



Commercial Marine

We move you.
With reliable power.



Power. Passion. Partnership.



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Powering you to success.

MTU supplies its customers with technically mature, uncompromisingly reliable products that are proven in the field. MTU's range of services for off-highway diesel engines is extensive – from standard to customized solutions.

MTU is the core brand of Rolls-Royce Power Systems AG, which is a world-leading provider of high- and medium-speed diesel and gas engines, complete drive systems, distributed energy systems and fuel injection systems for the most demanding requirements.

The product range of MTU is one of the widest and most modern in the sector. We offer comprehensive, powerful and reliable engine solutions for yachts, commercial ships and naval vessels, construction and industrial vehicles, agricultural machinery, mining, rail and military vehicles as well as for the oil and gas industry. We also provide a full line of service products to help you maximize uptime and performance.

For over 100 years, MTU has been known for cutting-edge innovation and technological leadership. That same spirit of innovation inspires our sustainability efforts. Today and in the future, our focus is on developing and implementing system solutions to maximize efficiency and meet emissions standards.

An important factor of success

If MTU engines symbolize one thing in particular, it's uncompromising reliability. For decades, they have proven themselves in many of the world's toughest applications – in fierce continuous operation under extreme conditions. It is especially in environments that place highest demands on the technology where MTU engines can play off their strengths: robustness, longevity, maximum availability and consequently optimum efficiency. And those qualities significantly determine your success, too.

An expert leader in the field

MTU has always set standards in technological expertise for customized product and system solutions. To deliver you maximum power density, we concentrate our innovation on the continuous advancement of our core competencies: fuel injection, turbo charging, exhaust aftertreatment and electronics.

A passionate engine specialist

We spend every day working together with you, our customers, to deliver engines and systems that best fit your needs. Whether a standard system or a customized solution – we are passionate about the art of engine creation.

A reliable partner

We understand the specific demands for diverse applications. In collaboration with you, we look for the solutions which are best suited to your individual requirements. Every step of the way – from the start of project planning, during the design of your integrated system solution, at the point of delivery and commissioning and continuing through the care of your product – we are there with you for the entire lifecycle.

1 Power

MTU meets even the most demanding propulsion requirements with powerful and reliable engines and propulsion systems.

2 Passion

MTU is passionate about fulfilling the needs of its customers with the utmost professionalism and precision.

3 Partnership

MTU is a reliable and trend-setting partner which acts with foresight in a results-oriented manner.

4 Leader in the field

As a supplier of powerful propulsion solutions that have proved their qualities thousands of times over, MTU stands for the highest level of experience and expertise.

Water is your workplace. MTU is your propulsion.

In us you have a partner at eye level – who is at home on the water just as much as you are. With more than 100 years of experience at sea, we are perfectly acquainted with your applications. We know how harsh the business gets. We comprehend the specific operational requirements. And therefore, we can deliver precisely the products and services you need. We are your ally: qualified, professional and absolutely reliable.

We have a long and intensive history of partnership with commercial shipping. Thousands of our robust, virtually indestructible diesel engines are used all over the world on oceans, seas, and rivers – as main propulsion and onboard power generation. This widespread use is based above all on the tried and tested performance, reliability, long service life and cost-effectiveness of our engines.

Of course, all MTU engines, whether for main propulsion or power supply, meet the requirements of the world's major classification societies.

However, we do not just deliver the perfect “hardware” for various commercial marine applications. Since we have known the workboat market inside out for decades, we know that professional service is one of the key criteria for success. With MTU **ValueCare** we provide you with a diverse portfolio of products and services. Whether by scheduled maintenance, reliable spare part availability or major overhauls – we make sure that your MTU engines run just as you expect them to: powerfully, reliably, efficiently. At any time. All over the world.



Propulsion for Tugs and Pushboats

Your tasks are enormous. We make you strong.

Reliable, punctual operation and the uncompromising availability of your vessels: That's what you demand. We prepare you not only with rock-solid products, but also with preventive maintenance concepts designed for continuous heavy duty service as well as support around the clock

Tugs and pushboats must maneuver extremely powerful and, at the same time, precisely and quickly in all situations. MTU engines help you meet this requirements with broad performance maps, proven common-rail technology and sequential turbocharging.

In order to predict your profit you need to know your operating costs and maintenance effort. With our comprehensive expertise in marine business, we are able to provide reliable LCC analysis as well as custom spare parts and tool programs adapted to your specific needs.

MTU always delivers solutions to meet your needs – tailor-made for the application, tailor-made for you. Our propulsion systems are extremely flexible and able to meet the most specific requirements. Whether you need the auxiliary crankshaft power takeoff to drive fire-fighting pumps, hydraulic pumps or further application-specific equipment, MTU meets those demands.

You have a lot of responsibility. We give you the capability.

No matter how rough conditions are at sea: You have to get out there – and your vessels’ availability must be guaranteed. So what you need are propulsion systems that are 100% reliable, punctual and safe. MTU makes sure they are: with engines braving even the harshest conditions, with preventive maintenance concepts designed for continuous heavy duty service and with comprehensive support around the clock.

MTU delivers customized propulsion and service solutions which satisfy the most specialized and demanding applications:

Fast supply ships

MTU’s propulsion systems for fast supply ships offer unsurpassed power density in terms of power-to-volume ratio and power-to-weight ratio combined with the effortless unfolding of power and bottom end torque

Platform offshore supply vessels

MTU offers diesel-electric propulsion systems and onboard power generation for extremely safe, efficient and environmentally friendly operation. Design of the installation, location in the ship and operating modes are highly flexible. Due to special mounting concepts, vibration and noise can be reduced to a minimum.



- 1 Rolls-Royce UT 771
Equipped with 4x MTU generator sets based on 12V 4000 M23S Ironmen engines.
- 2 Platform Supply Vessel Orion
Equipped with 4x MTU generator sets based on 16V 4000 M33S Ironmen engines.



Propulsion for Offshore Wind Park Crew Boats, Service and Supply Vessels

You are powering the future. We are powering you.

With its longtime and strong commitment to marine sector, MTU has always felt a particular responsibility for the environment – and has lived up to that responsibility in all aspects. That's what makes us the ideal partner for companies active in similar, future-oriented sectors – such as power generation from renewables.

The range of development includes products and services designed specifically to meet the needs of offshore wind farm operators.

Installation and construction vessels for offshore wind parks

These vessels are specialized for the preparation, transport, and installation of all necessary components of an offshore wind park. To satisfy the varying power demands within this application, MTU offers diesel-electric propulsion systems with an excellent load response, high stability as well as maximum reliability and availability.

Maintenance and service vessels for offshore wind parks

In order to provide high maneuverability, good sea keeping ability, and fast transfer, these vessels require classified propulsion systems. The high bollard push capabilities of MTU engines guarantee safe access to wind turbines. Thanks to their lightness, excellent power-to-weight ratio and response, the engines allow Thanks to their lightness as well as their excellent power-to-weight ratio and response, the engines allow the essential fast maneuvering of the vessels.

- 1 Llandudno Bay
Powered by 2x MTU 8V 2000
- 2 Wind Force II
Powered by 2x MTU 10V 2000
- 3 Friedrich Ernestine
Powered by 5x MTU 16V 4000

You have to move incredible amounts. We enable you to succeed.

Your competitive position and economic success depend on reliable and punctual operation. We prepare you with high quality products, preventive maintenance concepts, 24/7 service and as a result, maximum availability.

In order to predict your profit you need to know your operating costs. With our comprehensive expertise in marine business, we are able to provide reliable LCC analysis as well as custom spare parts and tool programs adapted to your specific needs.

Maximizing profit is your goal. Reducing fuel consumption is an important way to achieve that goal. MTU engines are renowned for their fuel efficiency. The sequential turbocharging leads to superior fuel consumption values cross the entire operating range. With an MTU propulsion system you get tried and tested technology that helps your business.

It is essential to be on time to earn money. MTU self explanatory service and simple maintenance work minimizes the risk of delays and downtimes. Our engine design allows basic maintenance on board. MTU training is adapted to your specific needs making you competent to do basic repair on your own.



MTU engines are used in many different types of inland and coastal cargo vessels. Powered by MTU engines they benefit from:

- Low fuel costs
- Low operating costs
- Environmental stewardship



Propulsion for Passenger Vessels and Ferries

You bring people and goods
to their destination safely.
We are on board with you.



The reliable, punctual operation of your fleet is crucial for your success of your business. We prepare you not only with high quality products, but also with preventive maintenance concepts designed for continuous heavy duty service. You can rely on our 24/7 service – and as a result, on the maximum availability of your vessel.

You need to know your operating and maintenance costs to predict your profit. MTU provides you reliable LCC analysis as well as custom spare parts and tool programs adapted to your specific needs. Rely on our specialized expertise in commercial marine business. Our global service network takes care wherever you are.

Photo courtesy of Austal

You have the challenge. We have the propulsion solution.

From fire and rescue boats to research and survey vessels: No matter what specialized task your vessel performs, MTU can provide exactly the right propulsion solution – involving both high quality products and preventive maintenance concepts designed for continuous heavy duty service.

Our decades of experience and individualized systems solutions can meet any challenge, any requirement. We also supply engines that meet the high security requirements for operation in hazardous environments, such as after accidents involving fuels or chemicals. To assure safe gas-protected operation, an anti-gas package is available.

Various PTO options can be implemented to adapt the propulsion system exactly to your application.



1 The outstanding torque developed by MTU engines ensures high-level PTO performance (e.g. for fire-fighting pump) with no reduction in vessel performance.

