We move you. With reliable power.
Innovative thinking – effective performance.

MTU is one of the world’s leading manufacturers of large diesel engines and complete propulsion systems. Our innovative spirit is focused on delivering solutions that best fit your needs, and making sure they perform smoothly every step of the way.

MTU Commercial Marine augmented reality app.

Three different ways to install the app on your smartphone:
- Scan the QR code on this page
- Search for “MTU Commercial Marine” on Android Play Store or Apple App Store
- Type in the link on your smartphone

www.mtu-online.com/marine-ar

Once the app starts, it will show you the basic handling before it switches to our AR Viewer.
- Each page containing the AR Symbol has additional content offering more information on the subject.
- Some of the content is interactive: it can be clicked on-screen to display the additional information.
- You do not have to carry this document around with you. Our content will be available without it: simply navigate to the burger menu and access the respective areas such as videos.
- Some of the content can be downloaded from the web.
- If you require additional information, the app contains a contact form for the purpose.

The meaning of the icons you find in the app:
- You can watch a video
- You can download the PDF
- You can rotate the item 360°
- Some additional information is available

Scan QR code to activate augmented reality features.
Pulling more than 100,000 tons of steel takes more than a powerful engine.
System Solutions

A lifetime of intelligent power from MTU.

Planning

MTU Life Cycle Solutions and ValueCare – Our experience in marine engineering, powertrain systems and software solutions makes us the preferred partner for life cycle planning, decision making and value optimization.

Integrated Automation System

MTU standard automation systems are delivered “off-the-shelf” and can be individually adapted to your vessel. Comprehensive analysis, documentation and dedicated risk mitigation services.

Propulsion System Integration

MTU standard propulsion systems are provided as a turnkey solution complete with equipment, planning and implementation of the electrical systems.

Propulsion Systems

MTU provides comprehensive propulsion systems that are perfectly matched to the requirements of your vessel, whether in terms of high power density, compact design, mechanical and thermal robustness, simplicity of operation and straightforward maintenance.

ValueCare services

ValueCare is a comprehensive service offering a cost-effective way to support and improve vessel performance. With a range of ValueCare services, MTU helps to optimize planning and implementation of the vessel’s life cycle.

Refits

Refurbishment of propulsion and automation systems is a cost-effective way to preserve and improve vessel performance. MTU offers comprehensive planning and implementation of the vessel’s life cycle.
Overview

Propulsion systems tailored to your needs.

Offshore wind park crew boats, service and supply vessels
With its long-standing, strong commitment to the marine sector, MTU has always felt a particular responsibility for the environment – and has kept up to that responsibility in all aspects. That’s what makes us the ideal partner for companies aiming to address forward-looking sectors – such as power generation from wind.

Offshore service and supply vessels
No matter how rough conditions are at sea, you have to get out there, and your vessels’ availability must be guaranteed. What you need are propulsion systems that are 100% reliable, punctual and safe. MTU makes sure your engines can brave even the harshest conditions.

Pilot boats
No matter how rough the sea state, ships have to be guided to harbor, so your vessel’s availability must be beyond doubt. You need propulsion systems that are safe, powerful and fully reliable. MTU makes sure your engines can brave even the harshest conditions.

Coastal cargo, inland cargo and pusher towboats
Your competitive position and financial success depend on reliable, timely operation. We provide the foundation for this with high-quality products, preventive maintenance programs, 24/7 service and a result: maximum uptime.

Tugboats
Harbor and almost tugs must maneuver with high power, precision and speed in all situations. MTU engines help you meet these requirements with broad performance maps, proven common-rail technology and sequential turbocharging. The result: impressive bollard pull figures.

Special vessels
From fire and rescue boats to research and survey vessels – no matter what specialized tasks your vessel performs, MTU can provide exactly the right propulsion solution – involving both high-quality products and preventive maintenance programs for the highest level of reliability.

Passenger vessels and ferries
Reliable operation of your fleet is a crucial factor in the success of your business. We lay the foundation by supplying high-quality products and delivering preventive maintenance programs designed to ensure continuous heavy-duty service. You can rely on our 24/7 service – and on securing maximum uptime for your vessel.
Decisive action requires a strong heart.
MTU Core Technologies

All engines at a glance.

**Analytics**

MTU engines are designed with advanced analytical methods to ensure optimal performance and reliability. The engines are designed to meet the specific needs of each application, ensuring superior performance and longevity.

**Fuel injection**

MTU's electronically controlled common rail fuel injection system optimizes fuel combustion in the cylinder, resulting in improved efficiency and reduced emissions.

**Turbocharging**

MTU develops and produces its own turbochargers for high-performance applications. Turbocharging helps achieve low fuel consumption and high performance across a broad range of running speeds.

