



# Technical data sheet

18.05.2016  
(Version 2)

## Marine diesel engine D2876LE403 ()

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

Rated power	331	kW
Rated power	450	PS
Speed	1800	rpm
Bore	128	mm
Stroke	166	mm
Displacement	12,82	liter
Rated torque	1756	Nm
Maximum torque	1960	Nm
at speed	1300-1500	rpm
Compression ratio [ε]	15,5	:1
Mean effective pressure	17,22	bar
Mean piston speed	9,96	m/s



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

### Consumption data <sup>1</sup>

Specific fuel consumption <sup>2</sup>	223	g/kWh
Absolute fuel consumption <sup>2</sup>	88	l/h
Lowest fuel consumption <sup>3</sup>	210	g/kWh

### Engine description

Operation profile	unlimited operating hours per year at a maximum of 100 % of time at full load
Construction	four-stroke marine diesel engine, direct injection, SAE 1 flywheel housing
Cylinders	6 cylinders in line, 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	Inline injection pump with mechanical governor, fuel to DIN EN 590, DIN ISO 8217 (DMA/DMX)
Auxiliary PTO	PTO for hydraulic pump (90Nm), front-PTO by crank shaft extension
Alternator	three phase generator with rectifier and transistorized governor, 28 V, 55 A /120 A
Starting system	solenoid-operated electric starter, 24 V, 5.4 kW
Service	oil change interval 400 operating hours, average TBO 20.000 - 25.000 operating hours
Classification	ABS, BV, CCS, DNV, GL, LR, RINA, RRR

**Exhaust status** IMO Tier II, 97/68/EC, RCD 94/25/EC

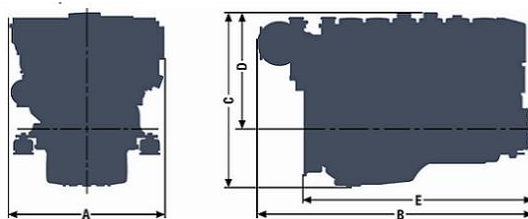
<sup>1</sup> values at rated power

<sup>2</sup> Tolerance +5% according to ISO 3046, diesel fuel to DIN EN 590

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

## D2876LE403 ( )

A - overall width.....	877 mm
B - overall length.....	1565 mm
C - overall height.....	1080 mm
D - above crank shaft....	665 mm
E - length to flywheel....	1320 mm
Engine weight (dry).....	1160 kg



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

Intake air temperature (max.)	45 °C
Intake air vacuum (min/max)	80/120 mbar
Intake air volume flow	1810 m <sup>3</sup> /h

Exhaust gas temperature	405 °C
Exhaust gas volume flow	4010 m <sup>3</sup> /h
Exhaust gas mass flow	2030 kg/h
Exhaust back pressure (min/max)	20/80 mbar

