



Expect more from your measurement with ABB

Chemicals Industry solutions overview

The world of chemicals is changing – and your team must implement solutions to take on new challenges.

You are challenged to address the widening skills gap, with experienced personnel retiring and fewer professionals entering the field. You are challenged to increase productivity, all while maintaining accuracy and quality. You are challenged to incorporate new technology that allows you to optimize your equipment, and nevertheless you'll have to meet tightening regulations, all while operating at ever increasing safety standards, and maintaining profitability.

You're expected to handle a lot – and **it's time to expect it from your measurement partner, too.**

With ABB, you can expect more. From our wide-range of robust products and solutions to our comprehensive service options, we're able to offer a truly integrated solution for your business. When you have a number of standalone products that are pieced together, the solution doesn't always operate in a way that maximizes performance.

With ABB, you can expect an integrated solution, with products that work together, enabling your business to be more efficient, profitable, optimized and safe.



Expect more from your measurement with ABB Ability™

For decades, ABB has provided the expertise necessary to integrate digital components into chemical plants around the world. These include sensors, software, digital networks and, now, the power of the Industrial Internet of Things. With ABB Ability, we are demonstrating the combined power of our collective knowledge, and how it is integrated and applied in the chemical industry.

Products within the ABB Measurement and Analytics portfolio provide critical information about your operations. In fact, with an ABB integrated solution, details can be generated from every stage of your entire operation – from your products to your processes. With ABB Ability, our cloud-based capability, you can harness that data all in one place – and this allows you to do so much more.

With ABB Ability™, we help you as you connect to the power of the Industrial Internet of Things and, through our services and expertise, go further by turning data insights into the direct action that "closes the loop" and generates customer value in the physical world.

Closing the loop is how we unlock new opportunities for our customers to reduce downtime, lower energy or fuel consumption, lower maintenance effort, increase resource efficiency, elevate performance and improve productivity via enhanced uptime, speed, and yield.

Additionally, the ABB wireless platform enables users to access important process and plant data using WirelessHART protocol. We can integrate this for temperature, pressure, level, flow and density measurements.

With data, you can solve many of the challenges that have emerged in recent years, and ABB is there every step of the way, working with you to make the transition into the digital world with ease.

Key Offerings:

Learn from your business, data and our experts to optimize your operation.

Remote assistance for Measurement Devices

Provides on-demand experts available to secure fast problem identification and resolution. Available for continuous gas analyzers.

Dynamic QR code assistance for Analyzers

Displays dynamically generated QR codes on the analyzer display for easy communication. In addition to static information for system identification, it also contains dynamic information on system configuration and analyzer health status. Available for continuous gas analyzers.

Verification for Measurement Devices

Enables users to check the health and measurement performance of their instruments. The tool analyzes the product's internal diagnostics and is ideally suited for customers with regulatory and custody transfer requirements.

Condition monitoring for Measurement Devices

Offers a dedicated, complete check of a selection of analyzers and instruments. Using predictive maintenance techniques, devices are maintained on-demand. Frequent monitoring of machine conditions ensure components are only replaced when needed.

Mobile leak detection

Uses ABB's patented laser-based technique to enable unambiguous identification of leaks several hundred feet away from the source.

Field Information Manager

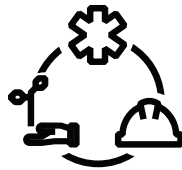
Makes the configuration, commissioning, diagnostics and maintenance of fieldbus instruments easier and quicker than ever before using a high-performance and innovative graphical user interface that helps technicians effectively work with process ABB instrumentation, as well as third-party devices.

Complete, end-to-end solutions for chemical operations

ABB is a one-stop solution provider for the chemicals industry, offering one of the most complete and competitive portfolios of instrumentation and analytical measurement solutions available to the chemical industry today.

Our solutions are fully supported by ABB industry experts and service team, meeting the needs for all chemicals industry segments.

