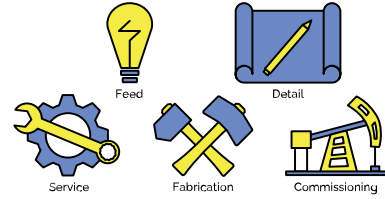


Systems Integration

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?

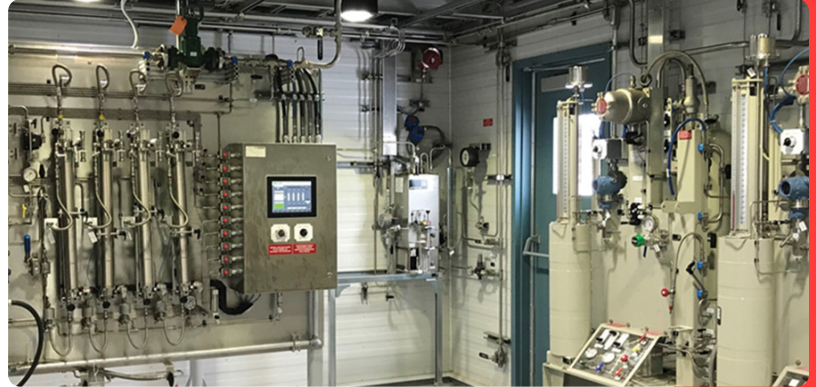
- Sample system excellence and training.
- Impeccable documentation and standards.
- Commitment to results and support.

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.

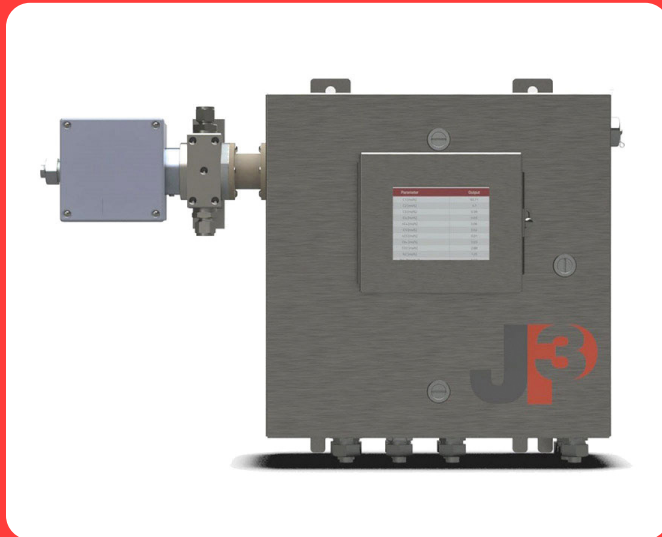


[Webpage](#)



JP3 Measurements

These Verax analyzers use a powerful tuned laser based spectrometer to do real-time analysis of hydrocarbon fluids, both gases and liquids, using near infrared (NIR) spectroscopy. The process interface is extremely robust and suitable for use on difficult streams such as waxy condensates and dirty crude oil. Advanced chemometrics algorithms provide real-time compositional and physical property measurements, replacing chromatographs and vapor pressure analyzers.



Why JP3 Measurements?

- Revolutionary approach to process measurements.
- Focused on gas plants, oil & gas pipelines and refined products.
- Suitable for difficult field applications with virtually no maintenance.

Amazing Applications

- Full gas plant, NGL, condensate and fractionation plant analysis (gases & liquids).
- Crude oil, condensate and diluent blending.
- Pipeline applications for real-time product quality and transmix optimization.

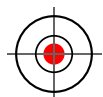
Fantastic Features

- Unique state of the art near infrared spectrometer with real-time analysis.
- Cloud based support, chemometrics and modeling.
- Robust, reliable, maintenance free operations.

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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](#)

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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 oxygen method.
- Fast response.
- Wide measurement range.
- Low maintenance.

Amazing Applications

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

[🌐 Webpage](#)

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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 O2.
- 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.