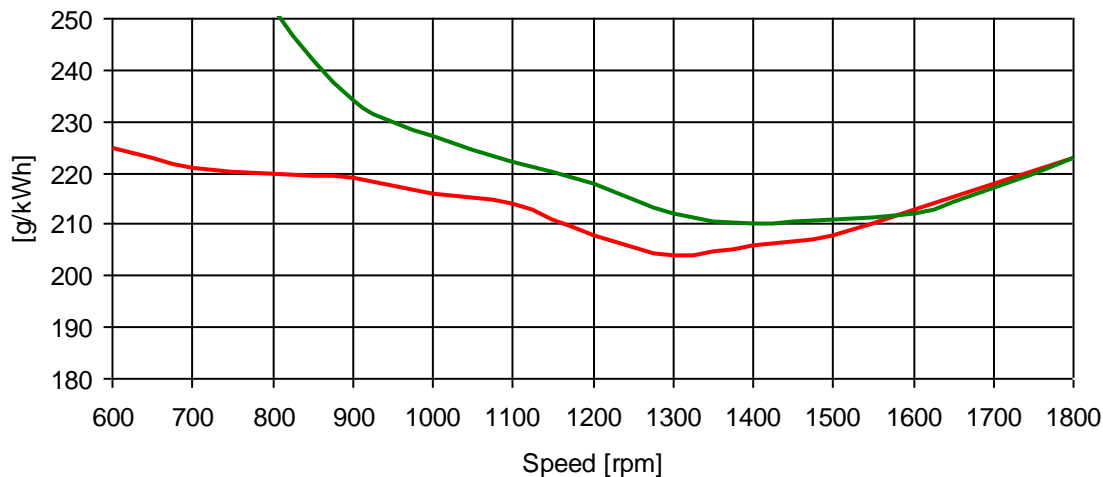
### Heat balance <sup>1</sup>

Exhaust gas heat	220 kW
Cooling water heat	247 kW
Intercooler heat	58 kW
Radiation heat	26 kW

### Noise emission <sup>1</sup>

Engine surface noise (Lwa)	117,8 dB(A)
Free exhaust noise (Lwa)	112,5 dB(A)

