



MAN Engines – new MAN D3872 engine series with significantly more displacement for workboats

Munich, 15/12/2023

- **30 litre displacement for medium and heavy-duty applications**
- **1,650 hp (1,213 kW) at 2,100 rpm**
- **Field test in passenger ship begins**
- **Future-proof for EU Stage V, hybrid system and suitable for HVO**

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MAN Engines is expanding its existing engine portfolio for workboats with the new MAN D3872 engine series. This newly developed V12 engine for commercial applications brings its power from a displacement of 30 liters for the first time. "MAN engines have always stood for a low power-to-weight ratio. With the MAN D3872, we offer an even better solution for demanding applications with more power and larger displacement," says Reiner Roessner, Head of Sales at MAN Engines.

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The MAN D3872 is currently undergoing field trials and achieves an output of 1,650 hp (1,213 kW) at 2,100 rpm in the LE432 variant for medium-duty applications. MAN is thus significantly expanding its portfolio compared to the MAN D2862 with 24.2 litres and 1,450 hp (1,098 kW). Wind farm supply vessels (WSV), ferries and passenger ships, or fishing boats with up to 3,000 hours of operation per year and a full-load share of up to 50 percent benefit from the high level of smoothness, fuel efficiency and reliability that are customary at MAN.

The MAN D3872 is based on a completely new basic engine that benefits from the findings of the established MAN D2862 V12 engine series. Werner Kübler, Head of Engineering at MAN Engines, emphasizes: "MAN engines stand for robustness. For this reason, numerous measures have been taken to ensure durability, reliability and future viability for the MAN D3872."

Significant changes were implemented, including an increase in the wall thicknesses of the crankcase, optimized bolting and a new crankshaft with larger bearing diameters. In addition to the positive results from extensive test bench tests, further tests are currently being carried out on the water in customer applications with classified engines, for example in a remotorization project of a passenger ferry. In addition, the development of the new

MAN Truck & Bus is one of Europe's leading commercial vehicle manufacturers and transport solution providers, with an annual revenue of about 11 billion euros (2022). The company's product portfolio includes vans, trucks, buses/coaches and diesel and gas engines along with services related to passenger and cargo transport. MAN Truck & Bus is a company of TRATON GROUP and employs approx. 33,000 people worldwide.



diesel engine was based on findings from the development of the E3872 stationary gas engine, which relies on a large number of common parts in the basic engine. The biogas and natural gas variants of the E3872 have already successfully completed several field trials and went into series production in November 2023.

The MAN D3872 has been further developed to provide higher performance while supporting the longevity of the product. A new coolant pump and an optimized thermostat housing provide an improved coolant supply and a long engine life. The engine offers optional outer skin cooling instead of the closed cooling circuit. The new cylinder head of the MAN D3872 is also aerodynamic and cooling-optimized. Improvements have also been made to the oil supply.

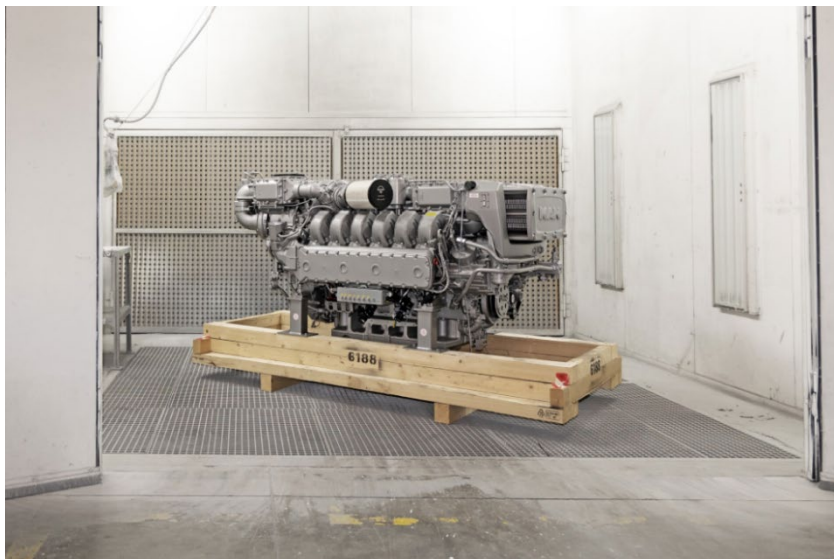
The new common rail injection system of the MAN D3872, with an injection pressure of an impressive 2,200 bar, enables low fuel consumption and excellent raw emissions. Together with the exhaust gas aftertreatment system, the adapted engine control unit meets current legal requirements such as EPA Tier 4, IMO Tier III or IMO Tier II. The MAN D3872 can also be combined with the "MAN Smart HYBRID Experience" hybrid system and, like all current model series from MAN Marine Engines, is approved for HVO.