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Moisture Generator Block

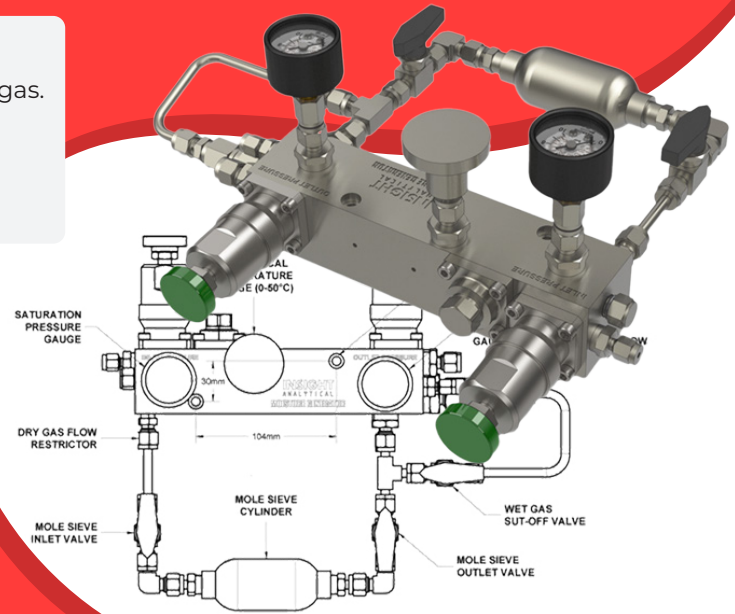
The Insight Analytical Moisture Generator ensures precise gas analyzer validation with a compact, portable design. It uses high-pressure sample gases for accurate results, stabilizes quickly, and requires no costly components, providing reliable performance in any conditions.

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.



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Process Insights

Premium Insights Into Process

[XPDM Brochure](#)

[ESS-SCVP Brochure](#)

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.



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

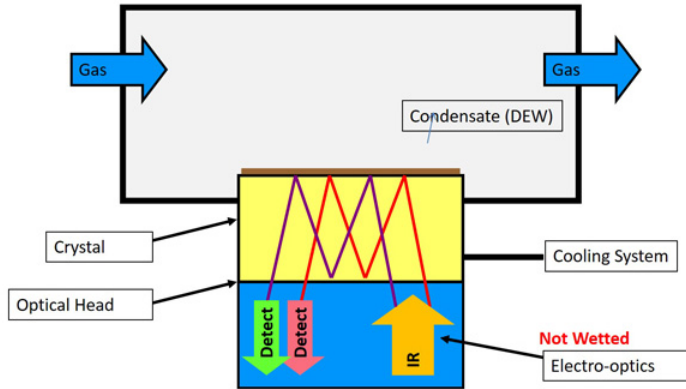


Dew Point Analyzers

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.



CEIRS™ (Chilled-Mirror Evanescent IR Spectroscopy)



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.

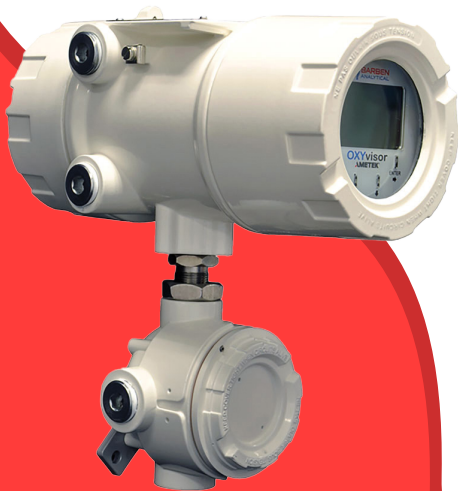
Fantastic Features

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

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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.

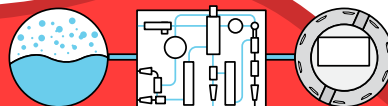
Fantastic Features

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

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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.

