



# Technical data sheet

17.05.2016  
(Version 2)

## Marine diesel engine D2868LE422 ()

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

|                         |           |       |
|-------------------------|-----------|-------|
| Rated power             | 588       | kW    |
| Rated power             | 800       | PS    |
| Speed                   | 2100      | rpm   |
| Bore                    | 128       | mm    |
| Stroke                  | 157       | mm    |
| Displacement            | 16,16     | liter |
| Rated torque            | 2674      | Nm    |
| Maximum torque          | 2950      | Nm    |
| at speed                | 1300-1900 | rpm   |
| Compression ratio [ε]   | 19,0      | :1    |
| Mean effective pressure | 20,79     | bar   |
| Mean piston speed       | 10,99     | 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> | 212 | g/kWh |
| Absolute fuel consumption <sup>2</sup> | 148 | l/h   |
| Lowest fuel consumption <sup>3</sup>   | 198 | g/kWh |

### Engine description

|                   |  |
|-------------------|--|
| Operation profile | up to 4000 operating hours per year   average load < 60 %  |
| 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 high pressure pump and EDC 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, 28 V, 120 A                      |
| Starting system   | solenoid-operated electric starter, 24 V, 7.0 kW   |
| Service           | oil change interval 500 operating hours, average TBO 12.000 operating hours                        |
| Classification    | ABS, BV, DNV, GL, RINA   |

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

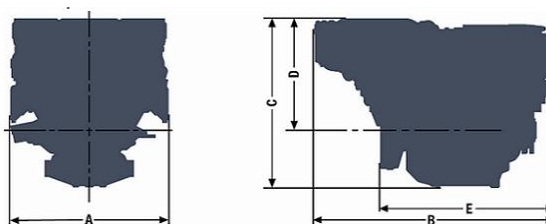
<sup>1</sup> values at rated power

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

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

## D2868LE422 ( )

|                            |         |
|----------------------------|---------|
| 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        | 2460 m <sup>3</sup> /h |

|                                 |                        |
|---------------------------------|------------------------|
| Exhaust gas temperature         | 425 °C                 |
| Exhaust gas volume flow         | 5920 m <sup>3</sup> /h |
| Exhaust gas mass flow           | 2920 kg/h              |
| Exhaust back pressure (min/max) | 20/80 mbar             |

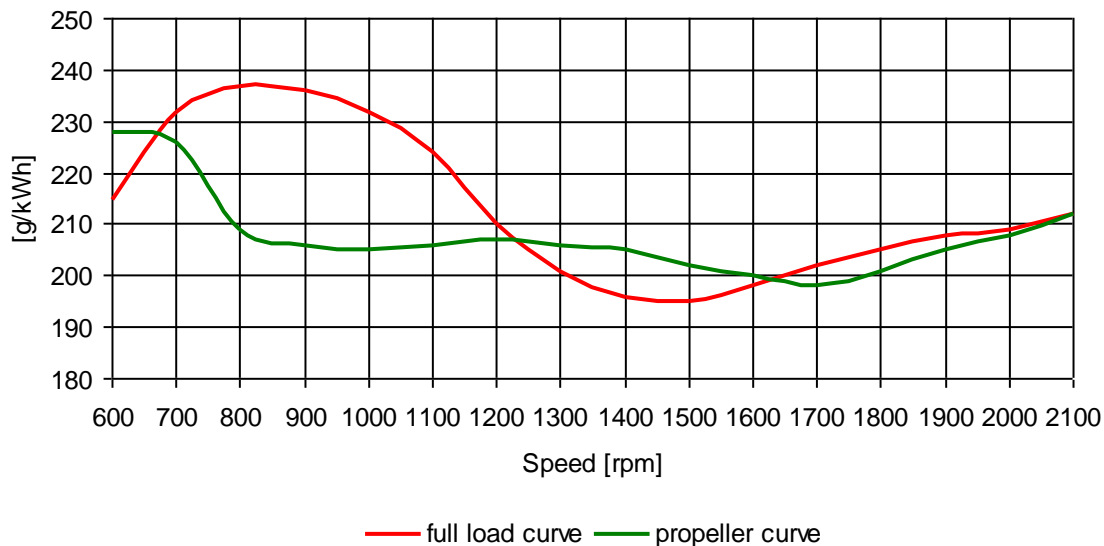
### Heat balance <sup>1</sup>

|                    |        |
|--------------------|--------|
| Exhaust gas heat   | 342 kW |
| Cooling water heat | 410 kW |
| Intercooler heat   | 120 kW |
| Radiation heat     | 30 kW  |

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

|                            |             |
|----------------------------|-------------|
| Engine surface noise (Lwa) | 102,1 dB(A) |
| Free exhaust noise (Lwa)   | 110,0 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