Our Solutions across your business:

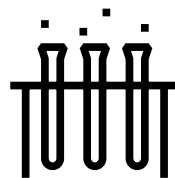


Safety (HSE) Solutions

At ABB, safety is our number one priority. We provide cutting-edge solutions for the industry that protect the health and safety of employees and minimize the impact on the environment.

Key solutions include:

- Ambient air monitoring
- Continuous emissions monitoring systems
- Mobile & static gas leak and gas detection
- Process purity analysis
- Wastewater monitoring
- Flare gas monitoring

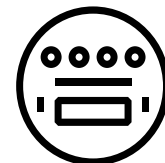


Laboratory & Process Solutions

ABB has the widest portfolio of process analyzers with the highest precision and accuracy to meet your measurement needs.

Key solutions include:

- Determination of chemical & physical properties in liquids, solids, and gas (batch & continuous)
- Toxic gas measurement
- Catalyst life extension
- Product purity analysis
- Licensed/compliance process solutions
- Moisture analysis
- Process end point determination



Instrumentation Solutions

ABB instrumentation provide the accuracy and durability needed to optimize the efficiency and performance of chemical processes.

Key solutions include:

- Redundant & non-invasive temperature measurement
- Sour water treatment
- Wastewater treatment
- Smart positioners with advanced diagnostics
- Plant-wide level measurement capabilities

Featured products for the chemicals industry



01 PROCESS GAS CHROMATOGRAPHS (PGC 5000)

ABB process gas chromatographs perform real-time analysis of the chemical composition of a process sample or stream – crucial for on-spec processes and productivity. The PGC5000 Series offers applications flexibility and includes the PGC5000A Master Controller, which provides all analyzer system control functions, coordinates internal and external data activities and easily operates with the PGC5000 Series. The PGC5000 B-class oven (airless available) targets measurement applications that can be made simple, and the PGC5000 C-class oven (airless available) targets complex applications that require multiple detectors or have special application requirements. Additionally, the PGC5000 integrated controller combines the core functionality of the PGC5000A master controller into either the PGC5000B or PGC5000C. Also available are the specialty gas chromatographs: PGC5000TP, a temperature programmed gas chromatograph; PGC5007, a total sulfur analyzer; and the PGC5009, a fast process gas chromatograph.



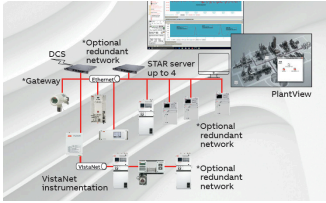
02 PROCESS GAS CHROMATOGRAPHS (PGC 1000)

The PGC1000 addresses a specific niche in the process industry market where customers seek analytical measurement solutions that are simple, highly accurate, cost-effective (requiring no shelter), modular and have very low maintenance and implementation requirements. The PGC1000 is a field-mount gas chromatograph capable of measurements of C1 through C9+, inerts and H₂S in various Hydrocarbon Processing Industry (HPI) streams.



03 DYNAMIC REFLUX SAMPLER (DRS2170)

The DRS2170 solves complex sampling problems (such as hot, particulate-laden, corrosive) and otherwise nasty samples in a process for application engineering. The primary sample conditioning occurs in an in-situ fashion. Condensable components are removed and are used to support particulate removal before they can present problems in the sample transport system's downstream components and the analyzer. The unit is a self-contained sampling device suitable for mounting at or near the process pipeline tap.



04 STAR DATA MANAGEMENT SYSTEM

STAR DMS is a client-server platform designed to centralize and manage critical data from legacy and current process analyzer networks. Archival and retrieval, trending, reporting and statistical analysis are all essential data management tools provided by STAR DMS. The remote user interface (RUI) launch portal for legacy and current ABB analyzer assets, and an OPC concentrator for third-party analyzers, provide complete remote access to networked analyzer assets all logically displayed in the Plant View Mode.