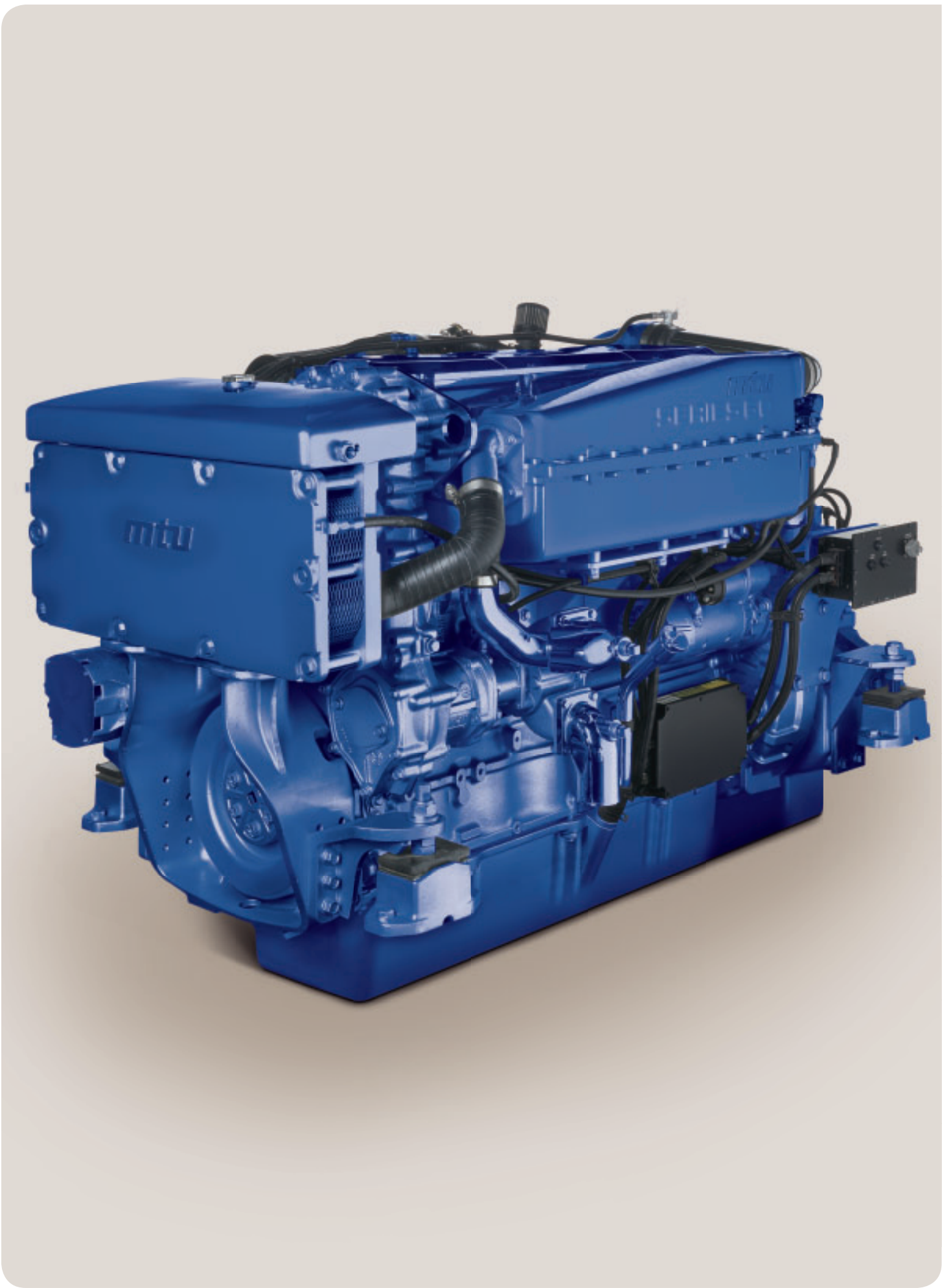
Commercial Marine Propulsion Overview

We move you.
With reliable power.

The more challenging the requirements, the more you need engines you can unconditionally rely on. We partner with our customers to develop the optimum propulsion solutions. Our broad range of real “workhorses” is ideal for meeting even the most demanding needs for power, availability and profitability.



Series 60



Availability

Higher availability translates into maximum service and reliability. A large global population and comprehensive field data enable availability-optimized preventive maintenance plans.

Reliability

Uncompromising reliability maximizes fulfillment of scheduled services, building the base for a reliable business partnership. Large population and comprehensive field data are proof of our outstanding reliability.

Maintainability

Our maintenance-optimized engine offers reduction in maintenance effort. This means reduced labor and higher overall availability of vessel. This saves on cost of ownership.

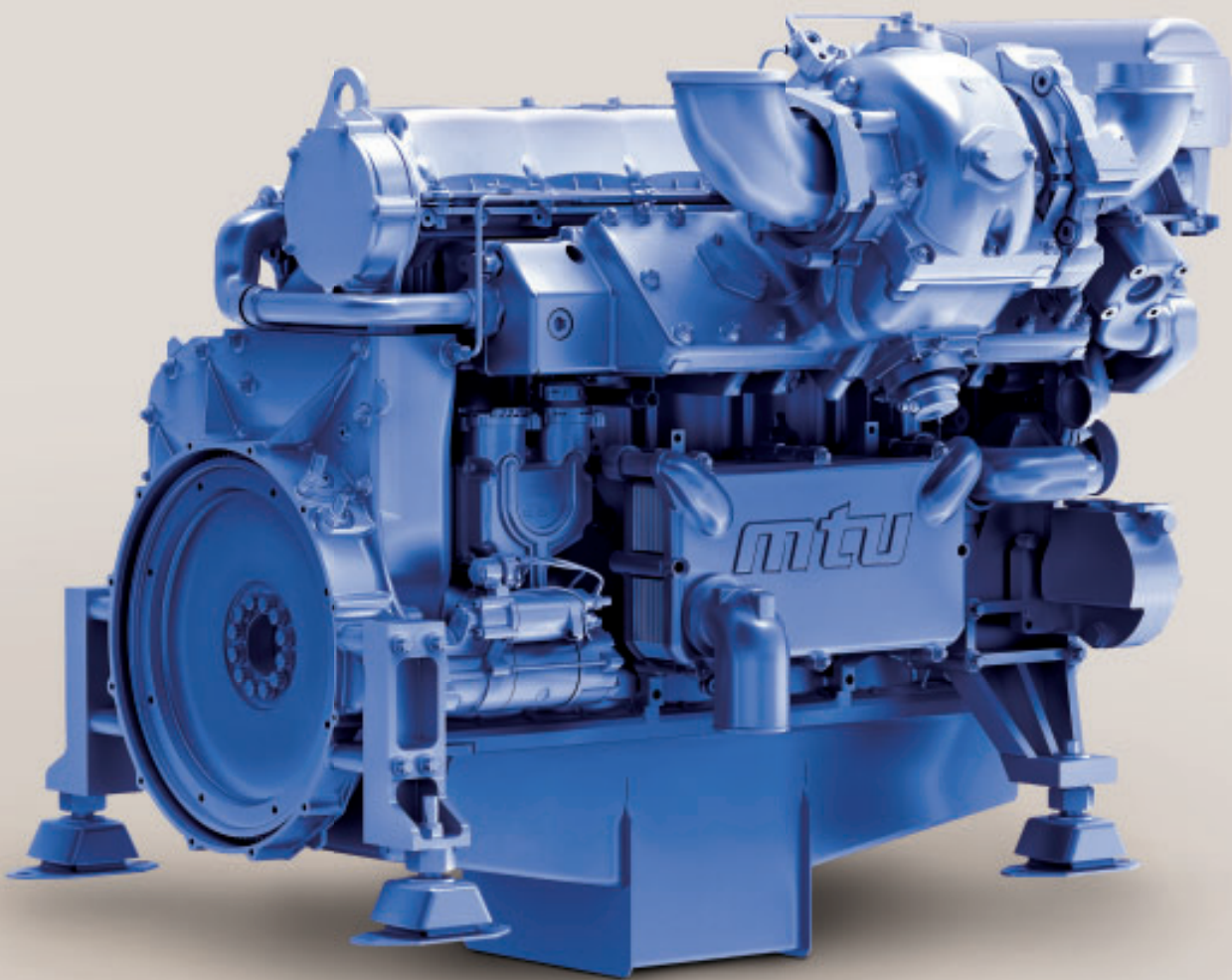
Life Cycle Costs (LCC)

MTU reduces maintenance and repair costs in order to lower cost of ownership throughout the whole lifecycle of the product. Reliable and valid for decades to come.

Engine model		S60 6R
Power output	kW (bhp)	261 – 447 (350 – 600)
Speed	rpm	1800 – 2100
Emissions		All engines comply with emissions regulations in accordance with IMO II and EPA 2

Series 60		for onboard power generation/ diesel-electric drives	
		50 Hz	60 Hz
Power output	kW (bhp)	298 – 354 (400 – 475)	271 – 370 (363 – 496)
Speed	rpm	1500	1800
Emissions		All engines comply with emissions regulations in accordance with IMO	All engines comply with emissions regulations in accordance with IMO II and EPA 2

Series 1600



When your requirement asks for reliability, safety and comfort:
MTU Series 1600 for onboard power generation

- Uncompromising availability and reliability in operation design and type approval, built in accordance to all major classification society rules.
- Designed and built according to the highest SOLAS requirements.
- Engineered to the most challenging noise, vibration and harshness standards.
- Robust design and marine engine high quality appearance.
- Engine controls and monitoring interfaces compatible to propulsion engines and ship automation.

Dedicated marine propulsion and power generation products tailored to the needs of the professional marine industry is our obligation and heritage.

Series 1600		for onboard power generation/ diesel-electric drives	
		50 Hz	60 Hz
Power output	kW (bhp)	269 (361)	323 (433)
Speed	rpm	1500	1800
Emissions		All engines comply with emissions regulations in accordance with IMO II and in part also EPA 3.	



Series 2000

for Vessels with Unrestricted Continuous Operation

Availability

Higher availability translates into maximized fulfillment of scheduled services, building the base for a reliable business partnership. Large population and comprehensive field data enable our availability-optimized preventive maintenance concepts. The insurance for the best feasible availability rate.

Reliability

Uncompromising reliability maximizes fulfillment of scheduled services, building the base for a reliable business partnership. Large population and comprehensive field data are proof of our outstanding reliability.

