

MEASUREMENT & ANALYTICS

Improving your accuracy and availability

Services that support the life of your devices



- Accuracy for compliance
- Availability for production
- Reliability for longevity

When you purchase an ABB measurement device, you don't just get a product. You gain access to a trusted and respected authority on industrial automation, operational excellence and digital technologies.

ABB has defined services for every lifecycle stage to make sure you receive the maximum possible benefit from your purchase today, tomorrow and beyond.

Our services cover the lifecycle of ABB measurement devices

ABB offers a wide range of instrumentation, analyzers and force measurement products for industrial operations that ensure compliant, continuous peak operation of the production processes that keep the modern world running.

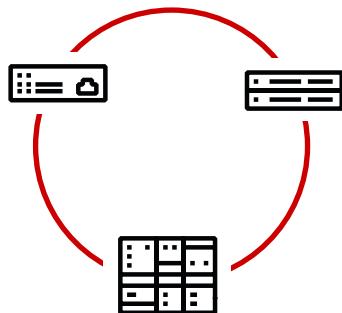
Whether you work in process industries, power generation or water management, chances

are there is an ABB device that fits your operational needs.

The first step in your new equipment's lifecycle is choosing the right supplier. When you choose ABB, you choose an experienced measurement provider with a proactive approach that will optimize performance and extend the life of your assets.

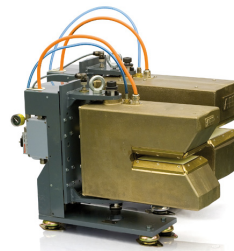
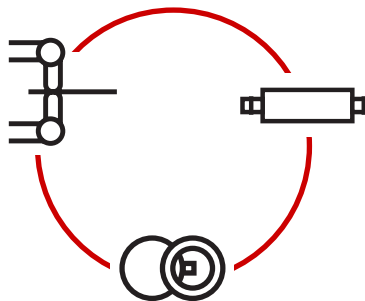
Analytics

- Emissions monitoring systems
- Fourier-transform infrared spectrometers (FTIR)
- Gas analyzers
- Laser based analyzers
- Liquid analyzers
- System integration units



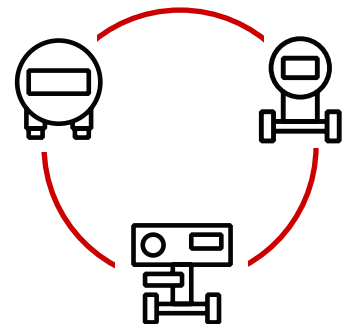
Force Measurement

- Diesel engine monitoring
- Dimension sensors
- Flatness measurement
- Rolling mill products
- Web tension measurement
- Weighing



Instrumentation

- Actuators and positioners
- Analytical instruments
- Flow measurement
- Pressure measurement
- Recorders and controllers
- Temperature measurement products



A proactive approach that extends the life of your assets

Products evolve as they transition through their lifecycle. Likewise, ABB's support of those products evolves along with them. From installation to maintenance, repair and upgrades, at each stage of the product lifecycle, ABB offers services to meet your needs, priorities and values.

ABB can collect and analyze asset information 24/7 to identify, categorize and prioritize actions that improve productivity, increase efficiency and ensure security. This helps customers manage the

challenges of aging assets and regulatory requirements with a clear view of their total asset performance.

These services aren't a cost to customers. They are an investment. This investment improves operating efficiency of equipment, reduces the risk of unplanned downtime caused by equipment failure, and helps customers optimize their service budget with fixed prices available through a Measurement Care service agreement.



Installation and commissioning



ABB provides trouble-free start-up and commissioning conducted by a global network of factory-trained experts. A professionally commissioned product ensures peak performance, process reliability, safe operation and reduced unplanned downtime.

ABB certified engineers check installation

conditions and connections as well as connect sensors when necessary. We perform a range of tests to ensure the product is operating correctly and is integrated into your network.

