Technical data sheet

Marine diesel engine

D2868LE449

22.08.2023
(Version 1)

Performance data

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	3310	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 [2]

Specific fuel consumption [1]	210	g/kWh
Absolute fuel consumption [1]	166	l/h
Lowest fuel consumption [3]	204	g/kWh
Absolute urea consumption [1]	10	l/h

Engine description

Application	Main propulsion diesel for ships with fixed pitch propeller
Operation profile	Up to 3000 hours per year at a maximum of 20 % of time at full load | average load < 50 %
Construction	Four-stroke diesel with exhaust after-treatment system (SCR), 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 cm³ (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
Classification	Engine according to classification requirements available => see MAN Marine Configurator

Exhaust status	**IMO Tier III, EPA Tier 3 recreational**

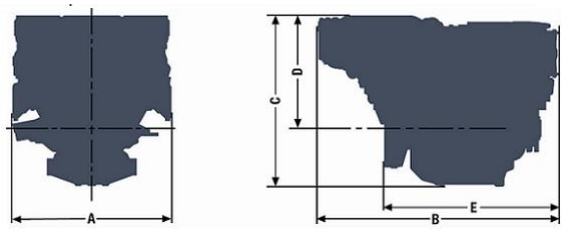
[1] Values at rated power

[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

D2868LE449

A - overall width.....	1157	mm
B - overall length.....	1647	mm
C - overall height.....	1180	mm
D - above crank shaft.....	769	mm
E - length to flywheel.....	1251	mm
Engine weight, dry..... (depending on the scope of supply)	1780	kg



Combustion parameters [1]

Intake air temperature (max)	45	°C
Intake air vacuum (min/max)	30/60	mbar
Intake air volume flow	2780	m³/h
Exhaust gas temperature	424	°C
Exhaust gas volume flow	6670	m³/h
Exhaust gas mass flow	3280	kg/h
Exhaust back pressure (min/max) downstream of SCR catalyst	20/80	mbar

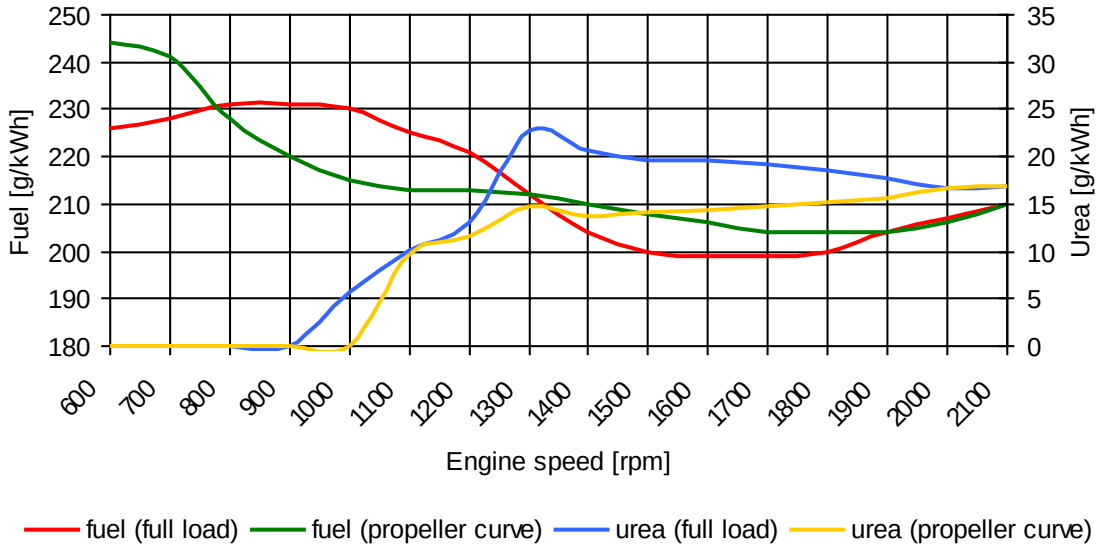
Heat balance [1]

Exhaust gas heat	400	kW
Cooling water heat	420	kW
Intercooler heat	150	kW
Radiation heat	30	kW

Noise emission (sound power) [1]

Engine surface noise (Lwa)	123,5	dB(A)
Free exhaust noise (Lwa)	104,3	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 2,7 >

< 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