Maintainability

Our maintainence-optimized engine offers reduction in maintenance effort. This means: reduced man hour requirements and higher overall availability of vessel. This saves on cost of ownership.

Life Cycle Costs (LCC)

Our company reduces maintenance and repair costs in order to maintain benchmark LCC. This saves on cost of ownership throughout the whole lifecycle of the product. Reliable and valid for decades to come.

Engine model		2000
		8V, 12V, 16V
Power output	kW	600 – 800
	(bhp)	(805 – 1070)
Speed	rpm	1500 – 1800
Emissions		All engines comply with emissions regulations in accordance with IMO II and in part also EPA 2, EU III A (including RheinSchUO II) and EU recreational crafts 94/25

Series 2000		for onboard power generation/ diesel-electric drives	
		50 Hz	60 Hz
Power output	kW	322 – 770	400 – 930
	(bhp)	(445 – 1033)	(536 – 1247)
Speed	rpm	1500	1800
Emissions		IMO II	IMO II

Some engines for onboard power generation are also available with interface automation **genoline**



Series 2000

for Fast Vessels with High or Intermittent Load Factors

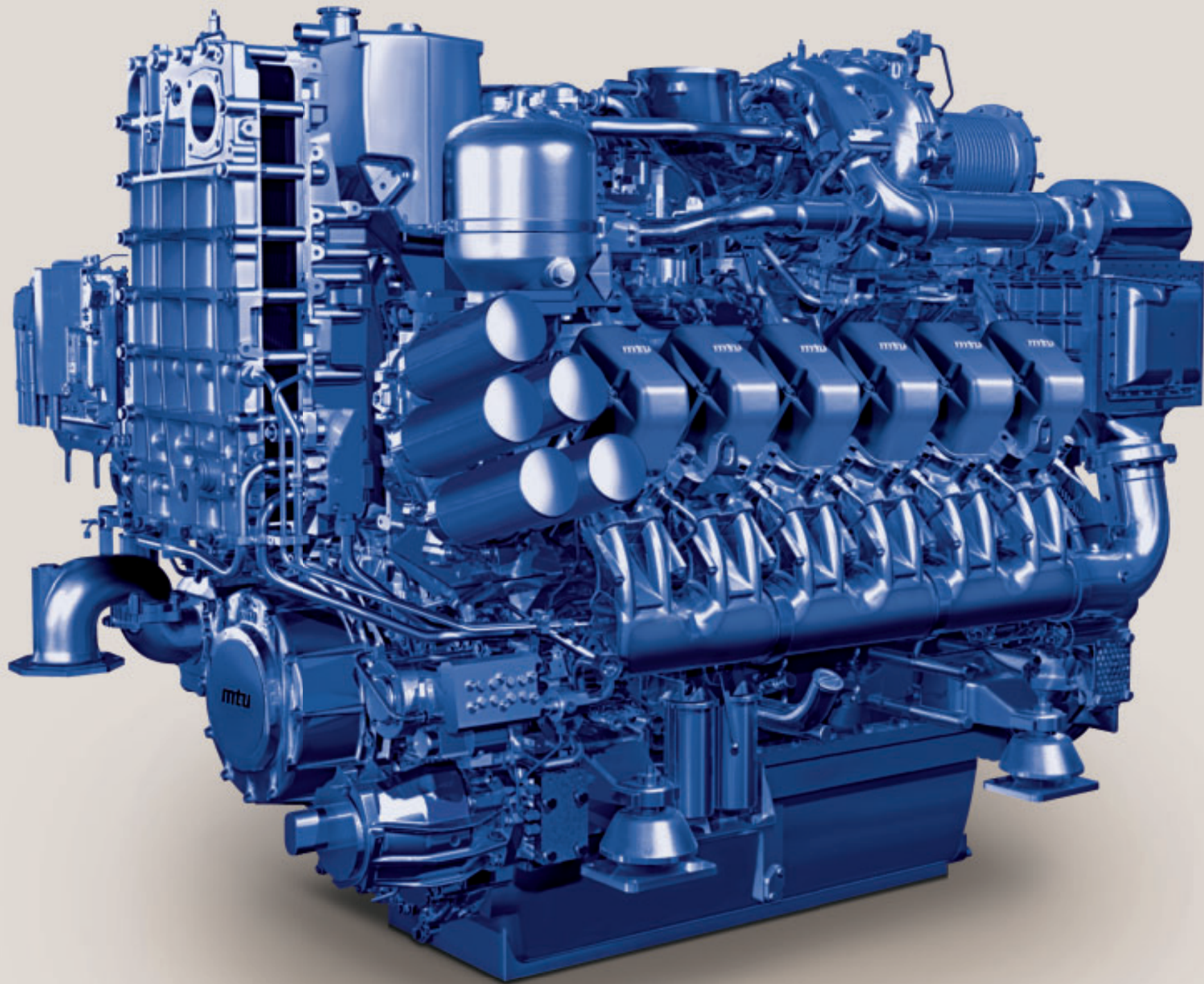
If unmatched performance in terms of speed, agility and safety are in focus,

MTU Series 2000 combines best in class power-to-weight ratio with effortless unfolding of power and and bottom end torque.
MTU Series 2000 combines industry leading safety features with the durability and reliability of one of the most successful marine engines. Design and type approved by major classification societies and SOLAS making the difference of this engine in the marine market. Designated marine design features enable this engine family to fulfill marine requirements not compromising the power-to-weight ratio.

Engine model		2000
		8V, 10V, 12V, 16V
Power output	kW	720 – 1630
	(bhp)	(966 – 2186)
Speed	rpm	1500 – 2450
Emissions		All engines comply with emissions regulations in accordance with IMO II and in part also EPA 2, EU III A (including RheinSchUO II)

Series 2000		for onboard power generation/ diesel-electric drives	
		50 Hz	60 Hz
Power output	kW	322 – 770	400 – 930
	(bhp)	(445 – 1033)	(536 – 1247)
Speed	rpm	1500	1800
Emissions		IMO II	IMO II

Some engines for onboard power generation are also available with interface automation **genoline**



Series 4000

for Vessels with Unrestricted Continuous Operation

Availability
Higher availability translates into maximized fulfillment of scheduled services, building the base for a reliable business partnership. Large population and comprehensive field data enable our availability-optimized preventive maintenance concepts. The ensurance for the best possible availability rate.

Reliability
Uncompromising reliability maximizes fulfillment of scheduled services,building the base for a reliable business partnership. Large population and comprehensive field data are proof of our outstanding reliability.

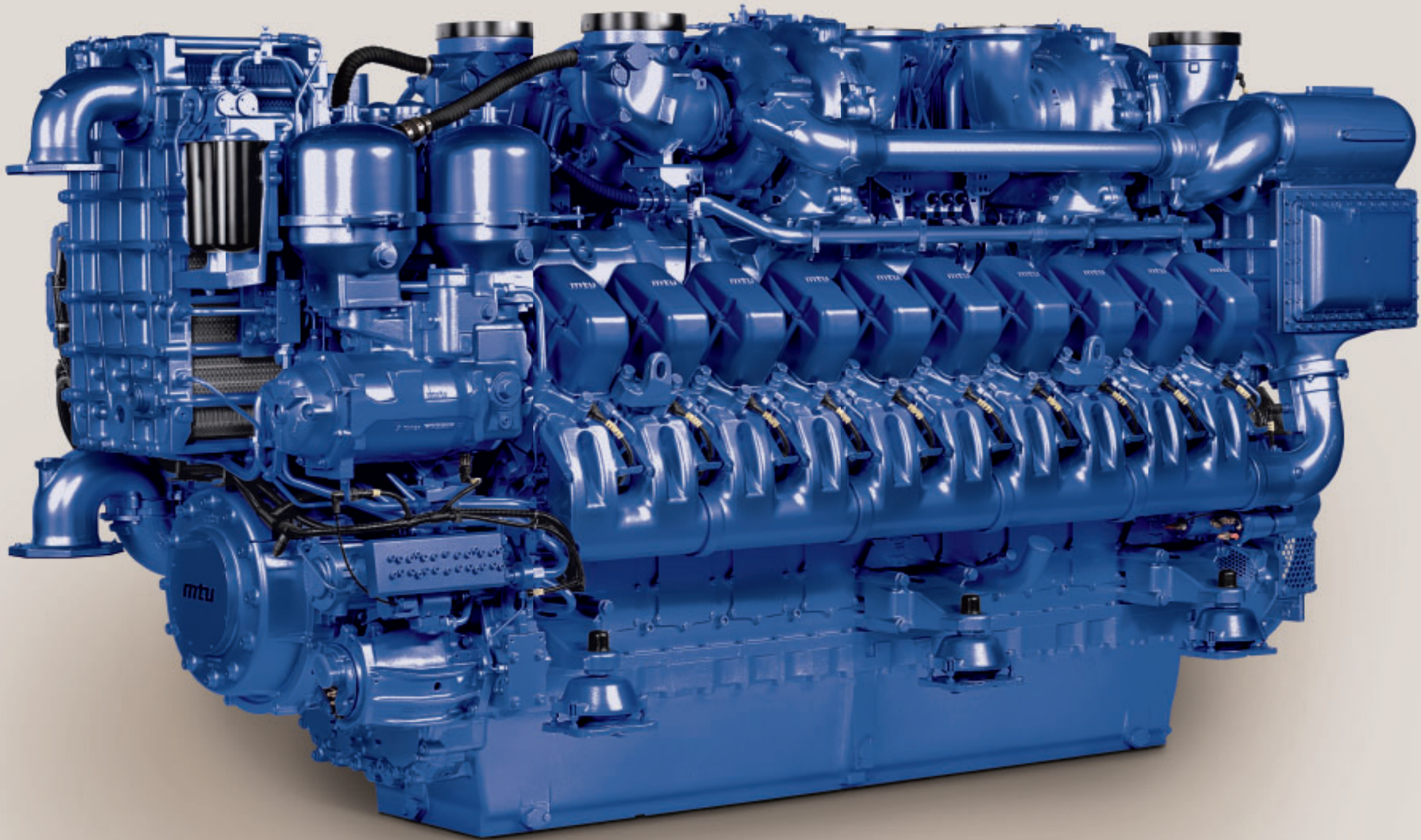
Maintainability
Our maintainence-optimized engine offers reduction in maintenance effort. This means: reduced man hour requirements and higher overall availability of vessel. This saves on cost of ownership.