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

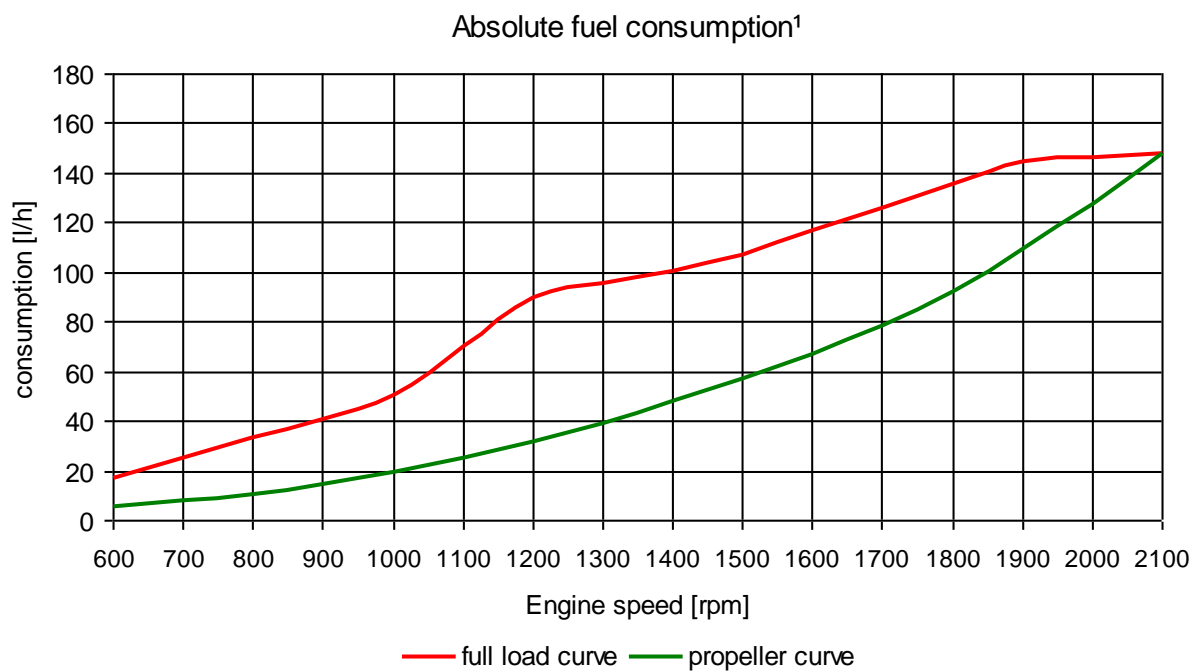
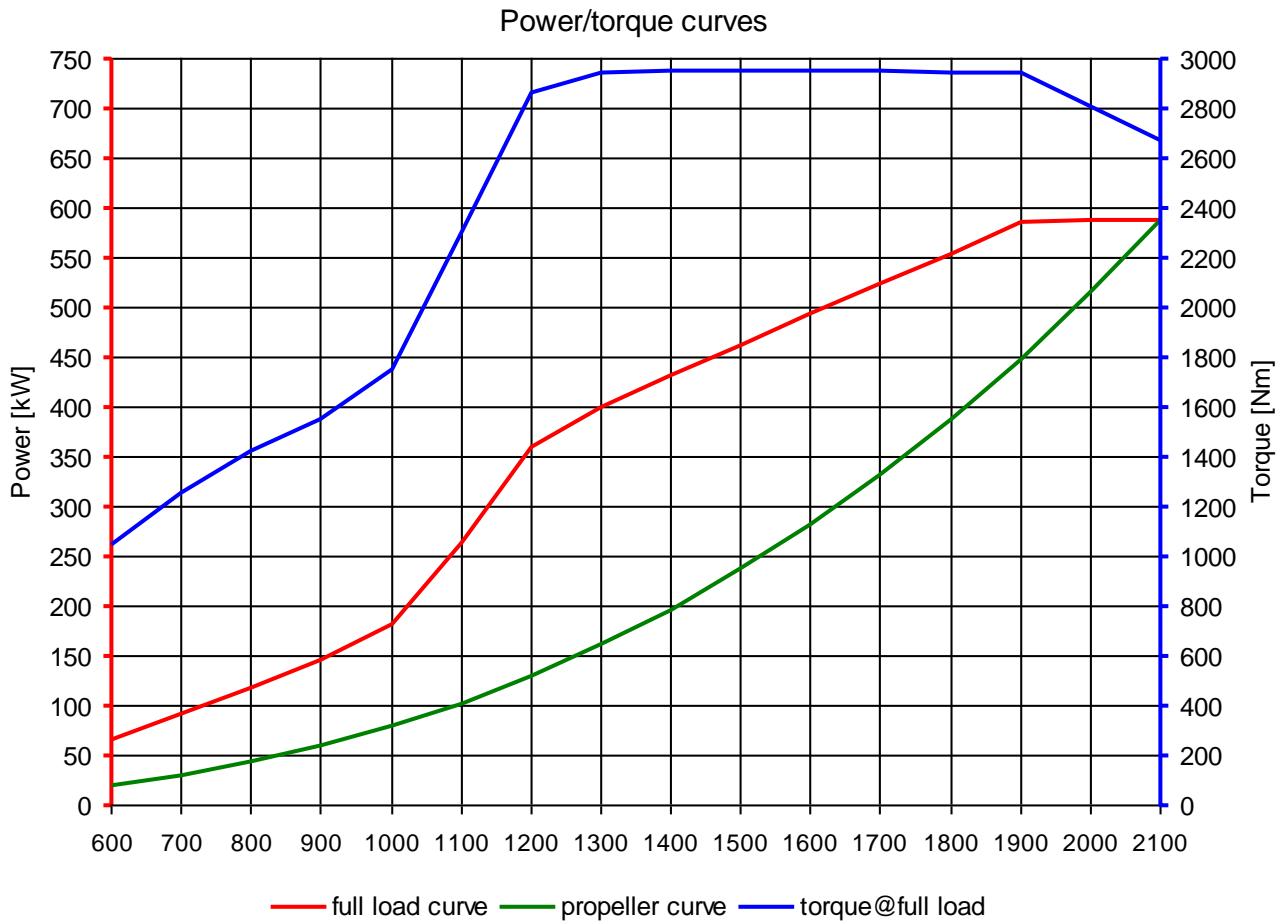
<sup>3</sup> values on propeller curve



# Engine curves

17.05.2016  
(Version 2)

D2868LE422 (588kW @2100rpm) ()



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

< Exponent for propeller curve 2,7 >

< Engine specifications are subjected to change without notice >

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