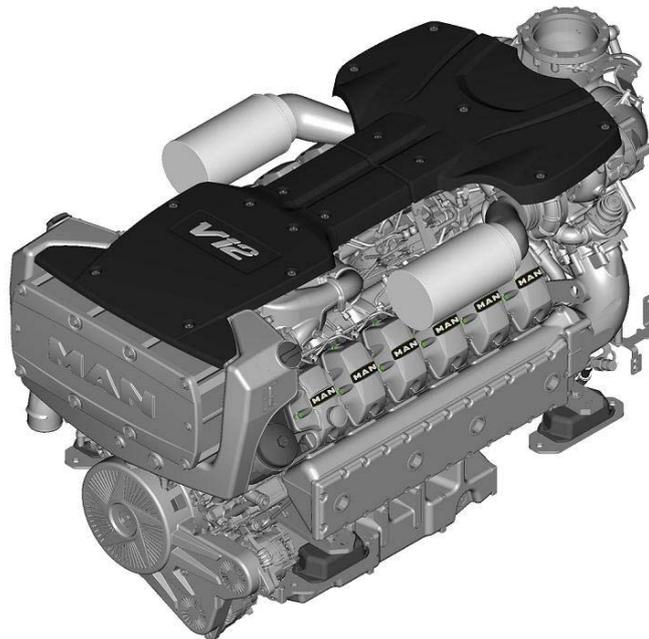




# Technical Data

Release  
16.12.2009

Diesel engine D2862LE463



- Mode of operation :** up to 3000 operating hours per year at a maximum of 20 % of time at full load and an average load of 50 %
- Engine type :** four - stroke, direct injection
- Cylinders :** 12 cylinders in V-arrangement, wet replaceable cylinder liners
- Aspiration :** single step turbocharger, intercooler, wastegate
- Engine cooling :** water circulation by centrifugal pump on the engine, plate heat exchanger
- Lubrication :** force-feed lubrication by gear pump, lubricating oil cooler in cooling water circuit of engine
- Injection :** Bosch Common Rail injection system with high pressure pump and EDC control
- Generator :** Three phase generator with rectifier and transistorized governor, 28 V, 120 A
- Starter motor :** Solenoid operated starter, 24 V, 7.0 kW

## Performance data of the engine

|                     |       |                               |           |
|---------------------|-------|-------------------------------|-----------|
| Nominal output [kW] | 1029  | Torque, nominal [Nm]          | 4680      |
| Nominal output [PS] | 1400  | Torque, maximum [Nm]          | 5120      |
| Speed [rpm]         | 2100  | at speed [rpm]                | 1300-1900 |
| Bore [mm]           | 128   | Compression ratio [ε]         | 17,0 : 1  |
| Stroke [mm]         | 157   | Mean effective pressure [bar] | 24,26     |
| Volume [l]          | 24,24 | Mean piston speed [m/s]       | 10,99     |

**Fuel consumption ( +5% tolerance )**

|                           |     |
|---------------------------|-----|
| at nominal output [g/kWh] | 210 |
| at nominal output [l/h]   | 257 |

**Lube oil consumption**

|                                |     |
|--------------------------------|-----|
| at nominal output , max. [g/h] | 412 |
|--------------------------------|-----|

**Combustion parameters**

|   |      |
|---|------|
| Combustion air flow [m <sup>3</sup> /h] | 4100 |
|---|------|

|   |       |
|---|-------|
| Suction vacuum, max. [mbar]<br>filter clean/ contaminated | 35/60 |
|---|-------|

|                                   |    |
|-----------------------------------|----|
| Intake air temperature, max. [°C] | 45 |
|-----------------------------------|----|

|   |       |
|---|-------|
| Exhaust gas volume flow [m <sup>3</sup> /h] | 10080 |
|---|-------|

|                              |      |
|------------------------------|------|
| Exhaust gas mass flow [kg/h] | 4600 |
|------------------------------|------|

|                              |    |
|------------------------------|----|
| Exhaust back pressure [mbar] | 80 |
|------------------------------|----|

|                              |     |
|------------------------------|-----|
| Exhaust gas temperature [°C] | 500 |
|------------------------------|-----|

|                       |     |
|-----------------------|-----|
| Exhaust gas heat [kW] | 700 |
|-----------------------|-----|

|                        |     |
|------------------------|-----|
| Jacket water heat [kW] | 660 |
|------------------------|-----|

|                       |     |
|-----------------------|-----|
| Intercooler heat [kW] | 220 |
|-----------------------|-----|

|                     |    |
|---------------------|----|
| Radiation heat [kW] | 70 |
|---------------------|----|

