

GE
Power Conversion

A Second Life for Your Crane

Electrical Equipment Refurbishment





Striving for improved productivity and efficiency

GE is at work. Applying our expertise to help improve throughput, performance and system reliability. Working with our crane customers to meet the demands and opportunities of the new electric age. We're making change happen—electrifying change.

GE crane systems can include process control, drive systems, automatic targeting positioning, anti-sway systems, laser controlled position detection, and motors and encoders.

Pressures on loading/unloading times mean efficiency is paramount and is essential to day-to-day operations. Crane monitoring systems process wind speed/direction, load, inclination, position feedback etc., resulting in safer operation of the cranes under all conditions. GE solutions are designed using active energy management and modular configuration enabling simplified status, diagnostics, and fault detection.

Understanding our customers and end-users needs enables GE to continually introduce more efficient operations with flexible and user friendly designs essential to customer's requirements.

Crane refurbishment means more than repair

GE Power Conversion offers a fully customized and comprehensive approach to crane refurbishment—from the power supply to the drives, from the sensors to the automation systems.

Our integrated crane solutions allow for a step-by-step upgrade process or for complete refurbishment, revitalizing your old crane with new parts and advanced technology.

With decades of experience designing crane control and automation systems—dating back to 1946—our history includes the combined experience of AEG, Alstom, Converteam and now, GE. From the beginning we have worked collaboratively with our customers, crane operators, and crane manufacturers to create a highly customized interface between new and existing parts that is based on the customers' needs, the current condition of the crane, and the main operating situation. The spirit of this partnership is driven by the pursuit of a common target—performance, reliability and safety.

Our TDE crane management and ProCrane drive systems define the standard for crane technology today. We provide advanced solutions and high-tech features that enhance the quality, precision and performance of your crane.

- Improved throughput and performance of your crane
- Improved crane control and automation
- Reduced operating costs
- Restored availability and reliability



GE's crane equipment

High Performance Controllers (HPC)

The HPC is the brain of your equipment and is designed to regulate dynamic applications.

- Rack or computer-based
- Remote I/O network
- Integrated safety concept

DC/AC drive systems

We offer complete drive systems for DC and AC solutions to meet exact requirements to achieve the highest possible quality, precision and dynamic performance.

- ProCrane AC-inverter
 - 300 kW to 6400 kW
 - Modular design
 - Low weight & harmonics
- DC-thyristor stacks
- Drive controller for new or reused power stacks

Low voltage & medium voltage power supply

From the land-side power network to the crane. Our power supply scope includes:

- Land-side power network analysis
- Trailing cable (with and without fiber optics)
- Cable drum (repair and upgrade)
- Medium and low voltage switchgear
- Medium voltage transformers
- Compensation system





DC /AC motors

The design of motors follows the requirements of the customer for power, speed, torque and mechanical dimensions. We deliver:

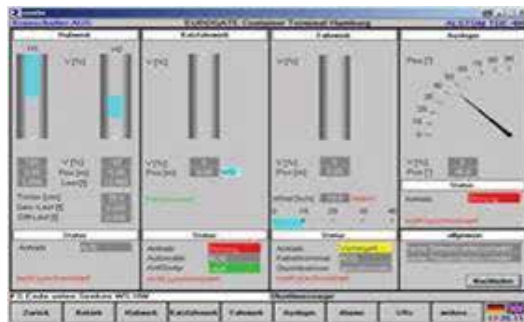
- Customized AC motors
- Customized DC motors
- Encoders and monitoring

Crane management system

The powerful TDE system enables simplified status, diagnosis and fault detection via an operator display located in the crane cabin. The easy to read screen design provides vital crane stats:

- Monitoring & reporting
- Postmortem analysis "black box"
- Crane check

The TDE also provides basic service assistance through its maintenance information memory, which features advice on correcting faults.





GE Comfort Control—Your Sixth Sense

Control is more than I/O handling

GE's controller allows for many additional features to assist the crane operator. Our system reduces stress on crane operators by monitoring and support features, and on the mechanical crane construction by fine-tuning drive curves.

À la carte options

GE also provides high performance manual operation features to assist the equipment operator.

- Boom anti-collision with and without sensor
- Automatic slow down in the container vessel
- Grab automation (semi-auto, automatic, load-optimizer)
- Crane management system to the landside workstation
- Safety features for the electrical system and for the crane
- Gantry drive regulations for curves
- Load measurement system
- PC upgrade
- Crane check

Services from GE

We understand the vital importance of process availability—and our focus on service keeps us actively engaged, both when things are going right, and when they are going wrong.

With a comprehensive global network of service engineers and technicians, GE is uniquely positioned to provide the knowledge, experience and skills for your full range of industrial service requirements—protect assets, maintain critical processes, minimize risks and maximize productivity. We deliver original equipment spares around the world as well as repair, refurbish and upgrade customer systems with the latest technology. We offer risk protection through contractual services based on our system experience and sophisticated application calculations. Through advanced digital platforms, we deliver expert onsite and remote emergency 24/7 support, intervention and planned maintenance customized to meet unique customer requirements.

Modernizations & upgrades

We tailor large and small modernization and upgrade programs to meet your exact requirements while helping to minimize plant downtime. We provide feasibility studies, design, project management, and implementation. Our engineers understand that upgrade work is about good planning and risk management from a close, cooperative and flexible relationship with our customers. We fit turnkey and innovative solutions to your specific applications.

Maintenance & repairs

Guided by a customized maintenance program, the crane system will undergo regularly scheduled checks performed by a combination of the customer's maintenance team, a GE services engineer, and remote monitoring. A services report documenting the crane's status allows our services experts to analyze current system conditions with historical checks and calibrations. Our global network of repair centers are localizing to serve you faster.

Spares & replacement parts

Even the best system has a limited lifetime. Eventually seals leak, bearings become worn, capacitors dry out and suppliers of mass-market components and software move on.

- Parts, sub-products, spare products
- New, remanufactured, exchanged, repair and return, test and certification
- Express option (off-the-shelf)
- Inventory management

Remote support

To support your on-site maintenance team GE can assist via a remote connection to the controller, the crane management system and the drives. We provide secured remote connection to GE equipment (outside the control network). This remote connection enables our services engineers to provide real-time support, ongoing health analytics and key performance indicators (KPIs), as well as basic configuration management support.

Contractual services

From hotline, rapid response and basic remote diagnostic packages to comprehensive multi-year contracts, GE offers technical support, preventive maintenance, managed spares, design and management of modernization/upgrade programs, and equipment availability based schemes.

Training

We regularly utilize our global network of training centers, as well as provide onsite training where you work. Courses can be tailored to meet your needs, promoting hands-on experience and using real-scale simulation technology. All GE instructors have extensive experience in the field and are rigorously updated on the latest technologies, application requirements, and industry standards.



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