Meeting the Challenges – a New Era in Marine
Meeting the Challenges – a New Era in Marine

GE's Power Conversion business applies power conversion expertise to increase operational efficiency, asset availability, and operational precision and minimize environmental impact in every shipping arena including offshore, merchant and naval.

Since the 1930's, GE has been engaged in the application of advanced electrical engineering solutions in the maritime environment. Today, in an era of new challenges in the marine industry, we apply that same imaginative approach to the design and supply of marine systems.

Power & Propulsion

We deliver systems which are engineered for:
- Higher overall efficiency
- Improved machinery layout and space saving
- Increased flexibility of equipment layout
- Reduced noise and vibration
- Improved reliability leading to reduced maintenance costs

In 1935 the French liner “Normandie” won the Blue Ribbon for crossing the Atlantic at 30.31 knots. The Normandie was equipped with GE's 160,000 HP electric propulsion system.

From that time Power Conversion has been an innovator in the fields of electric power generation and electric propulsion systems based on our range of variable frequency converters, motors and generators.

Podied Propulsion

GE offers two versions of podied propulsion:
- Mermaid – a pulling pod
- Inovellis – a pushing pod based on a pump jet principle

Optimized hydrodynamic performance with the latest variable speed drive technology ensures reliability, robustness, system compactness, and low levels of noise and vibration, as well as maneuverability and overall efficiency.

Vessel Control

GE's Vessel Control System is designed to enhance the operational effectiveness and efficiency of modern vessels by integrating the functions of control, monitoring and alarm management for a wide range of machinery and control systems.
Dual-redundant, high speed, Ethernet networks are employed to combine vessel-wide systems into a single entity which enables operators to have a unified view, and complete control of all elements of the distributed plant.

Typical system functionality encompasses:

- Central alarm system
- Centralized power plant monitoring and control
- Propulsion, thruster and steering systems CCTV
- Auxiliary systems
- Fluid and cargo systems

Additional sub-systems can be included in the project offering to further enhance overall vessel system coherence.

**Dynamic Positioning (DP)**

Flexibility of design and configuration comes as standard with GE’s DP system. We understand the challenges faced by each unique user, application and environment – our DP systems and our engineers adapt to those challenges and draw on experience gained through more than 800 references.

As an early pioneer of DP in the 1970’s GE has extensive expertise in the field.

The C-Series is a modular range of products from joystick maneuvering systems and simple DP systems to the most sophisticated triple-voting and Class 3 DP systems. The C-Series also incorporates a Thruster Assisted Mooring System (TAMS) for moored vessels.

**Drilling Systems**

Power Conversion’s drilling systems are installed on more than 100 drill ships, semi-submersibles, jack-ups and platforms.

Specializing in variable frequency drives for applications such as top drives, draw-works, mud pumps and cement pumps, Power Conversion has led the way in supplying the offshore industry with innovative and reliable solutions.

The predominance of the SCR drilling drive system has been gradually superseded by the MV3000 AC liquid cooled drive. Power Conversion is conversant with both technologies (SCR and AC drives) and is able to recommend the most appropriate solution on a case by case basis.

Our specialist knowledge and long experience ensures that we have adaptable systems and adaptable processes – making us ideal partners when considering drilling drive overhauls and upgrades regardless of original brand of manufacture.

To complete the package GE delivers driller’s consoles, mud consoles, transfer panels and dynamic brake resistor cubicles.

Power Conversion specializes in electrical systems for a diverse range of ship types including LNG carriers.
Lifecycle Solutions

GE offers a comprehensive range of through-life support services, including design studies, system integration, commissioning, training, spare parts provisioning, service call-out, and system upgrades.

Remote Support – Visor

Our advanced remote support solution, Visor, enables Power Conversion engineers to remotely connect with the MV7000 via secure networks.

Benefits include:

- Worldwide availability via highly secured internet links
- Rapid intervention for improved first-line fault diagnostics and solutions
- Reduced downtime
- Increased system and equipment availability

Contact information

- Brazil: +55 31 3330 5800
- France: +33 3 84 98 10 00
- Norway: +47 67 838250
- Singapore: +65 6332 0940
- South Korea: +82 51 465 9050
- United Kingdom: +44 1788 563 563
- United States: +1 713 895 0068