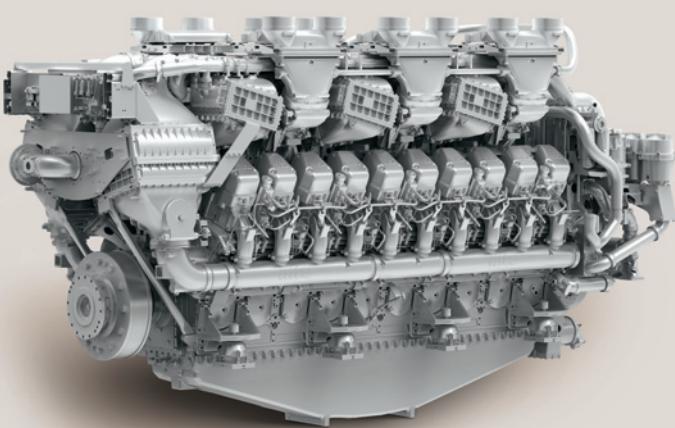


# Next Generation MTU Series 1163.

MATURE.  
TOUGH.  
UNRIValed.



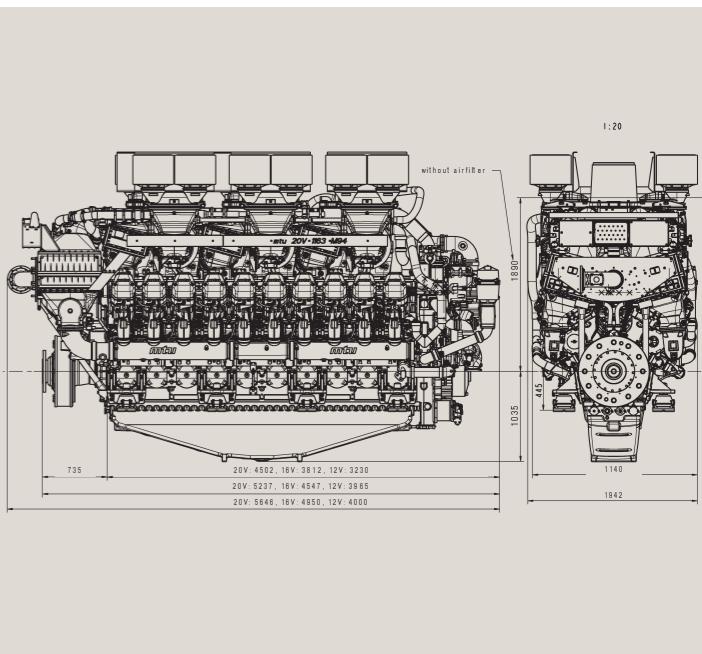
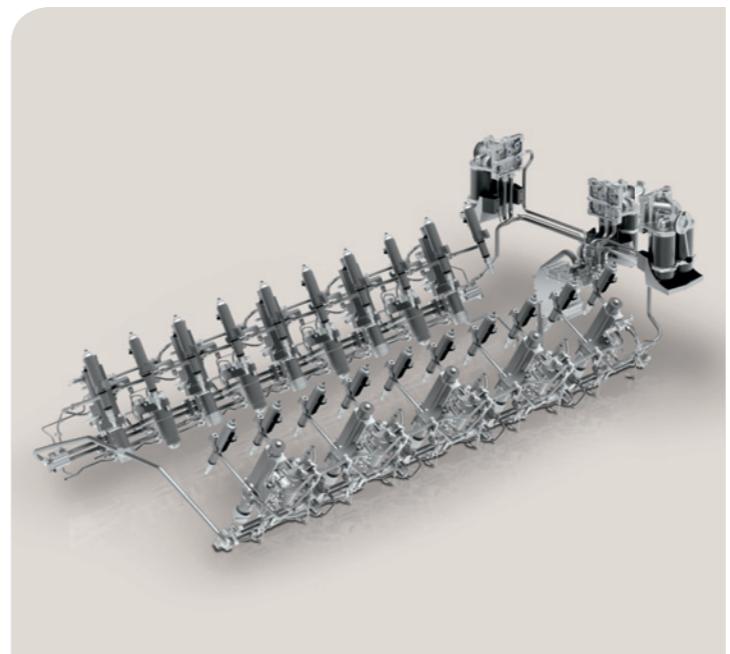
Series 1163



*Power. Passion. Partnership.*

# Next Generation MTU Series 1163: Compatible with all your missions.

The next generation of MTU Series 1163 – reliable, proven and trusted for more than 30 years – is based on the latest engine technology. Setting yet another benchmark, this new engine offers the maximum power-to-weight ratio, power density and acceleration performance. It comes with IMO II certification, including reduced fuel consumption, and is even ready for IMO III.



## The next generation MTU Series 1163 – your advantages

It's future-proof system solutions you are looking for - and we are your reliable partner offering them. By developing the next generation MTU Series 1163, we fulfill our commitment of providing you with state-of-the-art technology for your benefit. Our engines impress by improved product properties, especially with regard to the fuel injection and combustion system.

The 16V and 20V versions are scheduled for availability by mid 2013, with the 12V version following in early 2014.

## Footprint

Living up to its best-in-class reputation, the new Series 1163 is based on the existing footprint of its predecessor with regard to dimensions and major mechanical interfaces. Being interchangeable enables integration into your existing ship designs without the need for significant rearrangement of the propulsion system. Modularly configurable to commercial and military qualifications, the engine is available custom-made for your applications.

