LAGOON 560

User's guide

LAGOON

catamarans since 1984

www.cata-lagoon.com

We share a common passion for the sea ; we, LAGOON, as catamaran builders and you who want to live your passion on the seven seas.

We are delighted to welcome you to the family of LAGOON catamaran owners and we congratulate you on it.

This instruction guide is intended to help you to enjoy your boat in comfort and safety. It includes the boat specifications, the equipment provided or installed, the systems on board and tips on her use and maintenance. Read this guide carefully before you put out to sea so that you can make the most of her and avoid any damage and above all any further problem. Read it and get to know your boat before using her.

In order to share with you as much new technology, new equipment or materials and company experience, our boats are constantly improved. This is why the specifications and information given are not contractual and may be modified without notice and without obligation of updating.

This instruction guide has a general purpose and may sometimes mention some equipment or accessories or deal with some points that are not relevant to your own boat ; if in doubt, refer to the inventory you were given on delivery of your boat.

Our network of LAGOON authorized dealers will be at your disposal to help you get acquainted with your boat and will be the most qualified to take care of her maintenance.

If this is your first boat, or if you change to a new type of boat which you are not used to, get some training in boat control and sailing to ensure your safety and comfort. Your dealer, your international sailing association or your yacht club will be very happy to recommend local sailing schools or profesional instructors.

Although everything possible has been planned and designed with the safety of the boat and her users in mind, remember that sailing is highly dependent on the weather conditions and the sea state, and that only an experienced and very fit crew, handling a well-maintained boat, can sail satisfactorily.

The sea and wind conditions that correspond to design categories A, B, C and D are changeable and are still susceptible to the risk of unusually large waves or strong gusts of wind. Total safety cannot therefore be guaranteed, even if your boat meets the requirements of a category.

Always read and listen to the weather forecast before you put out to sea.
Make sure that the forecast sea and wind conditions will correspond to the category of your boat and that you and your crew are able to handle the boat in these conditions.

The sea and the water are not the natural environment of Man and he must respect their laws and strength.

Adapt the use of your boat to her condition that wears out with time and use.
Any boat, however solid she may be, may be severely damaged if badly used. This is not compatible with a secure navigation. Always adapt the speed and direction of your boat to the conditions of the sea.

The «COLREG», international regulations for preventing collisions at sea, published by the International Maritime Organization, specify the rules relative to steering and courses, navigation lights, etc. throughout the world. Make sure you know these regulations and you have on board a manual that explains them.

In numerous countries, a licence, an authorization or a training course is requested.
Make sure you have this legal authorization before you use your boat.

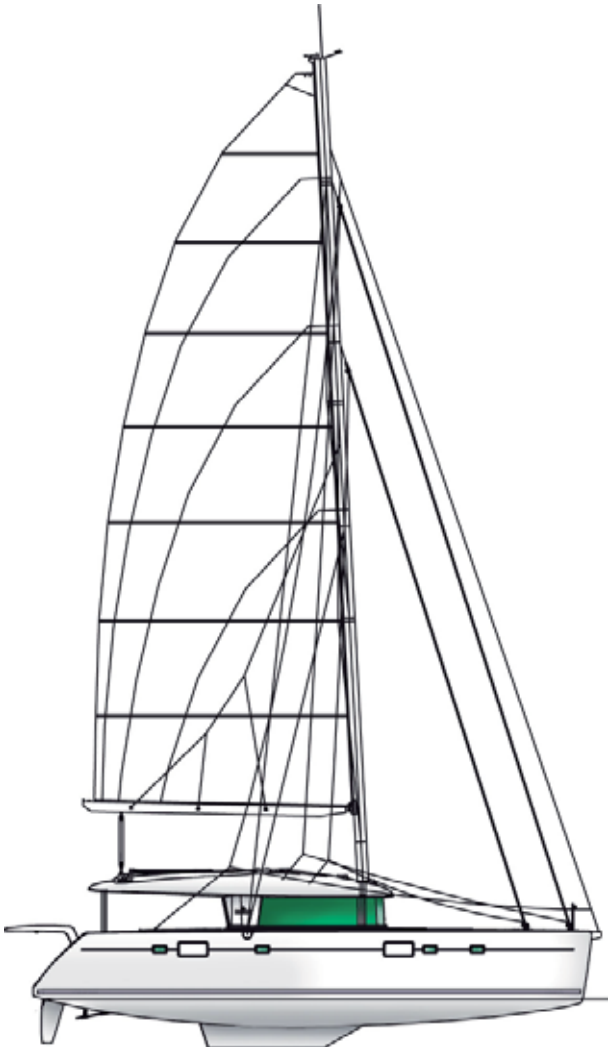
Always ensure an experienced professional carries out the maintenance of your boat, installs any accessories and makes any small modifications. The written authorization of the builder or his legal representative is compulsory for modifications that alter the specifications of the boat, in particular the vertical layout of the weights (installing a radar, modifying the mast, changing the engine, etc.).

For essential or optional equipment (engine, electronics, etc.) refer to their respective manuals supplied with your boat.

The users of the boat are informed of the following :

- The entire crew must be properly trained.
- The boat must not carry a load heavier that the maximum load recommended by the builder, in particular the combined weight of food supplies, equipment not supplied by the builder and people on board. The load carried by the boat must be properly distributed.
- The water in the bilges must be maintained at a minimum.
- Stability is reduced when you add weight in the upper sections.
- In the event of heavy weather, the hatches, lockers and doors must be closed in order to minimize the risk of water coming in.
- Stability may be reduced when you tow a boat or lift heavy weights using the davits or the boom.
- Breaking waves are a serious danger to stability.
- If your boat is equipped with a life raft, read the instructions carefully. All the proper safety equipment must be carried on board (harness, flares, life raft, etc.) according to the type of boat, the country in which she is used, the weather conditions, etc.
- The crew must be familiar with the use of all the safety equipment and all emergency safety procedures (MOB, towing, etc.).
- Anyone on deck must wear a life jacket or a buoyancy aid. Please note that in some countries it is compulsory to wear an approved buoyancy aid permanently.

Keep this manual in a safe place and hand it on to the new owner if you sell your boat.



Main specifications

L.O.A	17,07 m / 56’
L.W.L	16,47 m / 54’
Main beam	9,44 m / 30’97”
Clearance height	28,66 m / 94’03”
Draft	1,50 m / 4’11”
Theoritical light displacement	28620 kg / 63107 lbs
Theoritical maximum load displacement	36162 kg / 79723 lbs
Theoritical authorized maximum load	7542 kg / 16630 lbs
Bottom surface (appendages included)	98m^2

Water capacity	4x240 l / 4x63,5 US gal
Fuel capacity	2x650 l / 2x171,5 US gal
Positive cold capacity	330 l / 87 US gal
Negative cold capacity	60 l / 16 US gal
Battery capacity (standard)	420 Ah (24 V)
Battery capacity (with optional extra)	840 Ah (24 V)
Starting battery (per engine)	50 Ah (12 V)
Generator starting battery	50 Ah (12 V)
Maxi engine power	2x110 CV

CE Certification category	Number of persons
A	14
B	14
C	16
D	30

CONTENTS

SECTION 1 ..... SAFETY
1.1 Safety equipment
1.2 Gas system safety instructions
1.3 Fire extinction
1.4 Bilge pump system
1.5 Emergency tiller
1.6 Engine
1.7 Towing
1.8 Capsizing
1.9 General points

SECTION 2 ..... HULL / DECK
2.1 Construction
2.2 Companionway door, bay-window
2.3 Access to fly helm station
2.4 Cockpit
2.5 Gangway (optional extra)
2.6 Steering gear
2.7 Deck wash pump (optional extra)
2.8 Windlass, anchoring
2.9 Davits (optional extra)
2.10 Tenderlift (optional extra)

SECTION 3 ..... RIGGING / SAILS
3.1 Sailing
3.2 Standing rigging
3.3 Running rigging
3.4 Sails

SECTION 4 ..... ELECTRICITY
4.1 Multiplex management system
4.2 24 V system
4.3 12 V system
4.4 Inverters
4.5 110 V - 220 V system
Appendix

SECTION 5 ..... PLUMBING
5.1 Bilge pump system
5.2 Grey water system
5.3 Fresh water
5.4 Use of the marine heads
5.5 Black water tanks
5.6 Watermaker (optional extra)

SECTION 6 ..... ACCOMMODATION LAYOUT
6.1 Portholes and deck hatches
6.2 Floorboards
6.3 TV (optional extra)

SECTION 7 ..... ONBOARD UTILITY
7.1 Galley / saloon refrigerator
7.2 Alleyway refrigerator
7.3 Oven, hotplate
7.4 Microwave oven (optional extra)
7.5 Icemaker (optional extra)
7.6 Washing machine (optional extra)
7.7 Dishwasher (optional extra)
7.8 Air conditioning (optional extra)

SECTION 8 ..... PROPULSION
8.1 Engines
8.2 Fuel
8.3 Propellers, anodes, shaft line brake
8.4 Bow thruster

SECTION 9 ..... ……WINTER STORAGE / HANDLING
9.1 Laying up
9.2 Protection
9.3 Handling
9.4 Mast stepping, mast unstepping

SECTION 10 ..... UP KEEP / MAINTENANCE
10.1 Maintenance schedule

SECTION 1
SAFETY

1.1 SAFETY EQUIPMENT
1.2 GAS SYSTEM SAFETY INSTRUCTIONS
1.3 FIRE EXTINCTION
1.4 BILGE PUMP SYSTEM
1.5 EMERGENCY TILLER
1.6 ENGINE
1.7 TOWING
1.8 CAPSIZING
1.9 GENERAL POINTS

SAFETY EQUIPMENT ON DECK

1 - Location for life buoy.

2 - Deck eye for life line fastening.

3 - Emergency tiller cover.

4 - Location for life raft.

5 - Manual bilge pump.

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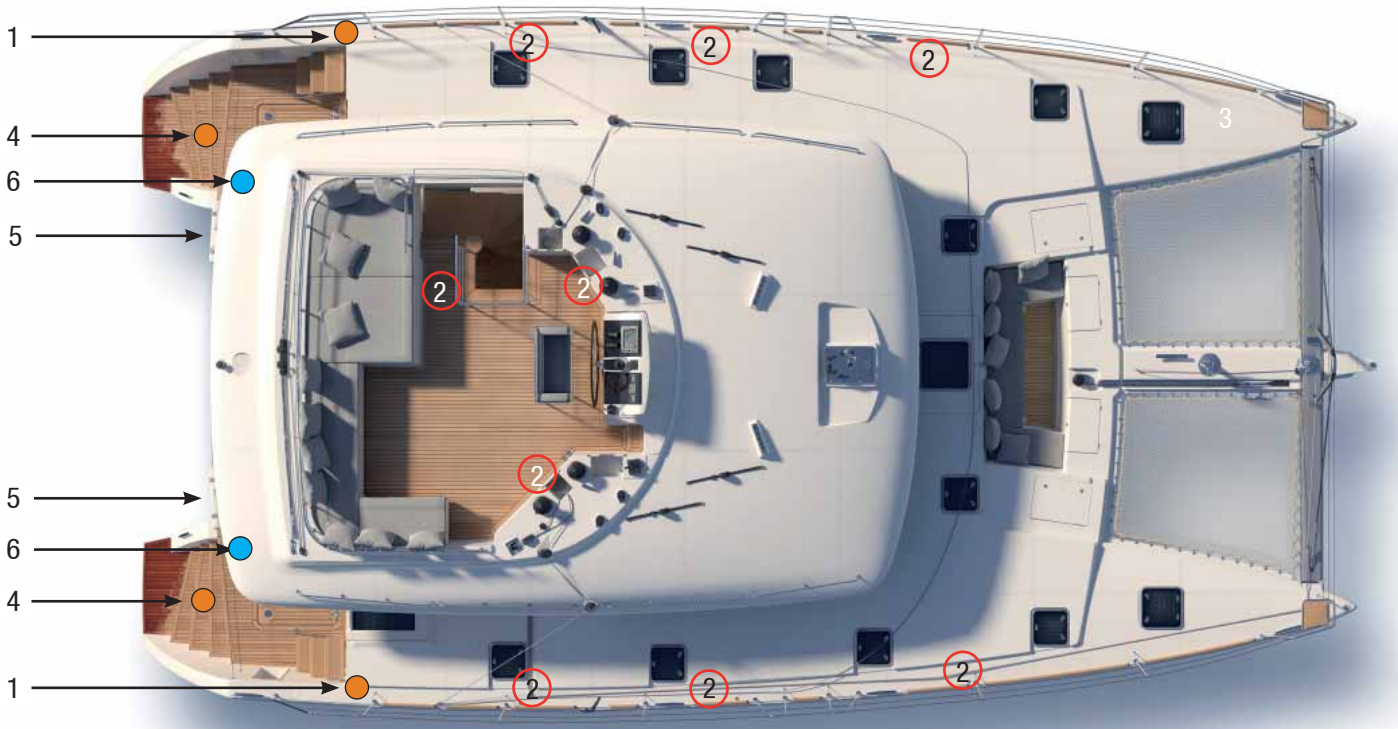

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RECOMMENDATION

Some components do not have a pre-determined place for them.

Fill-in this drawing according to your own boat safety equipments.

■ 1.1 Safety equipments

Before you sail, list the compulsory safety equipments.

WARNING
The list of the compulsory safety equipement corresponds to a certification category, a design category as well as to the regulations in the country where the boat is registered.

Do not exceed the number of persons indicated in the «SPECIFICATIONS» Chapter.

The combined weight of the persons and equipment should never exceed the maximum load recommended by the builder.

RECOMMENDATION
Close the deck hatches and portholes before each trip.

• LIFE LINES
- Fasten the life lines on the deck and under the bridgedeck (close to the manhole).

• LIFE RAFT
You shall use the life raft only as a last resort.

RECOMMENDATION
Before you sail to sea, carefully read the launching instructions on the life raft.

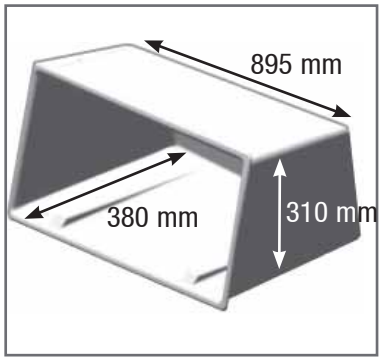
WARNING
Regularly check the safety equipements is in good working order.
Follow the service programme without fail.
Generally speaking, take particular care of all the safety equipment of your boat.

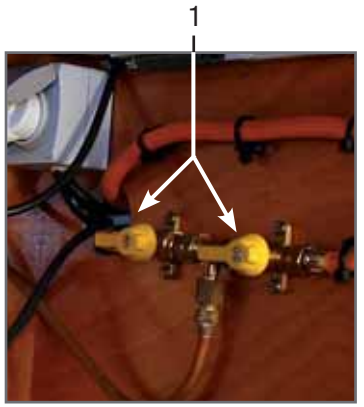
The locations for the life rafts are situated in the rear beam.

Fit your boat with life rafts in pursuance of the regulations of the country where the boat is registered.

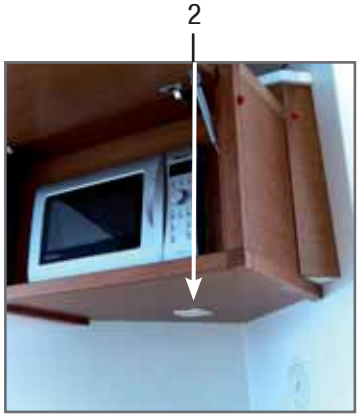
GAS VALVES - LIFE RAFT CASE MEASUREMENTS

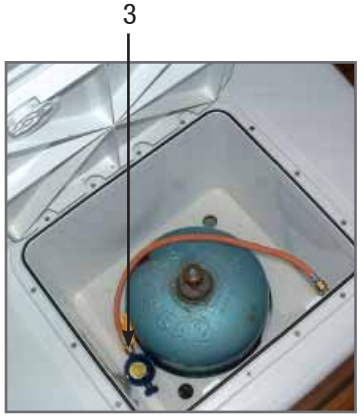
LIFE RAFT MEASUREMENTS





1 - Gas valves
(access through the cupboard, at the left of the oven).
2 - Electronically controlled valve command (US version).
3 - Regulator
(access through the starboard locker under the cockpit seating).





■ 1.2 Gas system safety instructions

The gas cylinders are located in the lockers of the cockpit settee.
Type of cylinder 13 kg (butane), or according to current standards of your country.

Close the valves on the system and on the cylinder when the appliances are not used.
Close the valves before you change cylinders and immediately in case of emergency.
Never leave unattended an appliance that is working.
Do not install flammable materials above or over the stove (curtains, papers, napkins etc.).

Do not use the oven or stove as back up heaters.
Never obstruct the fast access to the components of the gas system.
Make sure that the valves of the appliances are closed before you open the cylinder or pipe valve.

In case you smell gas or find that the burners have gone out (although appliance models cut off automatically if the flames go out), turn off the valves of the appliances. Do ventilate the boat in order to get rid of any residual gas. Find the cause of the problem.

Regularly test the gas system in order to detect any gas leak.
Check all the connections using water and soap or detergent, closing the valves of the appliances and opening the valve on the cylinder.
If you detect a leak, close the valve of the cylinder and repair before you use it again.

WARNING
- Never use a flame to detect leaks.
- Do not smoke, do not use a naked flame when you change the gas cylinder.

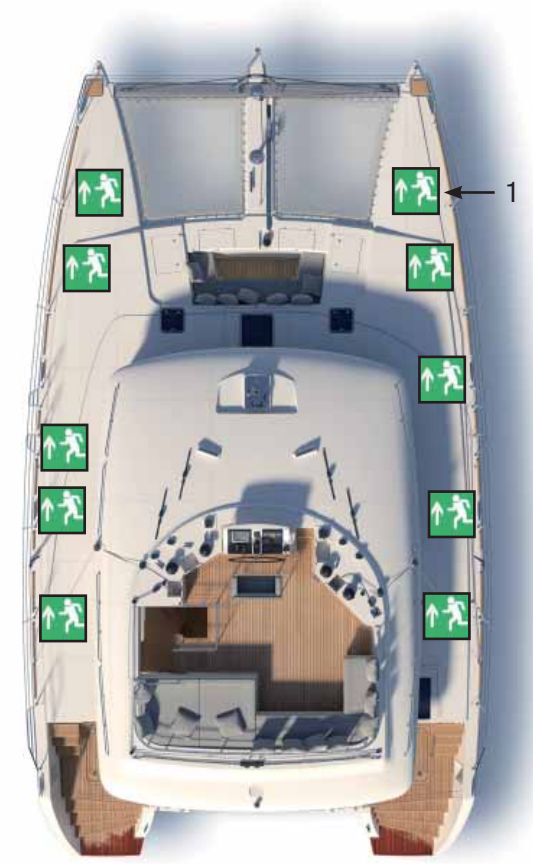
The appliances use the oxygen of the cabin and release combustible gases. Ventilate your boat when using appliances.
Do not obstruct the air vents and at least leave the door open.

Keep the taps of the empty cylinders turned off and the cylinders disconnected.
Keep the protections, lids, covers and taps in their places.
Store the empty and spare cylinders on the deck or in a locker with a ventilation to the open air.
Do not use the gas cylinder storage place to store other equipment.
Only use the proper locker to store the gas cylinders.

Regularly check and replace the rubber tubings that link the cylinder to one end of the circuit and the stove to the other one, depending on the standards and regulations in force in your country.
Pay particular attention to keep in good condition the screw thread of the cylinder on which the regulator is. Check the condition of the regulator every year and change it if necessary. Use regulators identical to the ones that are fitted.

Have the repairs carried out by someone skilled.

INDOOR SAFETY EQUIPMENT



1 - Emergency exit.

2 - Extinguisher.

3 - Release pull handle of engine extinguisher.

4 - Engine extinguisher.

5 - Distress flares.

6 - First aid kit.

7 - VHF (optional extra).