Life Cycle Costs (LCC)
Our company reduces maintenance and repair costs in order to maintain benchmark LCC. This saves on cost of ownership throughout the whole lifecycle of the product. Reliable and valid for decades to come.

Engine model		Series 4000
		8V, 12V, 16V
Power output	kW	746 – 2240
	(bhp)	(1000 – 3004)
Speed	rpm	1500 – 2100
Emissions		All engines comply with emissions regulations in accordance with IMO II, and in part also EPA 3 and EU III A (including RheinSchUO II)

Series 4000		for onboard power generation/ diesel-electric drives	
		50 Hz	60 Hz
Power output	kW	760 – 1760	920 – 2240
	(bhp)	(1019 – 2360)	(1234 – 3004)
Speed	rpm	1500	1800
Emissions		All engines comply with emissions regulations in accordance with IMO II and in part also EPA 3 and EU III A (including RheinSchUO II)	

Some engines for onboard power generation are also available with interface automation **genoline**



Series 4000

for Fast Vessels with High Load Factors

If endurance, reliability and safety are in focus of MTU Series 4000 ensures:

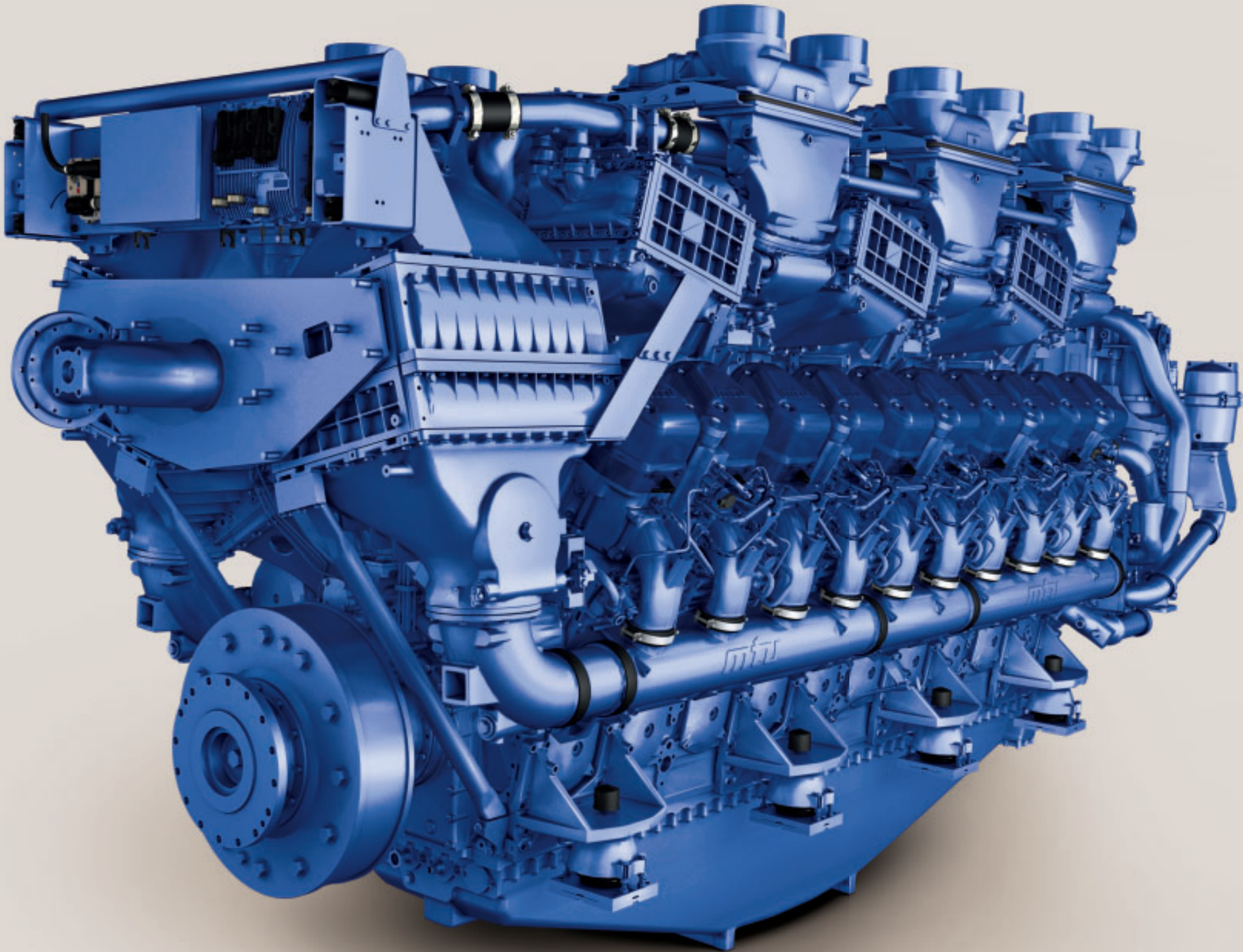
A tailor-made propulsion system solution based on MTU’s expertise in NVH-, noise, vibration, harshness-engineering set standards. References from very demanding applications are valid testimonials and are proof of MTU’s system engineering capability. Unsurpassed power density in terms of volume-to-power ratio and power-to-weight ratio combined with the effortless unfolding of power and bottom end torque due to MTU’s unique sequential turbo charging technology.

Engine model		Series 4000 12V, 16V, 20V
Power output	kW	1920 – 3600
	(bhp)	(2575 – 4828)
Speed	rpm	1970 – 2050
Emissions		All engines comply with emissions regulations in accordance with IMO II, and in part also EPA 2

Series 4000		for onboard power generation/ diesel-electric drives	
		50 Hz	60 Hz
Power output	kW	760 – 2600	920 – 3015
	(bhp)	(1019 – 3487)	(1234 – 4043)
Speed	rpm	1500	1800
Emissions		All engines comply with emissions regulations in accordance with IMO II and in part also EPA 3 and EU III A (including RheinSchUO II)	

Some engines for onboard power generation are also available with interface automation **genoline**

Series 1163

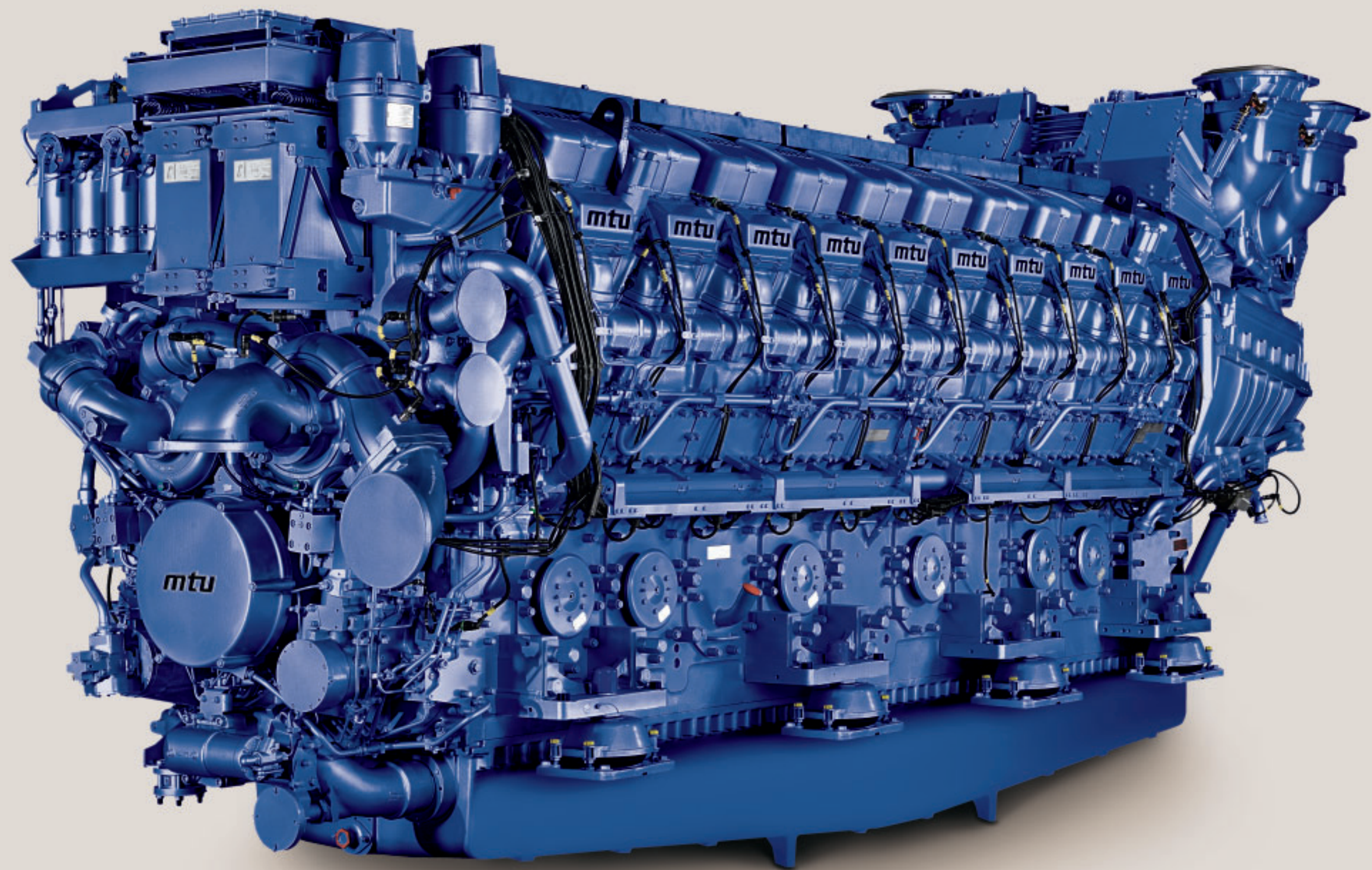


The proven and mature engine for the marine industry.

