

LOMBARDINI

Marine

LMG



Marine generator



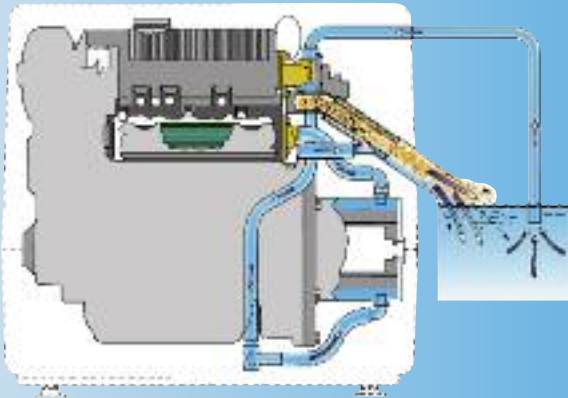
Lombardini Marine generator set is the result of many years of study, made after a careful market-research with boat builders and final users. Our aim was to meet the needs of everyone, by making what was required by the market.

We have therefore produced a generator which answers the fundamental requirements of noiselessness, compactness, lightness, vibration free operation and is capable of working in high temperature environments and at large angles of inclination.

A very good wave shape, as well as easy accessibility for maintenance checks, has also been achieved.

technical characteristics

A characteristic of the Lombardini Marine LMG generator set is its FULL WATER cooling system which includes both the engine and the alternator; the sea water cools, through a special circuit, the fresh water in the engine, the oil and the external walls of the alternator's stator. In a closed environment such as a boat's engine room, it is fundamental to eliminate the heat produced by the generator to avoid having hot air circulating inside the housing and reducing the efficiency of both the engine and the alternator.



noiseless energy

For a traditional generator set, the main cause of noise is the engine. Noise is transmitted outside the housing through openings made in the hood, which are generally necessary for the entry of the cooling air for the alternator. Lombardini Marine, developed the silencing of the engine with a soundproof shield on the injection side, a major source of noise, and cooling the alternator with water and not air. This is why many hood openings have been eliminated and the essential combustion air enters by little holes through a labyrinth run in order to prevent the exit of noise.

engine

FOCS (fully overhead controlling system) series engines, utilized for these generators, are known for their compactness, low noise, low pollution emissions and absence of vibrations.

The engine's architecture has been designed to have the smallest dimensions due to the position of the injection system under the cylinder head and at the same time producing excellent results in reducing noise thanks to indirect injection and to the absence of timing gear's.

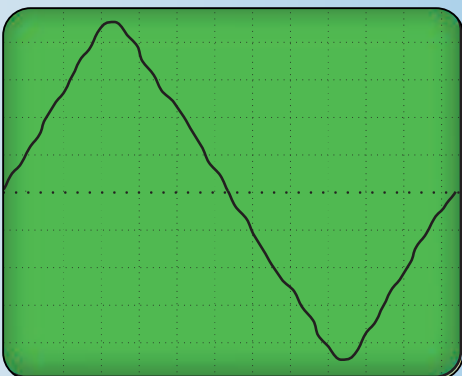
The cam-shaft in the head is belt driven and designed for heavy-duty application with the belt's life equal to the engine's life.

The Lombardini patented injection system utilising pump injectors, eliminates fuel pipes and improves precision in injection phases with big advantages in terms of performance and pollution.



alternator

The alternator is a synchronous type without brushes with the windings on the stator. The delivered voltage is constant between zero and the rated output. It has an excellent capacity to absorb extra power demands especially from electric motors, without creating any disturbance to other electrical equipment. The wave shape allows the safe utilization of the most sophisticated electronic equipment and a good input to the battery charger. Operational temperature is maintained at optimum level thanks to the innovative system of water cooling through a special heat exchanger fabricated in stainless steel which ensures even in the presence of hot air in the engine room, the best efficiency of the alternator.



absence of vibration

The low vibration level has been obtained with a double system of special rubber mounts. The first set, inside the housing, is composed of 5 soft rubber mounts type; while the second system, mounted externally, is made of 4 rubber mounts of the semi-rigid type.

This system completely insulates the generator from the rest of the boat, allowing, at the same time, simple and quick installation.

inclination

When the boat has to sail heeled, the generator set has to continue to work in order to guarantee the necessary power to the electrical systems on board. A special oil sump with internal bulkhead allows the gen-set to work intermittently with side or longitudinal inclination up to 30°.

maintenance

In order to simplify maintenance, the generator has been designed with all the controls and engine parts which require routine maintenance on one side only.

