



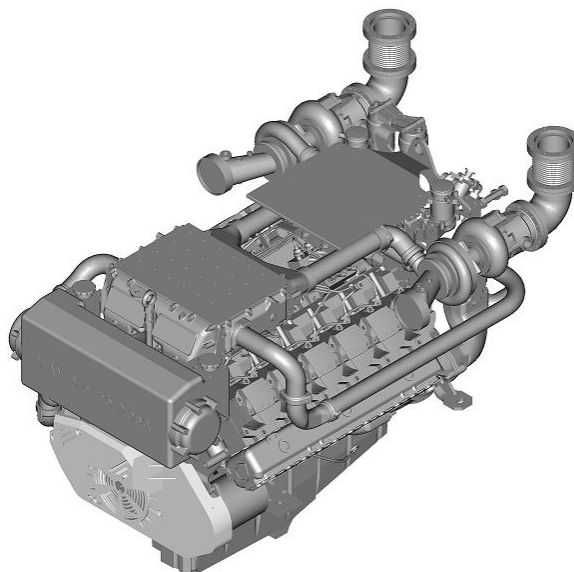
# Technical data sheet

18.05.2016  
(Version 2)

## Marine diesel engine D2842LE412 ()

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

Rated power	588	kW
Rated power	800	PS
Speed	1800	rpm
Bore	128	mm
Stroke	142	mm
Displacement	21,93	liter
Rated torque	3120	Nm
Maximum torque	3340	Nm
at speed	1200-1600	rpm
Compression ratio [ε]	15,5	:1
Mean effective pressure	17,88	bar
Mean piston speed	8,52	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>	222	g/kWh
Absolute fuel consumption <sup>2</sup>	155	l/h
Lowest fuel consumption <sup>3</sup>	203	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	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 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 /120A
Starting system	solenoid-operated electric starter, 24 V, 6.6 kW
Service	oil change interval 400 operating hours, average TBO 20.000 - 25.000 operating hours
Classification	ABS, BV, DNV, GL, RINA, RRR

**Exhaust status** IMO Tier II, 97/68/EC

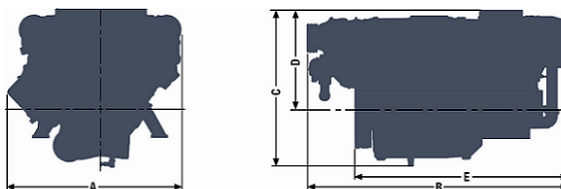
<sup>1</sup> values at rated power

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

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

## D2842LE412 ( )

A - overall width.....	1230 mm
B - overall length.....	1750 mm
C - overall height.....	1215 mm
D - above crank shaft....	685 mm
E - length to flywheel....	1491 mm
Engine weight (dry).....	1790 kg



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

Intake air temperature (max.)	45 °C
Intake air vacuum (min/max)	80/120 mbar
Intake air volume flow	2912 m <sup>3</sup> /h

Exhaust gas temperature	420 °C
Exhaust gas volume flow	6600 m <sup>3</sup> /h
Exhaust gas mass flow	3300 kg/h
Exhaust back pressure (min/max)	20/80 mbar