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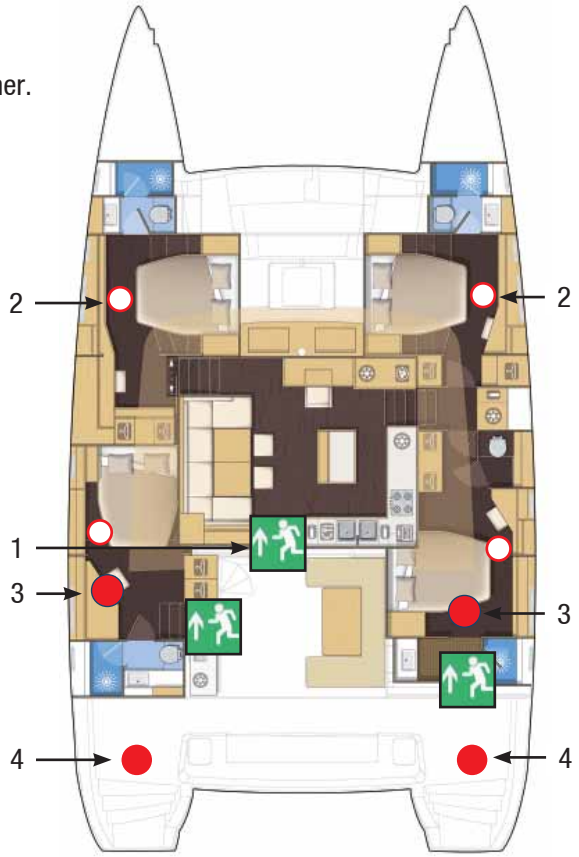


RECOMMENDATION
Some elements do not have a pre-determined place for them.
Fill-in this drawing according to your own boat safety equipments.

■ 1.3 Fire extinction

The boat has a fixed extinguishing system meant only for the engine bilges as standard equipment.
Check that mounted fire extinguishers have their pins removed before unberthing.
Nota : replacing the pins in mounted fire extinguishers is recommended during prolonged work in the engine holds in order to avoid any untimely activation.

Be sure :
- To equip the boat with extinguishers in pursuance of the regulations of the country where your boat is registered.
- To have the extinguishers checked according to the instructions given.
- To refill or replace the extinguishers by similar equipment if the extinguishers have been used or are out of date.
- To ensure the extinguishers are accessible when people are on board.
- To fill-in the drawing opposite, indicating the locations for the extinguishers.

Before each trip to sea, tell the crew :
. where the extinguishers are and how they work,
. where the release pull handles of the extinguishers in the engine bilges are,
. where the emergency exits are.

• ESSENTIAL PRUDENCE RULES
Never :
- Obstruct access to the emergency exits.
- Obstruct safety controls (fuel valves, gas valves, power switches).
- Obstruct the access to the extinguishers placed in cupboards or lockers.
- Leave the boat unattended when a stove or heater is in use.
- Use gas lamps in the boat.
- Alter any of the boat's systems (electricity, gas or fuel).
- Fill up a tank or change a gas cylinder when an engine is running or a stove or heater is on.
- Smoke while handling fuels or gas.

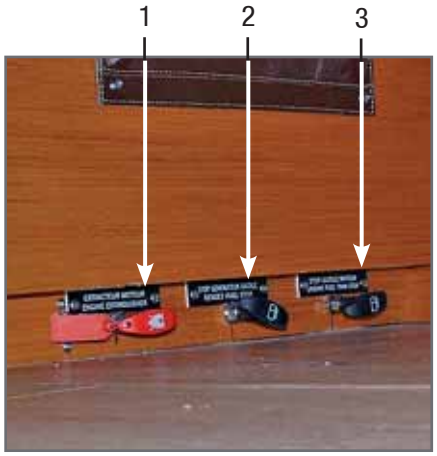
Do not install free hanging curtains or other fabrics near to or above cooking appliances or other naked flame devices.

Make sure that holds are clean at all times and regularly check that there are no fumes or fuel and gas leaks.
Flammable products should not be stored in the engine bilge. Non-flammable products stored in the engine bilges should be fastened to prevent them from falling on the machine and obstructing access.

WARNING
Should you replace components of the fire extinction system, only proper components with the same designation or with equivalent technical capacities and fire resistance should be used.

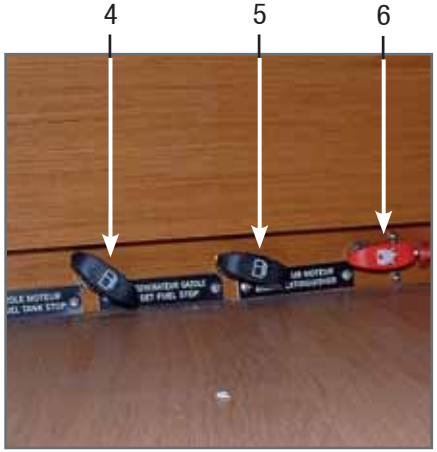
WARNING
Use only CO2 extinguishers to fight electrical fires.
Evacuate the area immediately after discharging the product to prevent asphyxia.
Ventilate before entrering.

PULL HANDLES OF FUEL VALVES - ENGINE BILGE EXTINGUISHER



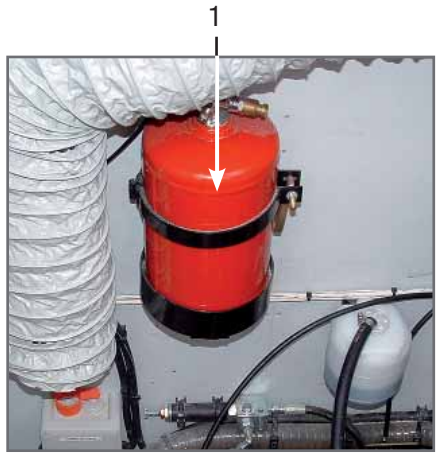
1 - Cut off device of generator tank fuel supply (portside).
2 - Generator tank power cut off (portside).
3 - Cut off device of portside tank fuel supply.

(access with the pull robs located at the bottom of the cupboard in the aft cabin of the port side hull).



4 - Cut off device of starboard tank fuel supply.
5 - Generator tank power cut off (starboard).
6 - Release mechanism of starboard engine bilge extinguisher.

(access with the pull robs located under the right side of the berth, in the aft cabin of the starboard side hull).



1 - Fixed extinguishing system of the engine bilges (access in the engine bilges).

• PROCEDURE TO FOLLOW IN THE EVENT OF FIRE
- Stop the engine if it is running.
- Cut the power supply, the fuel supply - using the pull robs located at the bottom of the cupboard (aft cabin, port side hull), under the right side of the bed (starboard hull, aft cabin) and if necessary, the gas supply.
- Cut off all sources of air (smother the fire using blankets).
- Hold the extinguisher upright and aim at the heart of the fire.

If fire has broken out in an engine bilge :
- Stop the engine if it is running.
- Cut the power supply, the fuel supply - using the pull robs located at the bottom of the cupboard (aft cabin, port side hull), under the right side of the bed (starboard hull, aft cabin) and if necessary, the gas supply.
- Shut off the air supply using towels to block off the engine air inlets, intakes and outlets.
- Spread the extinguishing product using the trigger mechanism of the motor extinguisher (at the bottom of the cupboard in the aft cabin,port hull, under the right side of the berth, aft cabin of the starboard hull.).
- Make sure that the fire is completely under control.
- Open the bilge access hatch to make any necessary repairs.

RECOMMENDATION
Always keep an extinguisher handy in case the fire should start again.

■ 1.4 Bilge pump system

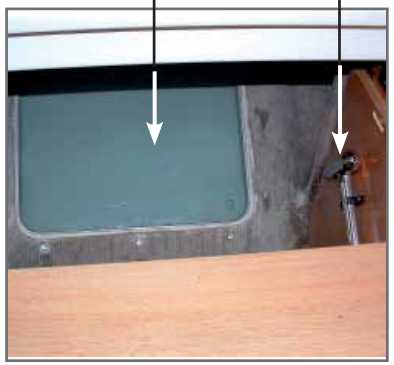
• ELECTRIC BILGE PUMP
In each hull of the Lagoon 560, you will find an electric manual bilge pump with automatic and manual release mechanism and one in each engine compartment.
These electric pumpes work on 24 V electricity, even when the general battery switch is turned to OFF.
Check that the pumps are switched on at the automatic breakers in the electrical cabinets of the starboard hull (access in cupboard to the right of the companionway) and the port hull (access in cupboard to the right of the companionway in the aft cabin).
A forced start of these four bilge pumps can be controlled from the touch screen.

• MANUAL BILGE PUMP
In case of electric bilge pump slowdown or failure, it is possible to use the manual bilge pumps.
They are located on the sides of the aft setteee in the cockpit.
They suck up water from the hull sump wells.

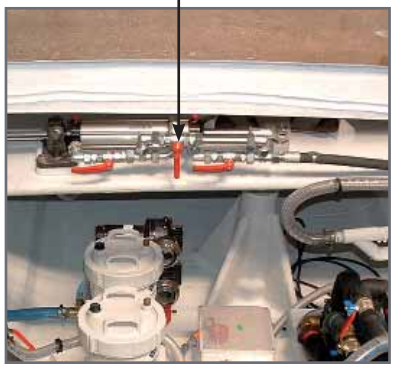
• PROCEDURE TO FOLLOW IN THE EVENT OF HULL BREACH
Make sure that the electric bilge pumps are on.
If it is not enough to reduce the water level, get a crew member to work one of the manual pumps.

EMERGENCY TILLER - «MANHOLE» HATCHES

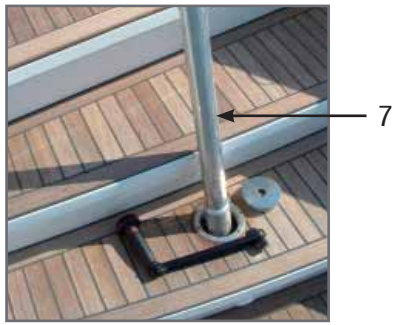
1 - «Manhole» hatch.
2 - Emergency tiller storage.
3 - Steering ram.
The same components are in each hull.



4 - Hatch (man hole) aft port side.
5 - Hammer to break the glass in the event of capsizing.
6 - Valve of the steering ram.



7 - Emergency tiller.
8 - Screw + fastening nut of tiller.
9 - Valve of the ram in by-pass position.



■ 1.5 Emergency tiller

The emergency tiller is stored in a locker.
It shall be kept easily accessible.

To operate the tiller :
- Use a winch handle and unscrew one of the tiller covers situated on one of the aft transom extensions.
- Insert the tiller into the rudder stock, making sure it is well fitted into the tiller head block.
- Insert the fastening screw across the stock and tighten the nut (access by the engine bilge).
- Turn to the by-pass position the ram valve situated in the engine bilge of the concerned side.

The rudder is then isolated from the steering system.

■ 1.6 Engine

Stop the engine before diving or swimming around the boat.
The blades of a propeller are sharp and may cause very important damages when spinning.
Do not try to remove a fishing net or line caught in the propeller when the lattter is rotating.

Before weighing anchor or leaving a dock, check that the propeller is working in both positions forward and backward (presence of a shaft line brake).
In the event of unusual noise or vibrations from the propeller, stop the engine immediately.
If the problem persists, contact the builder or your nearest supplier.

In the event of the use of a folding propeller, read carefull the manufacturer's instructions for use and maintenance.

■ 1.7 Towing

Tow another boat at a reduced speed and as smoothly as you can.
Be particularly careful when throwing or catching the towing line (It may catch on the propellers).

■ 1.8 Capsizing

You will find hatches (man holes) in the steps leading to the saloon in the hulls ans under the steps leading to the cockpit in the port side hull (and if the option « front peak fitting » has been chosen, in the front peaks).
Unlock and remove the step to gain access (after having unclipped the wooden piece at the back of the port hull).
There is a hammer to break the glass near each hatch and at the bottom of the life raft lockers.

You can have access to the life rafts on the rear beam (refer to the beginning of the chapter).

■ 1.9 General points

Know where your crew members are and inform them before any handling on the boat.
Handle the boat with caution and always wearing shoes.

SECTION 2
HULL
DECK

2.1 CONSTRUCTION
2.2 COMPANIONWAY DOOR, BAY-WINDOW
2.3 ACCESS TO FLY HELM STATIONS
2.4 COCKPIT
2.5 GANGWAY (OPTIONAL EXTRA)
2.6 STEERING GEAR
2.7 DECK WASH PUMP (OPTIONAL EXTRA)
2.8 WINDLASS, ANCHORING
2.9 DAVITS (OPTIONAL EXTRA)
2.10 TENDERLIFT (OPTIONAL EXTRA)

COMPANIONWAY DOOR

SLIDING DOOR LOCKING

SLIDING WINDOW LOCKING

SYSTEM SWITCH FLYBRIDGE ACCESS LOCKING (COCKPIT)

SYSTEM SWITCH FLYBRIDGE ACCESS LOCKING (ON THE FLYBRIDGE CONSOLE)

■ 2.1 Construction

The LAGOON 560 is constructed following the infusion process of a polyester resin and a high quality anti-osmotic resin on a core of balsa and fibreglass layers.

The hull bottoms and keels are made of monolithic laminates by infusion.

WARNING
Do not let the hull's large plexiglass windscreens come into contact with fenders or hawsers : surface damage would be irreparable.

■ 2.2 Companionway door, bay-window

The sliding door is fitted with a mechanism allowing its locking in an open position. A latch on the door jamb allows its locking from inside the saloon.

The sliding window leading to the cockpit can be locked from inside the saloon, either open or closed.

RECOMMENDATION
While sailing, block the sliding door locking it.

■ 2.3 Access to the fly helm stations

You will have access to the fly helm stations with stairs from the cockpit.
The access has a closing system which can be operated either manually or electrically (optional extra). The closing is electrically commanded with a switch located under the stairs and with a second switch located on the wheelhouse console.
The electric engine and the system synchronous belt can be reached through a trapdoor in the port aft seating locker of the flying bridge.

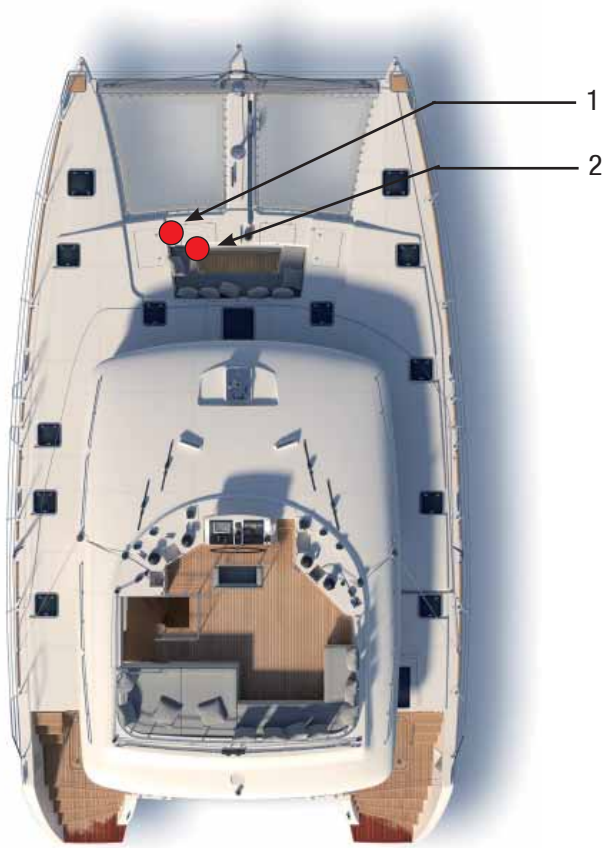
■ 2.4 Cockpit

The cockpit is fitted with a table and lockers in the aft beam and also with a cupboard equipped with a sink and a mixing valve (and optionally either a refrigerator or an ice maker).

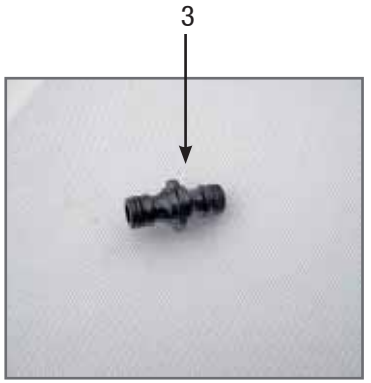
■ 2.5 Gangway (optional extra)

The boat may optionally be fitted with a foldaway carbon gangway. Remove, store and fasten the gangway when sailing.

DECK WASH PUMP (OPTIONAL EXTRA)



1 - Intake to connect hose.
2 - Deck wash pump (24 V)
+ valve to select fresh water / sea water
+ on/off switch.
3 - «Gardena» type connector.



■ 2.6 Steering gear

The steering system is composed of a steering wheel, an hydraulic power system and hydraulic rams for the rudders.

The suspended rudders are fitted with stainless steel stocks.

You have access to the helm and rams through the engine bilges.

Only WD 40 should be used to maintain nylon ertalon or teflon bushings.

Refer to section 1.5 for operating the emergency tiller.

■ 2.7 Deck wash pump (optional extra)

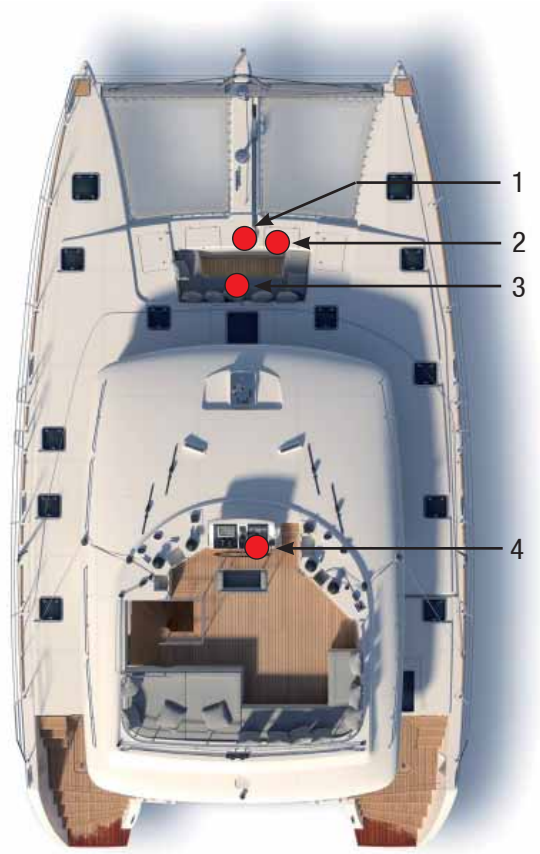
The deck wash pump is located in the fore peak port locker.

It provides sea water or fresh water from portside tanks.

The selection valve is located in the fore peak port locker, next to the deck wash pump.

Energise the deck wash pump using the multifunction touch screen in the saloon then by the switch next to it.

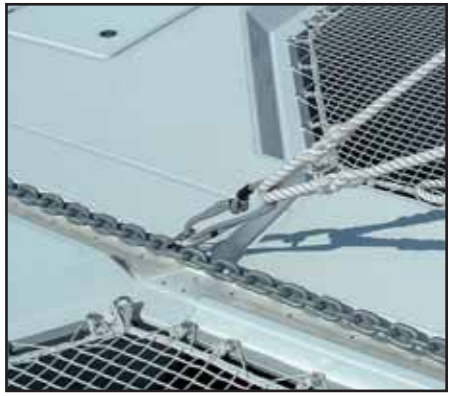
Push the plastic rim of the intake to connect or disconnect the «Gardena» type connector.



1 - Electric windlass.
2 - Electric windlass remote control.
3 - Electric windlass circuit breaker.
4 - Electric windlass control + chain counter.

STROP FASTENING TO THE FORE BEAM

STROP INSIDE THE ANCHOR ROLLER



STROP MADE FAST ONTO THE CHAIN

WINDLASS CONTROL

WINDLASS CIRCUIT BREAKER

■ 2.8 Windlass, anchoring

RECOMMENDATION
The electric windlass should be used with one or two engines running.

The electric windlass works with the 24 V domestic batteries.
Operate the windlass from the helm station or with the control in a locker to starboard on the foredeck.

In the event of the electric windlass failure to operate, check its circuit breaker in the technical room on the foredeck.
For the sake of safety, a switch at the portside helm station makes possible to switch off the electric windlass as well as the capstans and all the electric winches.

Refer to the manufacturer's instructions for windlass maintenance.

• PREPARING ANCHORING
Set the strop fastening it to the chainplates at the ends of the main beam.
Insert the strop inside the stem anchor roller.
Make fast the strop to the central cleat when lowering the chain.

RECOMMENDATION
Before anchoring, check the depth of water, the power of the current and the quality of the bottom.

• ANCHORING
Have your boat head wind and without speed.
Pay out the chain while moving back slowly.
Secure the chain on the strop.
Release the chain until the strop is taut.

