



Commercial Marine

Ferry engines from MTU.
All aboard for
first-class performance.



Power. Passion. Partnership.

Series 4000

Every season is Ironmen season in Cape Cod.



We've been very pleased with the operation, maintenance and support of our MTU Series 4000 over the past eleven years.

Our latest ferry has been running for over seven months now without a single lost trip due to propulsion related issues.

Carl Walker, Director of Engineering and Maintenance, Steamship Authority



MTU Series 4000 engines occupy a strong position in the ferry market.

They have been proving their mettle, even under the toughest conditions, for 20 years already. It is their reliability, durability and efficiency that are sought and highly prized by operators like

the Steamship Authority, the largest ferry service from Cape Cod to the Islands of Martha's Vineyard and Nantucket. The company has purchased ten MTU Series 4000 engines in little more than a decade. Its newest ferry, the "M/V Woods Hole", is also powered by MTU. Two Ironmen engines make it one of the (perhaps *the*) most dependable and cleanest ferries in Cape Cod: the vessel was the first one with EPA Tier 3 certification to operate in Nantucket and Vineyard Sound.

Series 4000 for conventional ferries:

- Established, proven technology
- Exceptionally long TBO for minimum vessel downtime
- Low fuel consumption for low lifecycle costs

Series 4000 for fast ferries:

- Established, proven technology
- Market-leading power-to-weight ratio in its power segment
- High performance with outstanding fuel efficiency



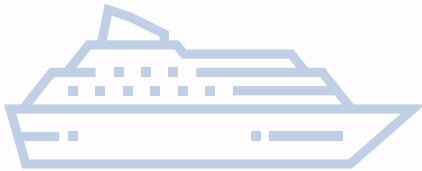
Destination: Success.

Worldwide, over two billion passengers travelled by ferry in 2016 – almost as many as by air. A great number of ferry operators choose to rely on MTU engines. This comes as no surprise: after all, we've been designing and building high-performance marine engines for over 100 years now. We know exactly what conventional and fast ferry operators need, and work constantly to ensure our product range is always up to speed with their requirements.

Whether our engines are destined for new vessels straight off the drawing board, or for important refits, as a premium partner to the marine industry we help shipbuilders and operators find the right propulsion systems. Drawing on the full span of our knowledge, we devise made-to-measure engineering solutions and make expert recommendations – as early as the design stage for new-build and refit projects. Our engines are the perfect starting point – relatively low-weight, extremely powerful and far more compact than their competitors.

Common rail injection and sequential turbocharging offer outstanding performance at all points along the power range – these key technologies are developed and perfected by our in-house specialists for many years and are what make our engines so economical. For example our new Series 1163 uses up to 8% less fuel than their predecessors, giving you the benefit of lower operating expenses and significantly reduced costs over the entire lifecycle – as well as being on the right side of current emissions requirements. All in the interests of clean, efficient ferry services.

Ferries powered by MTU leave shipyards on every continent destined for service all over the world – plying routes on the Mediterranean and the English Channel, connecting remote Scandinavian islands and moving people around major cities: MTU technology helps people get to their destinations more quickly, more reliably, and with maximum comfort thanks to a combination of different technologies which dampen engine noise and make the ferry much quieter overall. Whenever you want to cast off, we – and our engines – are ready for action.



2 bn passengers

Series 2000

Flexible ferry service, Norwegian-style.

» *These engines are awesome;
I trust them absolutely.* «

Jan Marcussen, Technical Officer of the "MS Teisten"

Ferries that need to be fast, maneuverable and yet economical in their fuel consumption are often fitted with MTU Series 2000 engines.

These units offer the best performance in their power class and can be configured to suit the performance profile of any ferry – including the "MS Teisten" which plies the Norwegian coast. Its CODAD propulsion system using four MTU Series 2000 engines not only makes the vessel one of the fastest ferries around (35 knots/ approx. 65 kph), but also extremely flexible.

Series 2000 for ferries:

- Exceptionally compact and lightweight, with high power output
- Optimized for heavy load factors, giving high durability
- Wide range of engine configurations



Always right on schedule.

Reliability starts with complete lifecycle solutions.

Heavy traffic on the water, adverse weather conditions, medical emergencies or vehicles wedged in on the car deck: departures can be delayed for many reasons. All the more reason to be able to rely on your engines. Our Series 2000, 4000, 1163 and 8000 engines are solidly-built, long-life workhorses and a great starting point for any propulsion solution. The second port of call is our wide range of Complete Lifecycle Solutions. Delivered under the banner of MTU ValueCare, our made-to-measure products, services and solutions are tailored to your business operations. They often take the form of Extended Coverage beyond the standard warranty, Long-Term Service Agreements and even engine Reman and Rebuild Solutions.

MTU ValueCare. For your peace of mind.