## Efficiency

The re-powering of your vessels with an MTU Series 1163 engine offers a cost-effective way of preserving and improving your fleet. At the same time, life-cycle costs can be cut down thanks to the reduction of fuel consumption and the engine's readiness for future emission demands.

## Naval Qualification

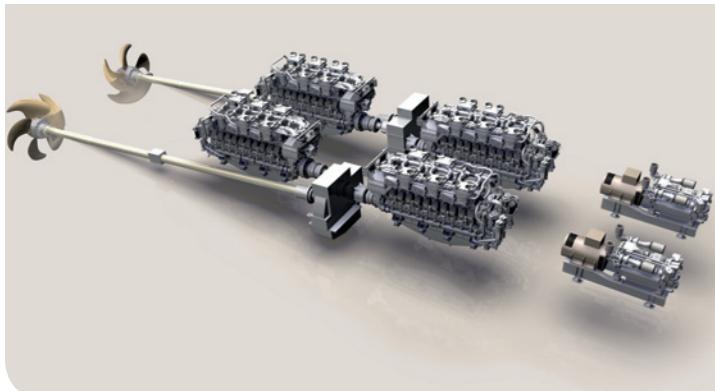
Worldwide naval and governmental customers rely on the state-of-the-art technology that we have especially developed for their applications in order to fulfill all the specific qualifications such as shock, acoustic and electro-magnetic compatibility (EMC).

## Technology

Precision common rail injection systems are the key to optimizing the essential engine performance. By precisely matching the injected fuel to the required power, the fuel consumption at partial and full load as well as the partial-load behavior can be optimized. Exhaust emissions, especially soot and particulate matter, can be reduced.

The MTU Series 1163 operates with a Miller Combustion Cycle, which is characterized by the early closing of intake valves. The consequential gas expansion and temperature reduction prior to the compression phase leads to a reduction of the combustion temperature, which has a positive effect on the NOx emission enabling you to comply with IMO II exhaust emission legislation.

In addition to low emission diesel engines optimized by engine-internal measures, MTU offers customized exhaust aftertreatment, such as selective catalytic reduction (SCR) units, to meet IMO III requirements. This results in less NOx emissions and enables unlimited access to emission controlled areas (ECA).



## System solutions

Combined systems involving diesel engines and/or gas turbines are now the propulsion solution of choice for corvettes and frigates. As a system supplier, we can configure the best possible complete propulsion system for your needs – whether CODOG, CODAG or CODAD.

All the components – engines, gas turbines and gearboxes including auxiliary power units and automation – come from one source and are combined into an integrated complete system.

## Next Generation MTU Series 1163 – Technical Data

No. of cylinders	12V	16V	20V	
<b>Rated power ICFN</b>				
S1163M74	kW (bhp)	3,600 (4,828)	4,800 (6,437)	6,000 (8,046)
S1163M84	kW (bhp)	3,900 (5,230)	5,200 (6,973)	6,500 (8,717)
S1163M94	kW (bhp)	4,440 (5,954)	5,920 (7,939)	7,400 (9,923)
<b>Speed</b>				
S1163M74	rpm	1,250 <sup>-50</sup>	1,250 <sup>-50</sup>	1,250 <sup>-50</sup>
S1163M84	rpm	1,280 <sup>-50</sup>	1,280 <sup>-50</sup>	1,280 <sup>-50</sup>
S1163M94	rpm	1,325 <sup>-50</sup>	1,325 <sup>-50</sup>	1,325 <sup>-50</sup>
<b>Dimensions and Masses</b>				
Length (L)	mm (in)	4,000	4,950	5,646
Width (W)	mm (in)	1,942	1,942	1,942
Height (H)	mm (in)	2,925	2,925	2,925
Mass, dry	kg (lbs)	16,490 (36,353)	20,560 (45,336)	24,480 (53,980)
<b>Bore / Stroke</b>				
	mm (in)	230/280 (9.1/11.0)	230/280 (9.1/11.0)	230/280 (9.1/11.0)
<b>Displacement, total</b>				
	l (cu in)	139.6 (8,519)	186.1 (11,357)	232.7 (14,200)
<b>Optimization of exhaust emissions<sup>1)</sup></b>				
		IMO II	IMO II	IMO II

<sup>1)</sup> IMO – International Maritime Organization (MARPOL)

## Mounting systems

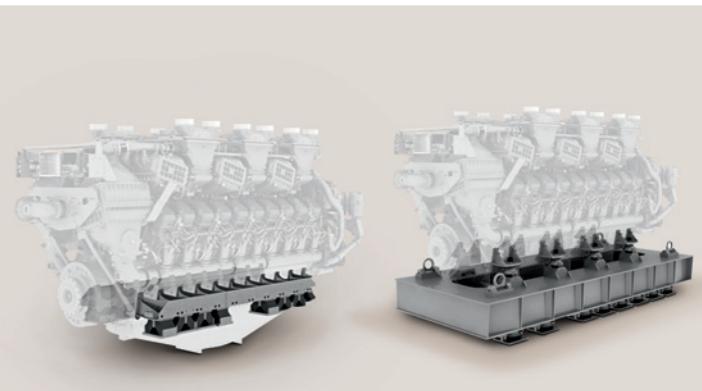
Significant noise reduction can be achieved with various custom-optimized mounting systems.

### 1 Single Resilient Mounting System

With this mounting system, even the most demanding shock requirements can be fulfilled achieving even better structure-borne noise levels.

### 2 Double Resilient Mounting System

The engine is resiliently mounted on a frame, which is itself resiliently mounted on the ship foundation. This leads to significantly less structure-borne noise being passed into the ship's structure.



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