• LIFTING THE ANCHOR
Ensure that the chain is properly set on the gypsy.
Activate the windlass in the upward position.
Slowly go near the anchor using the engine (do not use the windlass force to winch up the boat).
Visually check the final metres until the anchor makes contact with the anchor roller.
Check the position of the anchor on the stemhead fitting.
In the event of electrical failure, use the winch handle on the windlass to lift the anchor.

Nota : the boat is fitted with a chain counter.
The standard measurement «Zero» corresponds to the position of the anchor ready to be dropped.
Refer to instructions for its use and maintenance.

WARNING
Windlass operations are dangerous :
- Always keep the ground takle clear and free.
- Always proceed with care, wearing gloves and always wearing shoes.
- Make sure that nobody leans on the windlass when operating the control.

DAVITS (OPTIONAL EXTRA) - TENDERLIFT (OPTIONAL EXTRA)

1 - Tenderlift or davit fuse.

2 - Davit or tenderlift hydraulic pump + command.

TENDERLIFT OR DAVIT HYDRAULIC PUMP

TENDERLIFT OR DAVIT CONTROL

■ 2.9 Davits (optional extra)

The davits are operated by a hydraulic ram.
They are automatically energized as soon as the domestic general battery switch is set to ON.
In case of trouble, check the fuse located in the fore peak equipment room (see its location in the section ELECTRICITY).

WARNING
Nobody should be on board or under the tender during manoeuvres carried out with the davits.
Tie up the tender during manoeuvres.

• INSTALLING A TENDER ONTO THE DAVITS
Fix the davit rope hooks to the front and rear parts of the tender.
Remove the equipment from the tender and remove the water drain plug.
Operate the control located in the cockpit port aft locker.

• LAUNCHING A TENDER FROM THE DAVITS
Put the water drain plug back into position in the tender.
Make fast the tender and then operate the control.

When sailing, remove the tender engine and store it on board.
Install onboard the tender all the safety equipment in pursuance of the regulations of the country where your boat is registered.

WARNING
The davits are designed to support a maximum load of 450 kg and a tender which is maximum 4,30 metres long.

■ 2.10 Tenderlift (optional extra)

The tenderlift is activated by an hydraulic ram.
It is automatically energised when the general board cut-out is set to ON.
Its command is located in the port aft cabin locker.
In case of trouble, check the fuse located in the fore peak equipment room (see its location in the section ELECTRICITY).

When sailing, put the tender on the bearer and make it fast.

WARNING
The tenderlift can bear a maximum load of 450 kg and a tender of 4.3 m long maximum.

DANGER
Sailing while having the tenderlift in any other position than raised to its higher point is strictly forbidden. While sailing, the tenderlift must be locked and fasten with the straps.

SECTION 3
RIGGING
SAILS

3.1 SAILING
3.2 STANDING RIGGING
3.3 RUNNING RIGGING
3.4 SAILS

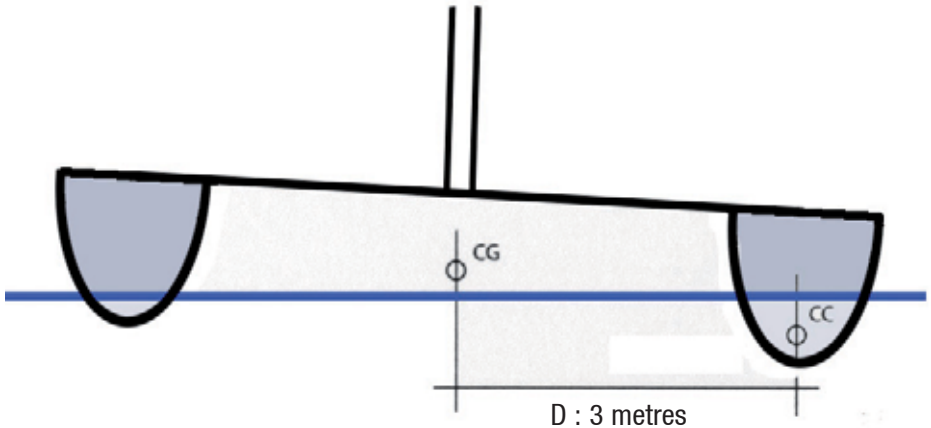


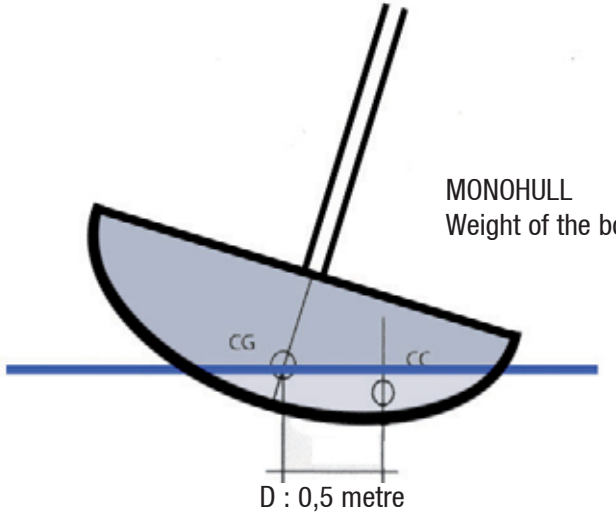
Illustration of the difference of the righting moment existing between a 10 m monohull and catamaran.

CATAMARAN
Weight of the boat : 10 tons

d : distance between centre of the bottom and centre of gravity.

RMmax : Weight of the boat x d
(RMmax : moment of maximum uprighting)

RMmax monohull : 10 tons x 0,5 metre
: 5 tons.metre



MONOHULL
Weight of the boat : 10 tons

RMmax catamaran : 10 tons x 3 metres
: 30 tons.metre

■ 3.1 Sailing

• BEWARE
A catamaran is about 6 times more resistant to heeling than a monohull.
In naval architecture, it is referred to as uprighting moment multiplication of the weight of the boat by the transversal distance between the centre of gravity and the centre of flotation (or bottom).
See the illustration on the opposite page.

This fact has real consequences as for the sailing and sail trimming of a catamaran.

The fact that the boat does not heel may mask overcanvassing, which may be very dangerous for the crew and the boat. Therefore you MUST permanently keep a close eye on the speed of the true wind, and trim the sail surface according to the latter as a matter of priority.
The below-mentioned trims apply in a calm sea. When the sea is brown, you shall reduce earlier by 10% as far as the speed of true wind is concerned. And as a general rule, it is absolutely imperative to permanently try to ease up the boat rather than to stress her.

You will always try to have the forward edges of the sails facing the apparent wind, and to have the sail not sheeted home, so that the airflow behind the sail may be laminar, that is to say so that it may go off the aft part of the sail without any disruption.

In case you shouldn't follow the recommendations below, it might be dangerous for the boat and the crew, and, in case of an accident, the manufacturer's responsibility would not be involved.

• TRIMMING WHEN CLOSE HAULED (between 75 and 50° of true wind)

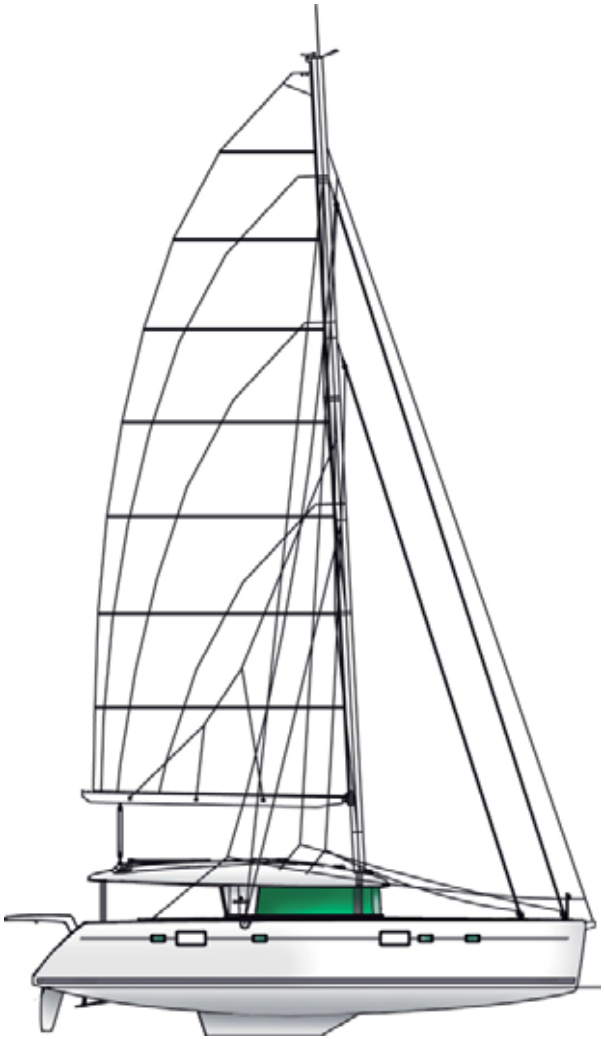
Wind force given in apparent wind
- From 0 to 16 knots : full sail ; sheet traveller 30 cm above the centre line of the boat, mainsail sheeted with a slightly open leech (boom on the centre line of the boat).
The genoa is trimmed so that it skims the spreader, the genoa traveller is set so that the angle of the genoa sheet is the continuation of a straight line that goes through the sheet clew and the luff, at 40% of its height.

- From 16 to 20 knots : full sail ; the sheet traveller goes up 60 cm above the centre line of the boat, mainsail sheeted with a leech a little more open (boom always in line : therefore you must ease off the sheet). The genoa traveller remains at the same place but the sheet is adjusted so that the leech is 10 cm far from the spreader.

- From 20 to 26 knots : 1 reef, full genoa ; the sheet traveller goes back to 30 cm above the centre line of the boat.
The genoa traveller remains at the same place but the sheet is eased off so that the leech is 20 cm far from the spreader.

- From 26 to 30 knots : 1 reef, 75% of the genoa ; the sheet traveller goes up 60 cm above the centre line of the boat.
The genoa traveller remains at the same place or slightly goes forward but it is adjusted so that the leech makes a propeller shape where the upper part let some air go off in increases of wind.

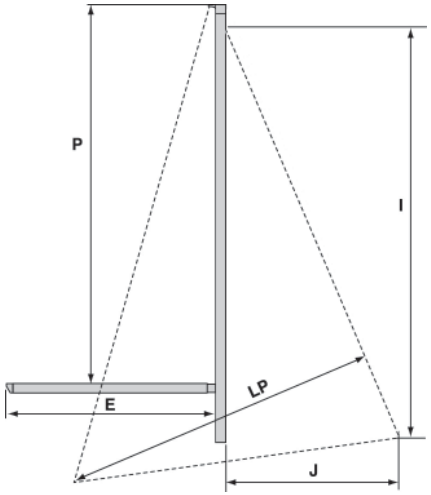
- From 30 to 36 knots : 2 reefs, staysail ; the sheet traveller is back 30 cm above the centre line of the boat, the sheet is 50 cm eased off and the boom is leeward.



Sails

Sail surface close hauled	207 m² / 2227 sq.ft²
Fully battened mainsail	125 m² / 1345 sq.ft²
Square top mainsail	128 m² / 1377 sq.ft²
Furling genoa	82 m² / 882 sq.ft²
Spinnaker (optional extra)	245 m² / 2636 sq.ft²
Gennaker (optional extra)	155 m² / 1668 sq.ft²
Furling staysail (optional extra)	45 m² / 484 sq.ft²

I	22,80 m / 74’10”
J	6,37 m / 20’11”
P	22,338 m / 73’3”
E	7,859 m / 25’9”



- From 36 to 45 knots : 3 reefs, staysail to be shortened. The sheet traveller is on the centre line of the boat, the sheet is 1 metre eased off and the boom is leeward

- From 45 to 55 knots : 3 reefs only (or try sail, or lying to), the traveller is on the centre line of the boat, the sheet is 1 metre eased off and the boom is leeward.
The boat would be more at ease scudding in such a weather.

- Over 55 knots : lying to, sea anchor, or preferably scudding.

• TRIMMING WHEN DOWN WIND (between 75 and 130° of true wind)

- From 0 to 23 knots : full sail ; the traveller can be set at different places ranging from 1 metre off the centre line of the boat to the end of the track, depending on the angle of the wind, the sheet is eased off so that the boom may be leeward and 50 cm far from the traveller in dead calm then up to 2 metres when the wind strengthens.
In all the cases, you will avoid having more than one batten chafing against the upper shroud, in the fairest points of saling.
The genoa is eased off in order to have its average front edge facing the apparent wind.

- From 23 to 28 knots : 1 reef, full genoa. The trimmings are similar.

- From 28 to 33 knots : 2 reefs, staysail. The trimmings remain similar.

- From 33 to 38 knots : 2 reefs, staysail shortened. The trimmings remain similar.

- From 38 to 45 knots : 3 reefs (or mainsail lowered and a little more staysail), staysail shortened. The trimmings remain similar.

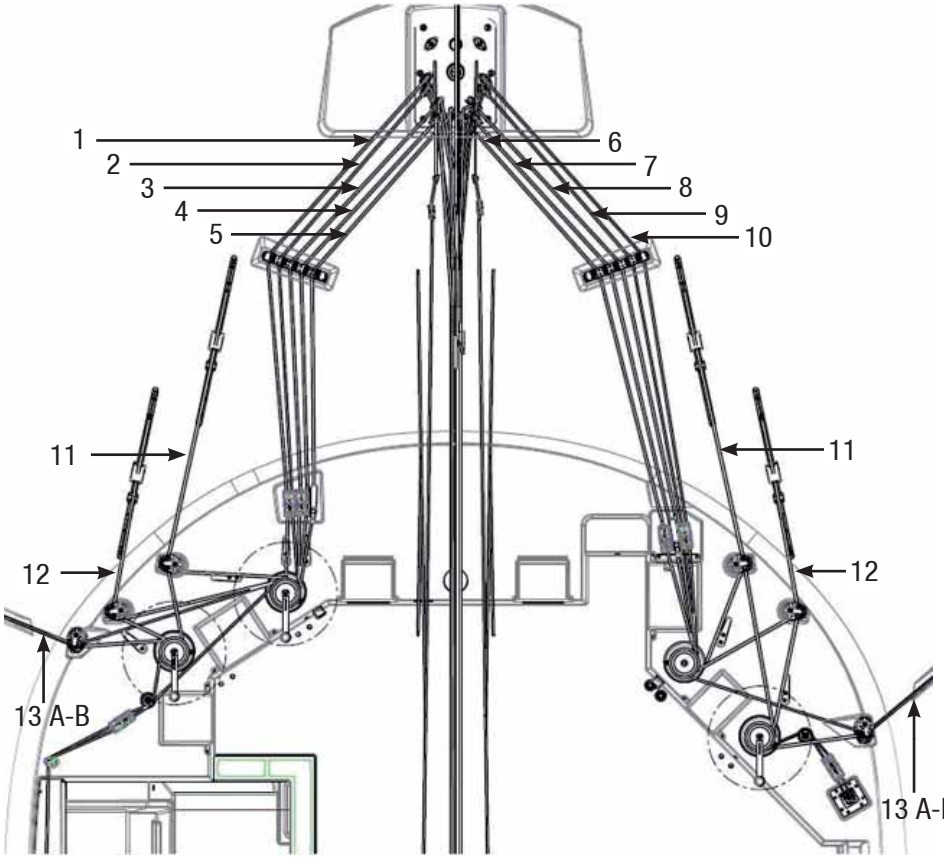
- Fom 45 to 55 knots : mainsail lowered, staysail shortened, sheeted enough in order not to flap.

- Over 55 knots : scudding, depending on the sea, you will set mooring ropes from one transom extension to the other one in order to reduce the speed of the boat.

WARNING
If there is a radar aerial on the mast, keep an eye on the genoa when you put about or gybe in order to avoid any risk of damage.

• SQUARE TOP MAINSAIL

WARNING
A cruising square top mainsail is more powerful than a standard mainsail.
Short en the sails earlier, depending on the wind conditions.



1 - Mainsail topping lift.

2 - Reef cunnigham 3.

3 - Spinnaker / gennaker halyard (optional extra).

4 - Reef pendant 3.

5 - Mainsheet.

6 - Reef pendant 1.

7 - Reef pendant 2.

8 - Main halyard.

9 - Reef cunnigham 1.

10 - Reef cunnigham 2.

11 - Staysail sheet.

12 - Genoa sheet.

13A-B - Spinnaker / gennaker sheet + spinnaker guy.

■ 3.2 Standing rigging

The LAGOON 560 is fitted with a mast with swept back spreaders ; it was adjusted by the shipyard and the mast manufacturer when it was first stepped.
The cables stretch a little during the first sailings. Therefore it is advisable to have the mast inspected and adjusted by a specialist.

Before you put out to sea, it is essential to make sure that the standing rigging is in good condition : inspect the gooseneck, turnbuckles, and check the condition of the shrouds.

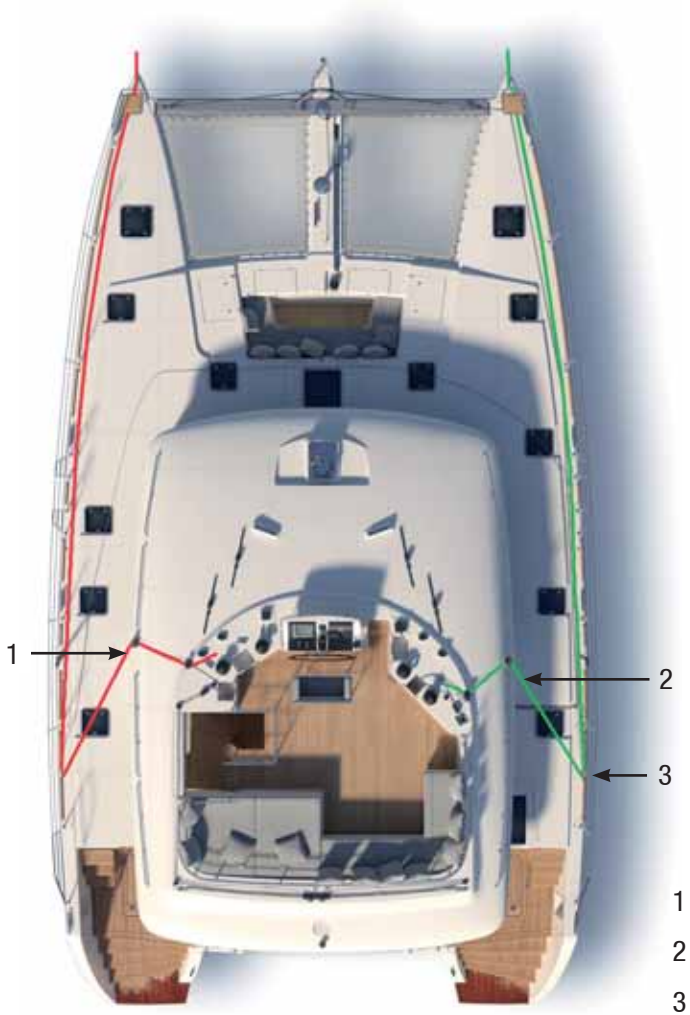
RECOMMENDATION
Any intervention on the standing rigging comes within a specialist remit.

To hoist a crew member up to the top of the mast, use the man hoisting halyard.
Belay the crew member with a bowline on the bosun's chair ring (do not use snap shackle or shackle).

WARNING
The man hoisting halyard which is the only one to be authorized for this purpose, is only meant to hoist a crew member up to the top of the mast.

Description of the ropes	length (m)	diametre (mm)
Genoa halyard	22	12
Genoa sheet	20 x 2	16
Genoa furling line	23	12
Staysail halyard on jammer	16,5	10
Staysail sheet	12 x 2	14
Staysail roller furling	20	12
Main halyard	60 + 23	14 + 12
Mainsail topping lift	55	14
Main sheet	40	14
Port mainsail traveller adjustment	20	12
Starboard mainsail traveller adjustment	14	12
Reef 1	22	14+10
Reef 2	29	14+10
Reef 3	39	14+10
Reef cunnigham 1	11	12
Reef cunnigham 2	15	12
Reef cunnigham 3	19	12
Spinnaker guy	33 x 2	12
Spinnaker / gennaker sheet	42 x 2	14
Spinnaker / gennaker halyard	50 + 45	14 + 12
Man hoisting halyard	60	10

RUNNING RIGGING SPINNAKER - GENNAKER

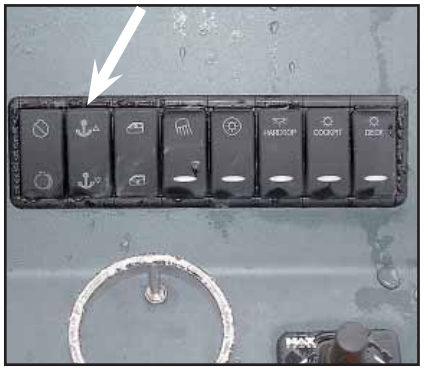


1 - Spinnaker guy.

