



# Technical data sheet

17.01.2017  
(Version 1)

Marine diesel engine  
D2676LE425 ()

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

|                         |           |       |
|-------------------------|-----------|-------|
| Rated power             | 478       | kW    |
| Rated power             | 650       | PS    |
| Speed                   | 2100      | rpm   |
| Bore                    | 126       | mm    |
| Stroke                  | 166       | mm    |
| Displacement            | 12,42     | liter |
| Rated torque            | 2174      | Nm    |
| Maximum torque          | 2402      | Nm    |
| at speed                | 1200-1900 | rpm   |
| Compression ratio [ε]   | 16,5      | :1    |
| Mean effective pressure | 21,99     | bar   |
| Mean piston speed       | 11,62     | 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> | 224 | g/kWh |
| Absolute fuel consumption <sup>2</sup> | 127 | l/h   |
| Lowest fuel consumption <sup>3</sup>   | 205 | g/kWh |

## Engine description

|                   |  |
|-------------------|--|
| Operation profile | up to 3000 hours per year at a maximum of 50 % of time at full load   average load < 70 %          |
| 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 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 high pressure pump and EDC control, fuel to DIN EN 590           |
| Auxiliary PTO     | PTO for hydraulic pump 16 cm <sup>2</sup>  |
| Alternator        | three-phase generator with rectifier and transistorized governor, 28 V, 110 A                      |
| Starting system   | solenoid operated electric starter, 24 V, 5.5 kW   |
| Service           | oil change interval 500 operating hours, average TBO 12.000 operating hours                        |
| Classification    | DNV-GL, RINA, LRS, BV, ABS, CCS  |

**Exhaust status** IMO Tier II, RCD 2013/53/EC, EPA Tier 3 commercial, 97/68/EC

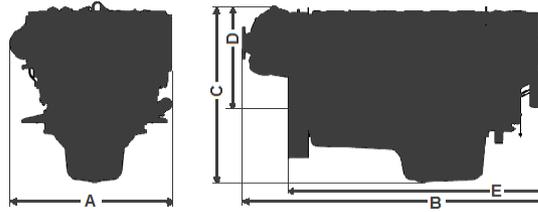
<sup>1</sup> values at rated power

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

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

## D2676LE425 ( )

|                            |         |
|----------------------------|---------|
| A - overall width.....     | 986 mm  |
| B - overall length.....    | 1795 mm |
| C - overall height.....    | 1096 mm |
| D - above crank shaft....  | 674 mm  |
| E - length to flywheel.... | 1527 mm |
| Engine weight (dry).....   | 1215 kg |



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

|                               |            |
|-------------------------------|------------|
| Intake air temperature (max.) | 45 °C      |
| Intake air vacuum (min/max)   | 30/60 mbar |
| Intake air volume flow        | 2190 m³/h  |

|                                 |            |
|---------------------------------|------------|
| Exhaust gas temperature         | 585 °C     |
| Exhaust gas volume flow         | 6350 m³/h  |
| Exhaust gas mass flow           | 2540 kg/h  |
| Exhaust back pressure (min/max) | 20/80 mbar |