You may qualify for a one-year warranty extension for some measurement and analytics equipment commissioned by ABB. Inquire for more detail.

Features	Benefits
Commissioning performed by certified engineers	Assurance of long-term reliability and performance
Measurement and analytics products installed and commissioned to achieve specified application	Fast, cost-effective commissioning
Set-up, testing and recording of parameters to meet specifications and to support future service and validation	Correct application for optimum lifecycle performance



Aluminum producer, China

Engineers commissioned an ABB Stressometer Flatness System in 2.5 days for a Chinese aluminum leader. The Stressometer replaced a competing version that was installed only a few years before. Because of the fast, efficient start-up, the customer achieved better strip quality and higher productivity sooner than expected, eventually resulting in millions of dollars of additional value created.

Training



The skills of your operations and maintenance personnel play a key role in equipment performance and maximizing return on investment. That's why we offer multiple on-site, classroom and online training

options for ABB Measurement & Analytics equipment, from basic principles and product portfolio to key application areas.

Measurement and Analytics training overview

Service Video Training

Maintenance, Commissioning & Troubleshooting videos

Global Product eLearning*

A detailed eLearning catalogue covering basic application areas and product portfolio

Global Classroom Training

Scheduled hands-on trainings at our factory training centers

Training benefits

Detailed product and application knowledge

Training delivered by ABB product and service specialists

Detailed product reference documentation

Theory of device operation

Practical, hands-on exercises with equipment

Local support where required/requested



Oil and gas producers, Norway

Eight major Norwegian oil and gas producers who rely on ABB natural gas chromatographs attended a three-day training session on how to improve natural gas production and delivery. Each day covered a different aspect of the technology based on customer need. The knowledge gained helped the producers to improve process efficiency and production stability.

* For more information on courses available, visit new.abb.com/service/abb-university

Spares and consumables



Sites must consider obsolescence, inventory control, criticality of selection and speed of access when managing spares activities.

ABB provides a range of services that can be tailored to meet both economical and operational needs.

Spare Parts Service

Our web-based ordering process features new, certified ABB spare parts for instrumentation and analytics products, which can be shipped within a day to ensure quick arrival. This increases reliability and leads to a longer lifetime for your equipment.

24/7 Emergency Spare Parts Service

For occasions when a spare part need threatens to halt production, our personnel and partners are available around the clock to provide an immediate response to your request. Our global logistics network assures the fastest possible delivery.

Refurbished Parts Service

For cases when new spares are no longer manufactured or available, or when you need the most cost-effective part, refurbished parts offer an alternative to purchasing new spares. Parts sold with this service are 'like-new' and tested to meet original equipment specifications and current component standards.

Services

Discrete Spare Parts Supply

Spares and consumables ordered and delivered on demand.

Scheduled/Routine Consumable Ordering

Place single annual order for all consumables such as reagents, standards and buffer solutions.

Preventive Maintenance Kits

The content of each kit is carefully defined to match the device maintenance schedule.

24/7 Emergency Spare Parts Service

ABB provides 24-hour spare parts service, guaranteeing spare part deliveries in the shortest possible time.

Benefits

Maximized uptime and continuous operation

Rapid recovery of affected equipment

Reduced inventory cost

Obsolescence protection

Predictable budgeting

Reduced storage cost

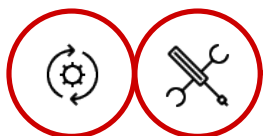
Guaranteed parts availability

Petrochemical producer, India

An Indian petrochemical complex needed fast, effective local spare parts support for its installed base of gas chromatographs. Instead of providing a list of factory-recommended spare parts, ABB analyzed how the complex used spare parts and customized communication and work processes to the customer's needs to ensure fast, high-quality work during on-demand service calls.



Maintenance, technical support and repairs



Prevention of measurement and analytics equipment faults through targeted and scheduled maintenance is proven to improve availability and reduce downtime.