06 LASER PROCESS ANALYZER

LGR-ICOS 950 Series laser process analyzers accurately measure gas concentrations with extraordinarily high sensitivity, fast response and over a wide dynamic range in both simple and complex mixtures. It is an effective solution for applications such as regulatory emission and control, chemical process optimization and gas contamination monitoring, as well as ambient air monitoring and real time detection of harmful vapors in chemical plants.



05 CONTINUOUS GAS ANALYZERS

The AO2000 Advance Optima gas analyzers combine advanced technologies with more than 75 years of experience in processing and environmental analysis. They are the innovative solution for the demands of today and the challenges of tomorrow. Being tailored to satisfy the requirements of various industries, the Advance Optima series can be used in almost every form of production and has proven itself in the toughest processing environments. Worldwide EL 3000 EasyLine is both a powerful and affordable line of instruments for the monitoring of gas concentrations in numerous applications. EasyLine is based on the proven and reliable analyzer technology of ABB for extractive continuous gas analysis. EasyLine is available in two versions, which are optimized for the various installation requirements of the respective location. The CL3020 NOx analyzer is designed specifically for low-NOx applications.



07 CONTINUOUS WATER ANALYZER

For over half a century, ABB has developed and manufactured continuous water analyzers to help customers safely increase productivity while saving energy and resources. ABB provides analytical instruments developed for use in applications ranging high-purity steam generation cycles like sodium and silica to rugged process monitoring instruments like pH and conductivity. ABB continuous water analyzers help optimize plant efficiency with safety, ease of use and maintenance simplicity in mind.



08 PROCESS SPECTROMETERS

ABB's process analyzers are robust, low-maintenance and versatile instruments designed for single or multi-channel applications in the MID-IR or NIR-IR spectral ranges. Our field-proven optical architectures allow very easy transferability of models from our laboratory instruments to the industrial process environment. These process spectrometers also offer a variety of solutions suitable to a wide range of process analysis challenges.



09 LABORATORY SPECTROMETER

The ABB MB3000 is the most reliable FT-IR laboratory analyzer in the market with the lowest cost of ownership. Combined with the intuitive Horizon MBTM FTIR software, the MB3000 will facilitate acquisition, processing and analysis of samples. Key benefits include small footprint, no consumables needed, long-life source and versatility.



10 MULTIWAVE PHOTOMETERS

The ABB Multiwave photometers provide continuous measurements in complex streams which allow for fast reactions to process changes. The fast analysis provides optimum control of a process and improves its safe operation. Measurements can be made in liquid or vapor streams. The Multiwave photometer PIR3502 is designed for the IR (infrared) and NIR (near infrared) spectral regions. The Multiwave photometer PUV3402 is designed for the UV (ultraviolet) and VIS (visible) spectra regions.



11 SMART POSITIONER (EDP300)

The PositionMaster EDP300 is an electronically configured positioner with communication capabilities designed for mounting to linear or rotary actuators featuring advanced positioner and valve diagnostics that run in the device itself. The PositionMaster features a compact design and is modular, robust and has an environmentally ruggedized construction. It's easy to commission with fully automatic determination of the control parameters, allowing for considerable time saving as well as optimal control behavior. It's also available in a variety of output options including HART, Foundation Fieldbus and Profibus. On top of that, it is global explosion protection certified and fully Sil 2/3 compliant.



12 TEMPERATURE TRANSMITTERS

Available in multiple form factors. The traditional head mount (TTH300 and 200), XProof Field Mount (TTF300) and DIN rail version (TTR200) meet a wide variety of process needs for all temperature measurements. Redundant sensor and drift detection options provide robust and safe operation whenever high availability and safe operation are a priority. Also included is the new and innovative Energy Harvester for wireless applications and Non-Invasive temperature for measurement without the need for thermowells. Global explosion protection certified and fully Sil 2/3 compliant.