2 - Gennaker / spinnaker sheet.

3 - Gennaker / spinnaker block.

HELM STATION WINCH SWITCH



■ 3.3 Running rigging

The mainsail, genoa and staysail sheets, the topping lift, the reefing lines, the mainsail and spinnaker halyards, the control lines for the main traveller are led back to the manoeuvre station.

• SHEET WINCHES AND MANOEUVRE WINCHES (MANUAL OR ELECTRIC) (OPTIONAL EXTRA)
The circuit breakers of the electric winches are in the technical room of the foredeck.

For security reasons, all the electric winches can be turned OFF with a switch located in the wheelhouse (turns also OFF the windlass).

RECOMMENDATION
Have at least 3 turns on the winch.
Electrical winches generate an extremely powerful force and you should use them with much care.
Never force when you find a jamming point.
When using the winches, keep your hands away.
After use, shut the switch covers.

WARNING
Refer to the manufacturer's instructions to remove the winches and put them back.
Improper refitting may result in accidents (for example : kick of the crank handle).

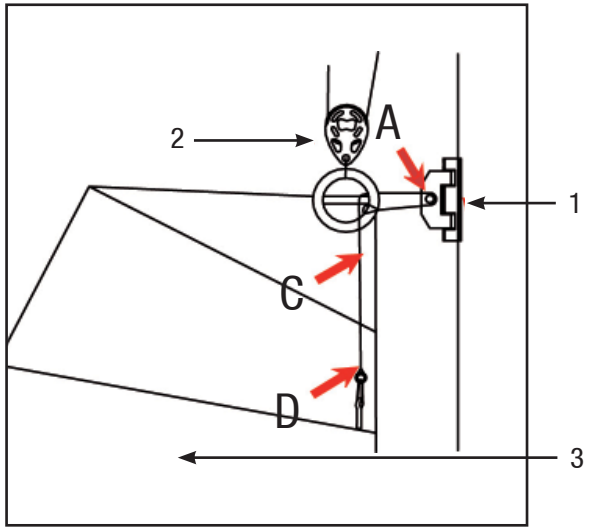
■ 3.4 Sails

• STANDARD MAINSAIL
To hoist the standard mainsail :
- Point your boat into wind with engine in gear.
- Make sure that the mainsheet is eased off and the reefs are free.
- Open the jammer.
- Hoist the sail being careful for the battens not to get jammed in the lazy-jacks.
- Make fast the halyard with the jammer.
- Trim the mainsail according to the wind and sea conditions.

To lower the standard mainsail :
- Haul up.
- Tighten the topping lift.
- Slacken off the halyard, lower the mainsail then furl it.
- Tighten the sheet.

REEFING A SAIL
On each reef, you will also find a stopper on the leech and on the tack.
- Move the mainsail closer to the eye of the wind, using the wheel or the traveller.
- Check the main sheet.
- Pick up the lift again.
- Slip the halyard .
- Tighten the tack pendant of the reef concerned till the lowest possible point, then close the jammer.
- Repeat the same maneuver with the reef tack stopper.
- Hoist the main sail home and shut the locker.
- Slip the lift.

CRUISING SQUARE TOP MAINSAIL



1 - Headboard traveller.

2 - Halyard block (to be fastened onto the headboard eye).

3 - Cruising square top mainsail.

FASTENING OF THE CRUISING SQUARE TOP MAINSAIL

REEF SHAKING OUT
- Make the mainsail closer to the eye of the wind, either steering the boat or using the traveller.
- Ease off the mainsheet.
- Tighten the topping lift.
- Ease off the tack and leech reef pendants.
- Hoist the mainsail, then close the jammer.
- Slacken off the topping lift.

• CRUISING SQUARE TOP MAINSAIL
The cruising square top mainsail halyard is lashed on the eyelet of the sail, not on the headboard traveller.
The square top will be properly set automatically once the sail is hoisted up.

FITTING OF THE MAINSAIL CRUISING SQUARE TOP SYSTEM
Refer to the drawing on the opposite page.

- Remove the pin of the headboard car (mark A).
- Make the 2 strand tackle as per the drawing on the opposite page.
- Put back the headboard car pin (mark A), adding the sheave.

The length of the headboard line is adjusted to the right dimension for a new sail at the sailmaker's.
The lashing (mark D) makes possible to make up for the possible lengthening of the rope due to ageing.

Nota : this system is patented by the INCIDENCES sailmaker.

WARNING
A cruising square top mainsail has a more important power than a standard mainsail.
Shorten the sail earlier depending on the wind conditions.

• GENOA AND STAYSAIL
GENOA FITTING
Pay attention to the way the drum winds up : the Genoa UV protection must be outside.

The genoa halyard has an extension linked to it through a whipping.
- Hoist the genoa until the halyard whipping appears level with the tension adjustment track.
- Furl the genoa.
The halyard can then be slackened.
- Separate the halyard from its extension.
- Have both of them fixed on each side of the tension adjustment traveller.
- Block the locker.
- Harden moderately the halyard until the traveller locks automatically one or two notches lower.
Once the genoa is completely unwounded, you will be able to adjust its definitive tension using a tightening rope, more important than the halyard extension.

If the genoa is kept wound when the boat is not used, slip the halyard one notch tighter on the track in order to release the tension of the halyard on the masthead sheave.

GENOA TIGHTENING TRAVELLER

TRAVELLER LOCKER

HALYARD TO ITS EXTENSION

The whipping must resist to the tension when hoisting.

GENOA AND STAYSAIL USE
- Progressively slip the genoa or staysail roller furling stopper pulling a sheet.
- Pull on the stopper to wind up the genoa or the staysail.

We advise you to wind or unwind the front sails when sailing before the wind.
Never force in case of hard point during the winding or unwinding of the front sails. Check that there is no halyard caught in the furler or that the sail is not too tightened.

WARNING
When the mainsail is shortened and reefed down twice, you must replace the genoa by the staysail.

GENOA LOWERING
The genoa must absolutely be furled.
- Have the genoa halyard extension fixed in the lower hook of the tension adjustment traveller then pass it in the available mast foot block with a direct return to a winch on the wheelhouse.
- Hoist the halyard (about 5 cm) before letting the traveller go down.
- Release the traveller locker doing a ninety-degree turn.
- Slip the halyard to the winch.
- This group of elements is no longer under tension.
- Release the halyard and its extension from the tension adjustment traveller and tighten them together with a solid whipping (in order to get one single halyard).
- Harden moderately the halyard using the winch.
- Unwind the genoa to haul down.

• GENNAKER
Remove the forward lifelines when using the gennaker (risk of damage).
Before getting under the way, take advantage of a windless period of time and hoist the gennaker.

- Secure the swivel to the gennaker headboard.
- Secure the furling system to the tack clew.
- Put the furling system to the boomsprit with a snap shackle.
- Secure the halyard to the headboard swivel.
- Hoist the gennaker.

Use the furling system line to furl or unfurl the gennaker.

Gennaker sheets :
- Secure the sheets to the gennaker clew.
- Have the sheets go on the outside of the stay and shrouds and above the guardrails.
- Make fast the sheet leading blocks to the chainplates.
- Reroute the sheets to the genoa sheet winches.

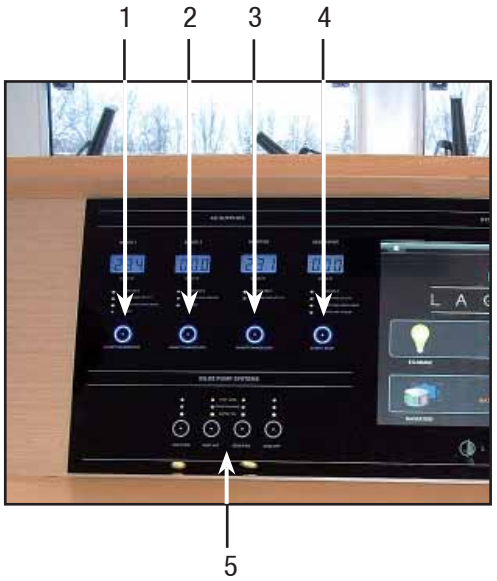
WARNING
In some sailing trims, the gennaker may hide the fore navigation lights.

WARNING
Unrig the gennaker when not in use (risk of being UV damaged and inadvertently unfurled).

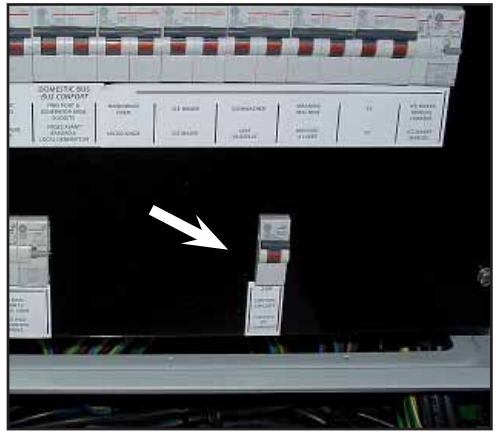
SECTION 4
ELECTRICITY

4.1 MULTIPLEX MANAGEMENT SYSTEM
4.2 24 V SYSTEM
4.3 12 V SYSTEM
4.4 INVERTERS
4.5 110 V - 220 V SYSTEM
APPENDIX

TOUCH SCREEN



AUTOMATIC BREAKER 24 V CIRCUIT



BATTERY CHARGERS 220 V / 24 V

1 - 110 V - 220 V supply by shore power socket no. 1 (on board).
2 - 110 V - 220 V supply by shore power socket no. 2 (air conditioning).
3 - 110 V - 220 V supply by inverter.
4 - 110 V - 220 V supply by generator.
5 - On / off switch for bilge pumps + manual switch.

GENERAL CUT-OUT FOR THE 24 V CIRCUIT ON BOARD + CHARGE MONITORING SCREEN

■ 4.1 Multiplex management system

The boat is fitted with a multiplex management system for the 12 V, 24 V and 220 V circuits on board.
The system is managed using a touch screen on the console panel located in the saloon.

This system allows grouping / centralizing the access to the different electrical devices on board.
Electrical equipment is supplied and controlled using the touch screen.

FUNCTIONING
- Energise the 24 V circuit by turning on the general cut-out fitted on the side of the chart table cupboard.
Note: following the set up carried out by the Shipyard, some appliances are automatically switched on via the touch screen.

TOUCH SCREEN
- Touch the screen to quit the stand-by mode.
- Select the desired electrical equipment to control directly on the touch screen.
The screen is turned off using the red switch located to its right, before switching the general cut-out to OFF.

IN CASE OF MALFUNCTIONING
In case of touch screen malfunctioning, each appliance is listed on the boat and is directly accessible via its own module.
See the process help to observe appended.

■ 4.2 24 V system

• BATTERIES
The batteries bank supplies the boat with 24 V and is located in the technical room of the foredeck.
The whole 24 V circuit is energized when you turn to the ON position the manual cut-out under the chart table.
Battery bank charge can be monitored using the control screen located next to the general 24 V circuit cut-out.
Check that the 24 V circuit is switched on at its automatic breaker in the foredeck technical room.

• BATTERY RECHARGING
You recharge the battery bank with a coupled alternator (110 Ah / 24 V) or a battery charger (220 Ahs / 24 V).

BATTERY CHARGERS (OPTIONAL EXTRA)
The battery chargers are located in the technical room of the foredeck.
The 110 V - 220 V / 24 V chargers recharge the domestic batteries.

OPERATION
The 110 V - 220 V power supply (shore, generator) is automatically selected when it is switched on.
Manual control is still possible.
Please refer to the explanations on page 51, ELECTRICITY chapter.
Check that the chargers are switched on at the automatic breakers of the High Load busbar in the foredeck technical room.

Nota : the battery chargers can remain in operation even when the boat is not energized in 24 V.

RECAPITULATION OF THE 12 V AND 24 V COMPONENTS

CHARGE AND ELECTRIC CONVERSION

220 V or 110 V / 24 V - 100 Amp Charger	Recharge of the 24 V service batteries bank (refer to 110 V / 220 V recapitulation)
220 V / 12 V (3 outlets) - 35 Ah Charger	With the optional generator to recharge the 12 V generator battery and the two 12 V engine batteries
24 V - 110 Ah coupled alternator	Recharge in 24 V of the service batteries bank
24 V / 12 V electronic inverter	With the electronics
24 V / 12 V car-radio inverter	With the car-radio optional extra

BATTERIES / CONSUMING APPLIANCES

24 V direct current	**Voltage**	**Starting up**	**Protection**
Service batteries	24 V (420 Ah as standard, 840 Ah as optional extra)		
Recharge of the service batteries by a coupled alternator (24 V) per engine + 220 V / 24 V - 100 Ah chargers (optional extra)			
Navigation electronics	24 V	Touch screen	E-Plex
Water pump	24 V	Touch screen	E-Plex
Lighting	24 V	Touch screen	Electrical box Starboard/Port
Navigation light	24 V	Touch screen	E-Plex
Cockpit refrigerator	24 V	Touch screen	E-Plex
Optional refrigerator	24 V	Touch screen	E-Plex
Deck wash pump	24 V	Touch screen	E-Plex
Grey water collecting pump	24 V	24 V Bord	Electrical box Starboard/Port
Electric heads	24 V	24 V Bord	Electrical box Starboard/Port
Winches	24 V	24 V Bord	Electricity room
Windlass (directly on the batteries)	24 V	24 V Bord	Electricity room
Davits / Tenderlift	24 V : hydraulic pump	24 V Bord	Electricity room
Bow thruster	24 V : hydraulic pump	24 V Bord	Electricity room

12 V direct current	**Voltage**
Engine start batteries	(12 V - 50 Ah) x 2
Recharge of engine battery by engine alternator + 220 V / 12 V charger	
Generator start battery	(12 V - 50 Ah) x 1
Battery generator recharging by generator alternator + 220 V / 12 V charger	

Electronic control of engine	12 V connected on engine start battery once «on»
Cameras	12 V
Hub (network terminal)	12 V
VHF	powered by a 24 V / 12 V inverter
Car-radio	specific to each radio system

• CONTROL OF THE 24 V CONSUMING APPLIANCES

TOUCH SCREEN

The touch screen on the chart table provides the access to:
- All electrical equipment (on board lighting, navigation lights…)
- The power on of the electronics.
- The consumption (amperes) and tension (volts) of the batteries.
- All the plumbing system (pumps, water groups, cooling system...).
- The fresh water and fuel tanks gauge.
- Air conditioning.
- HiFi, video.

When the equipments are turn on, a diode is turned on next to each equipment symbol on the screen.
In case of problems, the diode flashes on and off.
You should then turn OFF the equipment and turn it ON again with the screen.
If the problem remains, then, the equipment itself is the cause.

Identification of the module controlling the defective equipment is possible using the E-Plex page on the touch screen.
See Appendix for the troubleshooting procedure.

BILGE PUMP PANELS

The control panel for the electric bilge pumps is located to the left of the touch screen.
A long pressure on the symbol for each pump enables you to switch them on or off and control their automatic operation and forced start.
By default, the bilge pumps are in the automatic start position with alarm, even when the on board circuit is switched off.

• PROTECTION OF 24 V CONSUMING APPLIANCES

The automatic breaker boxes for equipment functioning with 24 V are located in the starboard hull (access in the cupboard at the right of the companionway) and the port hull (access in the cupboard to the right of the companionway in the aft cabin).

■ 4.3 12 V system

• BATTERIES

The 12 V batteries supplying the two engines and the generator respectively are in each engine bilge and the technical room of the foredeck.
Each one has its own cut-out at its side.

For safety reasons, a system of coupling the engine batteries (cut-out located in the portside engine compartment) makes possible the start of the engine the battery of which is failing.

• BATTERY RECHARGING

The battery bank is recharged with the engine alternators or a battery charger.

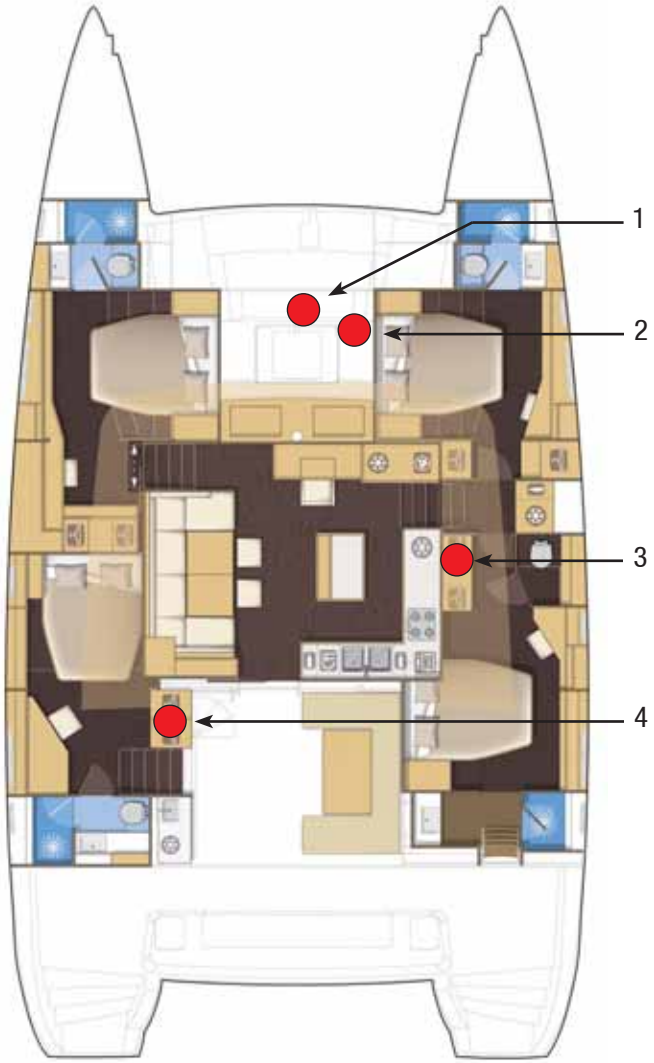
BATTERY CHARGERS

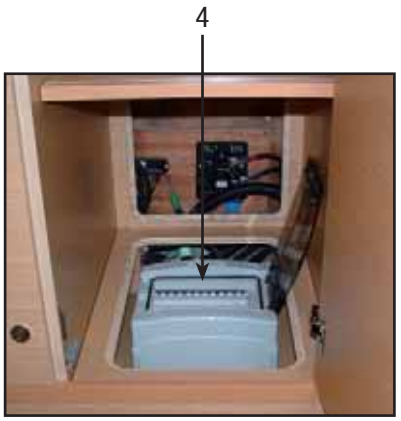
The 110 V - 220 V / 12 V - 35 Ah battery charger, located in the foredeck technical room, recharges the engine and generator batteries.

OPERATION

The 110 V - 220 V power supply (shore, generator) is automatically selected when it is switched on.

AUTOMATIC BREAKERS 24 V - INVERTERS



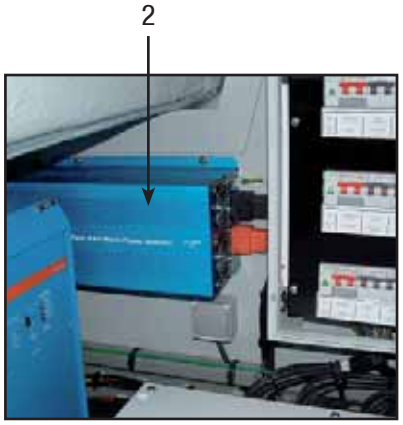


1 - Optional 24 V inverters.

2 - Standard 24 V inverter.

3 - 24 V Automatic breaker box starboard.

4 - 24 V Automatic breaker box port.



Manual control is still possible.
Please refer to the explanations on page 51, ELECTRICITY chapter.
Check that the charger is switched on at the automatic breakers of the High Load busbar in the foredeck technical room.
By default, the battery charger functions automatically with the shore power socket no. 1 plugged in or the generator working.

• CONTROL OF THE 12 V CONSUMING APPLIANCES
12 V consuming appliances are controlled using the touch screen on the chart table, with the HiFi - Video page.
These consuming appliances (camera, VHF, radio...) work in 12 V via a 24 V / 12 V inverter.