**Miscellaneous****Lube oil sump, capacity**

|                                  |       |
|----------------------------------|-------|
| Oil sump, standard (min/max) [l] | 70/90 |
|----------------------------------|-------|

|                                 |       |
|---------------------------------|-------|
| Oil sump, shallow (min/max) [l] | --/-- |
|---------------------------------|-------|

|                              |       |
|------------------------------|-------|
| Oil sump, deep (min/max) [l] | --/-- |
|------------------------------|-------|

|                        |      |
|------------------------|------|
| Engine dry weight [kg] | 2270 |
|------------------------|------|

**Engine cooling (HT- circuit)**

|   |       |
|---|-------|
| Cooling water temperature [°C]<br>under normal conditions | 85-90 |
|---|-------|

|  |    |
|--|----|
| Cooling water temperature [°C]<br>before you run engine at full load | 40 |
|--|----|

|   |    |
|---|----|
| Cooling water temperature [°C]<br>temporary, for short period | 95 |
|---|----|

|                            |     |
|----------------------------|-----|
| Cooling water quantity [l] | 100 |
|----------------------------|-----|

|                            |      |
|----------------------------|------|
| Cooling water flow [l/min] | 1200 |
|----------------------------|------|

**Engine cooling (LT- circuit)**

|                                  |    |
|----------------------------------|----|
| Sea water temperature, max. [°C] | 32 |
|----------------------------------|----|

**Sea water pump - standard**

|            |               |
|------------|---------------|
| Pump model | Impellerpumpe |
|------------|---------------|

|   |     |
|---|-----|
| Delivery quantity [l/min]<br>at 0 bar inlet and 0,6 bar back pressure | 725 |
|---|-----|

|                  |     |
|------------------|-----|
| Power input [kW] | 5,0 |
|------------------|-----|

**Sea water pump - option**

|            |      |
|------------|------|
| Pump model | ---- |
|------------|------|

|                           |     |
|---------------------------|-----|
| Delivery quantity [l/min] | --- |
|---------------------------|-----|

|                  |   |
|------------------|---|
| Power input [kW] | - |
|------------------|---|

|                                 |     |
|---------------------------------|-----|
| Injection timing [° before TDC] | --- |
|---------------------------------|-----|

|                                  |       |
|----------------------------------|-------|
| Flywheel housing dimension [SAE] | SAE 1 |
|----------------------------------|-------|

|   |  |
|---|--|
| Free exhaust noise [dB(A)]<br>1m distance |  |
|---|--|

|                              |  |
|------------------------------|--|
| Engine surface noise [dB(A)] |  |
|------------------------------|--|

**Exhaust status:** IMO Tier 2, RCD 94/25/EC, EPA Tier 2

**Transmission ratio** (related to engine speed)

|                      |      |
|----------------------|------|
| Ratio hydraulic pump | 1,30 |
|----------------------|------|

