Technical data sheet

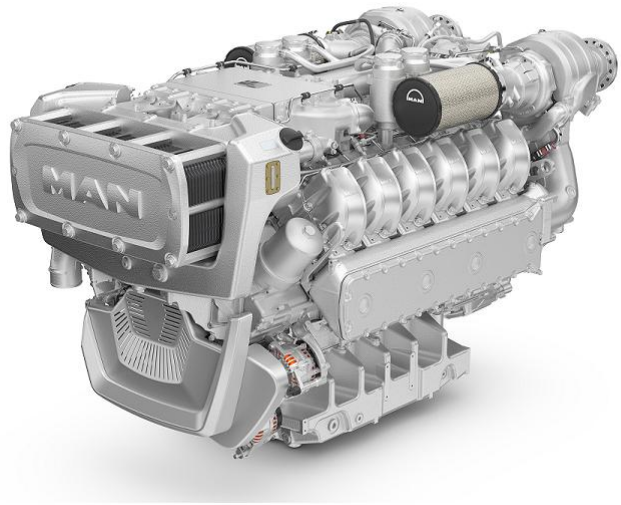
Marine diesel engine

D3872LE427

26.02.2025
(Version 1)

Performance data

Rated power	920	kW
Rated power	1251	PS
Speed	1800	rpm
Bore/Stroke	138/165	mm
Displacement	29,62	liter
Rated torque	4881	Nm
Maximum torque	5500	Nm
at speed	1400-1600	rpm
Compression ratio [ε]	19,0	:1
Mean effective pressure	20,68	bar
Mean piston speed	9,9	m/s



The engine illustrated may not entirely be identical to production standard engine

Consumption data ²

Specific fuel consumption ¹	198	g/kWh
Absolute fuel consumption ¹	217	l/h
Lowest fuel consumption ³	194	g/kWh
Absolute urea consumption ¹	12	l/h

Engine description

Application	Main propulsion diesel for ships with fixed pitch propeller or variable pitch propeller
Operation profile	unlimited operating hours per year at a maximum of 100 % of time at full load
Construction	Four-stroke diesel with exhaust after-treatment system (DPF+SCR), SAE 1 flywheel housing
Cylinders	12 cylinders in V-arrangement, single cylinder heads with wet replaceable cylinder liners
Air system	single-stage turbocharger with charge air intercooler and wastegate
Cooling system	Seawater cooled charge air cooler and plate heat exchanger by rubber impeller pump
Oil system	Force-feed lubrication by gear pump, lubricating oil cooler in cooling water circuit of the engine
Fuel system	Common Rail injection system with MD1 control, fuel to DIN EN 590
Auxiliary PTO	PTO for hydraulic pump 16 cm³ (180Nm)
Alternator	Three-phase generator with rectifier and transistorized governor, 28V, 120A
Starting system	Solenoid-operated electric starter, 24V, 7.0kW
Service	Oil change interval 600 operating hours
Classification	Engine according to classification requirements available => see MAN Marine Configurator

Exhaust status	**IMO Tier III, EU Stage V**

¹ Values at rated power

² Diesel fuel according to DIN EN 590 (tolerance +5% - ISO 3046), urea solution 32,5% according to ISO 22241 (tolerance +3%)

³ Values on propeller curve

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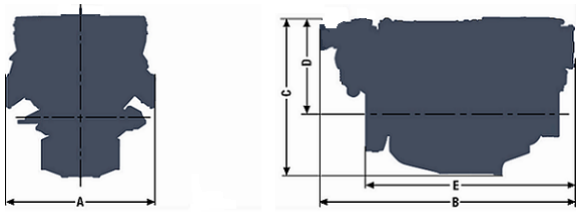
A - overall width.....		mm
B - overall length.....		mm
C - overall height.....		mm
D - above crank shaft.....		mm
E - length to flywheel.....		mm
Engine weight, dry..... (depending on the scope of supply)	2500	kg



Combustion parameters [1]

Intake air temperature (max)	45	°C
Intake air vacuum (min/max)	30/60	mbar
Intake air volume flow		m³/h
Exhaust gas temperature		°C
Exhaust gas volume flow		m³/h
Exhaust gas mass flow		kg/h
Exhaust back pressure (min/max) downstream of SCR catalyst	20/80	mbar

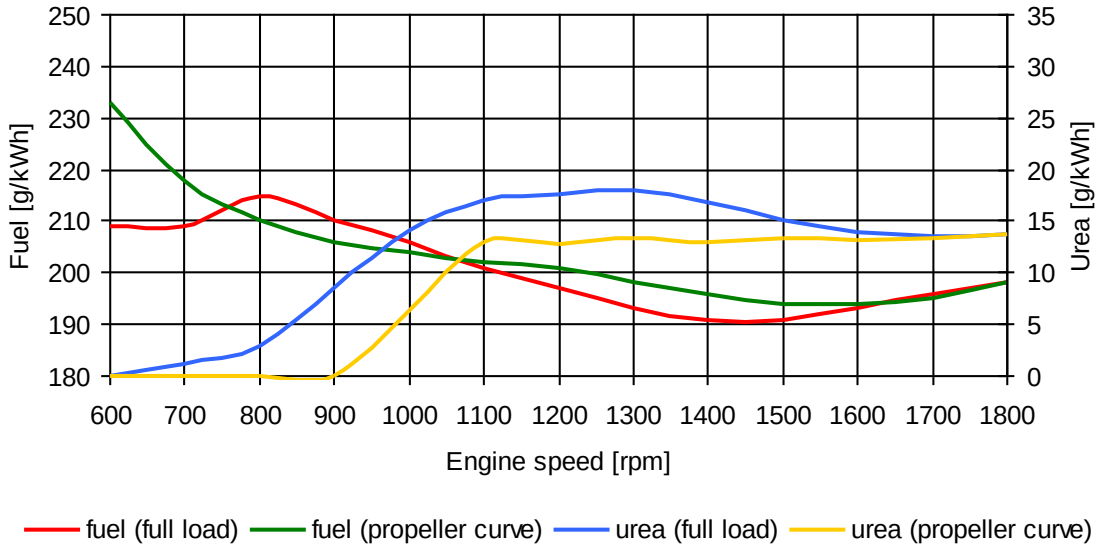
Heat balance [1]

Exhaust gas heat		kW
Cooling water heat		kW
Intercooler heat		kW
Radiation heat		kW

Noise emission (sound power) [1]

Engine surface noise (Lwa)		dB(A)
Free exhaust noise (Lwa)		dB(A)

Specific consumption[2]



< The rated power is based on reference conditions according to ISO 3046-1 (2002) >
< Intake air temperature, max. 45°C | sea water temperature, max. 32°C >
< Barometric pressure 1000 mbar | air humidity 60% >
< Exponent for propeller curve 3 >

< Engine specifications are subjected to change without prior notice >

[1] Values at rated power
[2] Diesel fuel according to DIN EN 590 (tolerance +5% - ISO 3046), urea solution 32,5% according to ISO 22241 (tolerance +3%)
[3] Values on propeller curve