



Medium voltage drives
Life-cycle services to ensure high
reliability, availability and efficiency

Power and productivity
for a better world™





Life-cycle services and support

Medium voltage (MV) drives are backed by comprehensive service and support from the customer's initial inquiry throughout the entire life cycle of the drive system.

One of ABB's key objectives is to maximize the uptime of its customers' processes by ensuring reliable operation and optimum lifetime of all ABB products in a predictable, safe and cost efficient manner.

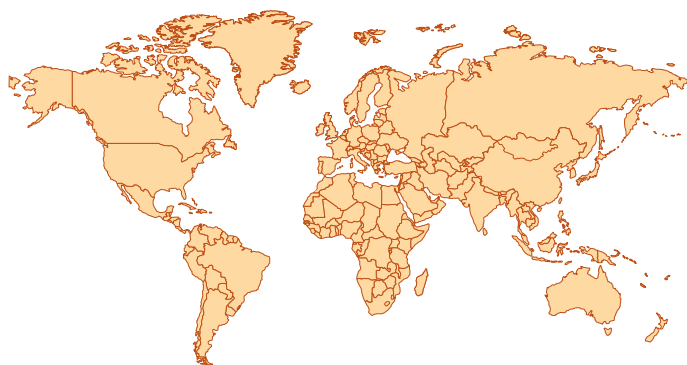
The services offered for ABB medium voltage drives span the entire value chain, from the moment a customer makes the first inquiry to disposal and recycling of the drive.

Among the benefits of using ABB drive services are higher reliability, lower operational costs, improved productivity, reduced environmental impact and enhanced safety.

Worldwide footprint

Over the years ABB MV Drives has built up its service footprint to follow the product installed base and to maximize responsiveness to customer needs.

The ABB Group of companies operates in more than 100 countries and has a wide network of service operations.



Overview of life-cycle services for ABB MV drives

Life-cycle service	Service and support offerings
Installation and commissioning	Initial erection, start-up and commissioning services for new equipment and systems
Maintenance and field services	Preventive, predictive and corrective maintenance services to maximize the performance, reliability and availability of equipment and systems
Spare parts	Spare parts and spare parts kits, emergency support, component repair and exchange, inventory management and logistics solutions
Training	Training for supervisors, engineers, technicians, operators, programmers, maintenance personnel on MV drives products, systems, processes and technology
Support and remote services	Providing on demand expert support using telephone consultations, online knowledge management and remote equipment monitoring services
Migration, upgrades and retrofit	Services and products to evolve or upgrade to the next generation of hardware and software using specialized benchmarking and failure mode analysis techniques. Exchange of parts or outdated equipment components while maintaining original plant and equipment configuration
Engineering and consulting	Identify opportunities and implement solutions to improve system and equipment performance, production processes and regulatory compliance

MV drives life-cycle management

ABB has developed a product life-cycle management model aimed at providing proactive services for maximizing availability and performance of medium voltage drives.



The model divides a product's life cycle into four phases: active, classic, limited and obsolete. Each phase has different implications for the end user in terms of the services and support provided.

1. Active phase

The active phase starts with the initial product release. The products are available for sale and fully supported with the complete life-cycle services range from spare parts, preventive maintenance and service agreements including remote services. Upgrades and retrofits of older models to the latest technology are also covered.

2. Classic phase

The classic phase applies to products that are no longer in the standard production and development cycle. Nevertheless, products and systems continue to be supported with a full range of services and spare parts. Systematic product maintenance, upgrades and life-cycle extensions will keep the system in the active and classic phases.

3. Limited phase

A product is moved to the limited phase when important spare parts can not be sourced or produced any more. The support for the system may therefore be restricted by the availability or accessibility of suitable technology and components. To extend the MV drives operational life, ABB offers migration and upgrade services to move the drive to the next control generation.

4. Obsolete phase

A product is in the obsolete phase when ABB cannot guarantee life-cycle services anymore because technical know-how may no longer be available or components may be out of stock. Migration to the next product generation is therefore strongly recommended, and life-cycle management planning at an earlier stage ensures that a product's transition into the obsolescence stage does not risk the integrity of plant operation.