**Fuel injection**

MTU's fuel injection system is specifically designed for optimal combustion and emission reduction. The system incorporates advanced technologies to ensure precise fuel delivery and improved engine performance.

**Mountings**

MTU engines are installed on specially designed rubber mountings to reduce noise and vibration. These mountings are engineered to minimize structural vibration and ensure smooth operation.

**Aftertreatment**

An integrated aftertreatment system minimizes exhaust emissions, ensuring compliance with the latest environmental standards.

**Analytics**

MTU uses the most advanced analytical methods to ensure optimal performance and reliability. The engines are designed to meet the specific needs of each application, ensuring superior performance and longevity.

**Alternative fuels**

MTU's pure gas engine is designed for use with alternative fuels, offering flexibility and reduced environmental impact.

**Series 8000**

The most powerful high-speed engine for the very highest demands.

**Series 60**

Uncompromising engine uptime.

**Series 2000**

The powerful heart for maximum agility.

**Series 1163**

The proven, evolved engine for the marine industry.

**For detailed technical information, please see:**

www.mtu-online.com/engineroom
MTU Generator Sets

MTU. Generating Power.

MTU offers a complete genset portfolio for commercial applications - from 5 to 2,700 kW - for auxiliary and emergency power generation and diesel-electric propulsion. Obtainable as 50/60 Hz versions, MTU gensets feature numerous options and accessories such as soundshields, control panels, PTOs for fire fighting pump drives, etc. High uptime and long TBO of up to 42,000 hrs ensure economical operation and reliable performance.

As a system supplier specializing in generator sets and automation systems, MTU configures complete propulsion solutions, implementing the best possible technologies for your needs. From cost-efficient pre-engineered standardized gensets designed and qualified by our central engineering headquarters in Germany to customized, advanced solutions as well as variable speed gensets - MTU’s quality and reliability have been proven in the field, all over the world, for decades.

Available for prompt delivery, MTU constant-speed gensets are easy to configure thanks to their modular design. This helps shorten project time frames while enabling our global network of partners and distributors to provide complete genset solutions backed by our factory engineers. Local content requirements can be met by means of global component sourcing and worldwide manufacturing options.

MTU customers benefit from our one-stop shop philosophy and our commitment to comprehensive service and support, provided through our global 24/7 customer assistance center and service network comprising over 1,200 locations worldwide.
MTU Generator Sets

Flexible power for lower life-cycle costs.

Do you want a flexible system with advanced technology for super-efficient operation? Variable speed gensets from MTU make this possible, maximizing operational flexibility and minimizing operating costs. MTU’s patented Superior System Controller (SSC) determines the best operating point in the engine performance map in relation to the electrical power demand. And for customers who prefer to use a generator of their choice, MTU offers a precise simulation and calculation to ensure safe, economical operation.

Benefits:
- Less fuel consumption at part load, up to 15%*
- Longer maintenance intervals and up to 20%* lower maintenance costs
- Lower noise signature

*can vary significantly depending on project / operation profile
(efﬁciency gain depends on system losses and generator operating curve)

Flange-mounted or free-standing
MTU supplies gensets with flange-mounted or free-standing generators on a common baseframe as per customer requirements.

Flange-mounted benefits:
- Cost effective solution
- Compact design saves installation space and offers more room for cargo or crew
- Easy service access inside the engine room

Free-standing benefits:
- Longest maintenance intervals based on sleeve bearings and maintenance-free, non-aging and heat resistant coupling
- Easy in-vessel serviceability

Spec. Fuel Consumption / g/kWh

Comparison of fuel consumptions

RPM counter showing variable range of RPM
Power under control.
MTU Ship Automation Systems

As comprehensive as necessary. As simple as possible.

MTU standard automation systems are delivered ready for installation, perfectly matched to your MTU propulsion system, giving you a complete package where everything is fine-tuned to your requirements: powerful engine performance, maximum efficiency, uncompromising reliability and green credentials.

BlueVision_Basic | NewGeneration

MTU’s non-classifiable monitoring and propulsion remote control system for Series 2000 and 4000 engines incorporates a deliberately simple design offering full basic functionality. An elementary feature of BlueVision_Basic | NewGeneration is the compactness of its hardware. As the central system component, the Local Operating Panel (LOP) pulls together all basic functions available in this version, really simplifying installation, operation and diagnostics.

Key Features:
– Compact hardware for easy installation and commissioning
– Local Operating Panels (LOPs) with basic functionality such as start, stop, combined alarm/horn off, for installation in the engine room
– All control stand components installed throughout the ship are connected to the associated LOPs via CAN bus

BlueVision_Advanced | NewGeneration

MTU’s classifiable monitoring and remote control system comprising a comprehensive standard automation system solution is available for Series 2000 and 4000 engines.