Modern-day marine diesel engines depend on advanced technologies to meet today's high performance and environmental standards. As a result, they require more attention than engines from some decades ago. But the outcome is that they are extremely powerful, more fuel-efficient, more reliable and kinder to the environment – a fair trade-off. And they are designed to run trouble-free from the outset, even under extremely tough conditions. With local support from our global network of authorized distributors and service partners, you'll always have MTU-certified technicians on hand to help you avoid costly downtime. Plus our Extended Coverage options beyond the standard warranty deliver additional peace of mind and financial security long after the purchase date – up to six years with no “ifs” or “buts”. Long-term Service Agreements make it easy to plan the cost of maintenance and maximize availability throughout your MTU equipment's lifecycle.



360° lifecycle support

Your ticket to better performance – MTU ValueCare.

MTU ValueCare strikes the perfect balance between improved performance, extended equipment life and optimized maintenance costs. Working alongside you, we'll tailor our Complete Lifecycle Solutions to help you get the very best from your fleet operations, leaving you free to focus on other areas requiring attention.

*"We know our engines are winners, and we're happy to put our money where our mouth is: With MTU's **Extended Coverage** options beyond the standard warranty you can be assured, for a full six years, that costs are predictive and service and repairs performed by MTU-certified technicians."*

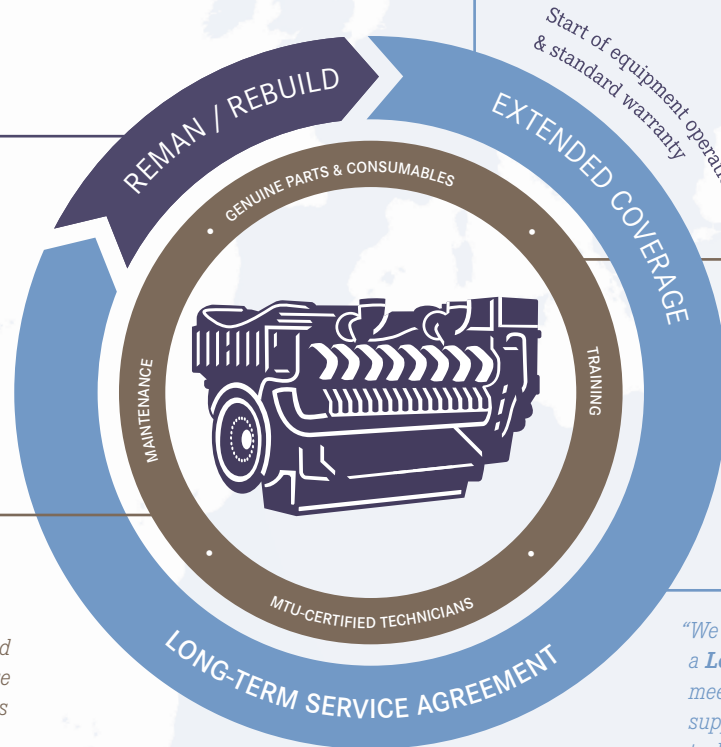
Phil Kordic, Manager Commercial Marine Sales,
MTU Friedrichshafen

*"MTU's **Reman** program is the perfect solution for us. MTU sends us a remanufactured engine, we remove the old one and install the as-new reman engine."*

Sean Collins, CEO, Thames Clippers

*"Bintan Resort Ferries Pte Ltd and MTU enjoy an excellent partnership in home-base **Maintenance** and service support. We work hand-in-hand on repairs and preventive maintenance to ensure the operational effectiveness and efficiency of the BRF Fleet."*

Raymond Kan Yew Fai, Senior Manager
Operations and DPA, Bintan Resort Ferries



*"MTU provides good quality of work – it's very easy to get **Spare Parts** and extremely convenient for ferry operators."*

See Ngiap Seng, Chief Engineer,
Bintan Resort Ferries

*"We worked closely with MTU to compose a **Long-Term Service Agreement** which meets our needs, effectively giving us 24/7 support. If necessary, the MTU distributors' technicians work through the night to keep the vessel running."*

Francis Portelli, Managing Director, Virtu Ferries

Series 8000

Malta to Sicily in just 90 minutes.



The reliable engine and the excellent service that MTU has in place in Malta enable us to operate the vessel very efficiently. Not a single trip has had to be cancelled since the first day of operation over six years ago.

Francis Portelli, Managing Director, Virtu Ferries



Our Series 8000 engines are the largest we make, and their 9,100 kW output also makes them the most powerful in the MTU line-up.

Four of these engines power the “Jean de la Valette”, one of the largest passenger ferries in the Mediterranean. By powering up to 39 knots (72 kph), this high-speed catamaran was even able to out-run pirates who tried to board it, when it entered the Red Sea through Bab El Mandeb during its delivery trip from Australia. Today, it takes passengers from Malta to Italy in record time – reliably and on schedule, thanks

to an all-round MTU maintenance agreement. In 2016, Virtu Ferries ordered a new 110 m vessel at Incat and again chose to rely on MTU Series 8000 engines.