The compact installation dimensions of the engine (2,235 x 1,250 x 1,320 mm) are almost identical to those of the MAN V12 series with a displacement of 24 litres. Despite its robustness, the MAN D3872, with a weight of 2,720 kg (dry), positions itself as a lightweight among the 12- and 16-cylinder work-boat engines in this class. With an outstanding power-to-weight ratio of 2.24 kg per kW (1.65 kg per hp) and a small footprint, the MAN D3872 is already proving its future viability. For its future use in combination with the modular exhaust gas aftertreatment system, the MAN D3872 will also be able to be used in confined spaces and at the same time comply with the strict EU Stage V emissions directive.

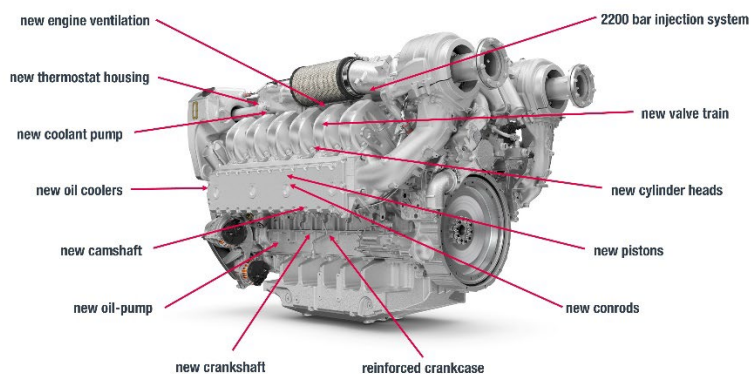
The MAN D3872 LE432 with two-stage turbocharging with an output of 1,650 hp (1,213 kW) for medium-duty applications will be available at the end of 2024. Further power gradations with single-stage charging for heavy-duty applications and aggregates are being planned.



Pictures:



With the MAN D3872, MAN Engines offers a newly developed workboat engine with a displacement of 30 liters for heavy- and medium-duty applications. Pictured is the fully painted MAN D3872 LE432 with 1,650 hp (1,213 kW), ready for the first field test on an Italian passenger ferry.



The MAN D3872 is based on a completely newly developed basic engine, which benefits from the experience of the current V12 engine series.



MAN D3872 LE4xx Workboat Engine / Arbeitsbootsmotor			
Zylinderanordnung/-anzahl Arrangement/number of cylinders		V12	
Bohrung Bore	mm	138	
Hub Stroke	mm	165	
Hubraum Displacement	l	29,6	
Nennleistung Rated power	kW PS/hp	1213 1650	
Nenndrehzahl Rated speed	min ⁻¹ rpm	2100	
Max. Drehmoment bei Drehzahl mean effective pressure	Nm/min ⁻¹ Nm/rpm	6096 1100 - 1900	
Spezifische Leistung Specific output	kW/l	41,0	
Motorlänge Engine length	mm	2335	
Motorbreite Engine width	mm	1153	
Motorhöhe Engine height	mm	1320	
Gewicht (trocken) Weight (dry)	kg	2720	
Einspritzsystem Injection system		Common Rail	
Motorsteuerung Engine control unit		MD1+	
Abgasstatus Exhaust status		EPA Tier 4 IMO Tier III IMO Tier II	

vorläufige technische Daten, preliminary technical data. Stand/as of: 01/12/2023

Data of the MAN D3872 LE432.