An elementary feature of BlueVision_Advanced | NewGeneration is the system bus. Data transmission between the LOP and the commanding control stands is performed via a redundant Ethernet-based field bus. This ensures totally secure communication and maximum flexibility of the overall system, also with an eye to future upgrades.

Key Features:
– Type-approved components such as LOP, control lever, display and instruments
– Designed to standards approved by all major classification societies
– Local Operating Panels (LOP) with color displays and advanced functionalities such as clutch and speed control
– Data communication via redundant Ethernet ring bus
More Power.
Less Emission.
MTU Ship Automation Systems

Security, dependability and operational readiness

The modular automation system integrates various self-sufficient subsystems into an intelligent overall structure. It gathers all of the ship’s data and displays it clearly on color monitors.

MTU E-Drive Solutions

Higher performance.
Lower emissions.

For minimum emissions, lower operating costs and maximum ease of use, hybrid systems - such as E-Drive systems - are the preferred solution. Conventional E-Drive systems can be upgraded using optional battery modules, enabling silent, emission-free operations in harbor areas.

Innovative E-Drive solutions

MTU MELT Engineering (mechanical, electrical, logical and thermal system integration) helps manage the complexity of E-Drive systems. We design and supply customer-specific E-Drive systems including fully integrated automation systems based on the proven Series 2000 and Series 4000 marine diesel engines. With MTU MELT engineering, your customized propulsion system is just one step away. While E-Drive propulsion systems require a higher initial investment than standard diesel-mechanical systems, they offer a number of benefits that provide outstanding return on investment.

Example design of an MTU hybrid E-Drive system

1 Genset
2 Switchboard
3 Main diesel engines
4 Power storage
5 Gearboxes
6 Electric motors

Example design of a PSV propulsion system using MTU gensets

1 Gensets
2 Switchboards
3 Electric motors
Emission Reduction Technologies

Working with a clear conscience.

Operating on the water means working in a sensitive environment. Assuming responsibility for protecting the water and air and keeping them clean is second nature to us. MTU has always played a leading role in developing environmentally friendly engines and, in particular, solutions for reducing emissions. Since we have all the relevant key technologies bundled within our company in addition to our core business of building engines, we have been and will always be leaders in this field. MTU engines are an embodiment of the most state-of-the-art technology available.

MTU SCR solution

As installation space is always restricted inside the engine room, the inhouse developed airless SCR (Selective Catalytic Reduction) solution from MTU is compact and maintenance friendly. Besides easily accessible doors for replacement of the SCR catalysts, the system also features an integrated mixing pipe and dosing units. The integrated mixing pipe and DEF (Diesel Exhaust Fluid) dosing gives the shipyard highly flexible pipework options between the engine and the SCR box. The extra space needed for the exhaust gas aftertreatment system is reduced to a bare minimum. Amonia slip is prevented under all operating conditions by a closed loop regulated control system.

To lower life-cycle costs, urea dosing can be switched off when operating outside emission-controlled areas (IMO II mode). As well as reducing emissions, our SCR system also helps achieve lower noise levels.

SCR - the ideal solution for the marine world

When using EGR (Exhaust Gas Recirculation) technology, quality of the fuel is essential. Fuel with more than 15 ppm sulfur will lead to the formation of sulfuric acid in the EGR cooling process. Sulfuric acid will cause substantial engine failures over time. As many vessels operate globally, especially in the offshore service and supply business, MTU evaluates SCR as the preferred solution to maintain reliability of our engines and the safety of your vessel and crew. SCR technology allows lower-quality fuel to be used.

Developing all major key technologies - such as SCR, EGR, turbocharging and common rail fuel injection - inhouse means we can design the ideal solution to meet IMO III and EPA Tier 4 emissions regulations. At MTU, we regard EGR as the ideal solution for applications such as mining or onshore oil & gas installations, and within the marine sector we are convinced that SCR technology offers superior uptime and longer component lives.

Diesel-mechanical propulsion solution or generator set with SCR box

1 Diesel engine
2 Generator
3 Mixing pipe – The integrated mixing pipe allows highly flexible pipework between the engine and the SCR box and saves installation space
4 Dosing units – The two DEF dosing units work airlessly and are built into the SCR box
5 Maintenance doors – The maintenance doors allow easy replacement of the SCR catalyst
6 Cabinet – The cabinet houses the monitoring and control units as well as the DEF pumps
More uptime.
Less stress.
MTU Service

Service solutions designed around your priorities.

ValueCare Agreements wrap around your MTU investment—providing tailored solutions that make it easy to optimize lifecycle costs, maximize uptime and devote more time and resources to your core business.

ValueCare Agreements help you:
- Increase operational uptime
- Guarantee parts availability and service quality
- Predict equipment-related costs
- Optimize maintenance planning
- Connect to MTU, 24/7

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ValueCare Agreements:
- **BRONZE**
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We move you. With reliable power.