■ 4.4 Inverters

The boat is standard fitted with a 24 V / 220 V - 2000 W inverter for the galley electrical appliances.
It may optionally be fitted with a pack of two 24 V / 220 V - 5000 Va inverters.
The inverters are located in the technical room.
They supply the UTILITY bus.

OPERATION
Check that the automatic breakers of the Inverter busbar in the foredeck technical room are switched on.
They are automatically turned on when the general 24 V circuit on board is powered on.

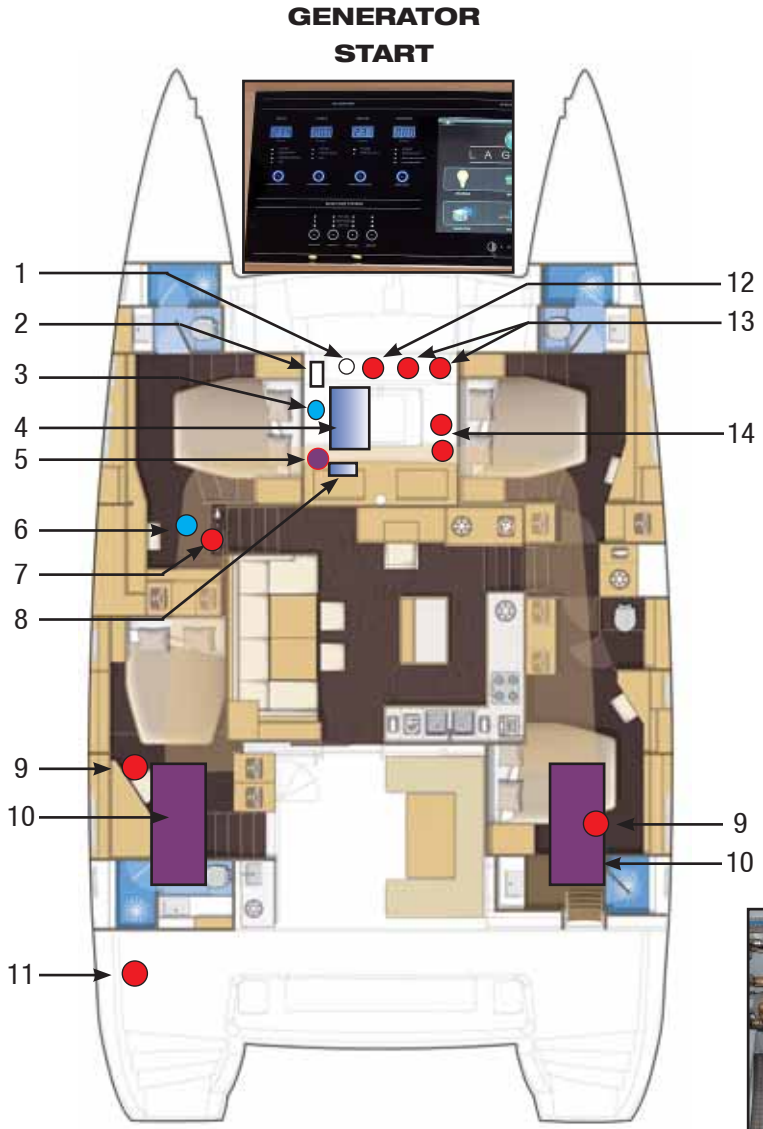
■ 4.5 110 V - 220 V system

• SHORE POWER SOCKET
A shore power socket is located in the portside aft transom of cockpit.
It supplies power to the 110 V - 220 V system and the battery chargers.
A second shore power socket, dedicated to air conditioning, is fitted nearby if the boat is fitted with the air conditioning optional extra.

Before you plug in or unplug the boat/shore power supply cable, switch off the shut off device connected to the shore supply.
Connect the boat/shore power supply cable in the boat before connecting it to the shore supply socket. Unplug the boat/shore supply cable on shore first.
Close the protecting cover of the shore supply socket when the plug is not in use.
The shore power sockets are protected by automatic breakers located in the port engine room.

DANGER
Never let the end of the boat/shore supply cable hang in the water ; the result may be an electric field liable to hurt or kill the swimmers nearby.

	220 V
SHORE POWER SOCKET N°1	50A
SHORE POWER SOCKET N°2	50A



1 - Air extractor of technical room.

2 - Generator start battery.

3 - Separator drain valve.

4 - Generator.

5 - Generator fuel filter.

6A - Generator sea water inlet valve.

6B - Generator sea water filter.

7 - Generator / tank selection pull rob.

8 - Water / gas separator.

9 - Fuel / generator stop pull handle.

10 - Fuel tanks.

11 - Circuit breakers of the shore power sockets
+ shore power sockets.

12 - 220 V / 12 V battery charger.

13 - 24 V / 220 V inverter.

14 - 220 V / 24 V battery chargers.

• GENERATOR
The generator is located in the technical room of the foredeck.
Its function is to re-supply the batteries via the charger and supply 110 V - 220 V electricity on board.

The generator is supplied by the port or starboard fuel tank.
To shift from one tank to the other, use the pull rob located under the companion ladder in the front port cabin (pull rob pushed : port tank selected).

OPERATION
The generator is switched on either on the generator itself or using the control panel to the left of the touch screen, by pressing and holding on its symbol.
Check that the fuel supplying valve is open (using the pull rob located at the bottom of the cupboard in the port hull aft cabin or under the right side of the berth in the starboard hull aft cabin).
Check that the relative seawater cooling valve is open (access through the front port cabin floor, at the foot of the companion ladder).

For the generator use and maintenance, refer to the instruction guide.

• POWER SUPPLY SOURCES FOR EQUIPMENT FUNCTIONING WITH 110 V - 220 V

AUTOMATIC CONTROL
The 110 V - 220 V power supply source is automatically selected when the source is connected.

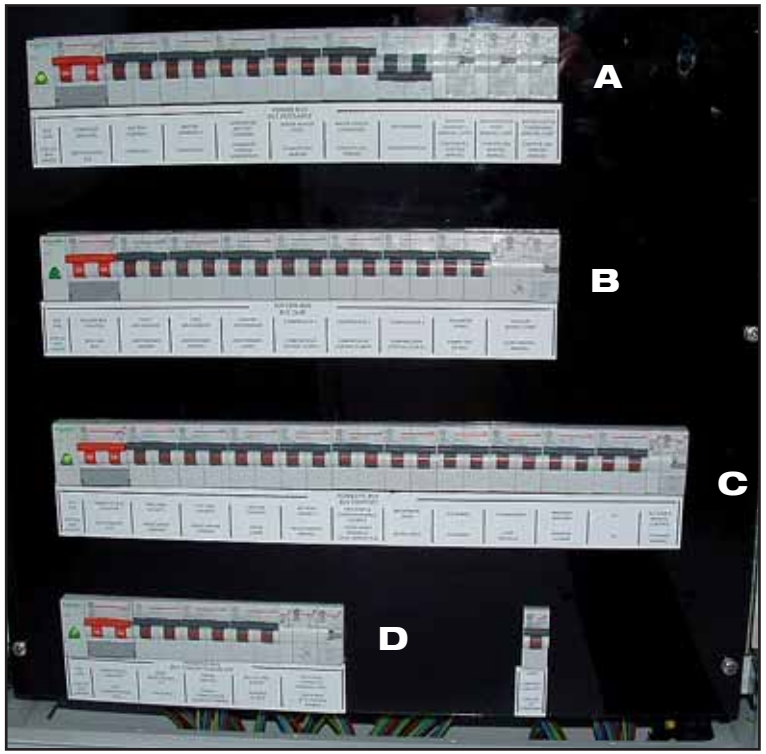
SHORE POWER SOCKET :
Equipment functioning on the High Load and Comfort busbars is automatically supplied by the shore power socket when it is connected.

GENERATOR:
Equipment functioning on the High Load, Comfort and Air Conditioning busbars is automatically supplied by the generator when it is switched on. Supply from the generator has priority if there are multiple supply sources connected.

INVERTER:
When the shore power socket is unplugged and the generator is switched off, equipment functioning on the Comfort busbar is automatically supplied by the inverter.

MANUAL CONTROL
It is possible to manually control the 110 V - 220 V power supply source.
Switch on the desired power supply source by pressing on the power supply source symbols on the control panel to the left of the touch screen.

AUTOMATIC BREAKERS 110 V – 220 V (TECHNICAL ROOM)



AUTOMATIC BREAKERS OF 110 V – 220 V PROTECTION BOX (UNDER CHART TABLE)

A - Automatic Breakers High Load busbar.

B - Automatic breakers Air Conditioning busbar.

C - Automatic breakers Comfort busbar.

D - Automatic breakers Inverter busbar.

PROTECTION BOX FOR 110 V - 220 V BUSBARS
In case of malfunction of the control screen located on the console panel above the chart table, it is possible to manually select the 110 V - 220 V power supply source using the protection box located under the chart table.

Control panel functioning:
The automatic breakers of the protection box are switched to ON.

Control panel not functioning:
- Switch to ON for automatic passage from one source to another.
- Switch the “shore control 1” automatic breaker to OFF to select shore power socket no. 1 (Puissance - High Load) as power supply source.
- Switch the “shore control 2” automatic breaker to OFF to select shore power socket no. 2 (Clim - Air Cond) as power supply source.
- Switch the “Utility bus control” automatic breaker to OFF to select the inverter as a power supply source.

The 3 other automatic breakers located in the protection box are:
- The automatic breaker for the Comfort - Utility busbar.
- The automatic breaker for the Puissance - High Load busbar.
- The automatic breaker for the Clim - Air Con busbar.

• USE OF THE 110 V - 220 V POWERED APPLIANCES

TO SWITCH ON THE APPLIANCES
In order to be able to use the 110 V - 220 V powered appliances (washing machine, watermaker, etc), it is advisable :
- Switch on the 110 V - 220 V power source (start the generator or plug in the shore power socket no. 1)
The source will be automatically selected for on board power.
- Check that the appliance to be used is switched on (washing machine, watermaker, etc) at the automatic breakers of the High Load or Comfort busbars in the foredeck technical room.

After this, start the appliance with its own controls.

To start 110 V - 220 V elements, wait for 10 to 15 seconds between the start up of each new component (in order to allow the generator to become stabilized and be able to give the power necessary for the starting up).

TO STOP THE 110 V - 220 V POWERED APPLIANCES
To stop the 110 V - 220 V powered appliances (washing machine, watermaker,etc) it is advisable to do as follows :
- Stop the appliance with its own controls.

To stop 110 V - 220 V elements, wait for 10 to 15 seconds between the stop of each new component (in order to allow the generator to become stabilized).

- Switch off the appliance used (washing machine, watermaker, etc) at the automatic breakers of the High Load or Comfort busbars in the foredeck technical room.
- Stop the generator or disconnect the shore power socket.

RECAPITULATION # 1 / 110 V - 220 V COMPONENTS

GENERATOR

Generator power 7 kva or 17,5 Kva	The generator gives 100% of its power in 220 V - 50 Hz (AIR CONDITIONING, UTILITY and 220 V HIGH LOAD buses). In the US version, the generator produces 25% of 110 V current and 75% of 220 V current.

SHORE POWER SOCKETS

HIGH LOAD Shore power socket European Version	A 50 Ah simple shore power socket - connection in the port aft transom extension (220 V - 50 Hz).
AIR COND Shore power socket European Version	A 50 Ah simple shore power socket - connection in the port aft transom extension (220 V - 50 Hz).

HIGH LOAD shore power socket US VersionUtilisation of the two 110 V phases to supply 220 V power on board.

ELECTRIC DISTRIBUTION

COMFORT - UTILITY BUSBAR	220 V	Supplied by generator, shore or inverter
PUISSANCE - HIGH LOAD BUSBAR	220 V	Supplied by generator or shore
CLIMATISATION - AIR COND BUSBAR	220 V	Supplied by generator or shore
COMFORT BUS US version	110 V	Supplied by the generator or the inverters

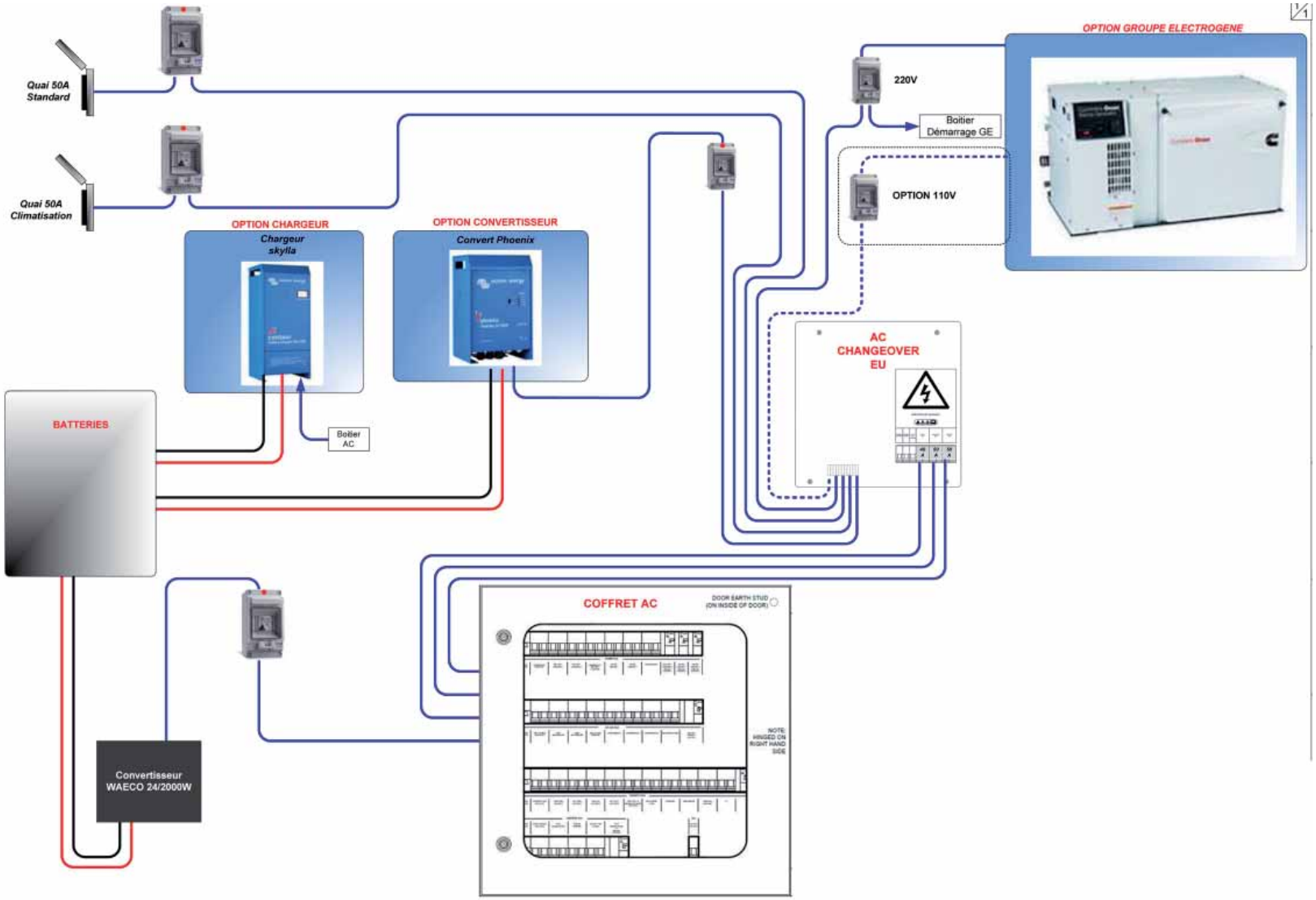
CHARGE AND ELECTRIC CONVERSION

220 V / 24 V - 100 Ah charger	Optional : recharge of the service bank by generator or shore
220 V / 12 V charger (3 connexions)	Automatically comes with the optional generator to recharge the 12 V battery, the generator and the two 12 V engine batteries
Standard inverter	24 V / 220 V - 2000 W automatic start
Inverter (optional extra)	2 x 24 V / 220 V - 5000 Va
Inverter (optional extra) US version	3 x 24 V / 110 V - 3000 Va

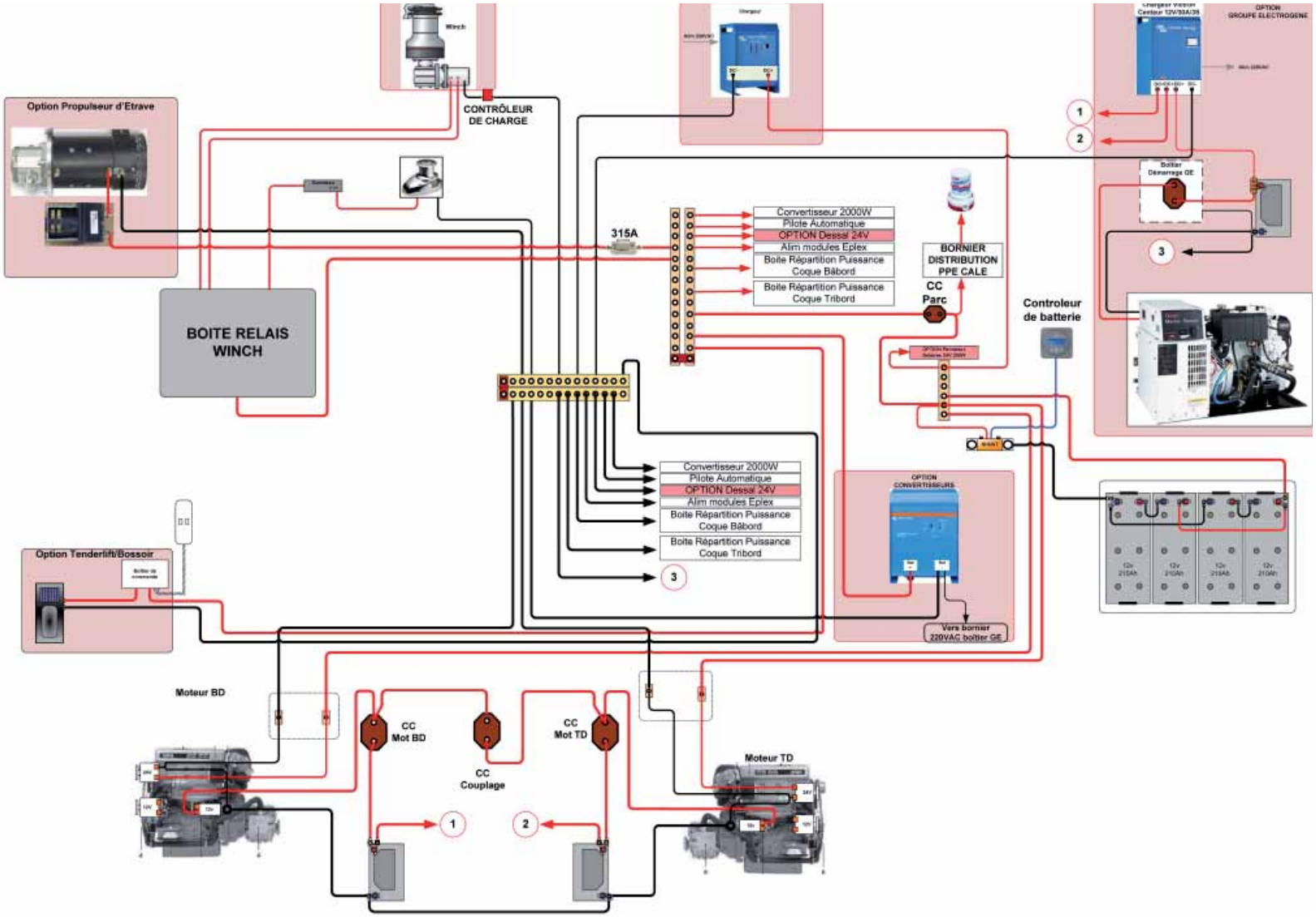
RECAPITULATION # 2 / 110 V - 220 V COMPONENTS

