



CBU control panel (Mod-Bus transmission Unit)

New design, latest technology, big display and soft touch buttons for quick menu navigation, start and stop procedure, IP54 protection grade. Very compact MASTER CBU 93x93mm (3.66x3.66 in). CBU has many functions for easy monitoring of the generator:

- ON/OFF/START/STOP/MENU controls.
- Digital hour-meter, Main voltage, Generator Battery voltage, external battery pack voltage, Frequency, Service time, Event list of last 10 alarms and time.
- 13 different alarms icons displayed.
- 485 Mod-Bus connector for monitoring generator by boat main control monitor.

Engine

- Easy access in case of maintenance to the feeding system and lubrication, of the sea/water pump and the air filter.
- Safety stop in case of low oil pressure.
- Safety stop in case high water/exhaust gas temperature.
- Oil and fuel filters of easy access.

Alternator

- Synchronous, 4 poles, brush less self-excited, electronic voltage regulator (AVR)
- Rotor and stator epoxy resin coated against external agents.
- Rotor dynamically balanced.
- Insulation class H.

Soundproof cabin

A new project engineering design with a structure of a draw piece of aluminum supporting, painted aluminum panels type 5754 of high resistance to external agents. Of limited weight and easy accessibility to the inner cabin in case of maintenance services.

| Engine | 50 Hz |
|------------------------------------|-----------------|
| Model | KUBOTA D1703 |
| Type | Diesel 4 stroke |
| Cylinders (nr.) | 3 |
| Cylinder block material | Cast iron |
| Bore (mm - in.) | 87 |
| Stroke (mm - in.) | 92,4 |
| Displacement (cc - cu.in.) | 1647 |
| Power (hp) | 19,4 |
| Rated rpm | 1500 |
| Combustion system | Indirect |
| Engine head material | Cast iron |
| Speed governor | Electronic |
| Lubrication system | Forced |
| Oil sump capacity (L - qt.) | 5,7 |
| Engine stop system | Stop solenoid |
| Fuel pump | Electric |
| Fuel pump discharge (cm - in.) | 70 |
| Full load consumption (L/h - qt/h) | 4,1 - 4,3 |
| Starting battery (Ah-V) | 80 - 12 |
| Battery charger (Ah-V) | 40 - 12 |
| Starter (kW-V) | 1,4 - 12 |
| Max. inclination | 30° |
| Water pump flow (L/min - gal/min) | 20 |

| Alternator | 50 Hz |
|-----------------------------|------------------------------------|
| Type | Synchronous, 4-poles, self-excited |
| Cooling | Air |
| Voltage (V) | 230 |
| Frequency (Hz) | 50 |
| Current (A) | 54,3 |
| Max. power (kW) | 12,5 |
| Continuous power (kW) | 11,5 |
| Power factor (cos ϕ) | 1 |
| Insulating class | H |
| Voltage stability | $\pm 1\%$ |
| Frequency stability | $\pm 2\%$ |