13 PRESSURE TRANSMITTERS AND REMOTE SEAL TECHNOLOGY

Characterized by long stability and high performance, ABB pressure transmitters and remote seals represent ABB's commitment in satisfying Customer needs. This transmitter features an in-field replaceable electronics module that, thanks to the auto-configuration functionality, dramatically improves plant productivity. Moreover, the innovative TTG (Through The Glass) technology allow users configure the instruments in the field without removing the windowed front cover, providing a safer and less time-consuming field experience. ABB's unique Easy Set Up menu allows anyone to have the pressure transmitter up and running in less than a minute. Our remote seals all feature welded construction, which means longer life and less maintenance issues, especially in high temp/low pressure (vacuum) applications. Global explosion protection certified and fully Sil 2/3 compliant.



14 LASER LEVEL GAUGE LLT100

The LLT100 is capable of measuring all solids or liquids, even transparent liquids, by using precise timing circuits, laser pulse control and powerful signal processing. The level of solids can be measured at up to 100 meters (330 feet) and liquids at up to 30 meters (100 feet). All of this is available in a two-wire powered device. Specifically made for harsh industrial environments, the LLT100 provides continuous, non-contact level measurement capabilities for process automation and inventory management in industries such as Chemicals, Aggregates, Oil & Gas, Mining, Food & Beverages, Power, Pulp & Paper, Pharmaceutical and Water & Waste Water.



15 LEVEL TRANSMITTERS

As a market leader in level detection with the largest selection of agency approved level switch technologies, the K-TEK level product line has the proven technology to provide solutions for the most difficult liquids and solids level applications. No potential leaks points for fugitive emissions and glass not under high pressure/temperature. It also features IP68 Scale assembly and superior design with direct contact of hazardous liquids inside indicators. ATEX, PED, IP68 and ASME “U, UM, or S” Code Stamps Transmitters certified for use in IEC 61508 SIL2 and SIL 3 rated control loops.



16 CORIOLIS FLOWMETER

High-precision measurement of mass and volume flow, density, temperature and concentration with just one device. ABB’s CoriolisMaster series has a history of success in a wide variety of industries and applications. With innovations such as VeriMass on-board Verification and Diagnostics, Smart Sensor Intelligence, Sensor Application Memory, Easy Set Up and up to 5 modular I/Os. This enables applications that weren't previously capable to then save time and money during installation, commissioning and maintenance.



17 PROCESSMASTER FLOWMETER

ProcessMaster is tailored for a variety of applications and designed to meet increasing industry demands and requirements. The advanced technology flowmeters offer flexibility, cost-saving operation and reliability while providing a long service life and exceptionally low maintenance. Advanced diagnostics, state-of-the-art memory technology, and versatile and simple configuration are a few of the key features to meet all your process applications.



18 VORTEX FLOWMETERS

VortexMaster is the universal vortex meter for measurement of liquids, gases and steam in volume, mass or energy units. Leading edge digital signal processing (DSP) and advanced filtering technology allow excellent flow signal detection and provide measurement immunity from the effects of hydraulic noise and pipeline vibration.



19 SWIRL FLOWMETERS

The SwirlMaster flow meter combines excellent measuring performance with enhanced flow computer functionality along with signals from remote sensors like pressure, temperature, density or gas content and can be computed directly within the meter. A key feature of the flow meter flexibility, due to the lowest inlet and outlet section requirements, provide a compact, space saving installation, making it ideal in many applications. Save 75% straight pipe run by employing SwirlMaster instead of orifice plates, turbine meters or traditional vortex meters.



21 VARIABLE AREA FLOWMETERS

Variable area flowmeters are the most cost-effective solution for almost all applications involving the measurement of industrial process liquids, gases or steam. ABB's variable area flowmeters are reliable, flexible and simple. They meet the application requirements by featuring a wide range of design varieties and sizes. Technology proven, they offer a long life and high reproducibility. Variable area flowmeters are excellent mechanical back-up meters because no external power supply is needed and are available with alarms, transmitted output and even HART communications.