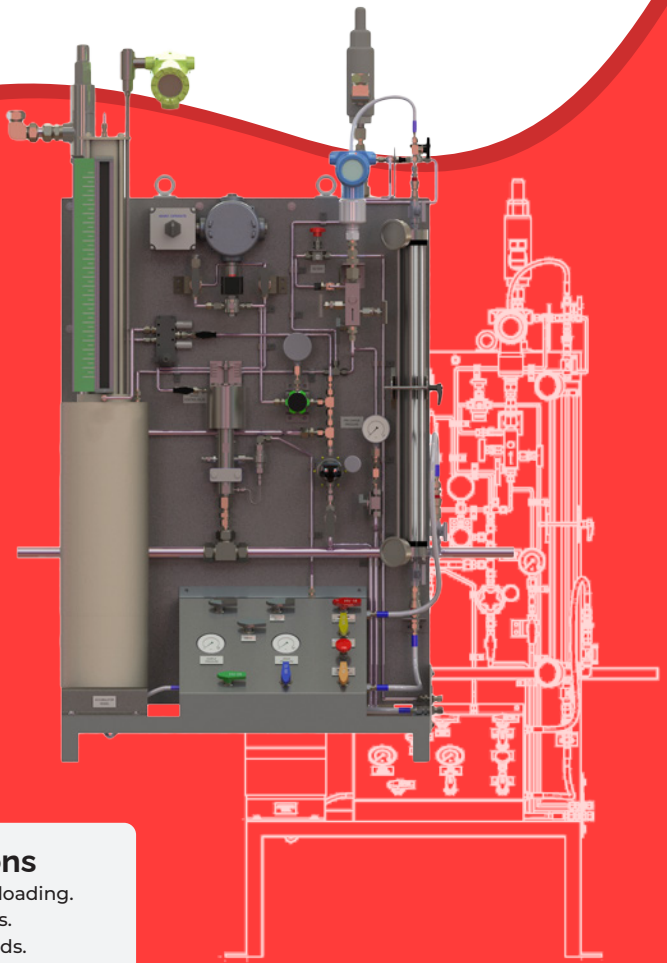
Fantastic Features

- 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.

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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.

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Rigaku

Applied Rigaku Technologies, Inc.

NEX OL

Featuring advanced 3rd generation energy dispersive X-ray fluorescence (EDXRF) technology, the Rigaku NEX OL represents the next evolution of process elemental analysis for liquid stream and fixed position web or coil applications. Designed to span from heavy industrial through to food grade process gauging solutions, the NEX OL is configurable for both classified and non-classified areas.

Amazing Applications

- Chemicals: blending additives and resins.
- Petroleum: lubricating oil additives and blending.
- Mining: solvent extractions.
- Industrial: wastewater.
- Metal finishing: plating, pickling, and pre-treatment baths.

Fantastic Features

- Real-time process control by elemental analysis.
- Measure elements aluminum ($_{13}\text{Al}$) to uranium ($_{92}\text{U}$)
- From ppm levels to weight percent (wt%) concentrations.
- Robust Rigaku NEX QC+ optical kernel with SDD detector.



NEX OL

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NEX XT

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

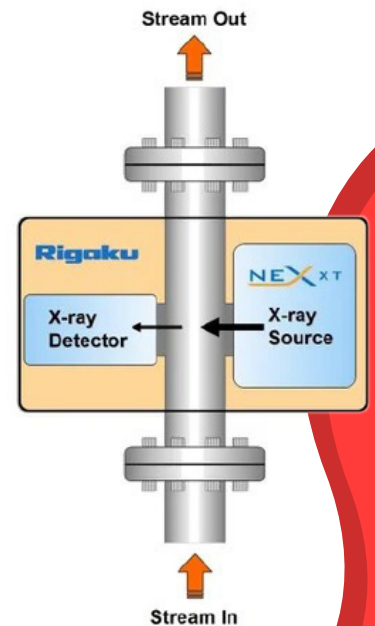
- Compact design with no routine maintenance.
- Up to 1450 psig and 200°C.
- User-adjustable data update frequency.
- Reduced standards requirements.
- No sample condition or recovery system.

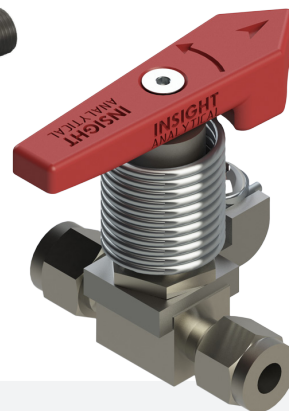
Amazing Applications

- Pipelines
- Upgrading Facilities.
- Refineries.

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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.