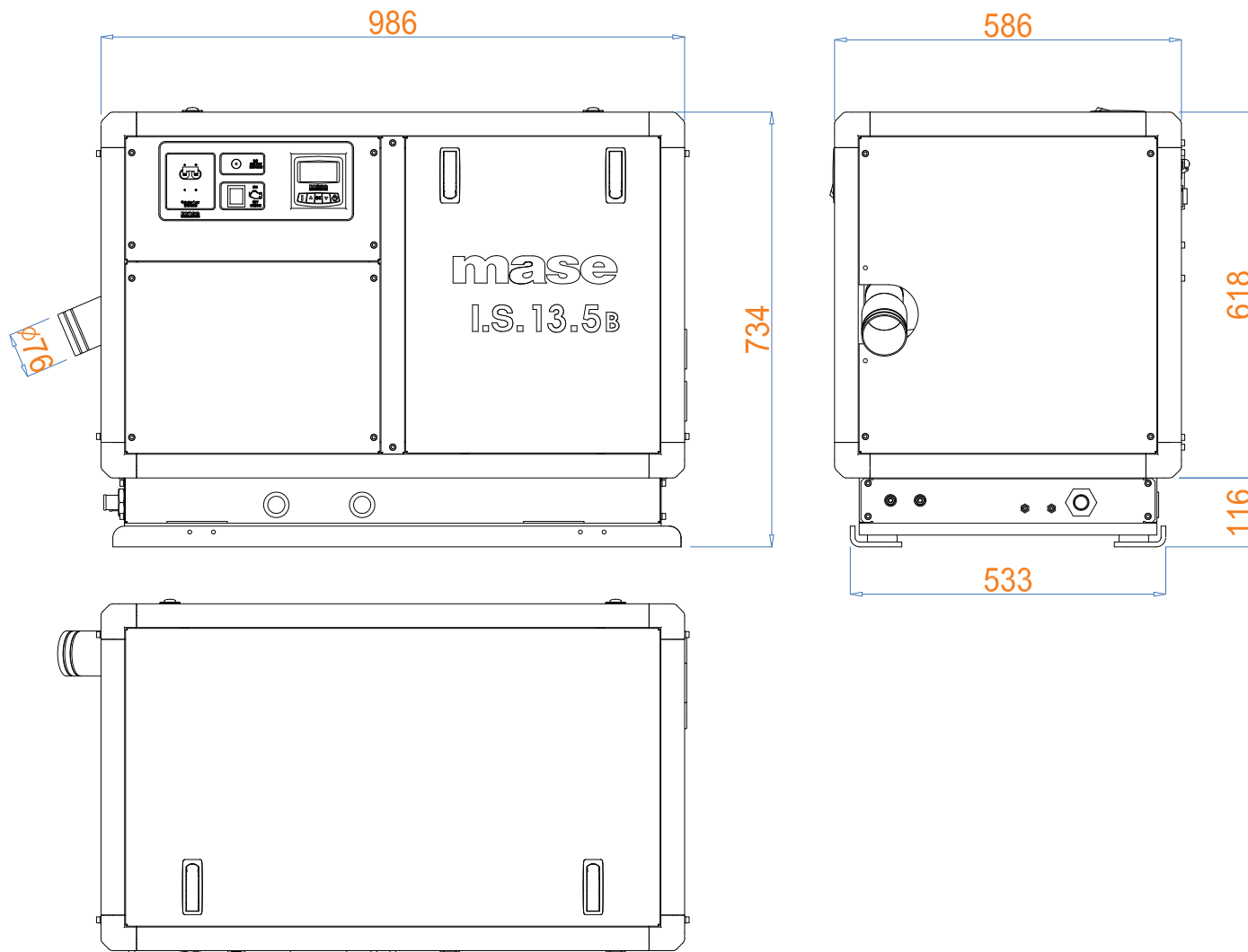
Cooling system

The cooling of the engine is based on a closed inner flow of coolant.

The system is based on a heat exchanger seawater/coolant type, of cupronickel, where the thermal exchange occurs between the two liquids.

Two separate pumps contribute to the flow of the coolant and the sea water. The cooling of the air inside the gen-set is obtained through a seawater/air heat exchanger. This provides the efficacious cooling of the alternator and the optimal temperature for the best performance and reliability of the gen-set despite its on board allocation and room temperature.

| | | | |
|-------------------------------------|--------------------|--|---------|
| | 50 Hz | | |
| Dimensions (Leng. x Width x Height) | 986 x 586 x 734 | | mm |
| | 38,8 x 23,1 x 28,9 | | in. |
| Weight | 400 - 882 | | kg - lb |
| Noise level emission | 48 dBA @ 7mt | | |



FITTINGS (optional)

- EXHAUST COMPONENTS KIT
- SIPHON BREAK
- WATER-GAS SEPARATOR KIT
- STARTING REMOTE CONTROL PANEL WITH A SHIELD CONNECTING CABLE 10 Mt. (32.8 ft) LONG OR
- SLAVE CBU CONTROL PANEL WITH A SHIELD CONNECTING CABLE 10 Mt. (32.8 ft) LONG

*This drawing is only a reference and is not indicatly for the installation. For more information, you may contact your local dealer or **mase** generators S.p.A..*

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Dealer: