 concentration in both gas & liquid phase applications.
- Temperature & pressure compensated.
- USB data trend storage.
- Local display HDMI for setup & configuration.

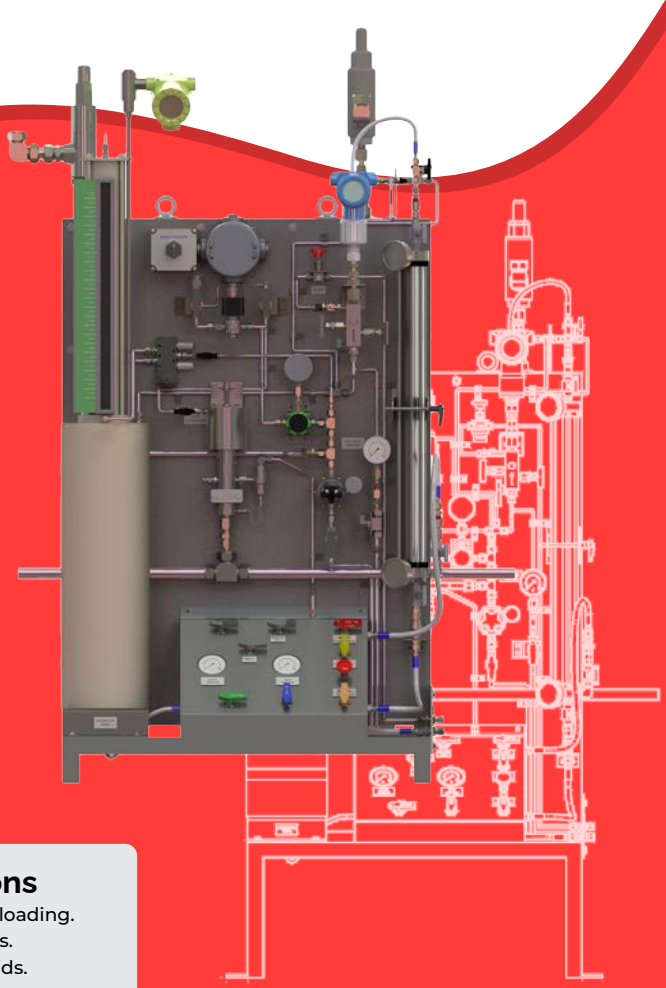
Webpage

Brochure

Video



INSIGHT ANALYTICAL



Insight Composite Sampling

Insight Composite Samplers have been designed while working in conjunction with one of the largest midstream companies in Canada. Our composite samplers are fully API 8.2 compliant and meet all the requirements of AER Directive 17. We integrate them in any enclosure or shelter, and incorporate all the features to properly pull samples for lab analysis.

Why Insight Composite Sampling?

- Specifically designed for NGL's, condensate and crude Oil.
- Simple operation with detailed instructions and support.
- API 8.2 and AER Directive 17 compliant.

Amazing Applications

- LPG for ship loading and off loading.
- Integrates with all LACT units.
- Applicable to all volatile liquids.

Fantastic Features

- Customizable design with full CRN in all configurations.
- Simplified operations with color coded valves and thoroughly detailed instructions.
- Complete solution for pipeline and custody transfer applications.
- Cost-effective, no expensive components.

Webpage | Brochure | Video

Insight Grab Sampling

Many operations rely on manual sampling, often leading to errors in technique or chain of custody. Insight Automated Grab Samplers eliminate these risks by using a PLC to automate safe, accurate sampling and securely record chain of custody data.

Amazing Applications

- Fully integratable with inferential analyzers for model building.
- Seamlessly monitor day and night blending operations.
- Sample truck loading and offloading facilities without operator intervention.

Fantastic Features

- Full graphical user Interface.
- Data automation – date, time stamping, physical data all recorded.
- Repeatable, reliable sampling with no human intervention or risks of exposure.

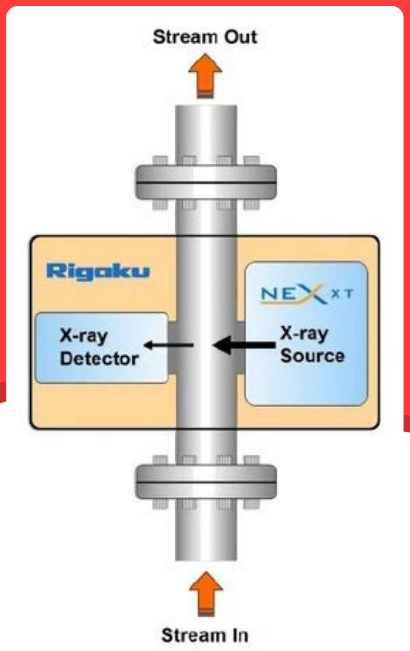
Webpage | Brochure | Video

NEX XT

Rigaku
Applied Rigaku Technologies, Inc.