Benefits of drive's life-cycle management

- Maximized value of the equipment and maintenance investments by:
 - ensuring availability of spare parts and expertise throughout the life cycle
 - enabling efficient product support and maintenance for improved reliability
 - adding functionality to the initial product by following the upgrade path
 - providing a smooth transition to new technology at the end of the life cycle
- Minimized life-cycle costs by following maintenance schedules and taking advantage of service agreements.



MV drives service and support offerings

ABB is a leading supplier of medium voltage drives. Its service portfolio is designed to ensure high reliability, availability and efficiency of its medium voltage drives over their entire lifetime.

Installation and commissioning

Professional installation and commissioning of the equipment, done by qualified and certified commissioning engineers, reduces start-up time, increases safety and reliability and decreases life-cycle costs.

Maintenance and field services

ABB's standard preventive maintenance offerings have been productized and associated to different life-cycle phases of various products. ABB recommends maintenance for MV drives throughout their lifetime in order to ensure maximum availability and to eliminate unplanned repair costs.

Systematic product maintenance

Preventive maintenance and reconditioning schedules are designed to ensure product reliability and optimum performance, as represented by the horizontal orange line in the graph below.

If preventive maintenance and reconditioning are neglected, the product's performance and reliability will follow the brown line – mainly through component aging and deterioration.

However, at a suitable point in its life cycle, shown by the yellow line, a product's reliability and performance can be enhanced by upgrades, retrofits or replacements, thus ensuring that the product remains in active or classic phase as described above.

Spare parts

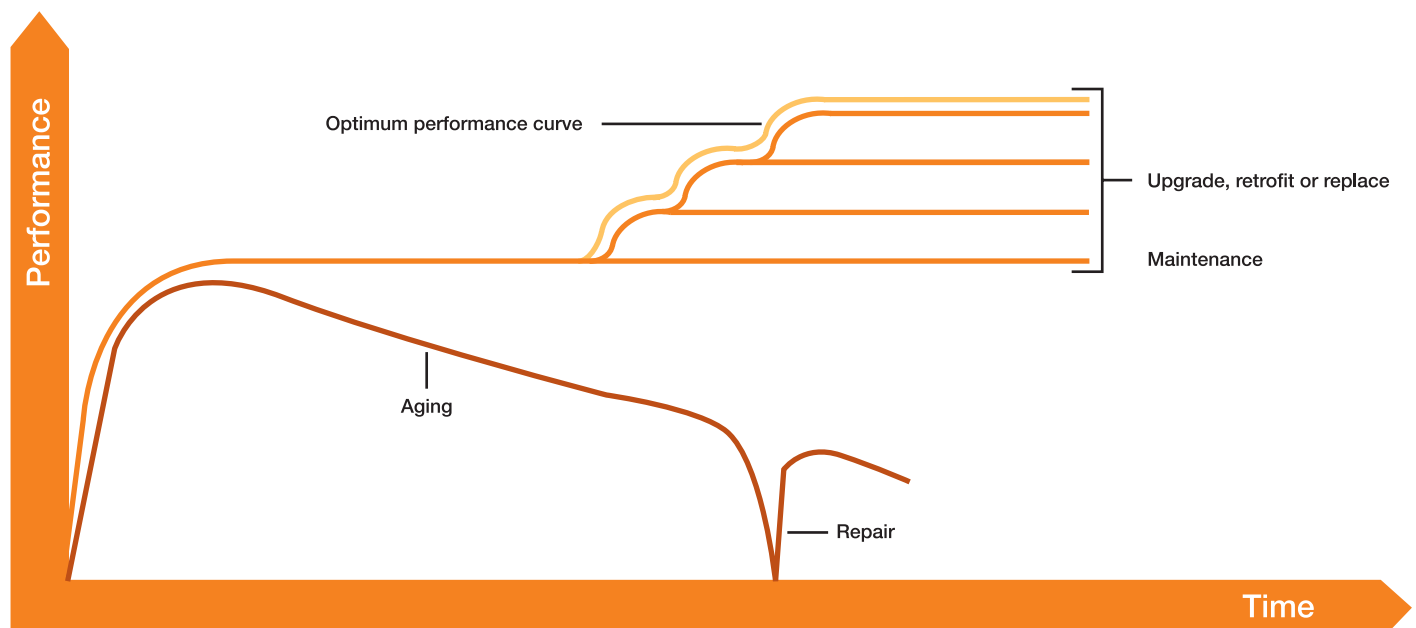
The MV drives standard spare parts service aims to provide customers with the right part, in the right place at the right time.