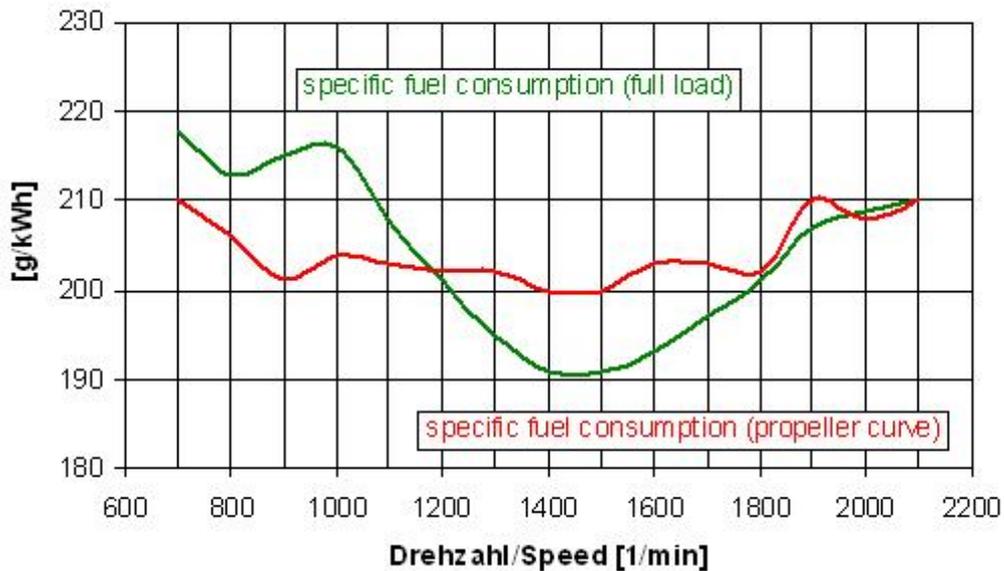
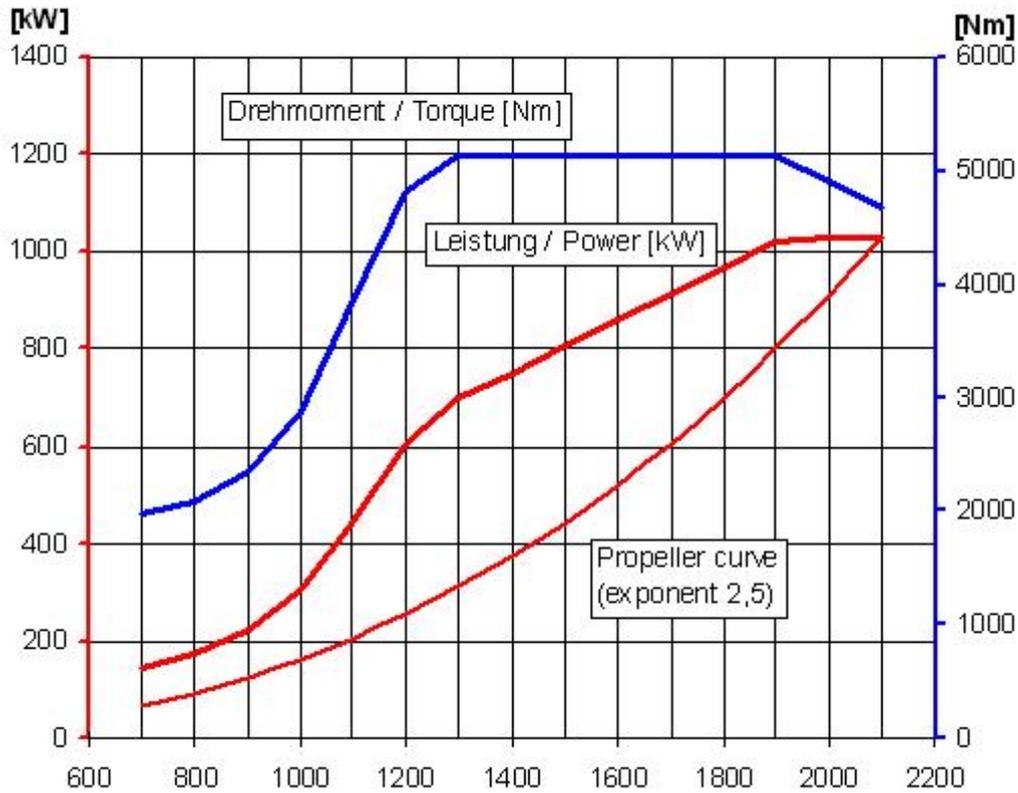
|                            |     |
|----------------------------|-----|
| Torque hydraulic-pump [Nm] | 180 |
|----------------------------|-----|

|                                |       |
|--------------------------------|-------|
| Ratio sea water pump, standard | 1,075 |
|--------------------------------|-------|

|                              |  |
|------------------------------|--|
| Ratio sea water pump, option |  |
|------------------------------|--|

|                            |      |
|----------------------------|------|
| Ratio alternator, standard | 4,03 |
|----------------------------|------|

|                          |  |
|--------------------------|--|
| Ratio alternator, option |  |
|--------------------------|--|



The nominal ratings are based on reference conditions according to DIN / ISO 3046 - 1: 298 K (25° Celsius) air temperature, 100 kPa (1000 mbar) air pressure, 60 % air humidity. Maximum permissible seawater temperature 305 K (32° Celsius). Output-related data are referred to the maximum rating specified for each speed.

Technical data are subject to alterations.