NEX XT

Rigaku's NEX XT is the next generation process gauge for high-level total sulfur measurement (0.02% to 6% S) of crude, bunker fuel, fuel oils, and other highly viscous hydrocarbons, including residuum. This versatile, compact, and robust X-ray Transmission / Absorption (XRT / XRA) process gauge is specifically optimized for the total sulfur analysis needs of refineries, pipelines, blending operations, bunkering terminals, and other storage facilities.



Fantastic Features

- Compact design with no routine maintenance.
- Up to 1450 psig and 200°C.
- User-adjustable data update frequency.
- Reduced standards requirements.
- No sample condition or recovery system.

Amazing Applications

- Pipelines
- Upgrading Facilities.
- Refineries.

Brochure

Webpage

KECO

205 PermaStream

We offer a range of solutions for both liquid and gas analysis. For liquids, our portfolio includes specialized analyzers such as the PermaStream Model 205HV for H_2S measurement in crude oil, the PermaStream Model 204 for VOC detection in water, and the PermaStream Model 205 for H_2S measurement in other liquids, along with dedicated laboratory units.

For gas analysis, we provide H_2S analyzers using electrical detection, total sulfur analyzers with reduction techniques, and pyrolysis analyzers for hydrogen and H_2S. Our offerings also include electrochemical analyzers for H_2S, CO_2, CH_4, and O_2, as well as lead acetate–based analyzers for monitoring critical applications.

Amazing Applications

- Produced Water.
- Dirty/Clean Water.
- Amine Solutions.
- Crude Oil (light, medium, heavy).
- Measuring dissolved H2S for controlling scavenger addition.
- Diesel.
- Fuel Oil.
- Condensate.

Fantastic Features

- 80 readings per minute.
- H_2S-specific — no false positives.
- No field calibration needed.
- Linear response — no drift.
- Membrane technology samples at process pressure and temperature.

Brochure

Webpage

INSIGHT ANALYTICAL

Insight Sampling Solutions

Years of experience in the field brings an acute awareness of the common problems seen in many applications. At Insight, we apply that awareness to develop novel cost effective solutions to common sampling issues and improved systems for field use.

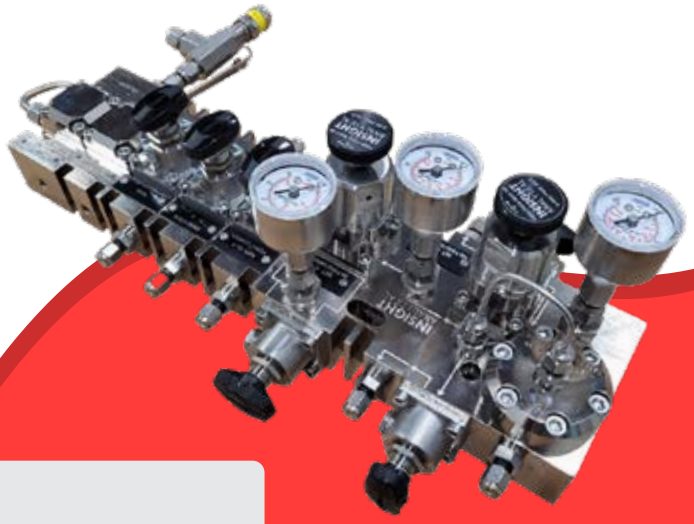
Amazing Applications

- Custom fast loop return probes.
- Auto shut off valves.
- Solvent flush / back flush tanks.
- Cost effective natural gas sampling probes.
- A host of new innovations to come.

Fantastic Features

- 3D Printing of prototypes in plastic and metal.
- Computational fluid dynamics modelling.
- Built for process applications.
- Engineered for success.

Webpage | Brochure | Video



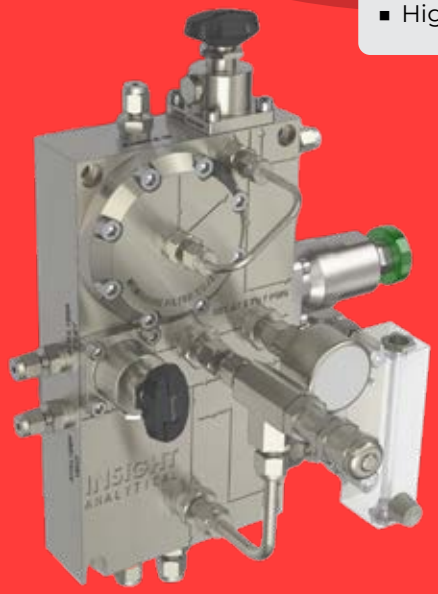
Insight Sampling Blocks

The Insight Analytical Sample System Blocks, including the SDP-1 and Type 1, deliver precise and efficient gas analysis. The SDP-1 simplifies gas routing to multiple analyzers or devices, reducing costs and complexity. The Type 1 offers exceptional accuracy and integrates seamlessly with portable or fixed analyzers. Both compact designs ensure consistent performance in temperature-controlled environments.