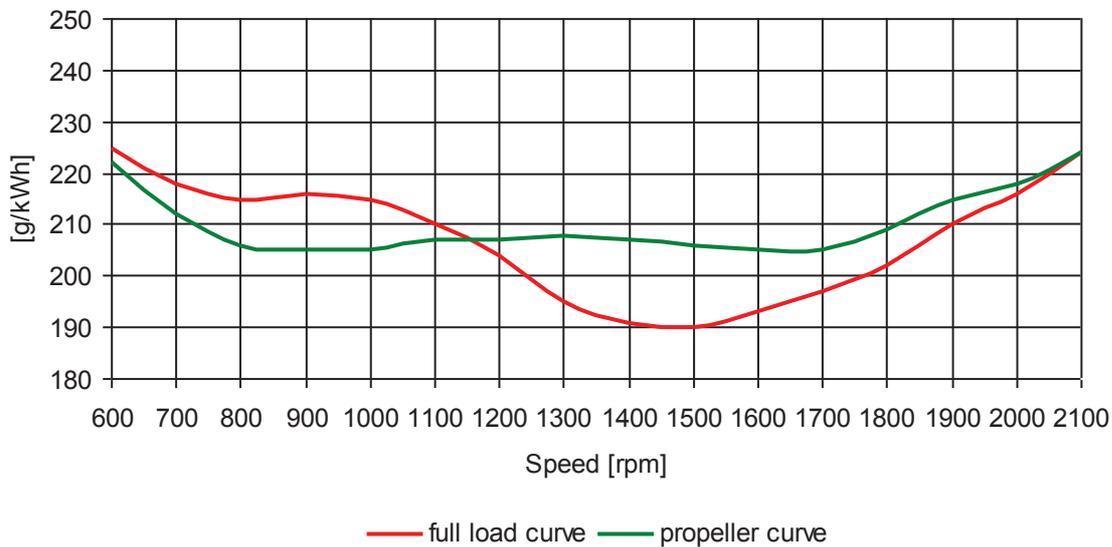
### Heat balance <sup>1</sup>

|                    |        |
|--------------------|--------|
| Exhaust gas heat   | 420 kW |
| Cooling water heat | 255 kW |
| Intercooler heat   | 100 kW |
| Radiation heat     | 27 kW  |

