



Technical data sheet

Marine diesel engine
D3872LE433 (V12-2200)

01.03.2023
(Version 1)

Performance data ¹

Rated power	1618	kW
Rated power	2200	PS
Speed	2300	rpm
Bore/Stroke	138/165	mm
Displacement	29,62	liter
Rated torque	6718	Nm
Maximum torque	7316	Nm
at speed	1200-2100	rpm
Compression ratio [ε]	17,0	:1
Mean effective pressure	28,50	bar
Mean piston speed	12,65	m/s



Consumption data ²

Specific fuel consumption ¹	213	g/kWh
Absolute fuel consumption ¹	412	l/h
Lowest fuel consumption ³	195	g/kWh

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

Engine description

Application	Main propulsion diesel for ships with fixed pitch propeller
Operation profile	Up to 1000 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	12 cylinders in V-arrangement, single cylinder heads with wet replaceable cylinder liners
Air system	Two-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 cm ³ (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 400 operating hours
Classification	-----

Exhaust status IMO Tier II, RCD 2013/53/EC, EPA Tier 3 recreational

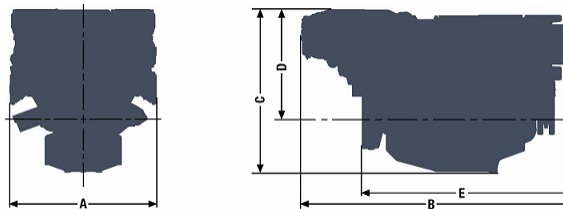
¹ Values at rated power

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

³ Values on propeller curve

D3872LE433 (V12-2200)

A - overall width.....	1157 mm
B - overall length.....	2374 mm
C - overall height.....	1328 mm
D - above crank shaft....	863 mm
E - length to flywheel.....	1792 mm
Engine weight (dry).....	2700 kg



Combustion parameters ¹

Intake air temperature (max.)	45 °C
Intake air vacuum (min/max)	30/60 mbar
Intake air volume flow	6000 m³/h

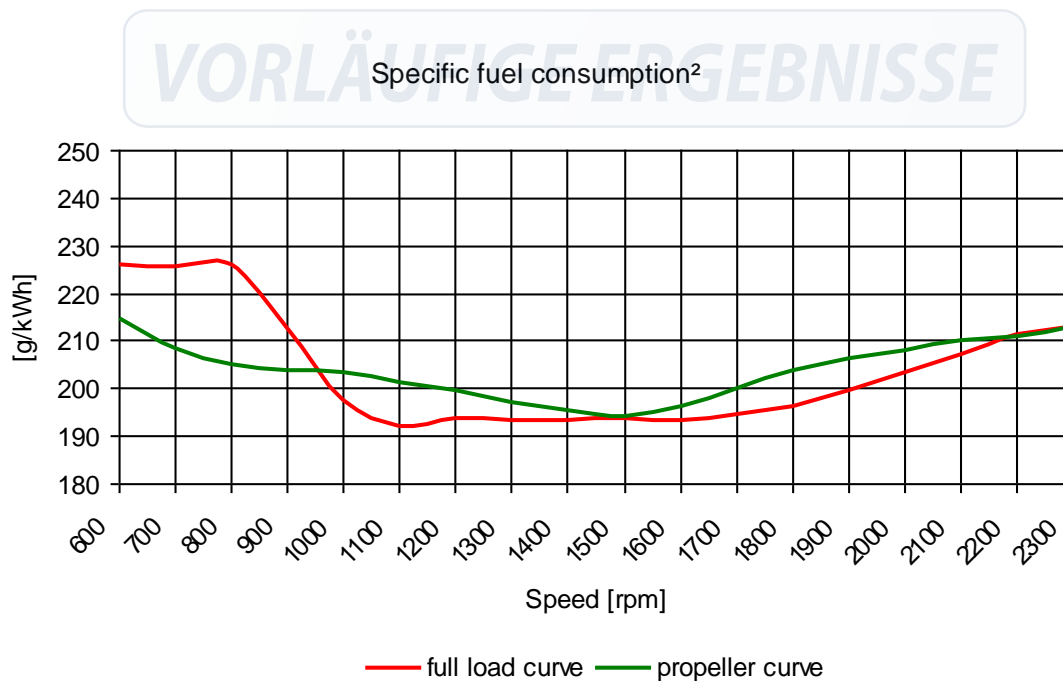
Exhaust gas temperature	515 °C
Exhaust gas volume flow	16500 m³/h
Exhaust gas mass flow	7190 kg/h
Exhaust back pressure (min/max)	20/80 mbar

Heat balance ¹

Exhaust gas heat	1080 kW
Cooling water heat	1020 kW
Intercooler heat	350 kW
Radiation heat	45 kW

Noise emission (sound power) ¹

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



< 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 2,5 >

< 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)

³ Values on propeller curve