Amazing Applications

- Route sample gas to multiple analyzers or devices.
- Enhance industrial process control and optimization.
- Environmental compliance with precise gas analysis.
- Natural gas metering buildings.
- High-pressure gas phase applications.

Webpage | Brochure | Video



Fantastic Features

- Compact design for fast response times and space efficiency.
- Integrated membrane filtration for effective filtering.
- Self-contained system for easy setup and minimal external components.
- Compatible with diverse applications, including gas chromatographs.
- Cost-effective, no expensive components.

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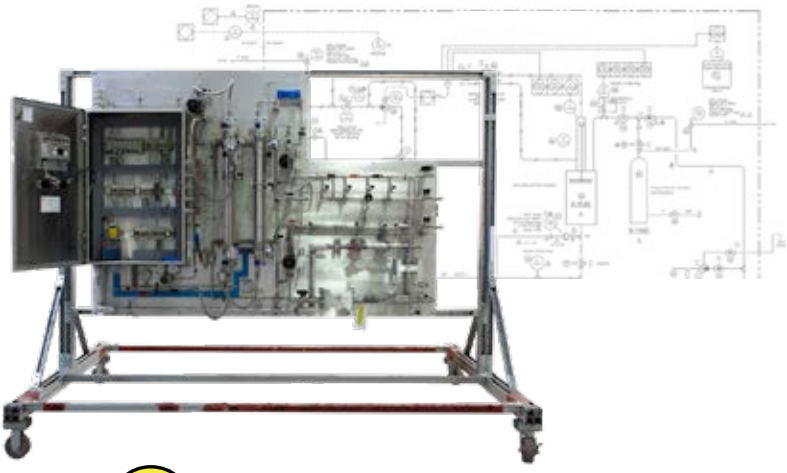
Systems Integration

Our analyzer specialists provide support for every phase of your project, including:

- Technical Project Definition. (Scope)
- Front End Engineering Design. (FEED)
- Detailed design.
- Manufacturing, integration and testing.
- Field commissioning and ongoing support.



Clear Insights for Project Success

Every successful project begins with a solid understanding of stakeholder needs and process requirements. Whether it's crude oil blending, emissions monitoring, or wastewater treatment, our expertise ensures nothing is overlooked.

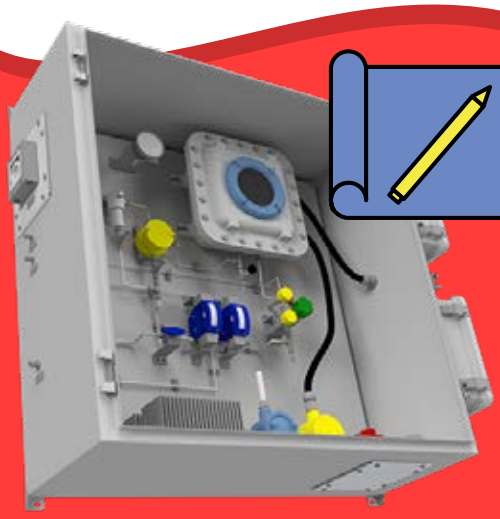
- Evaluation of reporting standards and custody transfer agreements.
- Preliminary engineering estimates.
- Stakeholder identification and role-specific requirements.

FEED

Front-End Engineering Design

Our approach minimizes changes during project execution and ensures a smooth path from planning to completion.

- Clear communication with stakeholders to meet all project requirements.
- A thorough bid package framework for integrators and suppliers.
- Documentation and evaluation of existing systems for brownfield projects.



Precision in Analytical Measurement Design

In analytical measurement installations, success lies in the details. Overlooking fundamental operating considerations can render designs impractical. At Insight Analytical, we leverage years of expertise to deliver systems that are both effective and maintainable.

Comprehensive Service and Support

Insight Analytical provides expert support from centers in Calgary, Edmonton, and Grande Prairie. Our services include:

- Professional installation, startup, and performance testing.
- Laboratory sampling for system verification or model building.
- Routine monitoring and recalibration to adapt to process changes.

With dedicated technical support and post-warranty performance packages, we ensure your systems operate reliably and efficiently.

For technical support, contact us by email:
ias_service@insight-analytical.com

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Making Measurements Matter.