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

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

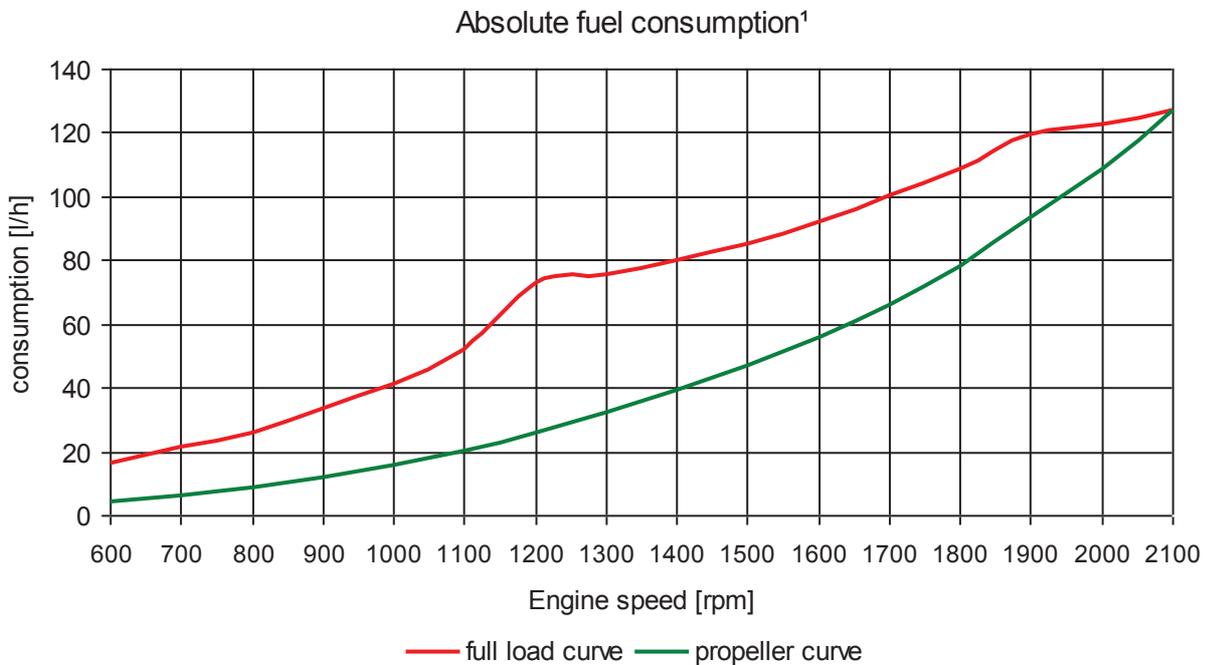
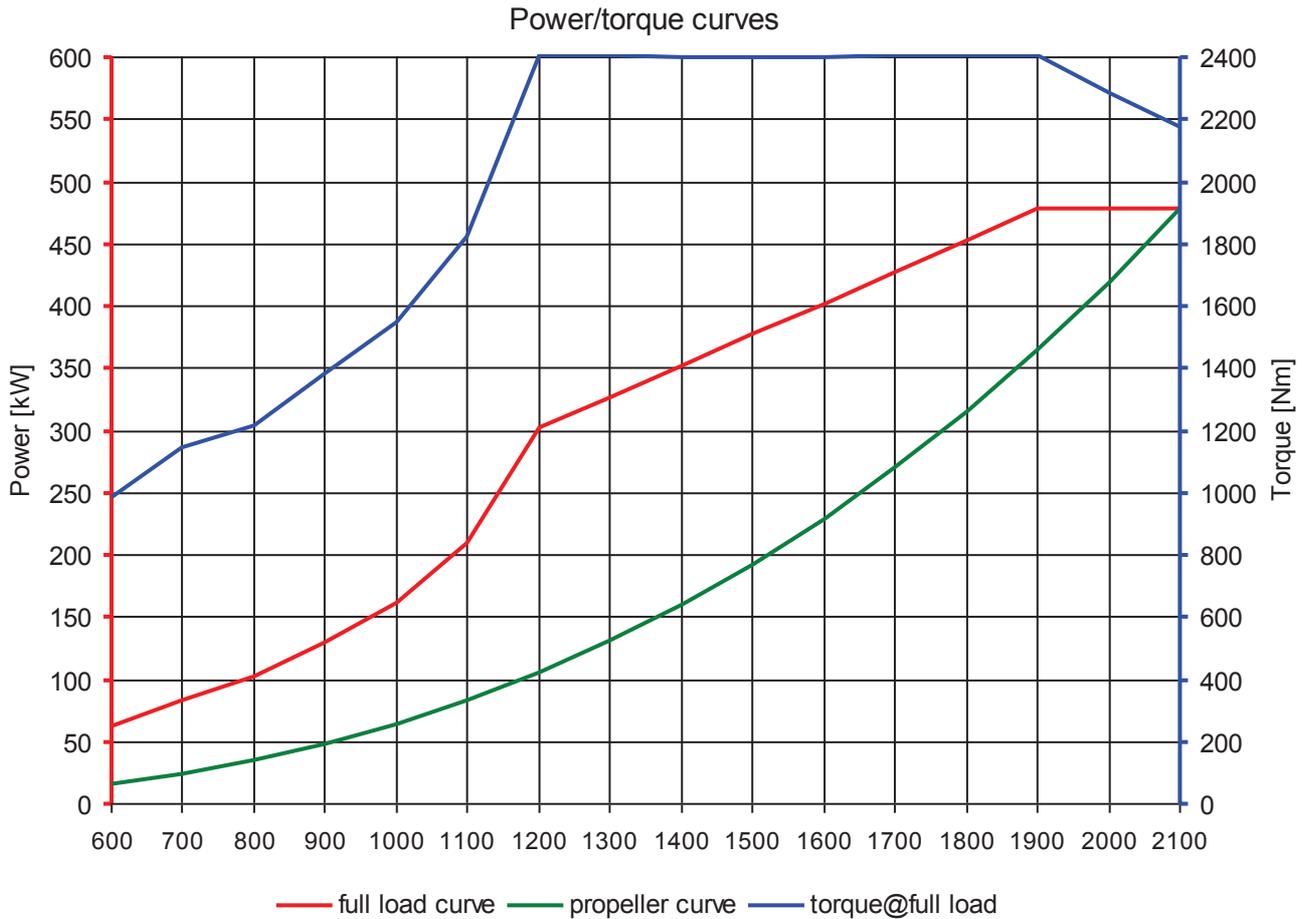
<sup>3</sup> values on propeller curve



# Engine curves

17.01.2017  
(Version 1)

D2676LE425 (478kW@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