The web based Parts OnLine spare parts information and ordering system from ABB ensures quick and easy ordering 24 hours a day.

Training

ABB provides extensive training for its medium voltage drives. A range of training programs is offered from basic tutorials to programs tailored to the customer's specific needs.

ABB MV drive training centers aim to deliver customer-oriented classroom training as close as possible to customer sites.



Systematic product maintenance is the key to maintain the performance and reliability of an installed MV drive.

MV drives service and support offerings

Support and remote services

ABB's support and remote services combine the classic MV drives technical support with state-of-the-art remote diagnostic services. They provide access to the worldwide network of ABB MV drives specialists.

Technical support

In most countries, ABB provides 24/365 technical support, via telephone and email and covering all stages of the value chain. Should further support be needed, ABB utilizes an escalation process, and the query is elevated throughout ABB up to the factory R&D, until the query is answered and the problem solved.

Remote services

DriveMonitor™ is an intelligent monitoring and diagnostic system which allows secure access to the drive from any location in the world. It consists of a hardware module connected to the drive and a software application that collects and analyzes selected drive signals. Long-term monitoring functions deliver important information on equipment status and possible performance improvements.

■ Remote troubleshooting

With remote troubleshooting a product expert can quickly connect to the drive in case of a failure. The ABB service specialist is able to analyze the situation and guide the local engineer through the fault finding process.

■ Remote periodic maintenance

Based on an agreed schedule, typically once or twice a year, an ABB MV drives specialist will connect to the drive and analyze the drive's performance. The findings, actual status and recommended actions (e.g. fine tuning, suggested actions for preventive maintenance), are summarized in a report.

Migration and upgrades

Upgrade and retrofit

ABB's upgrade and retrofit services are time- and cost-efficient tailor made solutions that improve performance and extend the life cycle of operational equipment at minimal cost. The service includes advice on plant retrofit options while taking into account technological developments and the life cycle of existing equipment.

New technologies can improve and extend the operation of existing equipment at a favorable cost, often on the basis of step-by-step upgrades that enhance functionality.

Replacement

Once the drive has reached the end of its lifetime, ABB will help select the appropriate replacement drive. As ABB is continuously improving its product portfolio, it is likely that the drive can be replaced with a more economical and better performing product than was available at the time of the previous investment.

Engineering and consulting

ABB MV Drives supports customers in finding opportunities and solutions to improve system and equipment performance, such as a power upgrade study or a life-cycle audit.



DriveMonitor™, a dedicated monitoring and diagnostics system



MV drives service agreements

ABB's comprehensive service agreements ensure that customers obtain access to ABB experts via remote services and/or local field support, whenever needed.

Customized service agreements

A service agreement is the most efficient way to manage the total life cycle of ABB drives and minimize downtime. One or more services can be combined to suit the customer's specific needs, all coordinated under one simple agreement.

Service agreement examples

One example of an ABB MV drives service agreement is a maintenance contract, which is a good addition/extension to the regular maintenance of the plants maintenance team. Customers benefit from ABB's experience, supply management and manpower.


Another service agreement offers technical support and remote services, enabling the customer to get access to the worldwide service network of ABB MV drives specialists.

Depending on the customer's needs, the most suitable service agreement can be offered by all local ABB MV drive service sites or the next regional sales channel.

Benefits

- Immediate access to ABB expertise and service experts worldwide
- Minimized downtime in case of a fault or troubleshooting
- Preventive expert diagnosis extending the lifetime of the equipment
- Expert advice on performance and customized maintenance schedule

Portfolio of service agreements*

Service types	Predictive maintenance	Preventive maintenance	Corrective maintenance	SERVICE AGREEMENT
Maintenance	Site inspection	Scheduled maintenance	On-demand service	
			Agreed response time	
Spare parts	Inventory audit	Spare parts kits		
		On-demand spare parts	Emergency spare parts	
Technical support and remote services	Remote periodic maintenance	Technical support		
		Remote troubleshooting		
Training	MV drives training portfolio			

Service offerings which can be included in an ABB MV drives service agreement.

* Not all services are available in all countries.

Contact us

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