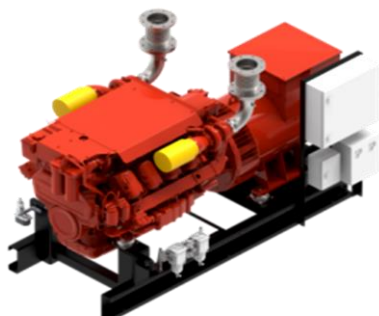


## Basic Line Marine Gen Set Data Sheet

## RED LINE

MRL165HE450



### Engine Equipment

- Basis engine for IMO Tier II
- Air filter(s), marine type
- Duplex change-over lube oil filter with dip tray
- Lube oil cooler
- Freshwater cooling pump with thermostats (HT circuit)
- Raw/Seawater pump LT circuit(Optional)
- Duplex change-over fuel oil filter with dip tray
- Fuel oil pressure gauge, mounted on the engine
- Flameproof flexible fuel oil hoses
- Flywheel and -housing
- Unit injectors, PDE
- Fuel lift pump and pre-filter
- Turbocharger
- Intercooler water-cooled
- Exhaust manifold(s) water-cooled
- Lube oil sump
- Hand pump for lube oil draining
- Centrifugal oil cleaner
- Scania Engine Management System,EMS
- Prepared for connecting to heat exchanger for seawater cooling

### Specific Fuel and Oil Consumption

|                               |         |      |
|-------------------------------|---------|------|
| 100% Load                     | [g/kWh] | 198  |
| 75% Load                      | [g/kWh] | 200  |
| 50% Load                      | [g/kWh] | 203  |
| Lube oil consumption (max)    | [g/h]   | 144  |
| Urea consumption @ 32,5% Urea | [g/kWh] | N.A. |

### Alternator Options:

- Anti-condensation heater(s)
- Droop kit for parallel operation
- Winding temperature sensors (1 x 3 PTC)

| Service          | Unit   | Value |
|------------------|--------|-------|
| Power            | kVA    | 562,5 |
| Power            | kW     | 450   |
| Speed            | r.p.m. | 1500  |
| Standard Voltage | V      | 400   |
| Frequency        | Hz     | 50    |
| Phases           |        | 3     |

### Engine and Alternator

|            |                          |
|------------|--------------------------|
| Engine     | Scania DI16 074M (04-03) |
| Alternator | LIAG Standrad Alternator |

### Diesel Engine Data

|                             |        |         |
|-----------------------------|--------|---------|
| Engine Power                | kW     | 480     |
| Number of Cylinders         | Pcs.   | 8       |
| Arrangement of Cylinders    |        | V-type  |
| Bore/Stroke                 | mm     | 130/154 |
| Piston displacement         | litres | 16,4    |
| Intake Air Volume Flow      | m³/h   | 1920    |
| Exhaust gas heat            | kW     | 239     |
| Exhaust gas temp.           | °C     | 465     |
| Exhaust gas mass flow       | kg/h   | 2160    |
| Exhaust gas volume flow     | m³/h   | 4583    |
| Exhaust gas back press. max | hPa    | 20/100  |
| Cooling water heat          | kW     | 351     |
| Intercooler heat rate       | kW     | N.A.    |
| Radiation heat              | kW     | 23      |

### Classification

Optional

### Alternator Data

|                         |        |       |
|-------------------------|--------|-------|
| Voltage                 | V      | 400   |
| Frequency               | Hz     | 50    |
| Speed                   | r.p.m. | 1500  |
| Insulation Stator/Rotor | Cl.    | H     |
| Temperature Rise        | Cl.    | H     |
| Enclosure               | IP     | IP 23 |
| Power                   | kW     | 450   |
| Power                   | kVA    | 562,5 |

### Alternator Equipment

The alternator is a 2-bearings, brushless, self-exciting, self-regulating with revolving field, in-ventilated, drip-proof design and with damper windings included.

The voltage regulation is maintained within limits of +/- 0,5 % from no load to full load at any power factor between 0,8 and 1,0.

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## Alarm Equipment

Indication for individual alarm at following failures:

- Low cooling water pressure LT
- Low cooling water pressure HT
- Low cooling water level HT
- High cooling water temperature HT
- Low fuel oil pressure
- Low lube oil pressure
- High lube oil temperature
- Over speed
- Options to customized as per clients requirements

## Shut-Down Equipment

- Overspeed
- Too high cooling water temperature HT
- Too low lube oil pressure

## Control System

The Engine Control Panel is flexible mounted on right side of the set and equipped alarm, monitoring and control system according to the rules of classification society.

Marine Engine Controller (MEC 24) with Graphic display 5,7".  
Redundant microprocessor based control and supervision system.

- (Optional) Provision of remote control MEC24 panel
- (Optional) Provision of Modbus RTU communication

## Construction

The diesel engine and alternator are connected through a flexible coupling and mounted on a common marine bed frame, manufactured of electro welded steel profiles. Vibration dampers are mounted between the set and the bed frame.

## Cooling System

With heat exchanger for max. inlet Temperature of 36°C installed pump for LT/Sea circuit

## Fuel oil System

The fuel consumption stated below refers to a net calorific value of 43,000 kJ/kg (11,800 kWh/kg) for fuel acc. to DIN EN 590 or ASTM D975 or DMX/DMA as ISO8217, sulphur max. 0,15% (1500 ppm)  
You will get more information in the engine supplier manual.

## Dimensions

|        |    |      |
|--------|----|------|
| Height | mm | 1620 |
| Width  | mm | 1470 |
| Length | mm | 3050 |
| Weight | kg | 4250 |

## Painting

The set will be painted in colour RAL 2002, base frame RAL 9005 (black)

The instrument panel will be painted in colour RAL 7035

## Signs

All signs on the set will be in English

## Certificates & Test run

The equipment will be tested according to LIAG rules in our workshop in Germany in the presence of our QS Team

- 1 No. LIAG test report

- 1 No. technical files for parts according to MARPOL ANNEX VI The parts which have influence on the NOx Emission will be according to the requirement for obtaining Certificate E(I)APP

- 1 No IMO Tier II (NOx) E(I)APP Certificate by DNV according to flag state

## Main starting system

- Electric 24V, 5,4 kW, 2-pole

## Warranty

12 months after commissioning, max. 24 months after announcement of readiness to dispatch from LIAG, whichever comes first.

## Electronical Final Documentation (per ship)

- 1x CD / USB's of Technical data's, descriptions, service instructions and drawings for the delivered equipment in English language

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Specifications are subjected to change without prior notice

V012e 2023-08-09

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