



# Collaborative services for grinding solutions

Excellence in support is never far away

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**ABB has manufactured variable-speed drive systems for over 50 years. We have sold and delivered more drive systems for advanced grinding solutions than any other supplier, including over 230 gearless and ring-gearred mills, and over 60 high pressure grinding rolls. We have also increased drive performance through innovation, enabling mills and rollers to become more powerful, productive and profitable.**



# A service portfolio for all your needs

## Know more, do more, do better, together.

ABB's experience and expertise are embedded in our drive system services, which are designed to ensure that drive systems, mills and rollers operate at peak productivity and cost efficiency.

Our drive system services range from long-term service agreements (LTSA's) to individual service products like spare parts, training at our global ABB University (with remote access to training in virtual classrooms and e-learning sessions), engineering and consulting. They apply digital technologies such as remote monitoring and advanced remote diagnostics. With an ABB LTSA,

end users minimize the risk of costly unscheduled downtime, extend the life of drive systems, optimize process performance and improve operational excellence. Our objective is to ensure a high return on your drive system investment. This is assisted by an ABB Lifecycle Manager assigned to each service agreement, who provides dedicated attention for your interests.

Make ABB your first call for service: we help you to protect and optimize your drive systems and grinding assets. Together, we will write the future.



# Predict, prevent, protect

## Long-term service agreement (LTSA)

Maximize availability and optimize asset performance with ABB's comprehensive service agreements.



### Benefits

- Optimized asset performance
- Single point of contact through dedicated ABB Lifecycle Manager
- Remote and local assistance from ABB experts
- Fast and guaranteed response
- Continuous ongoing improvements through periodic system reports

An LTSA is the most efficient and cost-effective way to manage the life cycle needs of your drive solutions and reduce the cost of maintaining them. It combines one or more services into an agreement customized to meet site-specific requirements for predictive, preventive and corrective maintenance.

An ABB long-term service agreement complements in-house resources and gives you access to support from ABB experts, enabling you to maintain optimal asset performance.

ABB recommends that the following service products be combined in an LTSA:

- Scheduled maintenance during planned shutdowns
- ABB Ability™ Remote Assistance
- ABB Ability™ Predictive Maintenance and Asset health
- ABB Ability™ Performance Optimization
- ABB LifeCycle Assessment
- Spares and consumables
- Training

Collaboration and consultation are key elements of an LTSA. An agreement includes a dedicated ABB Lifecycle Manager who works with your service team to plan, coordinate, manage and execute drive system service.



Communication and escalation plans are also integral components of an agreement, facilitated through progress meetings, quarterly management reports, and annual site assessments. We respond quickly to emergencies and adapt our approach to meet modifications in your production, maintenance or shutdown schedule.

An LTSA with ABB Ability Services enhances overall performance and maintenance excellence by more than a customer or ABB could achieve on their own, while establishing real-time links that ensure support excellence is never far away.





## Long-term service agreement (LTSA) supported by Lifecycle Manager

Portfolio	Service clusters	Services	
ABB lifecycle services portfolio	Extension upgrades and retrofits	Software upgrades	Hardware upgrades
	Spares & consumables	Spare parts lists and parts kits	On-demand spares
	Training	On-site	Classroom
	Technical support & repairs	Emergency on-site support (Technical support)	Start-up support
ABB Ability™ services portfolio	Remote assistance	24/7 SupportLine and troubleshooting	Remote support
 <b>Do more</b> Monitor, control, secure, manage, apply	Asset health	Preventive maintenance services	
	Virtual training	Remote learning platform (RLP)	E-learning
	Inspection	Scheduled maintenance	On-demand service
	Lifecycle assessment	Plant lifecycle assessment	System enhancement studies
	Predictive maintenance	Online fault prediction and notification services	
 <b>Do better</b> Optimize, simulate, predict, automate	Cyber security	Periodic assessment & fingerprint services	
	Energy optimization	Energy optimization services	
	Performance optimization	Performance & quality optimization	

# Uninterrupted production time

## Field services

ABB field services mitigate risks that threaten production disruption.



### Benefits

- Early problem identification
- Quick problem resolution
- On-site support by experienced experts
- System expertise for your on-site crew
- Minimal unplanned downtime

ABB offers comprehensive field services to meet any requirements. These include scheduled or on-demand maintenance (preventive and corrective), emergency repairs, extended on-site start-up support, long-term on-site support, and detailed field service reports.

Preventive maintenance is planned maintenance to improve equipment life and reduce unplanned events that cause production loss. Proper maintenance of plant equipment significantly improves asset and process availability while reducing operating costs.

Experience the advantages of having the right scheduled maintenance for the right equipment delivered at the right time by the right people. Availability of service technicians is assured through professional planning and scheduling of resources. Availability, process speed and quality improve, and production losses diminish due to less gearless mill drive downtime. Predictive technologies such as remote monitoring help to mitigate issues, extend equipment life and reduce repair costs.

These on-site services are performed by ABB service technicians trained in the latest diagnostic, repair and maintenance practices.