MTU Series 1163 combines industry leading safety features with the durability and reliability of the global market leader of high performance marine engines. Unique tailor-made propulsion system solutions based on MTU's expertise in NVH-, noise, vibration, harshness-engineering set standards. References from very demanding applications are valid testimonials and proof of MTU's system engineering capability. Individual customer-specific services for decades to come are the attributes provided to the marine industry.

Engine model		1163 12V, 16V, 20V
Power output	kW	3600 – 6500
	(bhp)	(4828 – 8715)
Speed	rpm	1200 – 1250
Emissions		All engines comply with emissions regulations in accordance with IMO II

Series 8000



MTU Series 8000 is dedicated for the marine industry with leading safety features, durability and reliability in its class. Unrivalled operational flexibility whether idling or sailing at full speed, the Series 8000 will deliver – without question.

Unique tailor-made propulsion system solutions based on MTU’s expertise in NVH-, noise, vibration, harshness-engineering set standards. References from very demanding applications are valid testimonials and proof of MTU’s system engineering capability.

Individual customer-specific services for decades to come are the attributes provided to the marine industry.

Engine model		8000 20V
Power output	kW	7200 – 9100
	(bhp)	(9655 – 12205)
Speed	rpm	1150
Emissions		All engines comply with emissions regulations in accordance with IMO II and EPA 2

Systems Solutions

You define it. We realize it.

For us, being your partner means: We do not just work for you first and foremost, we work together with you. From the very beginning onwards, we are at your side. Together, we define the mission, the objective, the requirements. And together, we develop the solution which is customized for you: From an individually tailored propulsion system to a perfectly fitting after-sales package. The basis for this is having all core competencies bundled within our company as well as benefitting from decades of practical experience. From system engineering to implementation, from operation and maintenance to major overhaul of your MTU propulsion: Trust MTU as your powerful and reliable partner.

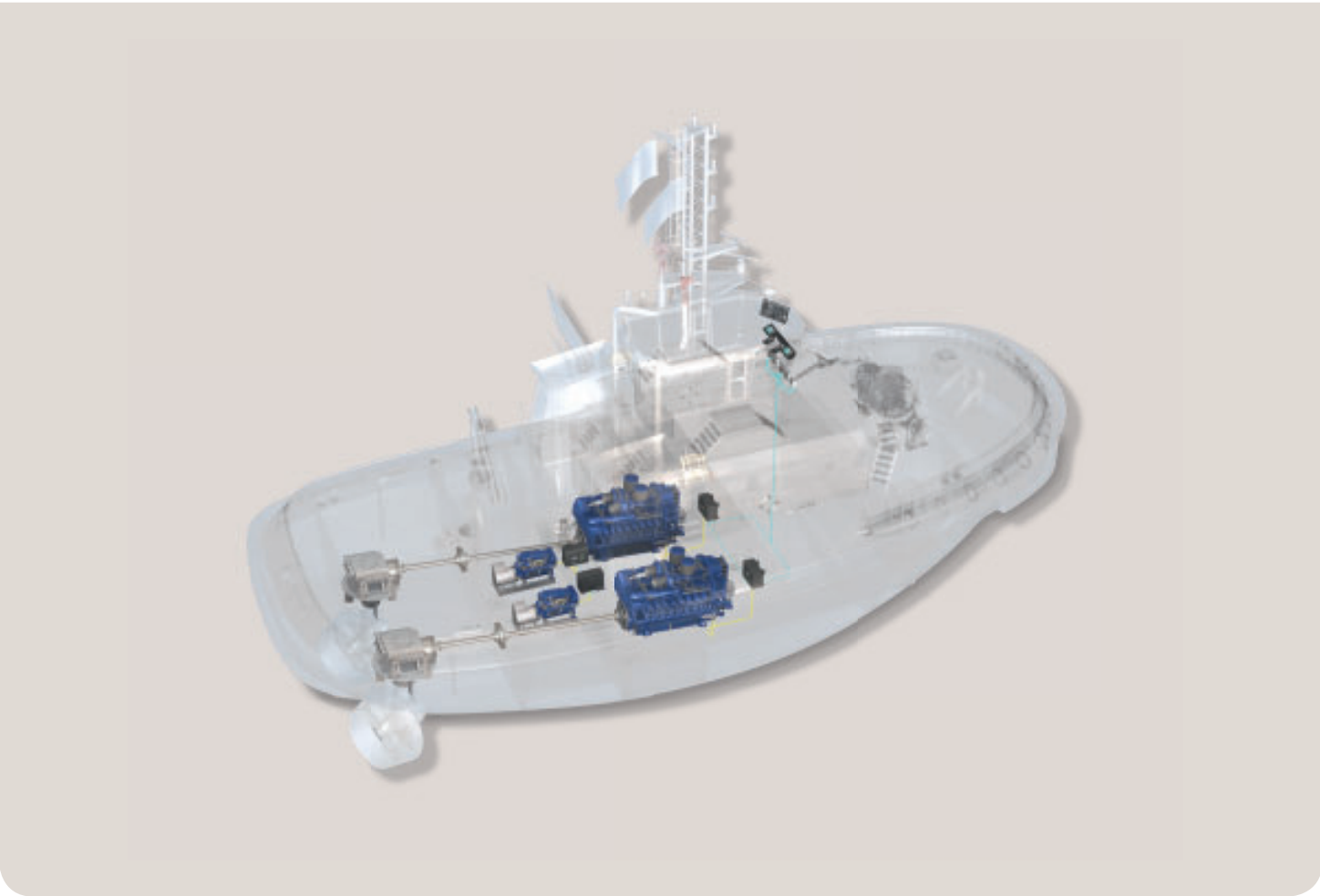


Diesel-mechanic propulsion systems

MTU delivers diesel-mechanical drive propulsion systems – comprised of an engine, coupling, and transmission – packaged as a complete series system. The diesel engine’s power is either applied directly to the ship’s propeller or through a transmission.

The system can also be upgraded to included other drive components, such as the shafting and a propulsor, if so desired. Whether waterjet, fixed pitch propeller, controllable pitch propeller, Voith Schneider, or any other type of propulsor – MTU has the expertise to integrate it into the complete system in the optimal way.

Two diesel engines directly power two rudder propellers – either fixed pitch propellers (FPP) or controllable pitch propellers (CPP). The engines are monitored by the automation system. In addition to the main engines, onboard power is also supplied by the gensets.



In addition, MTU offers matching accessories, such as:

- Fuel treatment plant
- Coolant pre-heater
- Lube oil priming pump
- Exhaust muffler

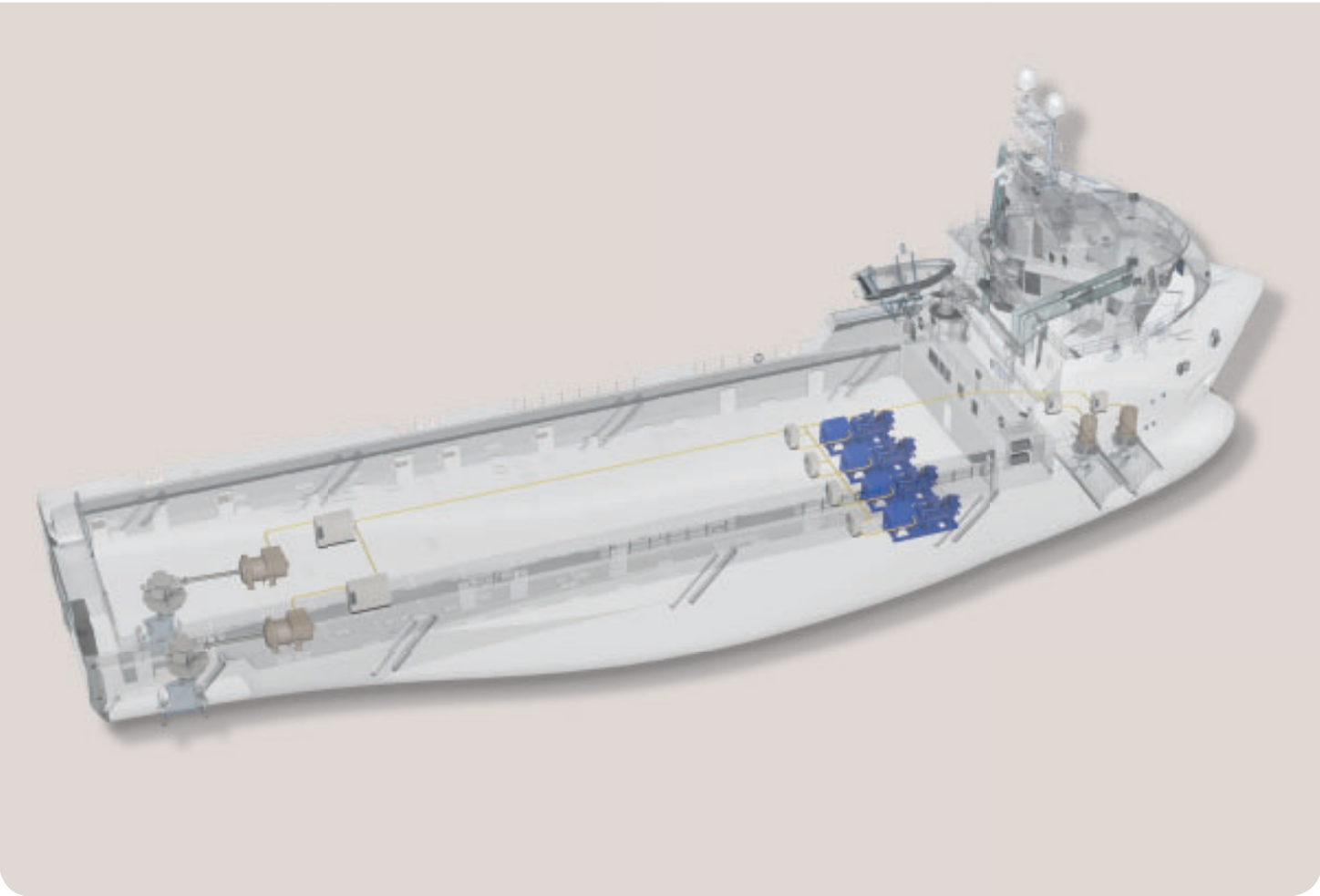
Diesel-electric propulsion systems

In addition to diesel-mechanical propulsion, MTU offers gensets for diesel-electric propulsion systems and onboard power generation based on Series 60, Series 2000 and Series 4000 engines. In this case, the mechanical energy produced by the diesel engine is converted into electricity using a generator, and then transmitted to the ship’s propellers – with a range of benefits:

- Highly fuel-efficient
- Lower emissions
- High operating safety through the use of multiple gensets, in most cases

- The design of the installation, its placement on the ship and its operating modes are all highly flexible
- Low life-cycle-costs
- Compact design
- Reduced vibrations during operation through double-elastic mounted systems
- Reduced noise during operation through the use of high-quality insulating capsules

Four marine diesel generator sets provide electrical power to the electrical-driven propellers and to the onboard power supply. The marine generator sets are monitored by the automation system.



Combined Propulsion Systems

In some cases, combined systems with several diesel engines or hybrid propulsion systems are the preferred propulsion systems for commercial vessels. With our long-time expertise, we engineer the propulsion systems for your specific application. All the components – engines, gas turbines, gearboxes, automation and accessories – come from one source and are combined into an integrated complete system.

Four diesel engines power two controllable pitch propellers (CPP) via four main gearboxes (two for each side). Adapted to each operation mode, the vessel can always be operated in the most economic way – either with two or four engines.

The propulsion system is controlled by the automation and control system. In addition to the main engines, onboard power is also supplied by the gensets.



Reducing noises. Raising comfort.

Squaring the circle

The reduction of sounds and vibrations that are inevitably caused by engines, pumps, and propellers in operation is something that is requested for different reasons. On the one hand, certain special ships require the sound which is propagated into the water to be reduced to a bare minimum. On the other hand, everyone wants to have the least amount of stress possible while working on board, including stress caused by noise.

With well-engineered concepts for noise reduction on board, MTU has a number of possibilities at its disposal to fulfill both the desire for more power and the need for optimum comfort. Running at over 2000 rpm, MTU engines are perfectly suited for implementing noise-reducing measures. For this purpose, we offer both standard systems as well as complex customized solutions.

Standard mounting concepts

Significant noise reduction can be achieved with our standard mounting systems. Generally speaking, all MTU marine engines are elastically mounted. Here are some typical configurations:

- Flange mounted gearbox, resilient mounts
- Freestanding gearbox; rigid or resilient
- Suitable coupling systems

Customized mounting concepts

For higher acoustic demands, MTU offers complex systems that are customized for the respective vessel in order to fit the needs of the owner. Our proven systems make use of state-of-the-art technologies, utilize special concepts, and incorporate acoustic improvements:

- With the **double elastic mounting system**, the soundproof engine sits elastically on a frame that is also elastic-mounted. This leads to significantly less structure-borne noise being passed into the ship's structure as is the case with single elastic mounts.
- **The innovative active mounting system** combines and complements proven high-quality conventional mounting technologies with special active elements derived from the automobile and aerospace industries. The active element contains the actuators and sensors required for noise reduction. The adjustment and control electronics which are optimized accordingly works on a stand-alone basis that is set up separately.
- Integrating the entire engine into a **sound-reducing capsule** also reduces airborne noise.



Photo courtesy of Wasser- und Schifffahrtsamt Stralsund



Gas-Protected Operation

Built-in safety.

Security - in all circumstances

In order to maintain a high level of safety in dangerous, explosive environments, some engines in the 396, 4000, and 8000 series can be equipped for gas protection around flammable or explosive gasses. Engines are equipped with a safety package that meets with the related operational conditions.

The following demands are thus satisfied:

- Prevention of retro-ignition in the atmosphere (engine is not to function as an ignition source).
- Controlled diesel-engine operation when drawing in high-energy gasses (protection for the engine to avoid overspeed).
- Approval by Germanischer Lloyd (GL).

An engine management system includes the control units for the engine speed regulation, register loading, starting automatic, gas-protected operation including an engine safety stop system that responds if any of the following criteria are present:

- Engine overspeed and engine speed gradient
- Engine oil-pressure too low
- Engine coolant temperature too high
- Engine coolant pressure too low
- Controller failure
- Impermissible operation in gas-protected mode

The following additional shipside measures are to be carried out:

- Exhaust cooling with temperature monitoring
- Exhaust silencer with spark arrestor
- Keel cooling system for engine-coolant
- Flame-retarder in the air-intake ducting
- Sealed engine-room citadel

Emissions Reduction Technologies

Working with a clear conscience.

MTU – a leader in assuming responsibility

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 space. MTU engines are an embodiment of the most state-of-the-art technology available. Running at above 2000 rpm, they are, in comparison to engines with lower rpm ranges, generally more environmentally friendly and emit less nitrogen oxides. The greenest engines are high-speed engines – and so it is logical that MTU engines comply with all current emission regulations.

Optimizing the combined package

In addition to low emission diesel engines, MTU offers customized exhaust after treatment systems such as:

- Diesel particle filters (DPF) with active or passive regeneration
- Selective catalytic reduction (SCR) units
- Combined DPF+SCR



MTU Workboat Automation Systems

Automatically more reliability.

As your systems partner, MTU not only provides you with the perfect workboat engine, but also an automation system which is exactly suited to it. Our systems automatically monitor and control the reliable and efficient operation of your propulsion system in every case, so that you can concentrate on the real important thing: performing your tasks.



Simply perfect: MTU workboat automation systems.



Standard systems – customized to workboats.

MTU standard automation systems are delivered ready-made to be installed in your vessel, meaning they are perfectly matched to your MTU propulsion system. So you get a complete package where everything is just right: not only powerful engine performance, but also maximum efficiency, uncompromising reliability and environmental compatibility.

Following the motto “as comprehensive as necessary, as simple as possible”, the new system **BlueVision | NewGeneration** makes workboat automation more convenient than ever before: easy to customize, easy to integrate, easy to operate.

BlueVision | NewGeneration is available both in the straightforward non-classifiable version **BlueVision_Basic | NewGeneration** and in the expanded classifiable version **BlueVision_Advanved | NewGeneration** – meeting different requirements according to boat design and customer budgets. The modular system design allows a flexible configuration; intelligent data bus technology ensures reliable data exchange and reduces cable efforts. Optimized interfaces between the propulsion and automation systems result in ideal all-round solutions that guarantee you security, efficiency and reliability.

With **BlueVision | NewGeneration** MTU offers you a complete and convenient system solution individually optimized for your ship, as well as comprehensive service – all from one source.

Thanks to “plug & play”, the system is as easily installed as it is operated. Simple interfaces connect the Monitoring & Control System **BlueVision | NewGeneration** with the MTU diesel engine (via EIM) and the gearbox.

All components are type-approved und type-examination tested in shake / vibration / stress tests. **BlueVision | NewGeneration** now already contains the proven ZF autotroll for the control of ZF gearboxes with trolling function.

Customer Benefits
BlueVision_Basic | NewGeneration and **BlueVision_Advanved | NewGeneration** are automation systems for propulsion plants especially in workboats with MTU Series 2000 or 4000 engines.

- BlueVision | NewGeneration** offers the following benefits:
- High operational availability and reliability of the propulsion plant
 - High flexibility thanks to modular system structure and open architecture
 - Simple, classifiable system in line with current directives
 - Quicker and easier commissioning via structured user dialogue
 - Type-tested components
 - Development in accordance with current standards
 - Optimized operation and visualization of the propulsion plant
 - Uniform spare part concept across all MTU Series
 - Global sales and service network
 - Self-learning “Improved Crash-Stop” in order to stop the ship as quickly as possible



- System features:**
- Monitoring of the propulsion plant on commanding control stands and locally (engine, gearbox, as well as propulsion-specific periphery)
 - Control of the propulsion plant on commanding control stands and locally (engine and gearbox)
 - 1 – 4 shafts
 - 1 – 6 commanding control stands
 - Fixed pitch propeller
 - Interface for remote control systems from external manufacturers
 - Classifiable
 - ZF autotroll inside

Entry at high level.

