



# Technical data sheet

Marine diesel engine

D2868LE446

07.07.2022

(Version 1)

## Performance data <sup>1</sup>

Rated power	662	kW
Rated power	900	PS
Speed	2100	rpm
Bore/Stroke	128/157	mm
Displacement	16,16	liter
Rated torque	3010	Nm
Maximum torque	3325	Nm
at speed	1400-1900	rpm
Compression ratio [ε]	17,0	:1
Mean effective pressure	23,41	bar
Mean piston speed	10,99	m/s



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

## Consumption data <sup>2</sup>

Specific fuel consumption <sup>1</sup>	235	g/kWh
Absolute fuel consumption <sup>1</sup>	185	l/h
Lowest fuel consumption <sup>3</sup>	214	g/kWh

## Engine description

Application	Main propulsion diesel for ships with fixed pitch propeller or variable pitch propeller (only IMO)
Operation profile	Up to 3000 hours per year at a maximum of 20 % of time at full load   average load < 50 %
Construction	Four-stroke marine diesel engine, direct injection, SAE 1 flywheel housing
Cylinders	8 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 by rubber impeller pump or two-circuit-cooling system for hull cooling
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 EDC17 control, fuel to DIN EN 590
Auxiliary PTO	PTO for hydraulic pump 16 cm <sup>3</sup> (180Nm), front-PTO by crank shaft extension
Alternator	Three-phase generator with rectifier and transistorized governor, 28V, 120A
Starting system	Solenoid-operated electric starter, 24V, 7.0kW
Service	Oil change interval 500 operating hours, average TBO 12.000 operating hours*
Classification	Engine according to classification requirements available => see MAN Marine Configurator

**Exhaust status** IMO Tier II, RCD 2013/53/EC, China 2 commercial

<sup>1</sup> Values at rated power

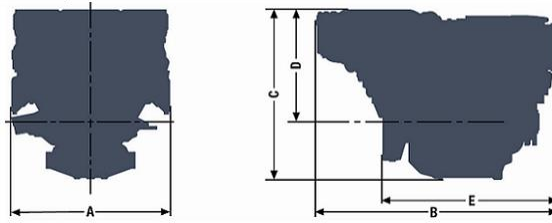
<sup>2</sup> Diesel fuel according to DIN EN 590 (tolerance +5% - ISO 3046)

<sup>3</sup> Values on propeller curve

\*TBO 12.000 operating hours for non or low particulate matters (PM) regulated jurisdictions (IMO, Canada, EU Stage IIIA)

# D2868LE446

A - overall width.....	1153 mm
B - overall length.....	1745 mm
C - overall height.....	1177 mm
D - above crank shaft....	765 mm
E - length to flywheel....	1243 mm
Engine weight (dry).....	1780 kg



## Combustion parameters <sup>1</sup>

Intake air temperature (max.)	45 °C
Intake air vacuum (min/max)	30/60 mbar
Intake air volume flow	2650 m <sup>3</sup> /h

Exhaust gas temperature	518 °C
Exhaust gas volume flow	7260 m <sup>3</sup> /h
Exhaust gas mass flow	3140 kg/h
Exhaust back pressure (min/max)	20/80 mbar

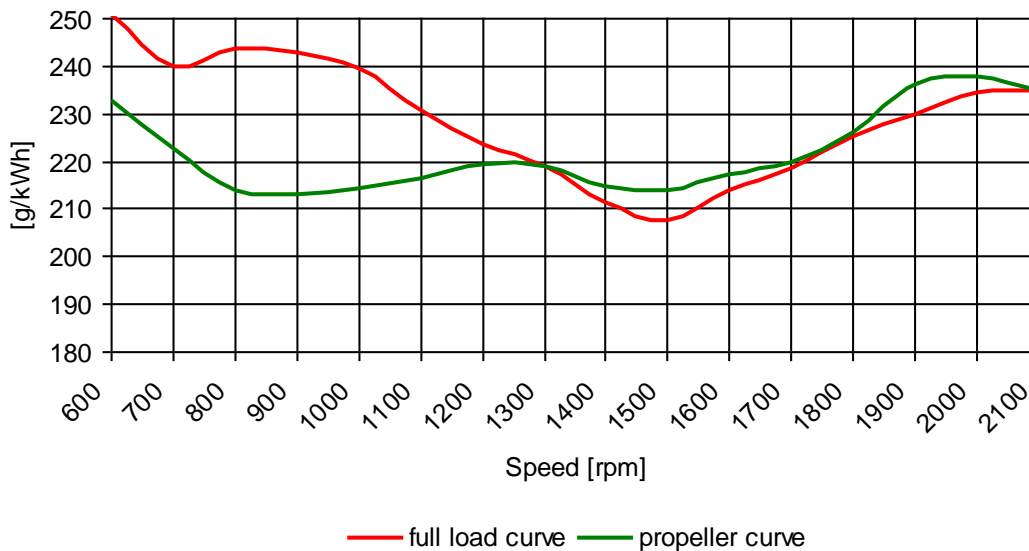
## Heat balance <sup>1</sup>

Exhaust gas heat	500 kW
Cooling water heat	450 kW
Intercooler heat	145 kW
Radiation heat	30 kW

## Noise emission (sound power) <sup>1</sup>

Engine surface noise (Lwa)	123,5 dB(A)
Free exhaust noise (Lwa)	122,3 dB(A)

## Specific fuel consumption<sup>2</sup>



< 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 2,7 >

< **Engine specifications are subjected to change without prior notice** >

<sup>1</sup> Values at rated power

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