It is sufficient to remove only one side of the housing to carry out all maintenance operations; for example topping up of fluids and the replacement of consumable parts such as the sea water impeller, fuel filter, zinc anode, or to gain access to the oil extraction pump for the periodic oil change.

The electrical components and the fuel pump are located in an easily accessible box.



remote control box

The generator set is supplied with a remote control box and 10 m. of plug-in cable complete with: hour meter. An automatic shutdown operates in the event of oil pressure and water temperature failure, warning lights indicate high water temperature, low oil pressure, battery charge failure. A power light bar indicates gen-set load with an overcharge alarm.



automatic security stop

In order to avoid serious damage to the engine, a special safety shutdown device intervenes in order to stop the engine in case of high temperature of the water cooling and low oil pressure.

easy installation

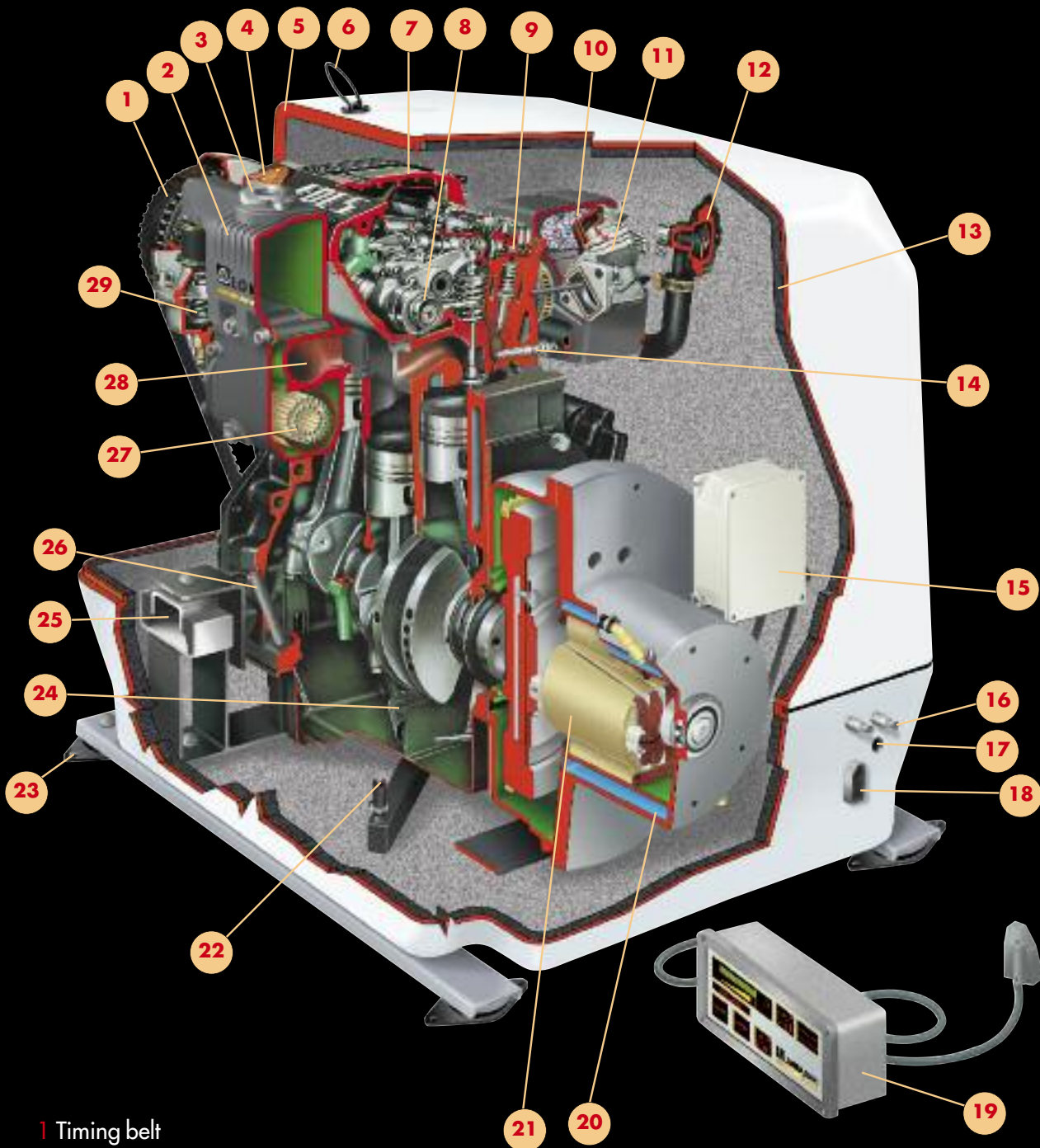
The gen-set is supplied with external rubber mounts pre-mounted and it only needs them to be fixed, with special screws, to the boat structure.