# We are never far away

## ABB Ability™ Remote Assistance

ABB Ability™ Remote Assistance services help you recover production fast.



### Benefits

- Access to technical experts 24 hours a day, 365 days a year
- Fast, easy and prioritized access to ABB's worldwide support network
- Assigned support engineer takes full responsibility for problem resolution
- Case tracking and escalation ensures fast resolution
- Real-time support and troubleshooting

Rapid response and quick resolution of issues is achieved with round-the-clock telephone support and on-line troubleshooting by ABB experts at minimum expense.

ABB offers two remote services to deliver round the clock access to ABB experts who continuously monitor drive systems via secure connections with ABB Ability Remote Assistance for grinding: 24/7 SupportLine and Remote Troubleshooting.

ABB SupportLine provides access to comprehensive and advanced telephone support. This 24/7 service immediately connects you with service technicians who have the knowledge, experience and resources to address your request. Often, a user inquiry is resolved during the initial contact with an ABB engineer.

ABB Ability Remote Assistance allows ABB experts to connect remotely to the customer's system via a secure remote access connection to troubleshoot and solve issues quickly and easily.



# Keep production running

## ABB Ability™ Predictive Maintenance

Always a step ahead, we deliver the data you need to make the right decisions for your equipment.



### Condition monitoring

On-line condition monitoring continuously assesses the operating condition of gearless mill drives using regularly-collected data. This data is transformed into valuable information that predicts system trends. If these trends approach critical levels, notifications are sent to stakeholders, and ABB service technicians work with you to implement improvements to prevent unscheduled outage of the system.

### Benefits

- Data collection, consolidation and long term storage
- Informative data analytics that provide system performance insight and trends
- Immediate email notification of alarms
- Intuitive user interface for visualization of analytics and correlating trends

Condition monitoring facilitates quick and easy decision-making for maintenance tasks, minimizing time taken and preventing unplanned shutdowns

ABB Ability™ for Predictive Maintenance is offered in combination with other service products with a minimum contract term of one year.

### Asset health (periodic maintenance reports)

On a quarterly basis, ABB experts review system data and provide a comprehensive health report on the system, which includes expert analysis with data trends and recommendations to prevent potential failures. The system captures data for ABB engineers to analyze and address, and helps customers access real-time and historical information.

### Benefits

- Optimized asset performance
- Reduced maintenance (planned and unplanned)
- Fast and automated information retrieval
- Condition reporting enhancements
- Immediate remote access to the drive system from anywhere in the world





# Getting the most from your investment

## Training and special services

Once you have invested in an ABB drive system, we do everything we can to help you protect your investment: an extensive training program to continuously improve your staff's expertise, engineering and consulting services to enhance drive solutions performance, and upgrades to the latest ABB technologies.



### Training

Training is key to ensuring that operators, engineers and managers are equipped with the skills and knowledge to improve productivity. Training and development ensure that skills and job satisfaction grow. ABB has trained more than 160,000 people at our 120 ABB University learning centers worldwide, where they receive instruction in ABB products and technologies, business processes, and management competencies. For drive systems, we offer a comprehensive program of instructor-led and web-based courses, workshops and seminars to improve skills, knowledge, and site safety.

### Benefits

- Equips employees with the right skills and knowledge to improve efficiency and increase productivity
- Helps staff keep up with a changing business environment
- Improves knowledge transfer through a skilled workforce
- Strengthens teamwork and increases employee satisfaction

### Spares and consumables

Efficient spare parts management is vital to maintaining productivity. Keeping spare parts in stock is a balancing act: too many parts tie up capital, too few, and you might face a costly shutdown.

ABB's spare parts services help you find the right balance. We perform audits of your spare parts inventory and identify spare parts requirements. We provide a list of spare parts with fixed prices and delivery times for an agreed period, with a fast and efficient ordering process.

### Benefits

- Efficient spare parts management
- Inventory audits that identify spare parts requirements
- Faster spare parts procurement and shipping

### Special services

Many customers benefit from ABB's long expertise and experience in drive systems by using our extensive resources in project management, engineering and consulting.

We identify how to improve asset and process performance and achieve regulatory compliance, and how to extend asset lifecycle by upgrading hardware or software. We can also help you evolve an aging drive system to significantly improve mill or roll performance.

### Benefits

- Unrivalled expertise in drive systems and grinding solutions
- Expert project management and engineering
- Improved equipment performance
- Pre-defined and optimized upgrade packages reduce downtime
- Smoother installations and faster start-up increases productivity and reduces costs



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**ABB Switzerland Ltd.**  
Segelhofstrasse 1K  
5405 Baden 5 Dättwil  
Switzerland  
Phone: +41 58 586 84 44  
E-Mail: [minerals@ch.abb.com](mailto:minerals@ch.abb.com)

24/7 Supportline:  
+41 (0)844 845 845  
[minerals.supportline@ch.abb.com](mailto:minerals.supportline@ch.abb.com)

**[abb.com/mining](http://abb.com/mining)**