20 WEDGE METER WITH MULTIVARIABLE

A robust flowmeter for difficult applications, the ABB Wedge meter is suitable for fluids which have high solids content, are erosive/abrasive or have a high viscosity. Designed to greatly simplify specification, installation and commissioning, the meter performance remains constant down to very low Reynolds Numbers, making it suitable for non-traditional DP technology. Flanged or chemical tee remote seal versions offer use of large sensing surfaces to improve performance in otherwise difficult applications. Combined with an integral multivariable transmitter, manifold and temperature element, WedgeMaster truly offers a reliable and highly accurate flow measurement in applications where available upstream and downstream straight pipe lengths are insufficient for a conventional orifice installation. Multivariable outputs available in both HART and Modbus protocol.

Expect more at every level

ABB can offer integrated, end-to-end solutions that cover all of your business needs – from the product level to our wireless capabilities to our data and analytics. Your business can expect products, expertise and support at every level, from your technicians to your management team.



Measurement Care to support your success, every step of the way

Measurement Care is our service program that bundles the services you routinely need, and more, into a single program. ABB provides lifecycle services including spare parts management, performance-based services and rapid response packages to keep your process moving. An ABB Measurement Care agreement provides the flexibility to support your needs, maximize your investment and secure long-term performance for your assets at a predictable cost.

Measurement Care



Preventative maintenance

Regular on-site maintenance, service and calibration to maximize uptime, extend product life and meet local regulations.



Emergency visit

A prepaid service visit which includes a repair, travel cost and labor cost.



Phone support plans

SupportLine Plus provides the added benefit of guaranteed response time and priority call status with 24-hour access to ABB technical support resources.



Priority response

Receive preferential scheduling and support.



Spare parts recommendations

A tailored parts list that includes recommendations for on-hand quantities.



Dynamic QR code service*

Display dynamically generated QR codes that provide instant delivery of the right information to the right people, enabling a fast resolution, ideally over the phone.



Remote condition monitoring

A scheduled product health check that provides service recommendations based on condition monitoring findings through an on-site or secure remote connection.



Training

ABB University offers a wide range of training courses from e-learning to on-site and classroom trainings. Customized training can also be provided based on your needs.

*Contact ABB for details

Discover our services:

Regional Channel Partners

We have local teams that are able to support you right where you're located. Your channel partner will be able to support you with the deep industry knowledge, regulatory information and product expertise you need to be successful.

ABB Health Check

ABB Health Check is a comprehensive lifecycle assessment of your current installed base compiled in a report tailored for you. A detailed summary is provided with recommendations for service and product optimizations to increase efficiency, longevity and uptime. The report is based on product lifecycle status, maintenance strategy, technology, data quality and transfer protocols, and in-house personnel skills and training.

Workshop Repairs

Our factory certified technicians can recondition your analyzer to like-new condition, extending asset life while saving you money. All repairs come with a full warranty.

e-Learning Tools

You'll have access to a wide range of resources online that help you and your team feel confident as you work with our products. These resources are available anytime and anywhere. Their modular nature means you don't have to incur travel costs and time away from work to learn. You can learn at your own pace and even in your own particular learning style.



"Reliable, cost effective and meets our well-established and honored standards.

We'll definitely continue to use and specify the same types of instruments for new applications and new projects."

- Chemicals customer



Expect more with ABB

ABB is uniquely suited to be a robust partner. From our complete product offerings that span the needs of your entire operation to our customizable services to our range of applications, ABB can provide an integrated solution with offerings that connect from top to bottom. All of this means that your business is able to run at its best.

With ABB, expect to:

- Continuously optimize to create the most efficient operation
- Gain control of your profits with reliable infrastructure and support
- Enhance your team's knowledge through partnership with our experts
- Operate in a way that's safer, with best-in-class equipment that keeps your people, profit and the planet protected

Contact us today to learn more about
ABB's integrated solutions.

ABB Measurement & Analytics

For more product information, visit:
<https://www.abb.com/measurement>

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