Our global service team professionals are trained and certified in the latest diagnostic, repair and maintenance practices to ensure high value for your measurement and analytics investment.

Keys to providing world-class service are to respond quickly and to provide better solutions than can be found elsewhere. In addition, we offer on-site and workshop repair services, backed by a global repairs and logistics operation with fast turnaround.

ABB guarantees any certification remains valid with the device, something that companies without the correct equipment and training often cannot provide.

Features	Benefits
Targeted maintenance strategies for the devices and applications	Assurance of long-term reliability and improved availability
Identification and provision of the correct consumables, part replacements and reagents	Quality of measurement and analytics equipment reading to verify and improve performance
Certified engineers to help maintain the validity and compliance of device functions	Correct application of settings for optimum lifecycle performance
Original equipment manufacturer expertise	Controllable costs through predictable staffing and fewer call-outs
Repair options including ABB workshop, on-site, or self-repair through guided instruction	Reduced capital expenditures



Food and beverage, Australia

An Australian food and beverage company originally contracted its repair and maintenance needs to a competing service provider for its 1,000 instruments. Despite losing the contract, ABB kept up with the customer's needs by helping the service supplier with corrective maintenance and access to repair and calibration facilities.

The customer recognized this value and ultimately returned to ABB to manage service of all its instrumentation assets, including preventive and corrective maintenance, rapid response, lifecycle status and repairs.

Advanced Services



ABB Advanced Services use the power of digitalization to maximize uptime of equipment and processes.

Advanced Services identify issues that inhibit peak performance in assets and processes, and provide recommendations to resolve issues quickly.

ABB Ability™ Verification for measurement devices

An on-site condition monitoring tool that consolidates functionality of several testing solutions into a single platform that confirms device health and streamlines service of your devices. With automated testing of devices, the quality and consistency of measurements are improved, leading to better results.

ABB Ability™ Condition Monitoring for measurement devices

Connects emissions equipment to ABB service experts, enabling condition-based monitoring data. This delivers high availability and reliability of equipment, prevents unplanned downtime,

helps to avoid risks and fines, and reduces operating and maintenance costs.

My Measurement Assistant

This user-friendly smart device app provides up-to-date support for ABB instrumentation including:

- Guided tutorials, checklists and videos
- Commissioning and troubleshooting
- Downloadable reports on actions taken
- ABB Support contact

ABB Ability™ Health Check for stressometer flatness control

Evaluate performance and identify possibilities to enhance the flatness control. The health check is a detailed and comprehensive evaluation of a stressometer flatness control system. It is a key service for maintaining high measurement accuracy and flatness performance leading to optimal quality and yield.

Features	Benefits
On-site or remote access for health monitoring and troubleshooting	Scheduled on-site/remote asset health monitoring, remote troubleshooting, priority support and condition-based maintenance
Predictive maintenance	Maximize availability and uptime Predictable process performance Device performance improvement

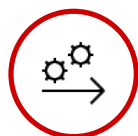
Utilities company, Italy

An Italian utilities company relies on ABB Ability™ Condition Monitoring for measurement devices to automatically perform monthly health checks of its ACF-NT and ACF5000 analyzers, which increase the data quality of the systems.

An ABB service engineer remotely accesses diagnostic data at the customer site to recommend service intervention. This helps the operator avoid serious costs and risks, enhance overall maintenance efficiency, and extend asset life.



Extensions, upgrades and retrofits



As a measurement and instrumentation market leader with a large global installed base of devices and systems, ABB understands the need for step-wise improvement and modernization of equipment.

To achieve continuous improvement and retain productive assets, we have developed comprehensive solutions for our products as well as for third-party products. Such cost-efficient and low-risk evolution is ideal for producers with a mix of automation.