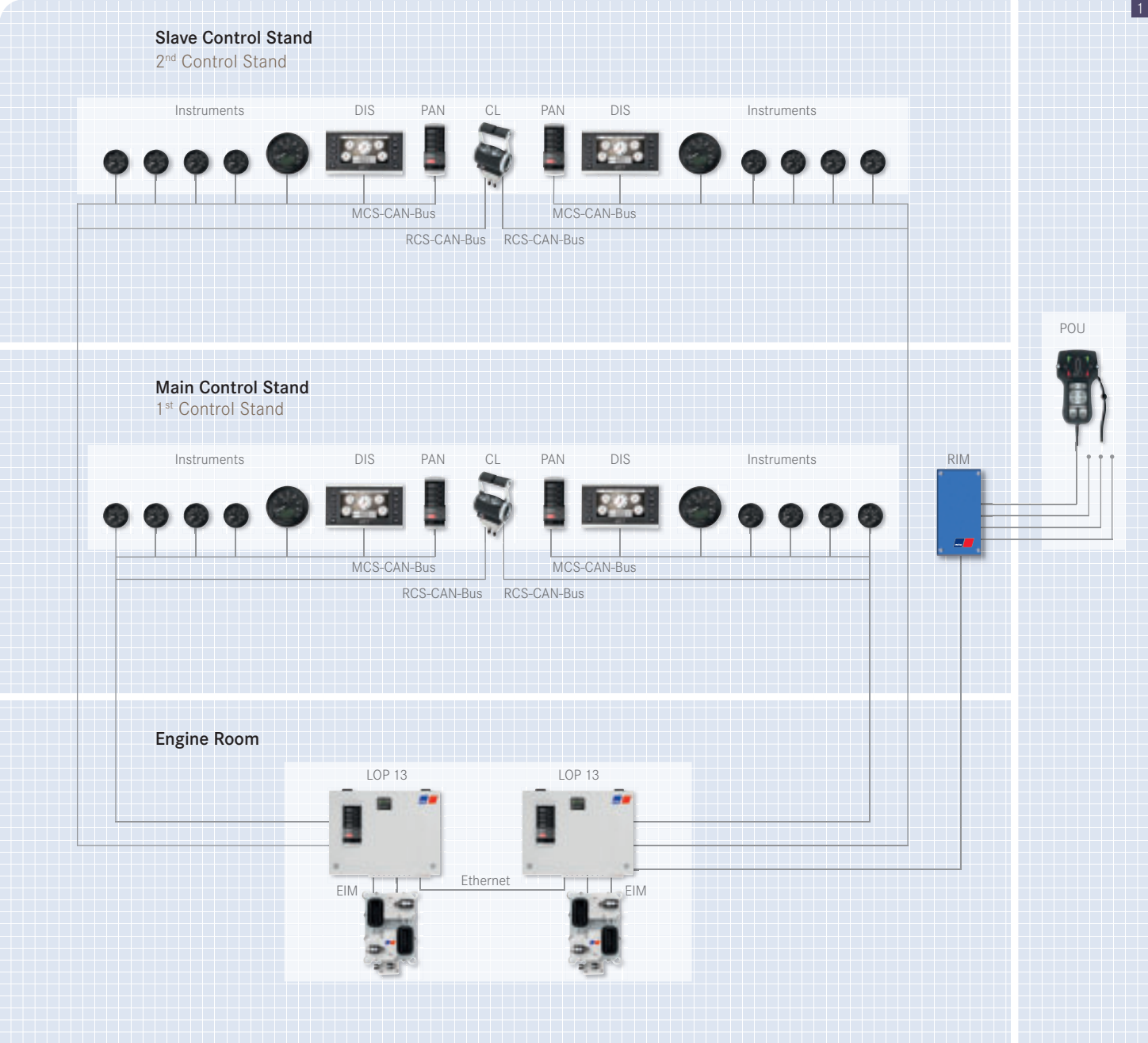
BlueVision_Basic | NewGeneration is an MTU “non-classifiable” monitoring and propulsion remote control system for MTU Series 2000 and 4000 engines. It incorporates a deliberately simple design and provides a complete basic functionality. The system is available at particularly favorable conditions and quick to install.

An elementary feature of BlueVision_Basic | NewGeneration is its hardware compactness. As the central system component, the Local Operational Panel (LOP) integrates all basic functions available in this version, simplifying installation, operation and maintenance significantly.

This version is delivered with the Color Graphic Display Basic DIS as standard. Besides a dashboard page, the Basic DIS also offers an overview of all relevant measured values as well as an alarm page.

The scope of supply also includes a Portable Operator Unit, enabling the captain to control the ship from up to 4 selected connection points (e.g. for berthing from the stern if the view from the bridge is limited).

- Key features:**
- Compact hardware for easy installation and commissioning
 - Local Operating Panels (LOP) with basic functionality like 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 LOP via CAN bus
 - Integrated ZF autotroll function for ZF gearboxes



- 1 Typical scope of supply for BlueVision_Basic | NewGeneration
- 2 Operating Panel (PAN) Control Lever (CL)
- 3 Display Basic (DIS)



Demanding more. Getting more.

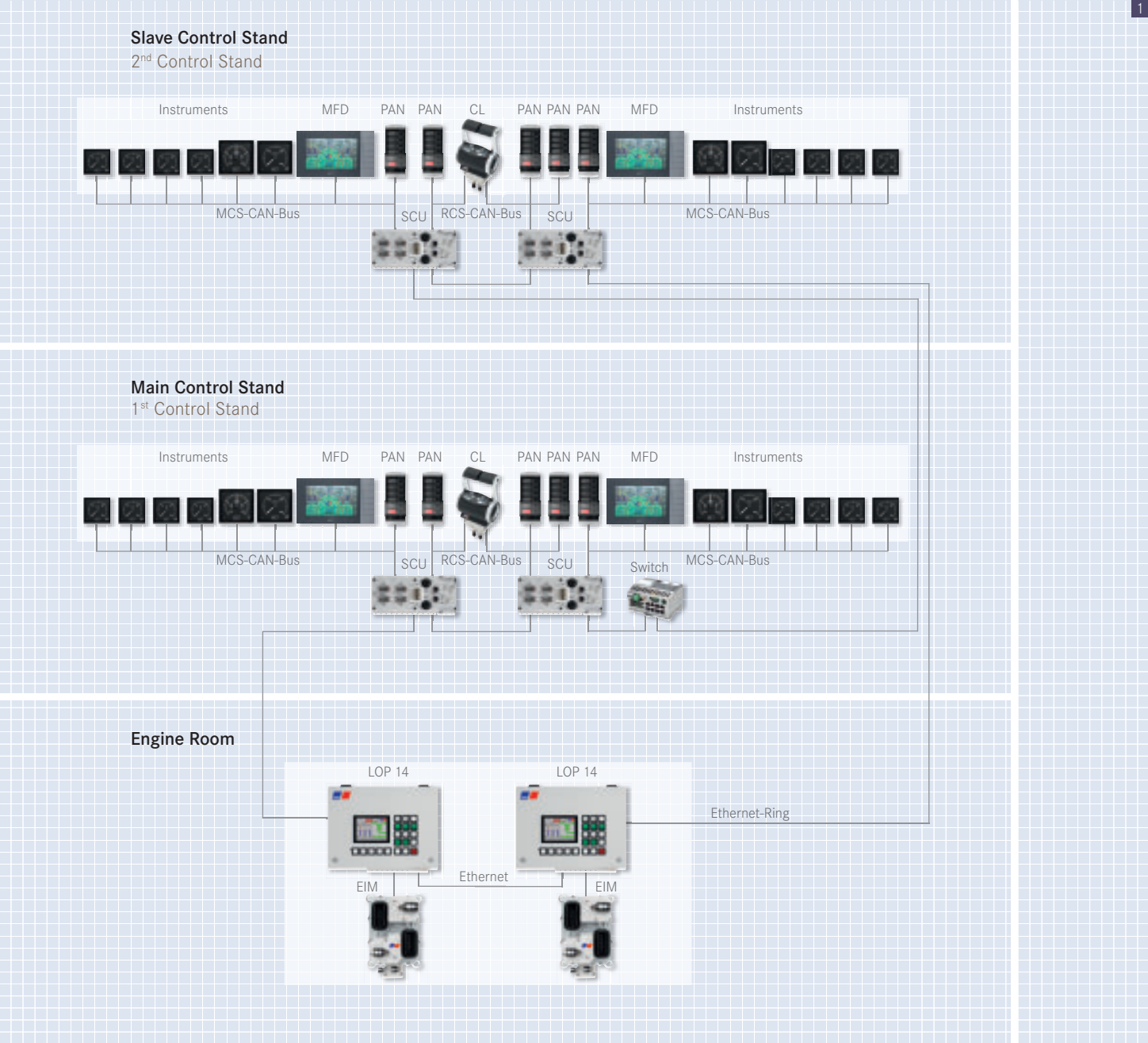
BlueVision_Advanced | NewGeneration is an MTU “classifiable” monitoring and remote control system for workboats, offering a comprehensive standard automation system solution. It is available for MTU Series 2000 and 4000 engines.

An elementary feature of BlueVision_Advanced | NewGeneration is the system bus. The data transmission between the LOP and the commanding control stands is carried out via a redundant Ethernet based field bus. This ensures an absolutely secure communication on the one hand and highest flexibility of the overall system – also with regard to future upgrading – on the other.

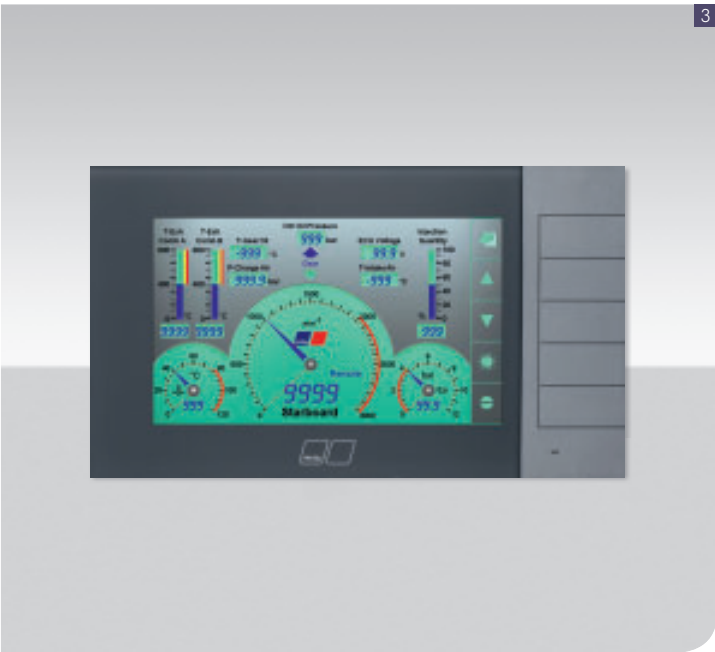
This version is delivered with the Color Graphic Display MFD as standard, which has been optimized for the operation in classifiable ships. Besides various dashboard pages, the MFD also offers the possibility to show all of the propulsion system’s relevant measured values. All active alarms are comprehensively displayed on a separate page.

BlueVision_Advanced | NewGeneration is a classifiable system in line with major classification societies.