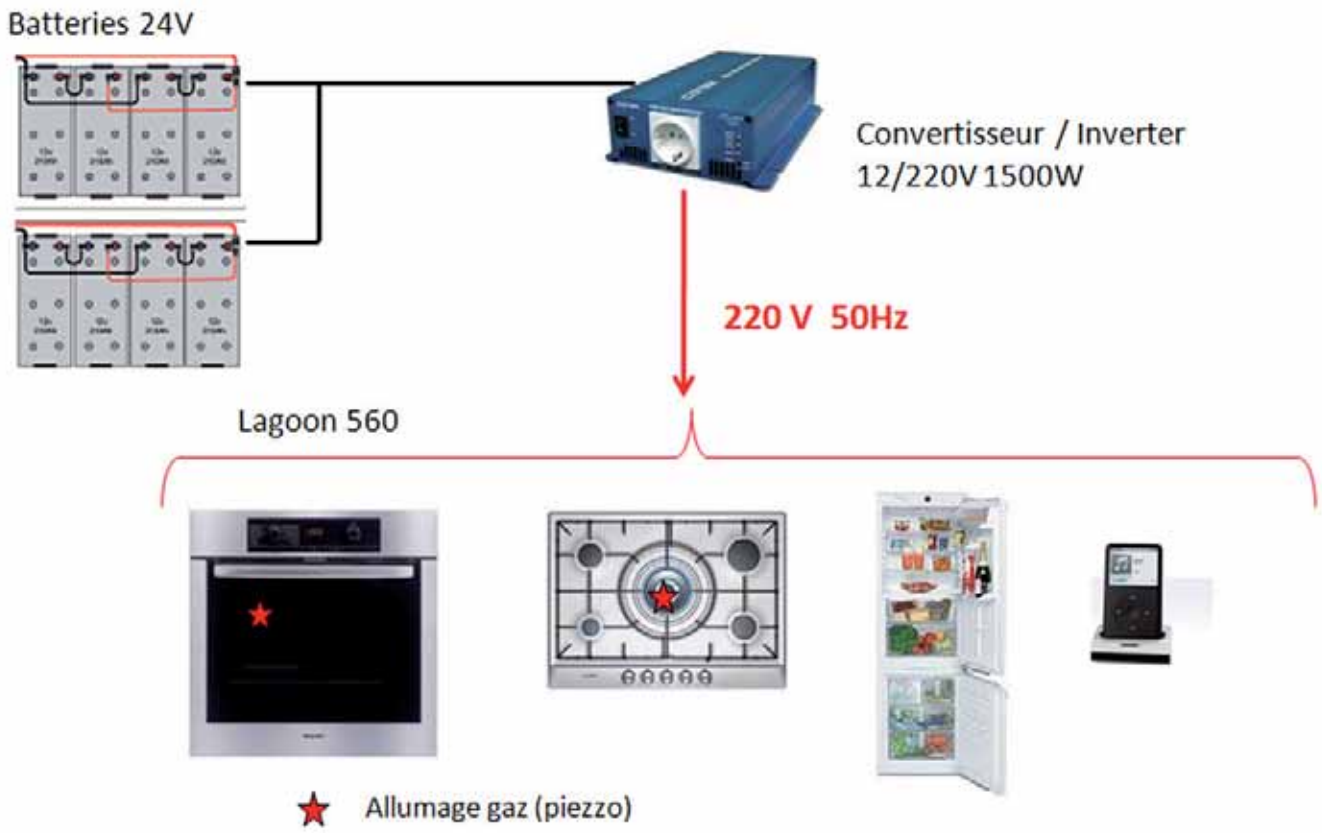
CONSUMING APPLIANCES	Operating voltage	220 V Boat	110 V Boat
Refrigerator / Freezer	220 V	Standard inverter	-----
Hood	220 V	Standard inverter	-----
Piezzo hob and oven	220 V	Standard inverter	-----
HIFI Bose	220 V	Standard inverter	-----
Icemaker	220 V or 110 V	UTILITY Bus	UTILITY Bus
Microwave oven	220 V or 110 V	UTILITY Bus	UTILITY Bus
TV	220 V	UTILITY Bus	UTILITY Bus
Washing machine	220 V	HIGH LOAD Bus	UTILITY Bus
Dishwasher	220 V or 110 V	UTILITY Bus	UTILITY Bus
Water heater	220 V	HIGH LOAD Bus	HIGH LOAD Bus in 220 V and engine
Watermaker	220 V	UTILITY Bus	HIGH LOAD Bus
Diving compressor	220 V	HIGH LOAD Bus	-----
Air cond	220 V	AIR COND.Bus	AIR COND Bus in 220 V (double phase)

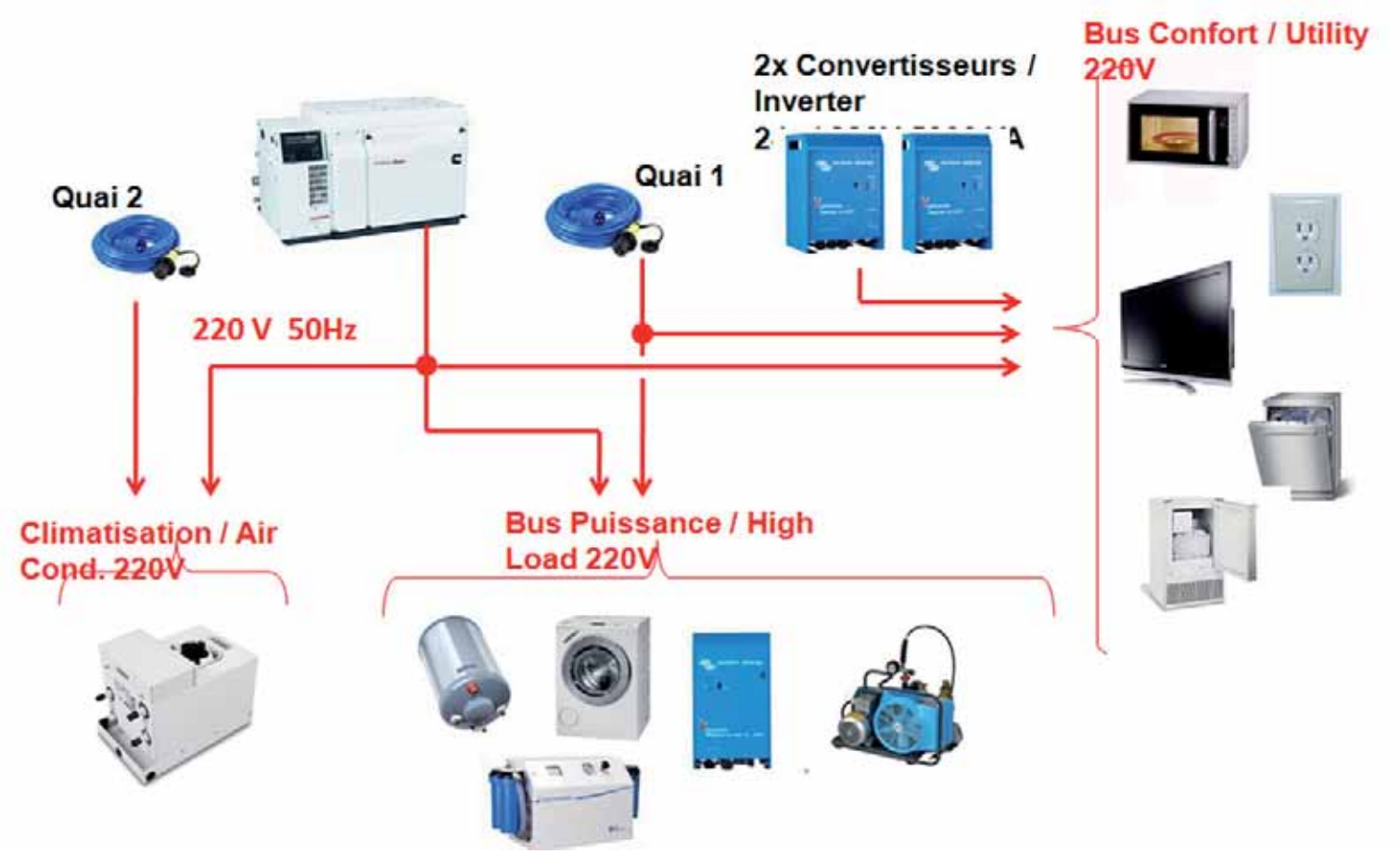
GENERAL BLOCK DIAGRAM 24 V



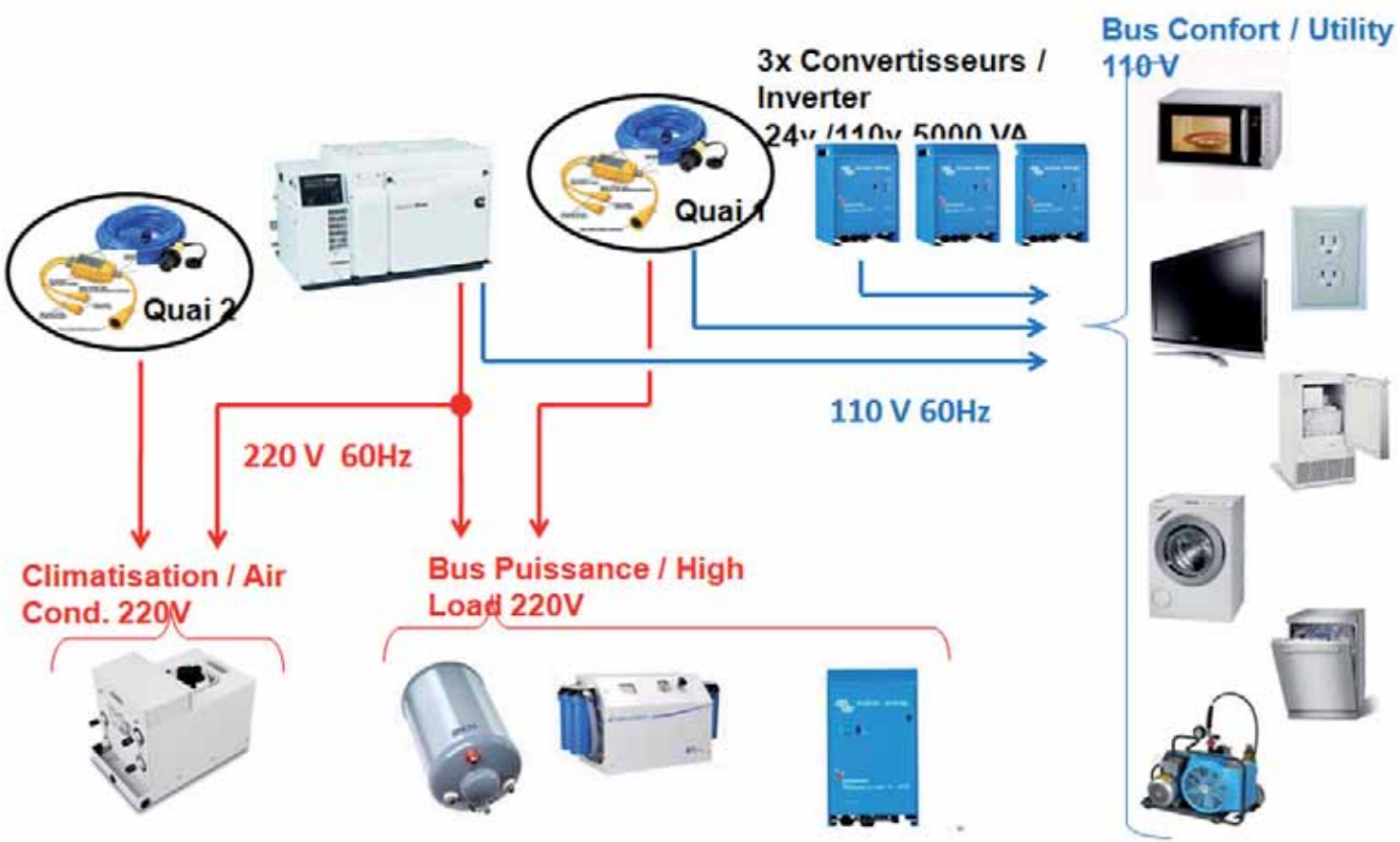
GENERAL BLOCK DIAGRAM 110 V – 220 V




Batteries 24V
Convertisseur / Inverter
12/220V 1500W
220 V 50Hz
Lagoon 560
Allumage gaz (piezzo)


Bus Confort / Utility
220V
2x Convertisseurs /
Inverter
Quai 2
Quai 1
220 V 50Hz
Climatisation / Air
Cond. 220V
Bus Puissance / High
Load 220V

OPTIONAL EQUIPMENT 110 V



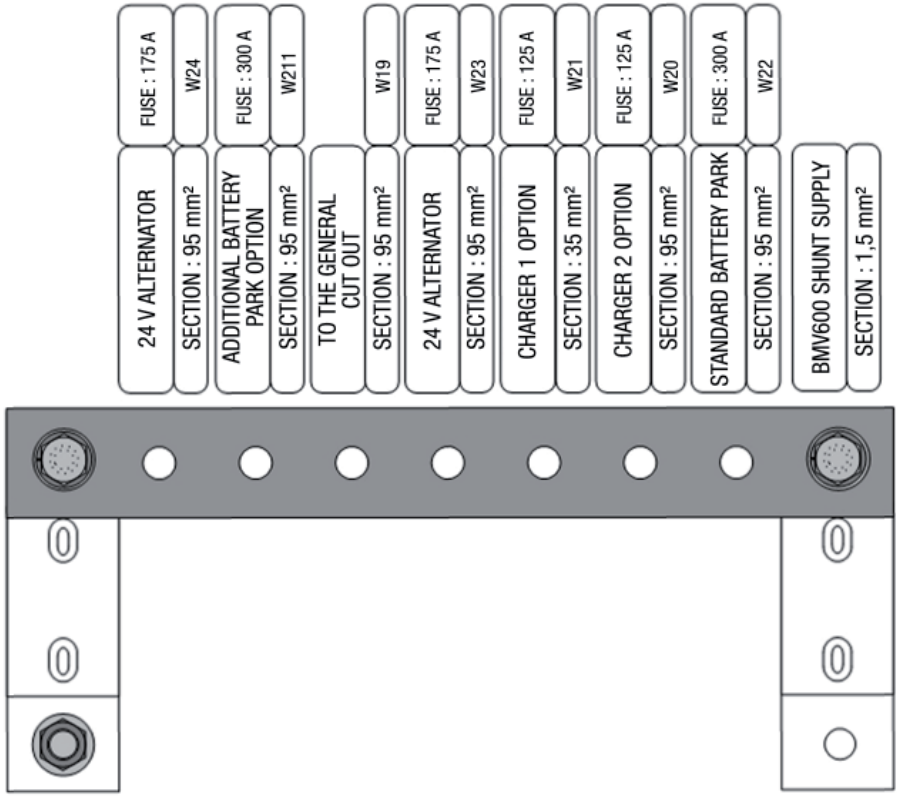
APPENDIX 1 : BATTERY BUS BAR PROTECTIONS

The bus bars in the equipment room supply the various electrical devices of the boat.
These equipments are protected by fuses.

The diagrams in the appendix 1 and 2 show the protection (e.g. : 175 Ah) corresponding to the equipment, as well as the designation (e.g. W24 / 24 V alternator) you will find on the relevant wire in the boat.

DANGER
Before any intervention on a bus bar, turn OFF the 24 V circuit on board.

BATTERY BUS BAR



APPENDIX 2-1 : POSITIVE BUS BAR PROTECTIONS

The bus bars in the equipment room supply the various electrical devices of the boat.
These equipments are protected by fuses.

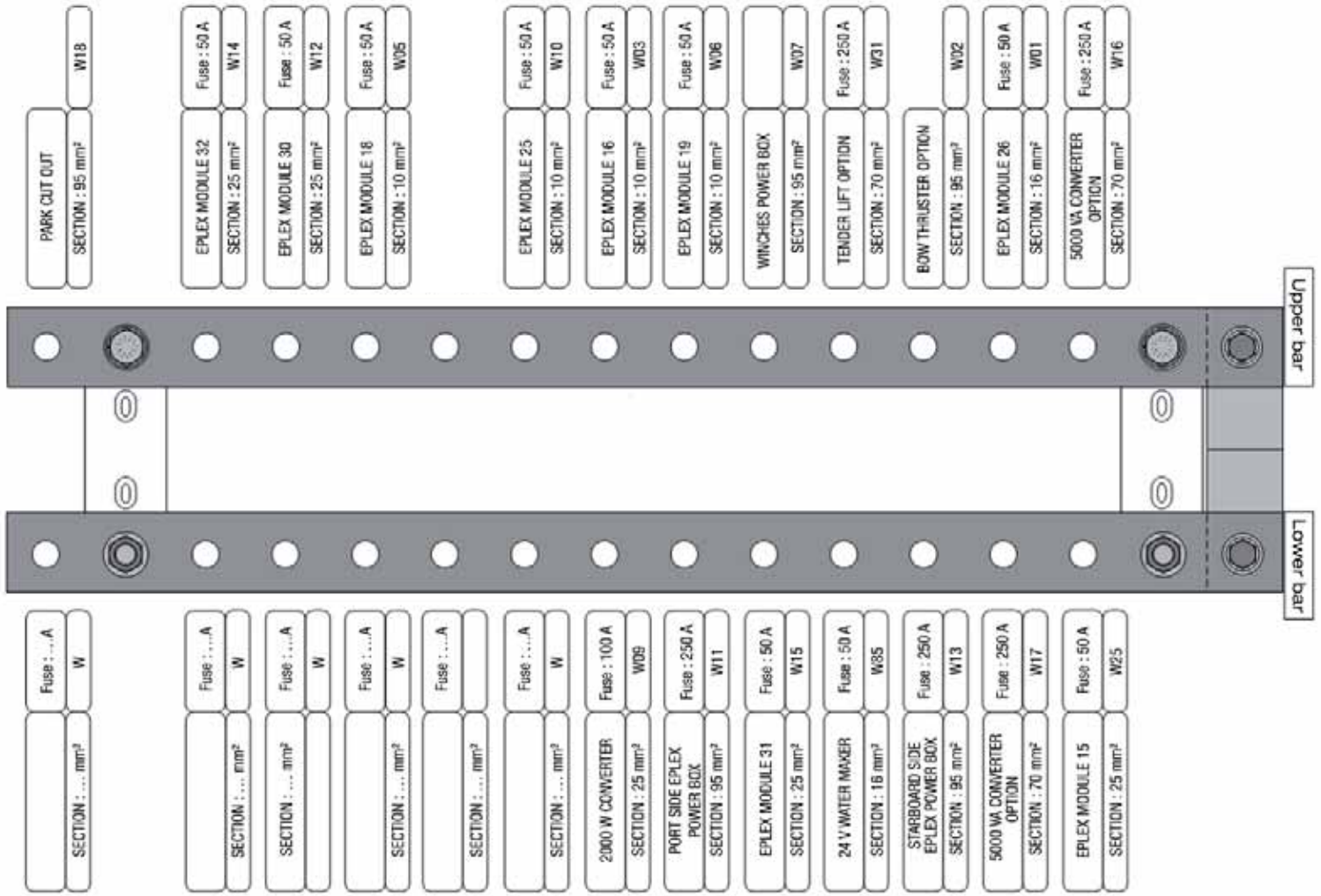
The diagrams in the appendix 1 and 2 show the protection (e.g. : 175 Ah) corresponding to the equipment, as well as the designation (e.g. W24 / 24 V alternator) you will find on the relevant wire in the boat.

DANGER
Before any intervention on a bus bar, turn OFF the 24 V circuit on board.

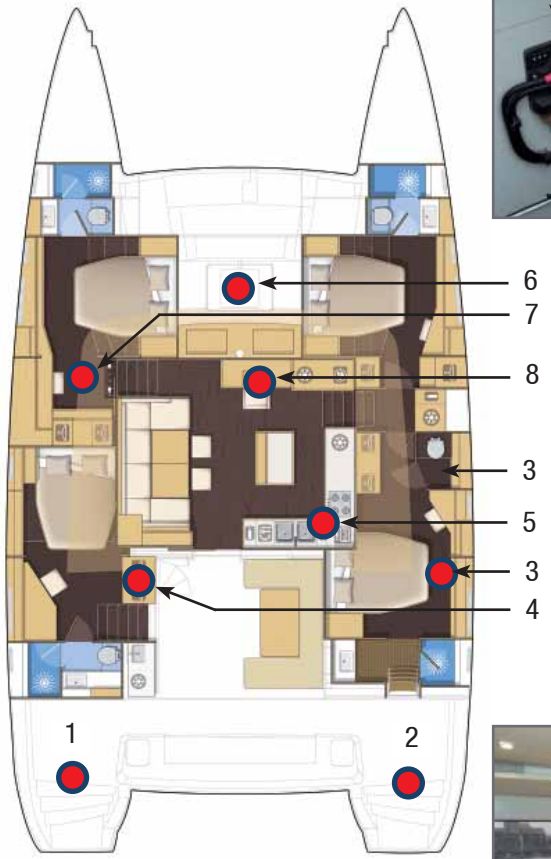
POSITIVE BUS BAR

SEE DETAILS OPPOSITE

APPENDIX 2-2 : POSITIVE BUS BAR PROTECTIONS



APPENDIX 3 : E-PLEX MODULES DESIGNATION / HULL – DECK (EXAMPLES)



1 - Port engine compartment - module no. 262.