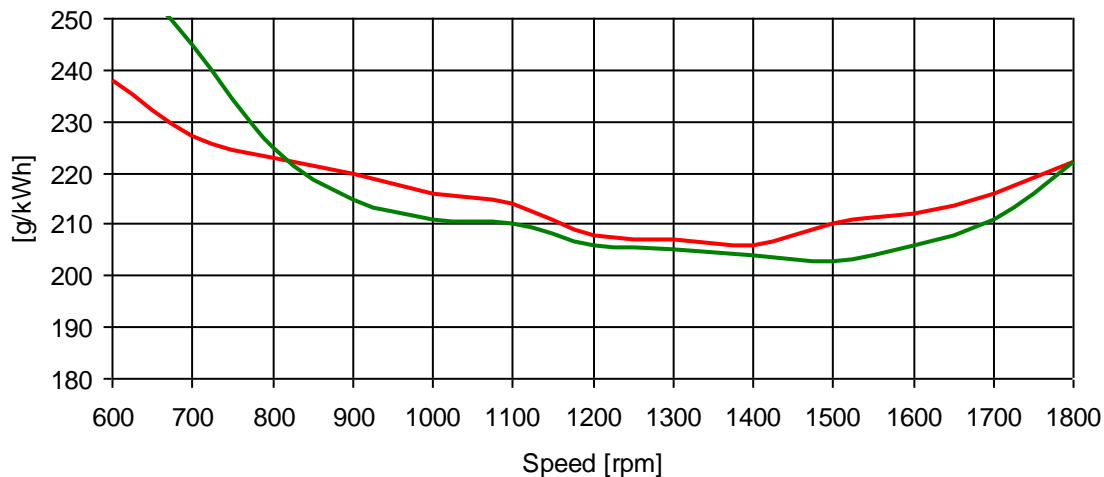
### Heat balance <sup>1</sup>

Exhaust gas heat	402 kW
Cooling water heat	420 kW
Intercooler heat	120 kW
Radiation heat	30 kW

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

Engine surface noise (Lwa)	121,6 dB(A)
Free exhaust noise (Lwa)	111,2 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