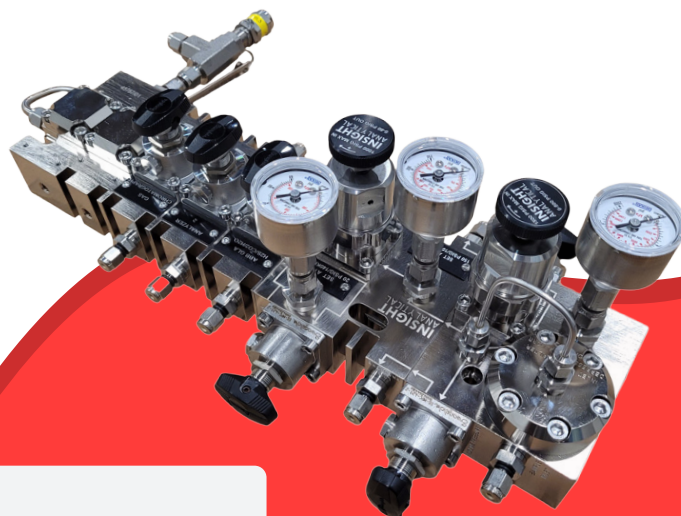
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Insight Sampling Blocks

The Insight Analytical Sample System Blocks, including the SDB-1 and Type 1, deliver precise and efficient gas analysis. The SDB-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.

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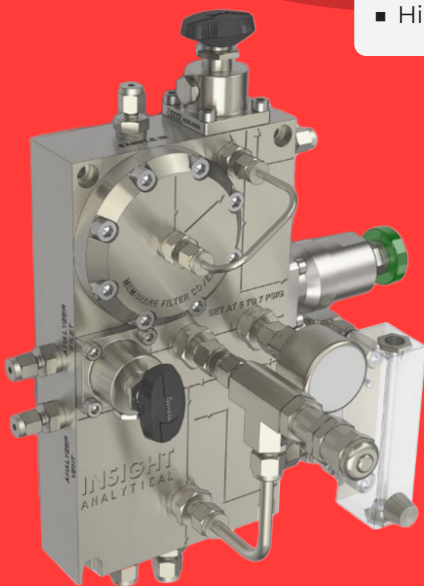
Fantastic Features

- 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

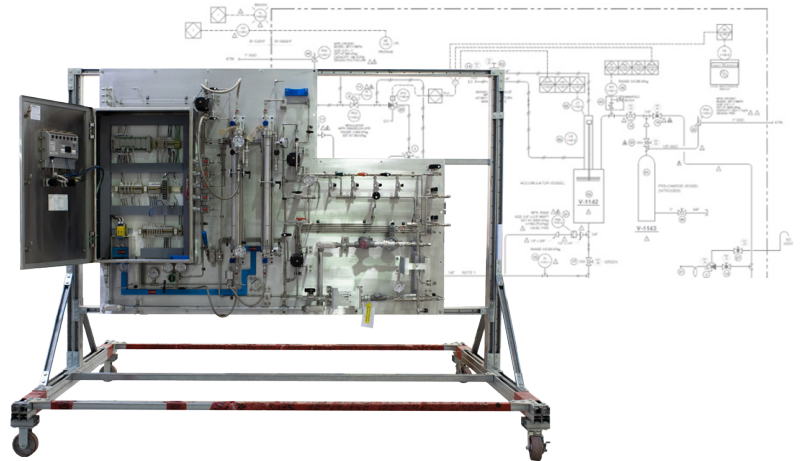
Our analyzer specialists provide support for every phase of your project, including:

- 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.

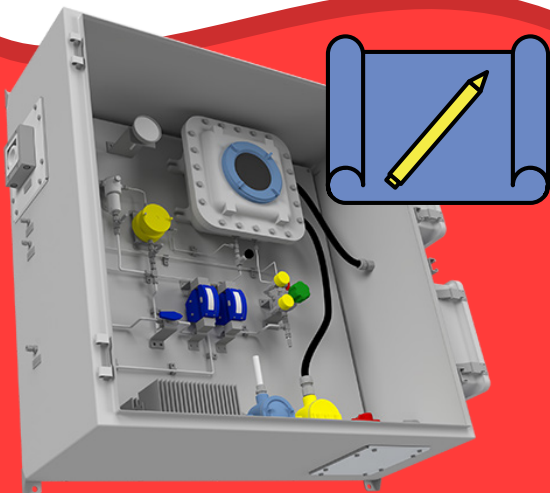


FEED

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

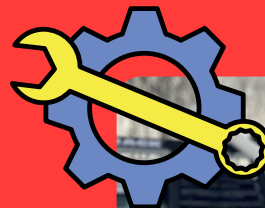
In analytical measurement installations, success lies in the details. Overlooking fundamental operating considerations can render designs impractical. At Insight Analytical, we leverage years of expertise to deliver systems that are both effective and maintainable.

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