- Key features:**
- Type-approved components, such as LOP, control lever, display and instruments
 - Designed according to all major classification societies
 - Local Operating Panels (LOP) with color display and advanced functionalities like clutch and speed control
 - Data communication via redundant Ethernet ring bus
 - Integrated ZF autotroll function for ZF gearboxes



- 1 Typical scope of supply for BlueVision_Advanced | NewGeneration
- 2 Operating Panel (PAN) Control Lever (CL)
- 3 Multi Function Display (MFD)



MTU **ValueCare**

Keep going.

We have a strong commitment to our commercial marine customers. With MTU **ValueCare**, this focus extends beyond the sale of our engines and systems. From maintenance to spare parts to remanufactured engines, MTU offers a full range of support to help you keep going.

Designed for maximum performance, uptime and value, MTU **ValueCare** is a diverse portfolio of products and services that can help you get the most from your equipment.

MTU **ValueCare** includes three product lines:

– **ValueService:**

Extensive global service and support to help you protect your investment

– **ValueSpares:**

Genuine spare parts and top-quality consumables designed specifically for MTU engines and systems

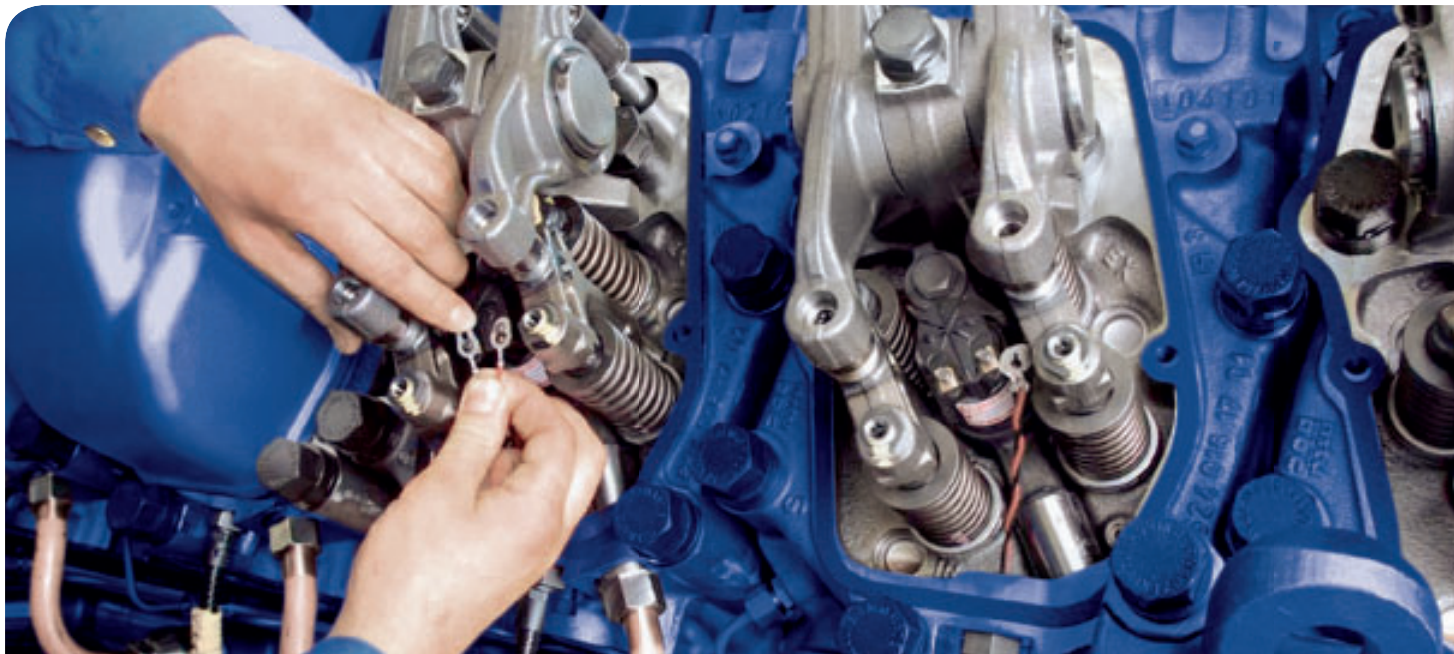
– **ValueExchange:**

Remanufactured engines, systems and service parts engineered with the same high-quality standards as new products

MTU **ValueCare** products and services are available anywhere in the world through our extensive network of authorized distributors and service dealers. For more information, please contact your local MTU service center or visit www.mtu-online.com.

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ValueService and **ValueSpares**

Full support. For full performance.

Engines and systems are put to the test on the open waters. Reliability and top performance are essential throughout the engine's or system's lifecycle. Through **ValueService** and **ValueSpares**, MTU provides comprehensive support, customized to meet your unique needs, to protect the value and productivity of your vessel or fleet for years to come.

Professional maintenance plans, designed to your needs.

Customized Care – professional maintenance solutions from MTU – makes it easy to plan the cost of maintenance throughout your engine's lifecycle. The details, terms and periods of each package are precisely tailored to match your individual needs, ensuring cost certainty and maximum availability. Professional maintenance is performed by MTU certified technicians, using only genuine MTU new or remanufactured spare parts.

Coverage tailored to your unique requirements.

Extended Coverage delivers peace of mind by providing coverage of unexpected repairs beyond your standard warranty – tailored specifically to meet your needs. During the extended coverage period, the cost of materials and labor are covered. Repairs with troubleshooting and fault clearance, provision of required components and replacement of failed components are included. To ensure quality, all repairs are conducted by knowledgeable MTU professionals.

Expert assistance. For longer engine life..

Annual Check is a yearly professional inspection of your MTU engines and systems by MTU experts, allowing you to identify and address problems early. It ensures effective preventive maintenance, helping you save on repairs or unexpected downtime, optimizing your engine's performance and longevity. The MTU service technicians inspect the maintenance condition and determine whether any additional maintenance or repairs are required. The process includes visual engine inspection; test run and leak check; on-site engine oil and coolant analysis; and diagnostic evaluation and reporting.

Monitor your engines activity, no matter where it is.

Save valuable service time and make informed operational decisions quickly with Remote Services. This powerful diagnostic solution displays a record of your MTU engines and systems activity in near real-time or at predetermined intervals through a secure Internet connection. Important engine data such as oil temperature, current location and operating hours can be conveniently retrieved for analysis – even from thousands of miles away .

Know your engines and systems, inside and out.

From timely preventative maintenance to efficient diagnostics and repair, our training programs are designed to make your service personnel proficient with MTU engines and systems. We offer a wide range of customized training programs to maximize your return on investment. MTU Training Centers, located around the world, are equipped with engines, sub-assemblies and electronics systems for a hands-on learning experience.

Genuine parts and consumables. For maximum performance.

To keep your equipment running at optimum efficiency, choose from a full line of **ValueSpares** genuine parts and consumables, including filters, oil and coolant. They're designed, tested and approved specifically for MTU engines and systems. Only MTU can guarantee genuine quality, with parts and consumables that are designed to work seamlessly with your product. Superior design and top-quality materials result in maximum power, torque, longevity and low total-cost of operation.



ValueExchange

Rebuilt to last.

Whether replacing a single component or an entire engine, quality is essential. **ValueExchange** provides a full range of genuine remanufactured MTU products, engineered to ensure robust, reliable performance. Choose from remanufactured parts or engines and systems that utilize genuine new and remanufactured MTU parts. A rigorous reconditioning process ensures the same high standards of performance, service life and quality as new products – including design and model-related updates. As a result, genuine **ValueExchange** products feature technological advancements similar to new products – with identical warranty coverage.

The **ValueExchange** process is designed to save you time and money, while benefiting the environment through the reuse of existing materials. To help you work more efficiently, **ValueExchange** products are readily available. And for your convenience, they're offered worldwide from our MTU service network.

Remanufactured parts

When you choose **ValueExchange** parts for your engine service, you get genuine MTU quality, speed and peace of mind while lowering costs. Thanks to precise remanufacturing and inspection processes, genuine **ValueExchange** parts share the same high standards of performance, service life and quality as new parts.

Remanufactured engines and systems

ValueExchange engines and systems can put your equipment back to work faster compared to an individual overhaul, and they're less expensive than purchasing new products – since your “cores” still have value. The process is simple. Rather than waiting for your original product to complete an overhaul, you are supplied with a remanufactured unit – with a core credit upon receipt of your usable core. With our no-hassle core acceptance policy, we provide the total costs to replace your product upfront – preventing unplanned costs. It's that simple.



Local support. Worldwide.

The reliability and performance of your engines and systems are crucial for your success and competitiveness. We are committed to your support. Our convenient global service network provides you this assurance.

Whenever and wherever you need expert support, MTU specialists are available. This continuous and long-term care ensures high availability, dependability and efficiency throughout the lifecycle of your engines and systems.

To find your local MTU distributor, visit www.mtu-online.com.



Local support. Worldwide.
We ensure that you receive individualized support from our global network of more than 1,200 service centers – anywhere, anytime.

- Global Headquarters
- Regional Headquarters
- Sales and Customer Service Center

MTU quality is something you can measure – and feel.

We are uncompromising when it comes to quality. True to our corporate philosophy of total quality management, we assure the quality of our products throughout the entire process of development and production. Every one of our staff is responsible in this respect – and thinks and acts accordingly.



Certified quality

Tognum with its core company MTU Friedrichshafen GmbH satisfies the international requirements of ISO 9001:2008 and 14001:2009. We conduct acceptance testing, including type tests, according to the rules and regulations of all the relevant classification bodies (e.g. ABS, BV, CCS, DNV, GL, JG, KRS, LR, NKK, RINA). All MTU electronics products bear the CE mark.

Quality you can feel

To us, quality is measured by more than just a certificate. We measure it by the degree of our customers' satisfaction, and by the number of years they continue to place their trust in us. Quality of that kind cannot be achieved with average objectives. You rightly expect everything of us – and we offer you even more. More reliability, more innovation, more specialization, more safety. If you share these aspirations, then together we will achieve a lot: a quality partnership.