Whether your initial investment was 1, 5, 10, or 15 years ago, our evolution experts will help you develop a long-term evolution roadmap to achieve continuous improvement while ensuring assets remain productive. We perform a complete review of your equipment to identify upgrade opportunities with the greatest return, and make recommendations that will increase the efficiency and productivity of your plant.

Energy producer, Germany

A German energy plant chose ABB to upgrade and provide lifecycle management services for an emission monitoring system facing obsolescence. The update extends the gas analyzer system's life, ensures spare parts are available in an emergency, and removes interruptions from plant operation.



Replacement and end-of-life services



ABB provides a full range of services to support late-life operations and a process for asset disposal. We can help you evaluate and make the best choice when considering decommissioning and replacement options.

With experience dismantling and recovering measurement assets, our capabilities ensure safe and environmentally-friendly decommissioning and disposal.

Our approach is based on a blend of operational experience and technical knowledge. We ensure all projects are done safely and cost effectively to maximize the value of the assets.

Petrochemical producer, Indonesia

An Indonesian petrochemical company had three obsolete ABB process gas chromatographs. After ABB replaced the obsolete chromatographs with the PGC5000 model, the petrochemical company collects more critical measurements to make even better business decisions.



Service Agreements

Create your own ABB Measurement Care agreement.

Our Service Portfolio Matrix covers all service offerings for instrumentation, analytics and force measurement.

ABB works with you to identify your needs, select services that make sense for your organization, and bundle them into a comprehensive ABB Measurement Care agreement.

Optional services are also available. We invite you to work with your sales representative to develop an ABB Measurement Care agreement that covers your needs.

Let ABB take care of your assets, so you can stay accurate and available.

	Installation and support	Commissioning	Classroom and on-site training	Spare parts	Exchange units	Consumable spares	Spare part packages	Lifecycle assessment	Preventative maintenance	Preventative maintenance kits	Reconditioning	Calibration	Workshop and on-site repairs	Verification	Remote monitoring	Service contracts		
	Installation and commissioning		Training	Spares & Consumables				Maintenance			Technical support and Repairs			Advanced Services			Extensions, Upgrades & Retrofits	Replacement and End-of-life services
Analytics																		
Emissions monitoring systems	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
FTIR	o	o	o	o				o	o				o			o	o	o
Gas analyzers	o	o	o	o		o	o	o	o	o	o	o	o	o	o	o	o	o
Laser based analysers	o	o	o	o				o	o				o			o	o	o
Liquid analyzers	o	o	o	o		o	o	o	o	o			o	o	o	o	o	o
System integration units	o	o	o	o				o	o				o			o		o
Force Measurement																		
Flatness measurement	o	o	o	o	o			o	o				o				o	o
Roll force measurement	o	o	o	o	o	o		o	o			o	o			o	o	o
Strip tension measurement	o	o	o	o	o	o		o	o			o	o			o	o	o
Strip width and position measurement	o	o	o	o	o			o	o				o			o	o	o
Thickness gauging	o	o	o	o	o	o		o	o			o	o			o	o	o
Web tension measurement	o	o	o	o	o	o		o	o				o			o	o	o
Weighing	o	o	o	o				o	o				o			o	o	o
Instrumentation																		
Actuators and positioners	o	o	o	o				o	o		o	o	o	o		o	o	o
Analytical instruments	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
Flow computers and remote controllers	o	o	o	o				o	o				o			o	o	o
Flow measurement	o	o	o	o	o			o	o		o	o	o	o		o	o	o
Level measurement	o	o	o	o				o	o				o			o	o	o
Pressure measurement	o	o	o	o				o	o			o	o	o		o	o	o
Recorders and controllers	o	o	o	o	o	o	o	o	o	o		o	o	o		o	o	o
Temperature measurement products	o	o	o	o				o	o			o	o			o	o	o
Remote indicators	o	o	o	o				o	o				o			o	o	o
RTUs	o	o	o	o				o	o				o			o	o	o



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