2 - Starboard engine compartment - module no. 368.

3 - Under floor in front of bed aft cabin - module no. 406.

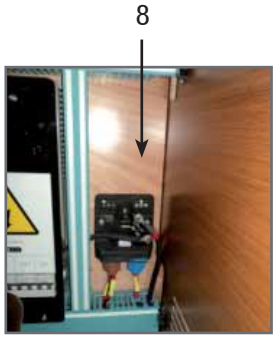
4 - In aft port cabin, at the back of the cupboard over the electrical box - module no.280.

5 - Under ceiling, galley - module no. 316.

6 - In technical room - module no. 334, 370, 352, 424.

7 - In forward port cabin, under floor - module no. 298.

8 - Under chart table - module no. 442.



APPENDIX 4 : TROUBLESHOOTING PROCEDURES

TROUBLESHOOTING USING THE TOUCH SCREEN
If a problem occurs with an appliance, consult the E-Plex page on the touch screen.
By following the directory structure, the module which is not working will be identified in red.

TROUBLESHOOTING FROM THE MODULE
If it is impossible to use the touch screen to access the different electrical appliances on board, you can intervene directly on the module.
You will find module locations in appendix 5 for the hull, and appendix 6 for the roof.
You will find the module designations in appendix 7 and 8 (output modules).

The input modules enable the system to determine if the start up or control information is correctly given to the associates output modules.
They have no manual control.

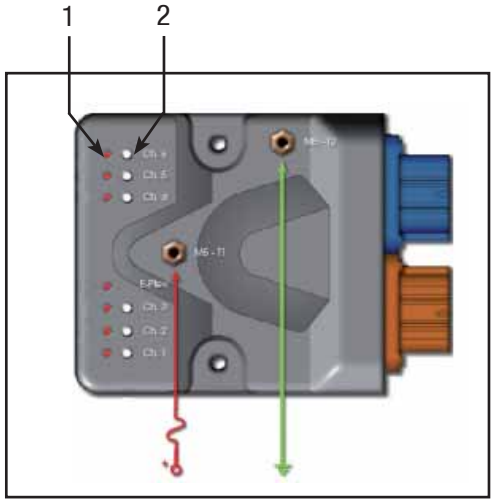
A manual intervention can only be justified on the output modules shown in Appendix 7 and 8.

- Identify the element requiring an intervention by its output number in its detailed module using Appendix 7 or 8.
- Locate on the diagrams in the Appendix 5 or 6 the position of this module so that you can physically reach it.
- Work manually on this module to turn ON or OFF the said element.

MODULE INTERVENTION
The switches (#2) allow you to select then control the six elements matching the diodes (#1).

- Press the switch corresponding to the element you want to turn on (lighting diode).
If you press the switch again, the element will be turned OFF.

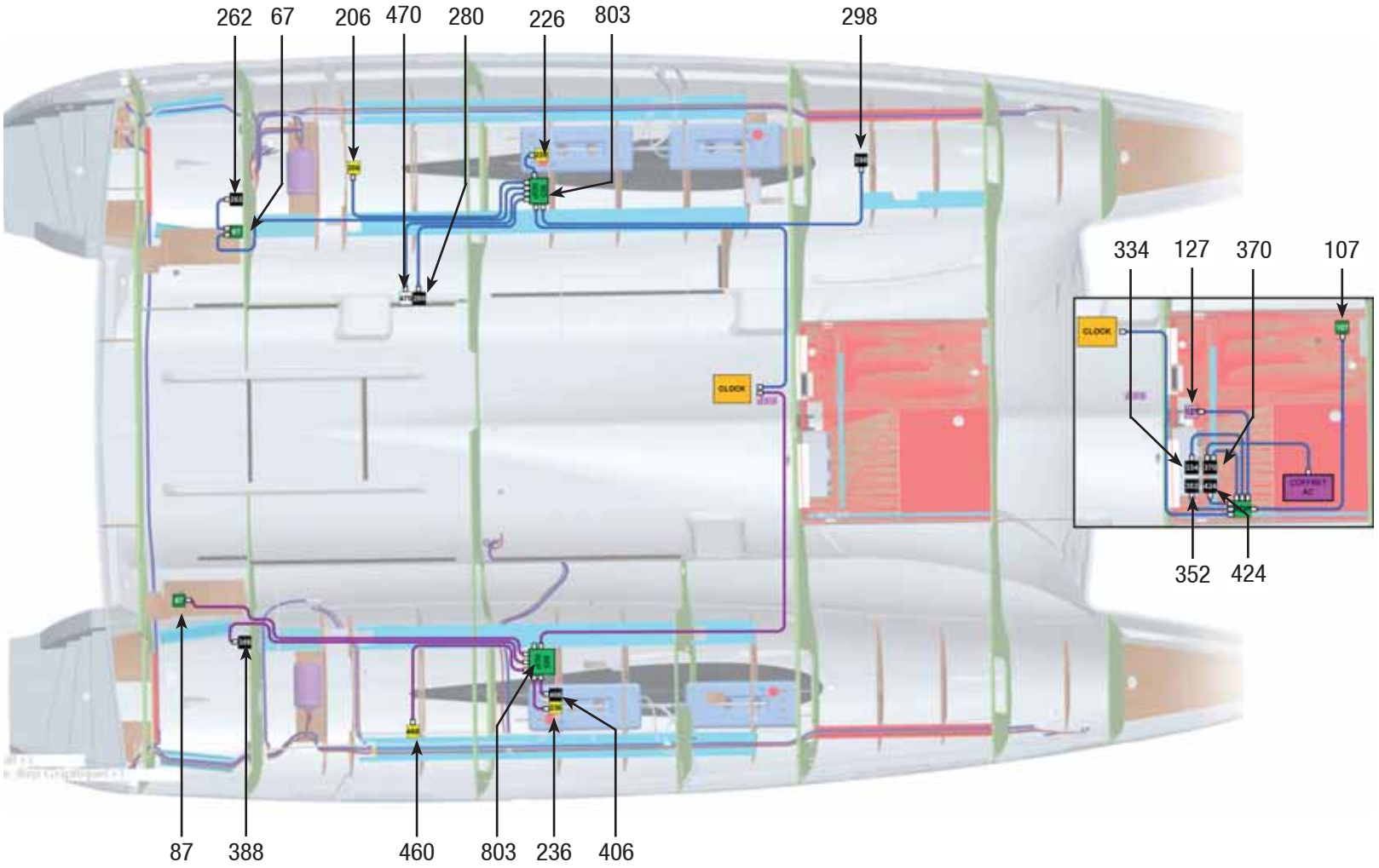
MODULE



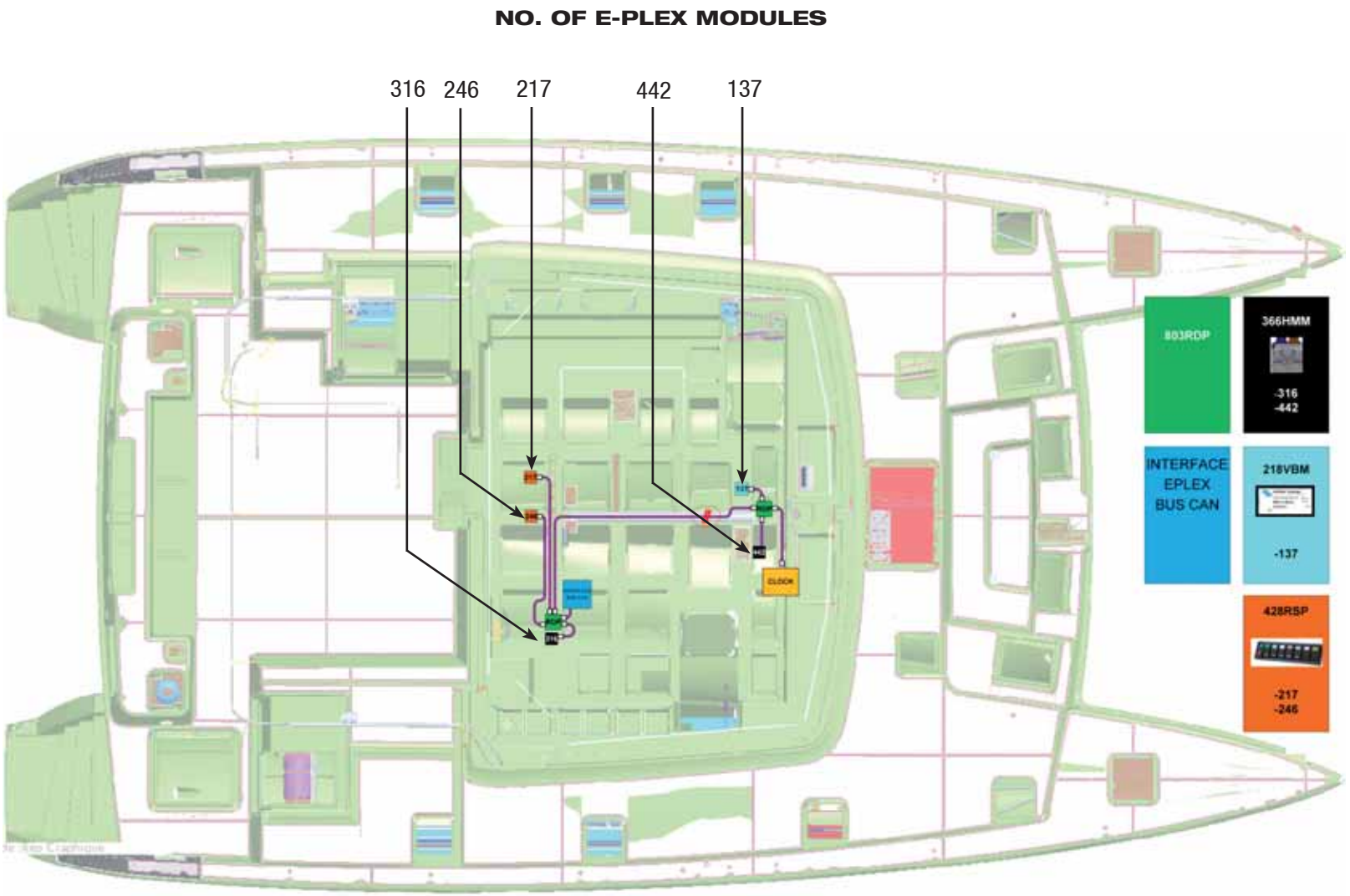
1 - Diodes.
2- Selector switches.

APPENDIX 5 : E-PLEX MODULE LAYOUT IN THE HULL

NO. OF E-PLEX MODULES



APPENDIX 6 : E-PLEX MODULE LAYOUT IN THE ROOF



APPENDIX 7 : IDENTIFICATION OF E-PLEX MODULES / OUTPUTS

NEW MODULE 262

OUTPUT 1	ENGINE COMPARTMENT LIGHTING	1 A
OUTPUT 2	AFT TRANSOM COURTESY LIGHTING	1 A
OUTPUT 3	WATER PUMP	15 A
OUTPUT 4		
OUTPUT 5	AFT BEAM SPOTLIGHTS	1 A
OUTPUT 6	AFT UNDERWATER LIGHTS	4 A

NEW MODULE 280

OUTPUT 1	CENTRAL PORT CABIN HEADBOARD WALL LIGHT + VENTILATION	2 A
OUTPUT 2	INVERTER + CENTRAL PORT CABIN RADIO	7 A
OUTPUT 3	COCKPIT REFRIGERATOR 3 A	3 A
OUTPUT 4	INVERTER + AFT PORT CABIN RADIO SYSTEM	7 A
OUTPUT 5	AFT PORT CABIN HEADBOARD WALL LIGHT + VENTILATION	2 A
OUTPUT 6	AFT PORT CABIN COMPANIONWAY COURTESY	1 A

NEW MODULE 298

OUTPUT 1	FRONT PORT CABIN COMPANIONWAY COURTESY LIGHT	1 A
OUTPUT 2	FRONT PORT CABIN HEADBOARD WALL LIGHT + DESK + VENTILATION	2 A
OUTPUT 3	INVERTER + FRONT PORT CABIN RADIO SYSTEM	7 A
OUTPUT 4	-	
OUTPUT 5	-	
OUTPUT 6	-	

NEW MODULE 316

OUTPUT 1	STERN LIGHT + COMPASS LIGHTING	2 A
OUTPUT 2	FLYING BRIDGE CLOSING SYSTEM POWER SUPPLY	12 A
OUTPUT 3	FLYING BRIDGE EXTERIOR COURTESY LIGHTING	1 A
OUTPUT 4	BIMINI TOP LIGHTING	1 A
OUTPUT 5	OPENING CONTROL	1 A
OUTPUT 6	CLOSING CONTROL	1 A

NEW MODULE 334

OUTPUT 1	PORT NAVIGATION LIGHT	1 A
OUTPUT 2	STARBOARD NAVIGATION LIGHT	1 A
OUTPUT 3	WINCH CONTROLS POWER SUPPLY	5A
OUTPUT 4	INVERTER + SALOON RADIO SYSTEM	7 A
OUTPUT 5	COURTESY LIGHTING FORWARD COCKPIT	1 A
OUTPUT 6	GENERATOR COMPARTMENT LIGHTING	1 A

NEW MODULE 352

OUTPUT 1	WINDLASS CONTROL	1 A
OUTPUT 2	WINDLASS CONTROL	1 A
OUTPUT 3	CHAIN COUNTER	1 A
OUTPUT 4	EXTRACTOR GENERATOR ROOM	8 A
OUTPUT 5	DECK WASH PUMP	11 A
OUTPUT 6	WINDLASS LOCKING CONTROLS	1 A

NEW MODULE 370

OUTPUT 1	TOP LIGHT	2 A
OUTPUT 2	ANCHOR LIGHT	2 A
OUTPUT 3	DECK SEARCHLIGHT	3 A
OUTPUT 4	SPREADER SPOTLIGHTS	6 A
OUTPUT 5	BOOM LIGHTING	1 A
OUTPUT 6	TRI-COLOURED LIGHT	2 A

NEW MODULE 388

OUTPUT 1	STARBOARD ENGINE COMPARTMENT LIGHTING	1 A
OUTPUT 2	STARBOARD SEATING + COCKPIT + AFT TRANSOM LIGHTING	1 A
OUTPUT 3	STARBOARD HULL WATER PUMP	15 A
OUTPUT 4	-	
OUTPUT 5	OUTPUT 5 STARBOARD AFT UNDERWATER SPOTLIGHTS	4 A
OUTPUT 6	STARBOARD AFT BEAM SPOTLIGHTS	1 A

NEW MODULE 406

OUTPUT 1	GREY WATER TANK + AIR CONDITIONING SYSTEM	4 A
OUTPUT 2	AFT STARBOARD CABIN HEADBOARD WALL LIGHT + DESK + VENTILATION	2 A
OUTPUT 3	FRONT STARBOARD CABIN HEADBOARD WALL LIGHT + VENTILATION	2 A
OUTPUT 4	STARBOARD COMPANIONWAY COURTESY LIGHT	1 A
OUTPUT 5	INVERTER + FRONT STARBOARD CABIN RADIO SYSTEM	7 A
OUTPUT 6	INVERTER + AFT STARBOARD CABIN RADIO SYSTEM	7 A

NEW MODULE 424

OUTPUT 1	CHART TABLE READING LIGHT	1 A
OUTPUT 2	RADAR	3 A
OUTPUT 3	VHF, STNG, AIS, CAMERA, HUB, ST70 - 24V/12V INVERTER	10 A
OUTPUT 4	NAVIGATION SCREEN HELM STATION	2 A
OUTPUT 5	NAVIGATION SCREEN CHART TABLE	2 A
OUTPUT 6	ANTENNA	1 A

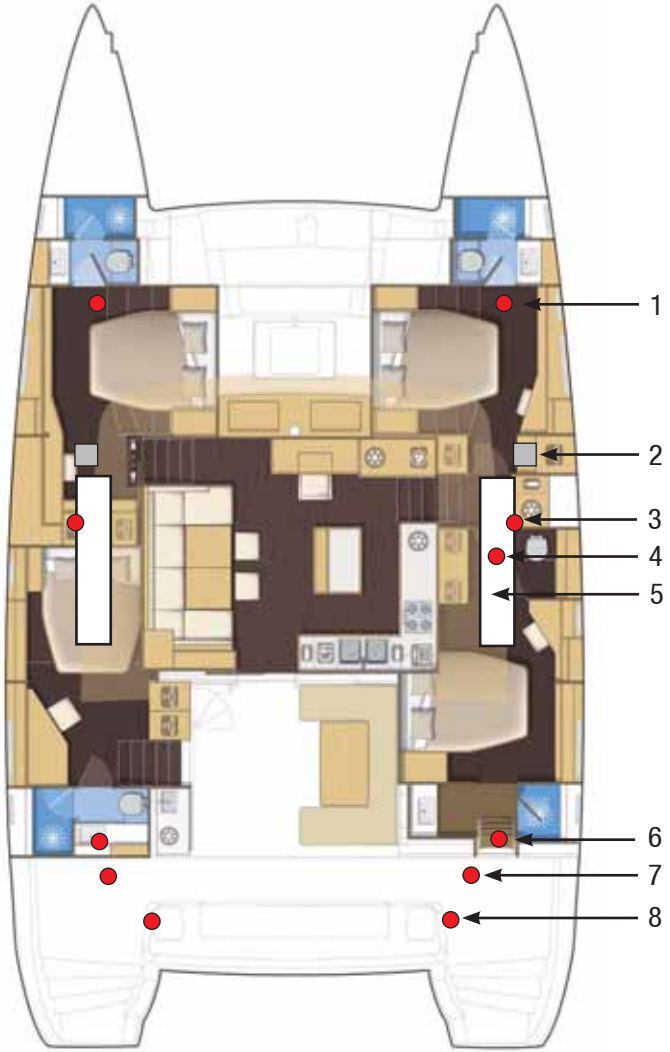
ANNEXE 8 : IDENTIFICATION MODULES EPLEX / SORTIES

NEW MODULE 442		
OUTPUT 1	COLD FRONT GALLEY	5 A
OUTPUT 2	COLD AFT GALLEY	5 A
OUTPUT 3	STRIP LED SALOON SEATING	1 A
OUTPUT 4	E-PLEX SYSTEM ALARM	1 A
OUTPUT 5	ELECTRIC TABLE LEG	7 A
OUTPUT 6	TV LIFT	10 A
NEW MODULE 217		
E 1	ANCHOR LIGHT	
E 2	TRI-COLOURED LIGHT	
E 3	NAVIGATION LIGHT	
E 4	TOP LIGHT	
NEW MODULE 246		
E 1	WINDLASS LOCKING	
E 2	WINDLASS UP/DOWN	
E 3	FLYING BRIDGE OPENING/CLOSING	
E 4	BOOM LIGHTING	
E 5	SPREADER SPOTLIGHTS	
E 6	BIMINI TOP LIGHTING	
E 7	EXTERIOR COURTESY LIGHTING	
E 8	DECK SEARCHLIGHT	
NEW MODULE 470		
E 1	-	
E 2	-	
E 3	FLYING BRIDGE OPENING CONTROL	
E 4	FLYING BRIDGE CLOSING CONTROL	

SECTION 5
PLUMBING

5.1 BILGE PUMP SYSTEM
5.2 GREY WATER SYSTEM
5.3 FRESH WATER
5.4 USE OF THE MARINE HEADS
5.5 BLACK WATER TANKS
5.6 WATERMAKER (OPTIONAL EXTRA)

BILGE PUMP SYSTEM

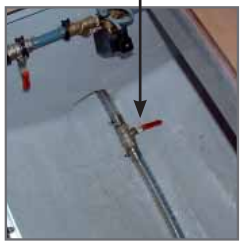


SEA-COCK OPEN

SEA-COCK CLOSED

1 - Outlet valve of forward compartment.
2 - Grey water tank.
3 - Electric bilge pump / sump.
4 - Automatic start mechanisms of the electric bilge pump.
5 - Hull sump.
6 - Drain valve of engine bilge.
7 - Electric bilge pump / engine bilge.
8 - Manual bilge pump.
Each hull has the same components.
Nota : each valve in the boat is identified.