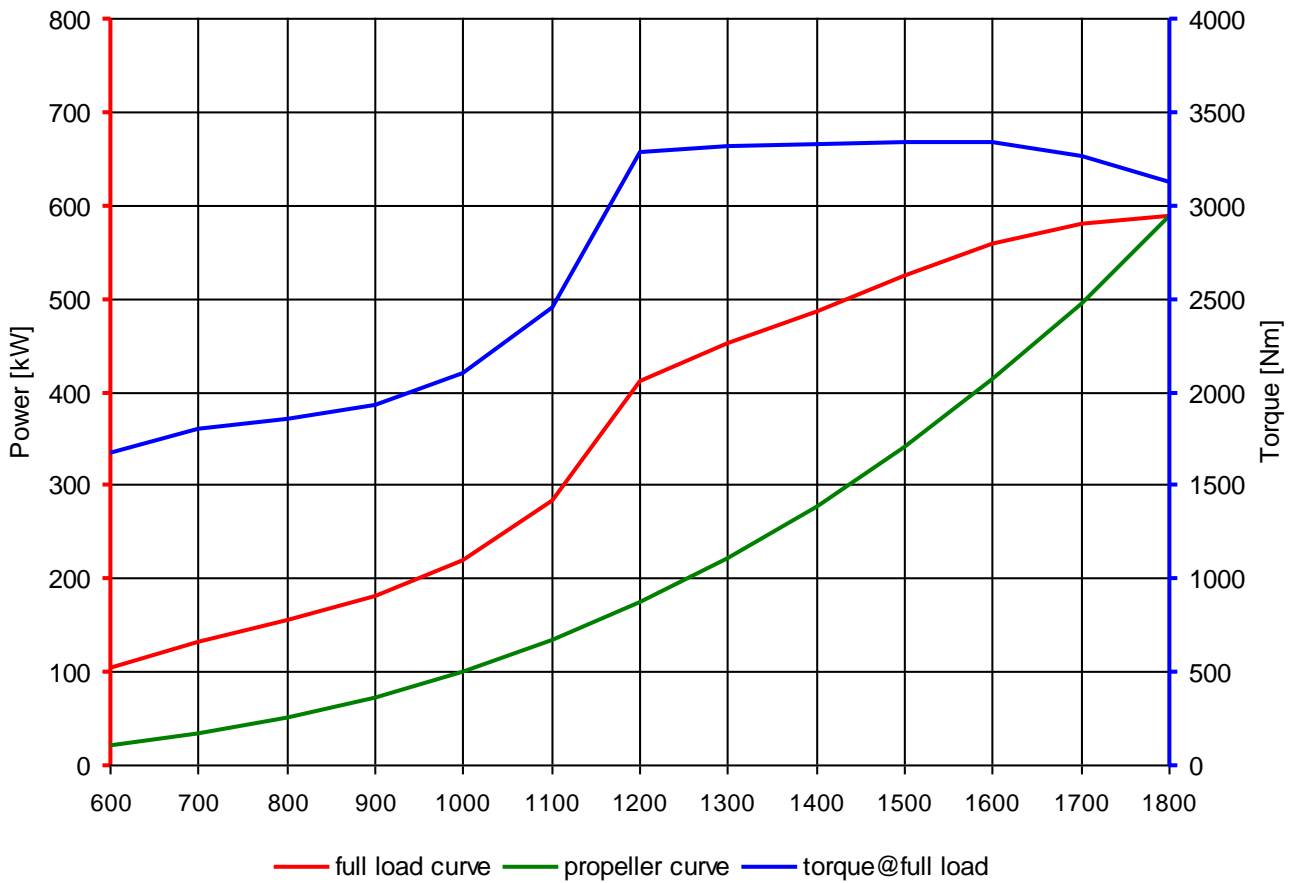


# Engine curves

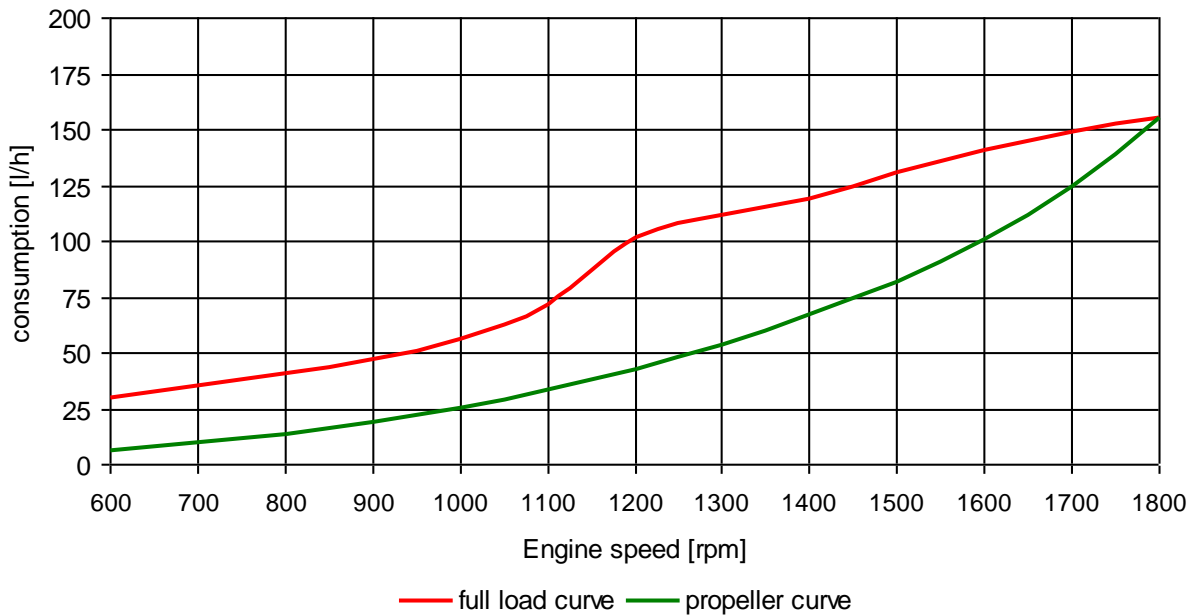
18.05.2016  
(Version 2)

D2842LE412 (588kW@1800rpm) ()

Power/torque curves



Absolute fuel consumption<sup>1</sup>



< 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 >

<sup>1</sup> Tolerance +5% according ISO 3046, diesel fuel to DIN EN 590