Series 8000 for ferries:

- Best power-to-weight ratio in its power segment
- Intelligent Power Unit concept to expedite maintenance events and minimize downtime
- Up to 72,000 operating hours between major overhauls



Plain sailing in the fast lane.



1

USA | "The CAT", Bay Ferries Limited
Portland, Maine (USA) - Yarmouth (Nova Scotia)
4x MTU Series 8000 @ 8,200 kW each

The vessel has undergone an extensive refit, including new engines. Passengers can now make the journey in about half the time taken by its predecessor.



2

Germany | New vessel, Stadtwerke Konstanz
Constance - Meersburg
2x MTU Series 4000 LNG Gas Engine @ 746 kW each
From 2019, a new high-speed MTU pure gas engine will power the Lake Constance commuter ferry, making the new vessel one of the first of its kind in Europe.



3

USA | "Salacia", Boston Harbor Cruises
Boston - Provincetown (Cape Cod)
4x MTU Series 4000 @ 1,455 kW each
The vessel is the largest and fastest catamaran of its kind in the US - and the first EPA Tier 3 certified emissions level vessel operating in Boston harbor.



4

Republic of Malta | "Jean de la Valette", Virtu Ferries
Valetta - Sicily
4x Series 8000 @ 9,100 kW each

A comprehensive service agreement including regular preventive maintenance performed on the MTU engines ensures a reliable, on-time ferry service.



5

Singapore | Fleet of four vessels,
Bintan Resort Ferries
Singapore - Bintan
4x MTU Series 2000 @ 1,440kW each
Not one cancelled ferry trip in the past 16 years, thanks to reliable MTU engines and a maintenance agreement.



6

Hong Kong | "Jin Zhu Hu", Guangzhou Liushan
Port Passenger Transport Co. Ltd under Chu Kong
Shipping Enterprises Co., Ltd (CKS) Hong Kong
2x MTU Series 2000 @ 1,440kW each
CKS is operating more than 20 catamarans and trusts in the engines reliability and high performance.



7

Sultanate of Oman | "Shinas" and "Hormuz"
National Ferries Co., Shinas - Khasab
4x MTU Series 1163 @ 6,500 kW each

The vessel's high operating speed (up to 103.5 kph) is made possible by MTU engines, enabling it to hold the record as the world's fastest ferry for many years.



8

Spain | "Benchijigua Express", Fred Olsen S.A.
Various routes between the Canary Islands
4x MTU Series 8000 @ 9,100 kW each
127 meters long, with space for 1,350 passengers and 400 cars: this trimaran relies on its MTU engines to provide the necessary propulsion.



9

Norway | "MS Kistefjel", Boreal Sjø
Tromsø - Finnsnes - Harstad
2x MTU Series 2000 @ 1,080 kW each
Boreal Sjø operates more than 30 MTU Series 2000 engines in their fast ferry fleet.

Series 1163

Great performance with lower fuel consumption.



For us, it's all about engine reliability and performance. The 1163 allows us to be very flexible and reduce fuel consumption. Also, in more than 30 years with MTU, we've never had problems with parts availability.

Antonio Scotto, Technical Director, SNAV



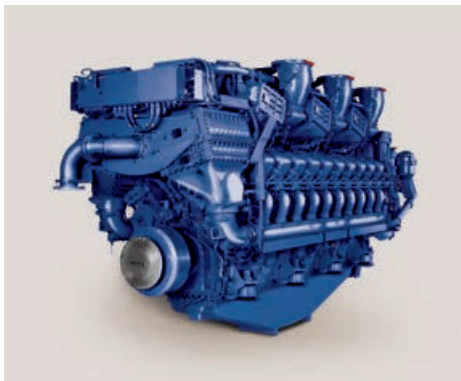
For over 40 years, operators have been turning to the MTU Series 1163 engine wherever ferries are called upon to be especially maneuverable, fast, and easy on the environment.

Included in their number is Italian operator Società Navigazione Alta Velocità (SNAV) which runs ferry services in the Mediterranean and is a long-standing MTU customer. It recently replaced two engines on its high-speed catamaran, the "Don Francesco", with

MTU Series 1163s. Their sequential turbo-charging technology gives them fast acceleration and superb maneuverability as well as lower fuel consumption.

Series 1163 for ferries:

- Mature product, perfected over more than 40 years
- Best power-to-weight ratio on the market
- New-generation engine offering improved fuel efficiency and IMO Tier II compliance



MTU Friedrichshafen GmbH | MTU Asia Pte Ltd | MTU America Inc.
Part of the Rolls-Royce Group

www.mtu-online.com/marine