For the electrical cable, sea water pipes and exhaust, you will find special openings in the housing. By using suggested diameters you can avoid noise leaks.

assistance network

Lombardini Marine has a dealer network which covers Europe and the rest of the world wherever pleasure boats are operating.

An efficient spare parts department ships parts and accessories anywhere in the world.



- 1 Timing belt
- 2 Heat exchanger
- 3 Cooling fluid filler cap
- 4 Oil filler cap
- 5 Soundshield
- 6 Elastic locking ring
- 7 Rocker arm cover
- 8 Camshaft
- 9 Injector-pump
- 10 Air filter
- 11 Fuel feeding pump
- 12 Breather valve
- 13 Sound insulation
- 14 Glow plug
- 15 Electrical box with harness
- 16 Fuel hose break-away coupling
- 17 Sea water pipe inlet

- 18 Remote control multipole connector
- 19 Remote control panel
- 20 Alternator cooling jacket
- 21 Alternator
- 22 Oil cooler
- 23 External rubber mounts
- 24 Oil sump bulkhead
- 25 Internal rubber mounts
- 26 Oil dipstick tube
- 27 Heat exchanger tube nest
- 28 Water cooled exhaust manifold
- 29 Thermostatic valve

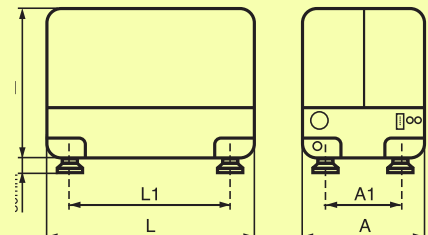
TECHNICAL SPECIFICATIONS

3000 RPM	LMG 9000	LMG 14000	LMG 18000
Diesel engine			
Manufacturer	Lombardini Marine		
Model	LDW 702 MG	LDW 1003 MG	LDW 1404 MG
Cylinders	2	3	4
Displacement	686 cc	1028 cc	1372 cc
Power ISO 3046 - IFN	10 KW	17 KW	22 KW
Speed	3000 rpm (3600 rpm on request)		
Cooling system	Indirect by heat exchanger		
Electric starter	12 Volt remote controlled		
Synchronous, brushless, AC water-cooled generator			
Manufacturer	V.T.E.		
Power	9 KVA - 8 KW	14 KVA - 11 KW	18 KVA - 16 KW
Voltage	Single phase AC 230/115 Volt self-regulated		
Frequency	50 Hz (60 Hz on request)		
Battery charger voltage	12 Volt DC 10 Amp (24 Volt on request)		
Cooling system	AISI 316 stainless steel heat exchanger jacket		
Set			
Noise emission	52 dBA	54 dBA	54 dBA
Weight soundproof hood included	160 Kg	210 Kg	230 Kg

1500 RPM	LMG 6500	LMG 8500
Diesel engine		
Manufacturer	Lombardini Marine	
Model	LDW 1003 MG	LDW 1404 MG
Cylinders	3	4
Displacement	1028 cc	1372 cc
Power ISO 3046 - IFN	8.3 KW	11.5 KW
Speed	1500 RPM (1800 RPM on request)	
Cooling system	Fresh water with heat exchanger	
Electric starter	12 Volt remote controlled	
Synchronous, brushless, AC water-cooled generator		
Manufacturer	V.T.E.	
Power	6.5 KVA - 6 KW	8.5 KVA - 8 KW
Voltage	Single phase AC 230/115 Volt self-regulated	
Frequency	50 Hz (60 Hz on request)	
Battery charger voltage	12 Volt 8 Ampere	
Cooling system	Trough stainless steel AISI 316 and heat exchanger jacket	
Set		
Noise emission	49 dBA	51 dBA
Weight soundproof hood included	170 Kg	200 Kg

Overall dimensions

LMG					
	6500	8500	9000	14000	18000
H	590	620	590	620	620
L	770	860	720	860	970
L1	650	700	550	700	800
A	460	580	460	580	580
A1	350	420	350	420	420



Lombardini Marine is a division of:



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