

Power and automation services for
marine, offshore and cranes

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Profile

Marine, offshore and crane services

ABB's marine service solutions comprise design, supply, installation, commissioning, maintenance, retrofit and modernisation for power, propulsion, automation and drilling systems in marine, offshore and crane applications. These services are delivered globally from ABB's strategic network of service centres.

Strategic Centres of Excellence

ABB operates from 2 Centres of Excellence (COE) that are assigned to offer industry-specific solutions for various vessel types.

The Oil and Gas Centre of Excellence supports FPSO, LNG, OSV and drill rigs. The Cruise and Ferry Centre of Excellence supports cruise ships, ferries, yachts and container vessels.

These Centres of Excellence are the design authority and offer specialised support to the global service centres to assist customers to attain a reliable lifecycle performance from their assets.

Support services

Lifecycle Management (LCM)

Adopting a comprehensive LCM plan prevents critical equipment from having a disruptive lifecycle and avoids premature replacement. LCM thinking reduces the real cost of maintenance and makes equipment and asset performance more predictable. LCM help is directing resources to the correct areas and releasing capital investment to address more critical issues. Lifecycle Management can include one or more of the following services within a contract.

Features

- Equipment condition assessments
- Plans to prevent critical equipment from having disruptive lifecycles
- Determining component degradation due to age or the operating environment that could eventually lead to failure
- Adopts the most effective maintenance methodology to predict and prevent failures

Benefits

- Sets out the best form of maintenance to attain the required safety, reliability and operational performance
- Directs maintenance resources and efforts to the right areas
- Minimises the risk of unplanned failures, that could result in loss of power or propulsion and other critical systems
- Avoids premature replacement of equipment and reduces the "real cost" of maintenance

Lifecycle management model



- ABB's lifecycle management model consists of four phases
- Many products are supported for more than 20 years
- ABB's lifecycle services include: selection and dimensioning, installation and commissioning, training and learning, technical support and remote services, maintenance, spare parts, repair, retrofits, replacement, and recycling

Support services

24/7 support

ABB's network of global service centres are strategically located where there is a concentration of marine activities. These centres operate 24/7 and can be contacted by all forms of communication: telephone, e-mail, Internet, fax. The centres have comprehensive access to technical archives to offer the best level of technical support.

Features

- 24/7 telephone support for service, spare parts and general assistance for ABB equipment and systems
- Escalation to technical authorities in support of complex issues
- Technical consultation to support customers
- Local centres connecting with global knowledge

Benefits

- Assures a high level of service and telephone support around the globe
- Rapid escalation helps resolve issues thus minimising the risk of failure or consequence of failures
- Technical staff assist customers, diagnose and rectify problems to avoid failure or limit the consequence of failure
- Provides a local technical partner, in country language to reduce risk of ambiguity

Emergency on-call service

Guaranteed emergency and on-call response services are available to customers through service agreements. This enables rapid escalation of support services and immediate access to expert resources to deal with critical and complex problems. This delivers assurance that service is available when it's needed, where it's needed and how it's needed.

Features

- Escalation of appropriate services, spare parts and technical support to meet your demands
- Remote diagnostics and experience to respond or manage both critical and complex failures
- Response times and support demands may be defined by agreement or aligned with severity
- Emergency contact and call-back from local or specialist support resources when needed

Benefits

- Rapid response to failures and emergencies guaranteed support agreements available
- Identification of problems and parts required minimises down-time and corrective actions
- OEM responsibility, ownership and resolution of problems including defects and warranty
- Simple and effective methods of communicating asset response levels designed with customer



Support services

Spare parts and logistics

Availability of spare parts plays an important role in the sustainability of any plant. Therefore ABB offers a comprehensive spare parts and logistics service for the full range of services and products it delivers. Dedicated co-ordinators are available for handling of enquiries and logistics. In addition, ABB offers storage, testing and programming of critical parts that can be mobilised 24/7 for delivery worldwide.

Features

- Trained parts co-ordinators available as single point of contact for handling and expediting
- Complete service and product portfolio managed with expert support in parts identification
- On-line parts and stock control systems with an opportunity to upgrade during process
- Rapid spare parts response through call-off, 24/7 or strategic maintenance agreements

Benefits

- Simple and effective procurement channels locally executed and globally co-ordinated
- Single source provider for ABB or non-ABB equipment, worldwide logistics managed
- Parts illustration, identification references and customer ordering facilities available on-line
- Spare parts management audit and lease or CAPEX schemes available for spare parts

Workshop and factory repairs

ABB's large service centres have facilities for undertaking repairs, modifications or assembly of most standard equipment. Re-certification and repair of complex equipment is undertaken within ABB factories. Repairs are fully guaranteed and 24 hour work is available to turnaround critical repairs. In addition, ABB also engages a number of certified service partners to manage and support repairs in non-OEM locations.

Features

- Global workshops available to undertake most repairs of ABB equipment: rotating machines, drives, automation, etc.
- Lifecycle support through stages of a product lifecycle
- Design authority and factory support for large and complex repairs and possible re-certification
- Warranty handling and escalation

Benefits

- Repairs using approved parts and certified solutions return equipment to original design performance and can take significantly less time than new replacement
- Enables the right repair and replacement of products according to established lifecycle product degradation
- Expert resources to back-up repair and support possible re-engineering to effect repair and meet equipment design performance
- Enables immediate access to support



Support services

Design and engineering

These services are delivered from ABB's Centres of Excellence and its global network of Marine Service Centres. These centres are resourced with teams of experienced engineers with core and specialised skills across a broad range of disciplines. This enables ABB to undertake complex turn-key projects, retrofit, upgrades, lifecycle extensions and modernisation programs.

Features

- Local and global experience delivering advice to industry customers and partners
- Standard design and approval references from Class and customers
- Design engineering and consultancy work undertaken, including structural interface
- Global team of qualified and certified resources, supported by research and development centres

Benefits

- Excellence that delivers optimised solutions with lifecycle operational and cost benefits
- Proven designs that deliver a high level of reliable performance
- Reduced number of vendor interfaces, minimising the risk of errors, quality issues and cost overruns
- Effective solutions based on best practices and innovative state of the art designs

Installation and commissioning services

An investment in the performance of critical equipment can not be achieved without proper care during installation and the best lifecycle of service begins with quality commissioning and hand-over of documentation. This presents an opportunity for customers, system integrators and manufacturing or fabrication facilities to develop their knowledge and experience whilst optimising the plant and equipment for its intended design.

Features

- Clearly defined and executed commissioning programs
- Dynamic testing programmes that effectively test the integrated power, automation and propulsion trains
- Programme and parameter settings uploaded, updated and documented
- Expert personnel undertaking commissioning

Benefits

- Provides the foundation for reliable lifecycle performances
- Tests prove the integrity of interconnected power, propulsion and automation trains to confirm overall design performance
- Assists future servicing and analysing performance trends against original settings and documentation
- Enable works to be performed safely and in an efficient and effective manner



Support services

Preventive maintenance

Prevention maintenance is better than the cost and consequence of failures. Therefore, ABB believes that investment in prevention makes good operational and economic sense. To this end, it helps its customers by offering an extensive range of preventative maintenance services focussed on enhancing equipment and overall plant and safety performance. This reduces the risk of disruptive lifecycles and the overall cost of maintenance.

Features

- Pro-active development of planned preventive maintenance programmes against key objectives
- Established maintenance categories enable appropriate maintenance planning against known or developed condition based schedules
- Forward planning and preparation
- Best form of maintenance established – intrusive, non-intrusive, condition-based

Benefits

- Reduces the risk of disruptive lifecycles and high cost of maintenance
- Target programmes focus on the failure prevention of safety and operationally critical systems and reduces the direct and indirect cost of maintenance
- Reduces surprises and enables decision making regarding repair or replace and future actions
- The correct type and level of maintenance is performed against the knowledge failure and degradation characteristics

Condition Monitoring

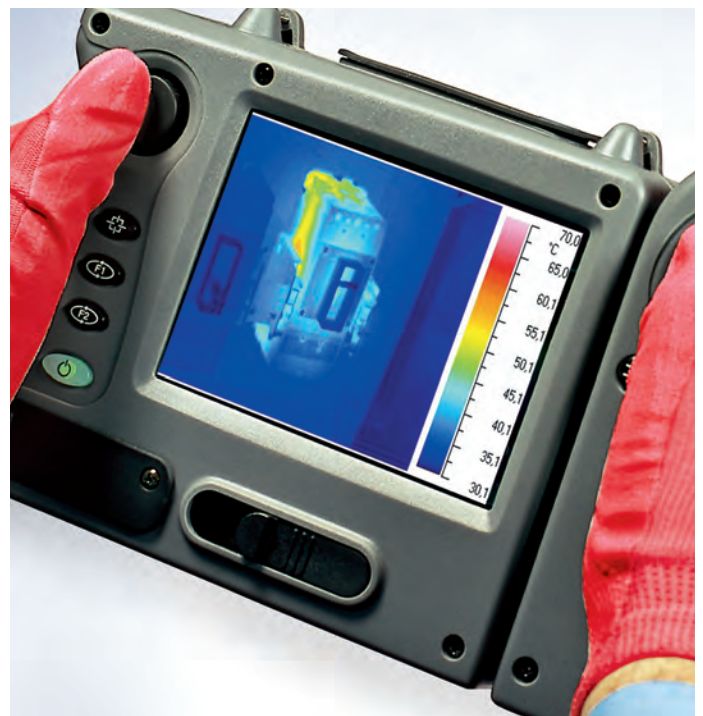
ABB's condition monitoring services are designed for both on-line and off-line inspection based upon the practical access of the installed infrastructure. Analysis may be carried out from locally obtained data or if applicable remotely via web diagnostics. Advanced mechanical and electrical condition monitoring techniques are available and recommended for all large HV machines, variable speed drives and HV switchgear.

Features

- Non-Intrusive predictive maintenance, early identification and trending of performance
- PD and line spectrum analysis, Drive System Analysis, IR work and circuit breaker testing
- Oil and gas sampling, mechanical vibration or multiplexing analysis and laser alignment
- Local measurements and resident or remote monitoring systems and web diagnostic tools

Benefits

- Reduction of premature failures increases equipment reliability and plant performance
- Indirect indication of environmental and / or network disturbances affecting other plant
- Trending enables pro-active maintenance and planning to minimise execution or impact
- Practical remote capture and analysis during peak loading, cargo and transit operations



Support services

Retrofit and modernisation

Retrofit and modernisation helps overcome issues associated with obsolescence, performance and regulatory standards. Upgrading existing systems and equipment with the most modern components will optimise technical and operational performance, extend remaining lifetime, and – compared to the cost of full renewal – be a very economical choice.

Features

- Introduction of modern products and technologies
- Retrofit, and modernisation to comply with latest standards and introduce tomorrow's level of safety technology
- Comprehensive consultation concept that includes optimisation of design for safety and performance
- Minimal interruptions through technology selection, planning of installation programme and use of experienced engineers.

Benefits

- Enhances serviceability, safety and extends remaining lifetime
- Improves operational capability, conforms to regulatory and safety standards and enhances commercial marketability
- Reduces cost of drawn out authorisation procedures to arrive at functional designs that meets operational, environmental and economic performance requirements
- Reduces time and cost to install and commission

Dry-docking and Turn-Around (TAR)

Many terms can be used to describe the frequent or irregular care cycles of an asset and the scope of each may vary greatly. Successful execution can be achieved through effective communication and planning. Each year ABB delivers a high number of planned repairs, dry-docks and TARs with its experienced safety culture and available resources to meet the necessary downtime and standards.

Features

- Specialist vendor work scopes and turn-key or complex overhauls and repairs undertaken
- Pro-active communication and planning with the customer classification authorities or vendors
- Local execution and utilisation of resources globally supported by factories and COEs
- Established routines and safety procedures and volume of specialised tools and equipment

Benefits

- Sub-contracted minor and major work scopes allow customers to focus on other areas
- Customer input to work scope and specification ensures control and deliverables are achieved
- Supervised cost effective use of local certified resources and approved sub-contractors
- Efficiency and safety through the execution of work with established and experienced supplier



Support services

Training / Marine academy

The commitment to the delivery by ABB of its products and systems continues with a range of learning solutions which are designed to give the necessary technical competence and skills required for operation and maintenance. Customer training is provided at a number of locations and facilities and is fully developed to offer theory and practical hands-on techniques, in addition to the fundamental rules of safety.

Features

- eMST learning solutions for assets, products designed with interactive PC based training
- Global marine academy: dedicated facility for product, safety and marine systems training
- ABB factories and universities for general products and advanced products training
- On-site training services for equipment and dynamic training (commissioning and trials)

Benefits

- Tailored training courses and solutions to support both complex & critical systems
- Handling and training of multiple persons or disciplines, focused on system & application
- Equipment certification and competence or fundamentals to operate equipment safely
- Practically delivered training covering most common maintenance & operational tasks



Service contracts

Customised service contracts

In addition to traditional ad hoc support we offer customised service contracts. A service contract is the most efficient way to manage the lifecycle of your power and automation equipment. One or more services can be combined to suit your needs, giving cost-effective delivery of a range of important benefits, co-ordinated under one simple contract.

Here's how it works

1. First determine the elements that make up your basic service contract. This will provide your basic needs to keep your plant up and running on a day-to-day basis.
2. Then simply bolt-on other services from the 'Options' listed below, that you require for added support.

3. ABB can customise the packages to your needs. Whether you need planned preventive maintenance or easy and quick access to technical support, ABB can find a customised solution that meets the needs of your plant, your in-house capabilities and your budget.

4. Call **01224 592123** or e-mail **marine.services@gb.abb.com** to get the right service contract for you.

Basic Service Contract

- 24/7 telephone support - *page 4*
- Spare parts support - *page 5*

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+ Bolt-On Options

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