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



— full load curve — propeller curve

< 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 >**

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

<sup>2</sup> Tolerance +5% according to ISO 3046, diesel fuel to DIN EN 590

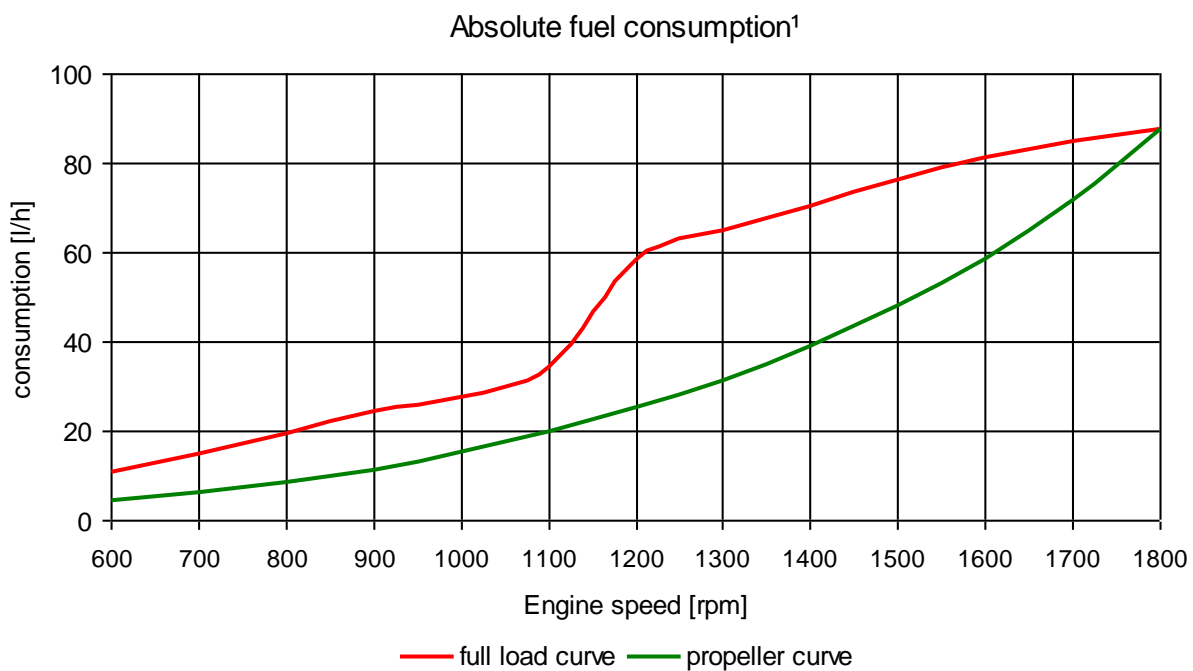
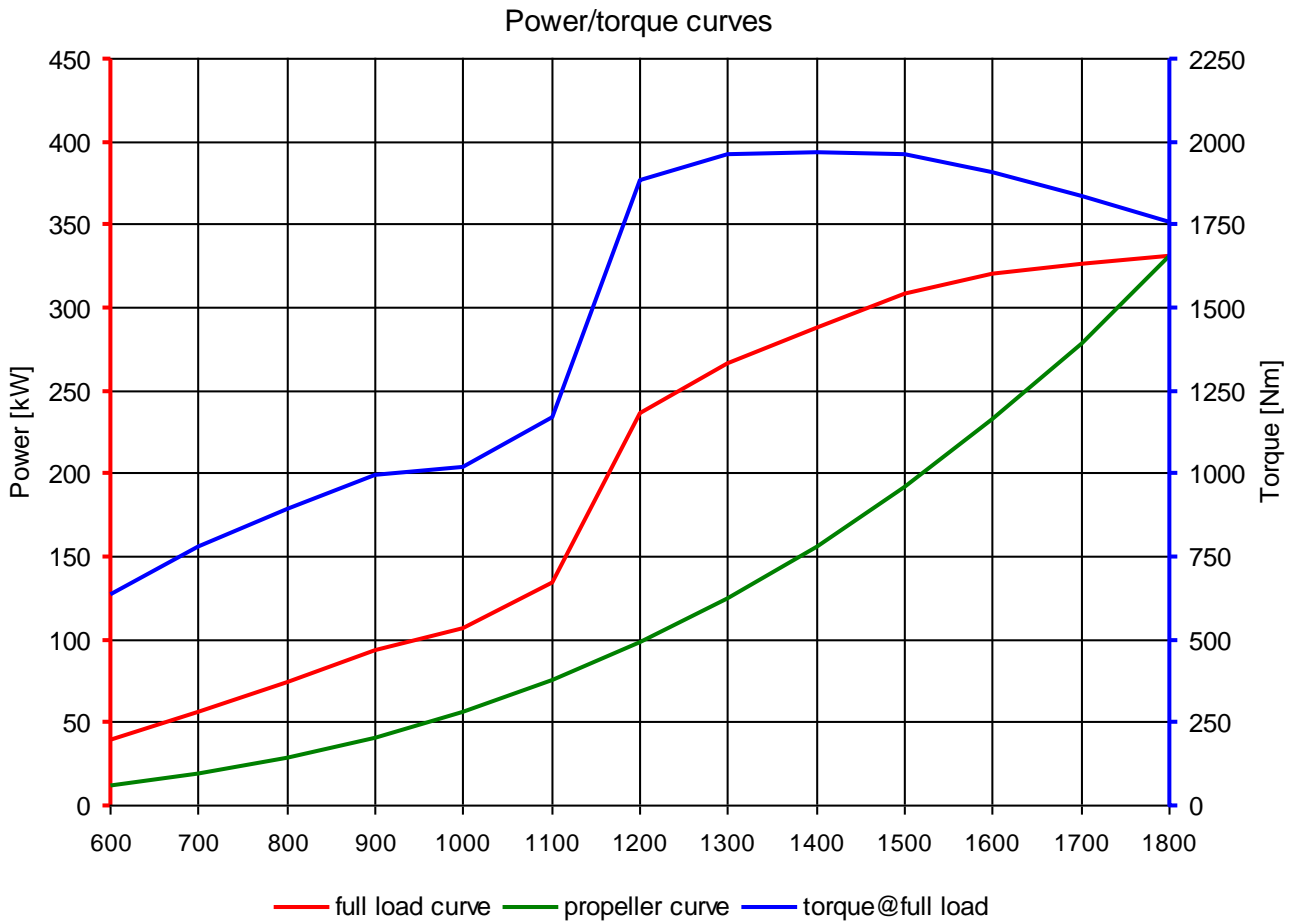
<sup>3</sup> values on propeller curve



# Engine curves

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D2876LE403 (331kW@1800rpm) ()



< The rated power is based on reference conditions according to DIN ISO 3046-1 (2002) >

< Exponent for propeller curve 3 >

< Engine specifications are subjected to change without notice >

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