1



2

6

■ 5.1 Bilge pump system

A main sump is under the floorboard of each hull.
The fore and aft compartments are linked to these sumps by a bilge pipe and a valve (access under the floorboards).

RECOMMENDATION
The drainage valves for the forward and engine compartments should normally be in a closed position.

Each sump is drained by :
- A cockpit manual pump.
- An electric pump with automatic and manual start (with the touch screen).
An automatic start for a low level starts the pump but not the alarm (draining of the bilge pipes).
An automatic start for a higher level starts the alarm then.
Nota : the electric bilge pump automatically works even if the 24 V system has been switched off.

The engine rooms are each equipped with an electric pump with automatic and manual start (with the touch screen).

Check that the pumps are switched on at the automatic breakers in the electrical cabinets of the starboard hull (access in cupboard to the right of the companionway) and the port hull (access in cupboard to the right of the companionway in the aft cabin).

To manually switch on an electric pump, press and hold the desired pump symbol on the touch screen.

WARNING
The bilge pump system is not designed to provide buoyancy to the boat in case of damage.
The bilge pump system is designed to drive out the water being either sea spray or leaks but absolutely not the water coming through a hole in the hull, this hole being the result of a damage.

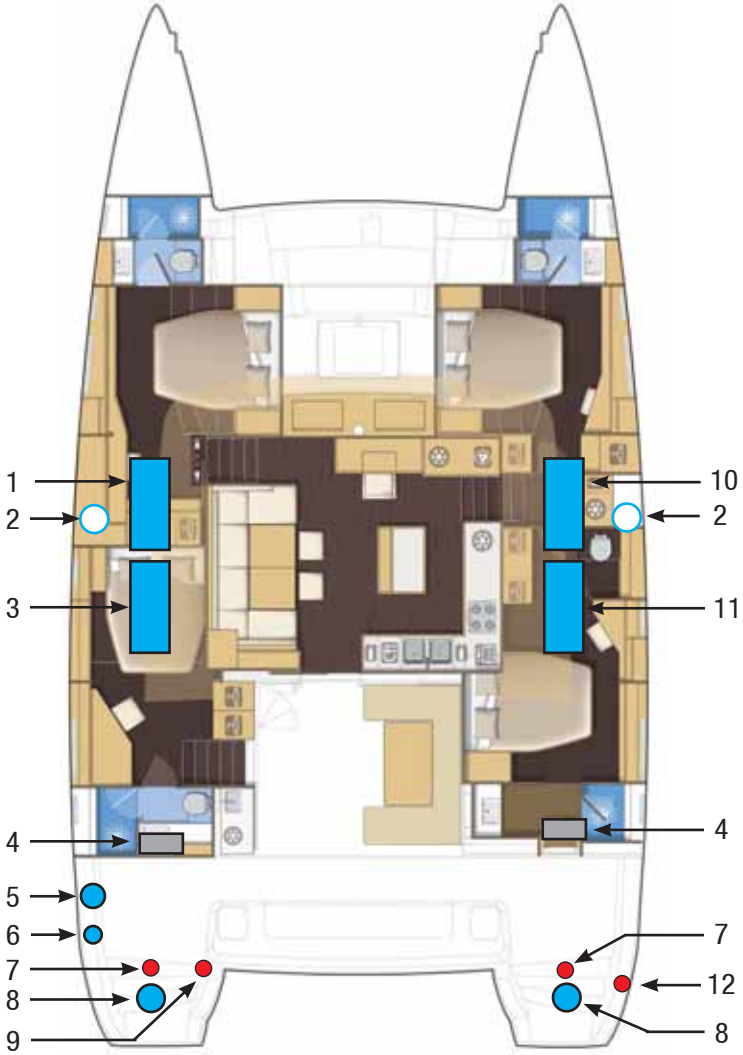
RECOMMENDATION
Regularly check the valves and sea-cocks for proper operation and watertightness.
Regularly make sure the strumboxes and bilges are perfectly clean.

■ 5.2 Grey water system

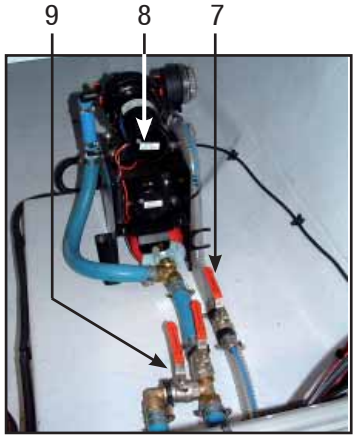
The grey waters are grouped together in a collecting tank in each hull. They collect the waste waters of the basins and showers of the shower rooms.

The grey water tanks are drained using automatic starting pumps.
Check that the pumps are switched on at the automatic breakers in the electrical cabinets of the starboard hull (access in cupboard to the right of the companionway) and the port hull (access in cupboard to the right of the companionway in the aft cabin).

FRESH WATER SYSTEM



1 - Port forward tank.
2 - Deck filler.
3 - Port aft tank.
4 - Water heater.
5 - Shore fresh water supply.
6 - Valve for shore fresh water supply.
7 - Water unit stop valve.
8 - Pressure water pump.
9 - Transfer valve.
10 - Starboard forward tank.
11 - Starboard aft tank.
12 - Deck shower.



It is recommended to regularly clean the filters (access by unclipping the covers).

■ 5.3 Fresh water

• TANKS
Each hull has a pressure water pump and two tanks linked together, but independent between the port and starboard hulls.
To prevent any handling mistake, never fill the water and fuel tanks at the same time.
During filling, avoid handling contaminants near the fillers.
Open and close the filler caps with the suitable key.
Check the filler cap seals for condition during filling.
The tanks are fitted with overflow outlets and vents.
Never insert the water filling hose deep down into the system in order to prevent any over-pressure in the systems.

RECOMMENDATION
- Pay attention to the quality of the water for the filling up.
- Check if it is drinking water.
- If the boat is not used for long, purify the tanks and pipes with proper treatment.

The tanks are fitted with inspection hatches therefore it is possible to clean the inside.

Nota : the capacity of the fresh water tank(s) indicated on the page 'SPECIFICATIONS' may be not completely usable depending on the trim and load of the boat.

• SYSTEM
The water pumps are switched on using the saloon touch screen.

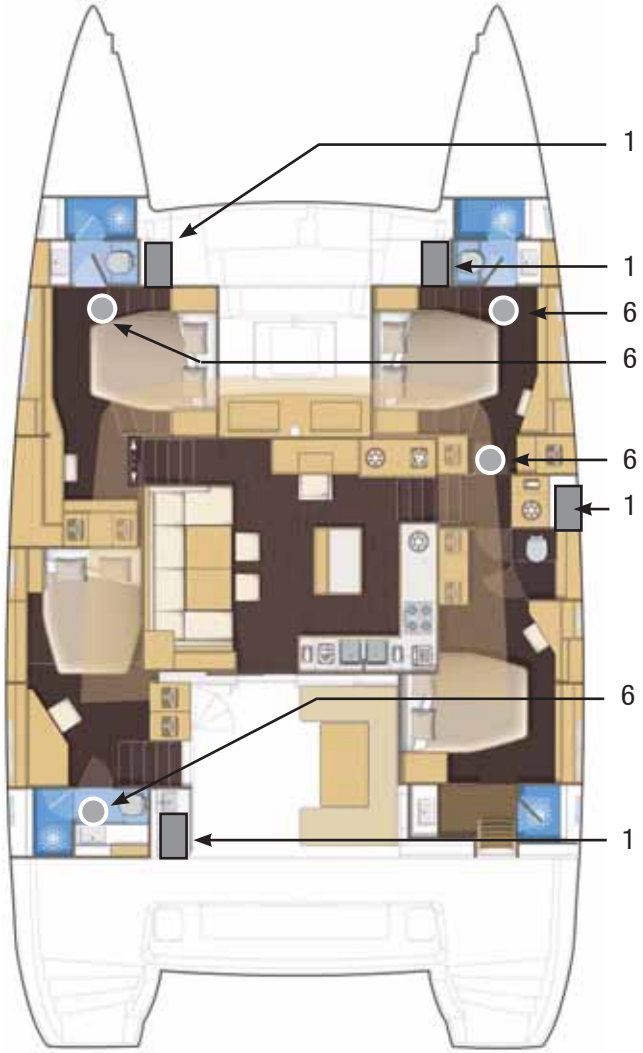
Check that the water pumps are switched on at the automatic breakers in the electrical cabinets of the starboard hull (access in cupboard to the right of the companionway) and the port hull (access in cupboard to the right of the companionway in the aft cabin).
If one of the water groups is broken down, after having turned it OFF with the touch screen, open the transfer valve located in the port engine hold so that the tank and the relevant water group take it over.

RECOMMENDATION
- Never operate water system equipment when the valves are closed or when the tanks are empty (the electrical equipment may be damaged).
- Check the different water filters for condition.

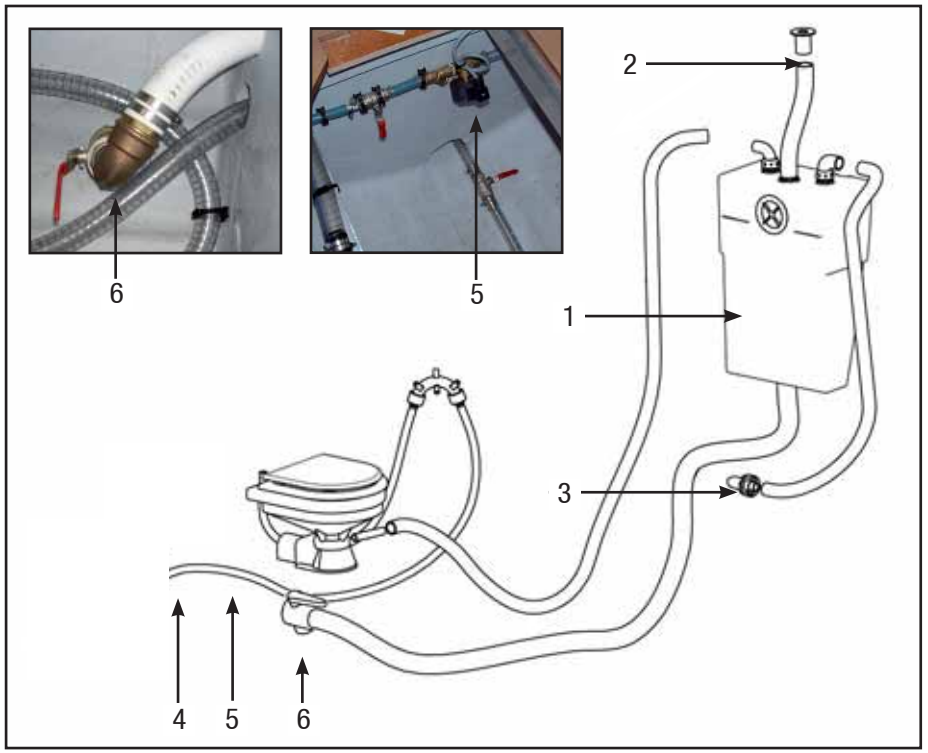
• WATER GAUGE
Monitor the gauges using the touch screen.

• SHORE FRESH WATER SUPPLY
The shore fresh water supply is located in the port aft transom extension.
To use the marina fresh water :
- Connect the shore supply.
- Open the shore supply valve (access by port engine bilge).
- Open the transfer valve (access by starboard engine bilge).

BLACK WATER TANKS



BLACK WATER TANK SYSTEM



1 - Black water tank.
2 - Drain bung hole on deck.
3 - Vent.
4 - Fresh water tank inlet.
5 - Electrovalve / fresh water inlet.
6 - Drain valve on hull.

• WATER-HEATER
Each water heater (one per hull) has a capacity of 60 litres.
The water heaters automatically work once their respective engines are running, or on 220 V supply after the shore power supply is plugged or after the generator started.
Ensure that the water heater is switched on using the touch screen (plumbing menu).
Check that the water heater is switched on at the automatic breakers of the High Load busbar in the foredeck technical room.

The hot water temperature is pre-set using the thermostatic tap situated on the water heaters (access under the aft floorboards of the galley to portside and the owner's study to starboard).

■ 5.4 Use of the marine heads

ELECTRIC MARINE HEADS
You rinse them using the fresh water in the port tanks for the heads in the port hull and the starboard tanks for the heads in the starboard hull.

Having switched on the general 24V boat circuit, ensure that the water pumps are powered using the touch screen.

Check that the water pumps and the WCs are switched on in the electrical cabinets of the starboard hull (access in cupboard to the right of the companionway) and the port hull (access in cupboard to the right of the companionway in the aft cabin).

In order to avoid clogging the heads, use absorbent paper only.

For the use and maintenance of the electric heads, refer to the instruction guide.

■ 5.5 Black water tanks

The heads are fitted with black water tanks.
To use them, make sure the drain valve on the bowl is closed in order to avoid any inadvertent discharge (the valve is closed when the handle is perpendicular with the pipe).
You will reach the tanks via the bathrooms.

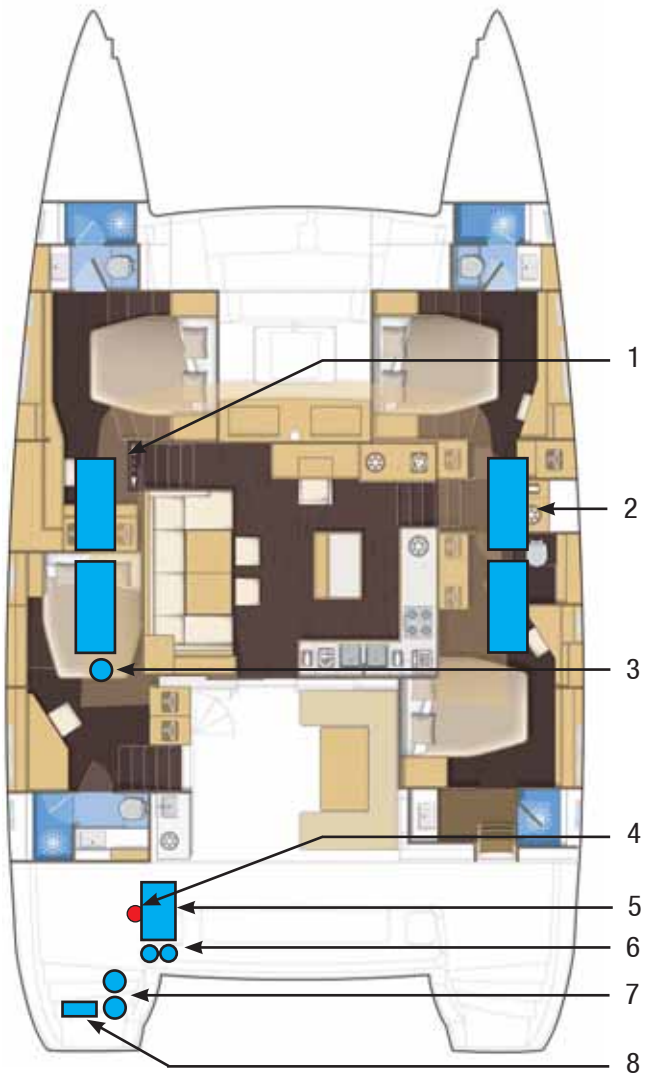
To empty a black water tank :
- In an authorized area, open the drain valve to empty the tank through gravity.
- In a marina equipped with an organic waste suction system, put the suction hose into the tank through the deck filler. Start the pump of the suction system.

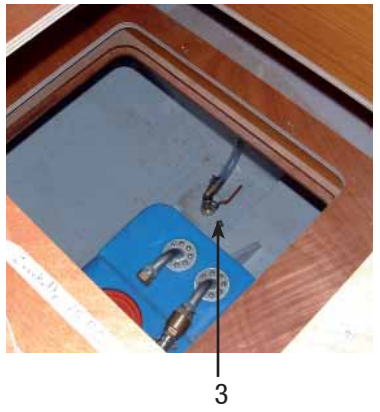
The filler cap is opened and closed with an appropriate key.
When the tank has been emptied, check the cap seal for condition then close the filler.

Regularly rinse the black water tanks.

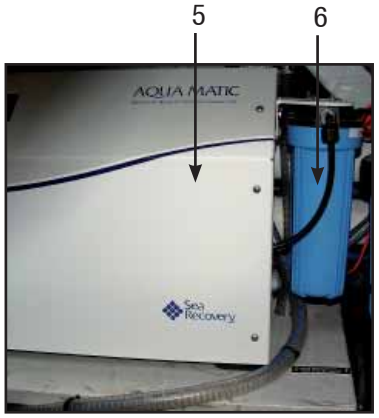
RECOMMENDATION
Use the suction systems in marinas to empty your holding tanks.
In order to respect environment, do not discharge your holding tanks near the shore.

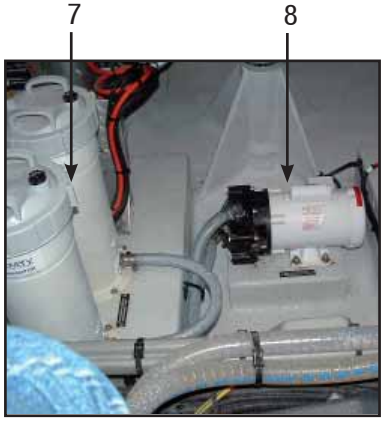
WATERMAKER





1 - Freshwater tanks
2 - Watermaker start screen
3 - Sea water supply valve
4 - Valve to select port / starboard tank.
5 - Watermaker.
6 - Filters.
7 - Watermaker pre-filters.
8 - Watermaker low pressure pump.





WARNING
Ask for information about the laws in force in your country or your marina about discharging black water into the sea.

■ 5.6 Watermaker (optional extra)

The boat may optionally be fitted with a water maker located in the port engine hold.

RECOMMENDATION
The watermaker shall be used exclusively in clear waters, when moored or sailing.

OPERATION
The watermaker functions with the generator on (version 110 V - 220 V).
Open the seawater inlet valve (access under the aft port cabin bed base).

- Check that the watermaker is switched on at the automatic breakers of the High Load busbar in the foredeck technical room.
- Start the watermaker using the screen located on the console at the front starboard side of the saloon.

The watermaker circuit is equipped with a 3 channel valve to supply freshwater to the port or starboard tanks.

This valve is located under the water maker, in the port hull engine hold.

Check the level of fresh water in the tanks when the watermaker is working.
For the use and maintenance of the water maker, refer to the instruction guide.

SECTION 6
ACCOMMODATION

6.1 PORTHOLES AND DECK HATCHES
6.2 FLOORBOARDS
6.3 TV (OPTIONAL EXTRA)

PORTHOLE AND DECK HATCH LOCKING

BLIND CURTAINS

SUCTION PADS FOR THE FLOORBOARDS

■ 6.1 Portholes and deck hatches

The deck hatches have locking systems to keep them closed.
At anchor, intermediate opening positions make possible to ventilate the boat.
The deck hatches are fitted with a blind and mosquito net system to be used event when the hatch is open.
They must be handled with care.
The portholes are fitted with blinds.

■ 6.2 Floorboards

The floorboards can be lifted up to have access to the different technical components on board.
Use the suction pad provided for this purpose.

RECOMMENDATION
To prevent premature ageing ot the floorboards (dents, scratches), it is recommended to keep them as clean as possible and to remove one's shoes before getting on board.

■ 6.3 TV (optional extra)

The saloon can be fitted, as an option, with a television.
The cabins may also be fitted with optional TV sets.

USE
Switch on the television using the touch screen (HiFi menu).
Check that the television is switched on at the automatic breakers of the Comfort busbar in the foredeck technical room.

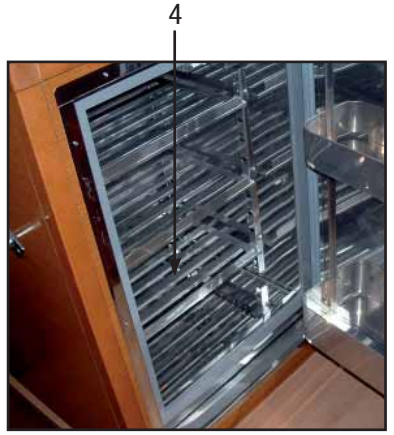
For the use and maintenance of the television set, refer to the instruction guide.

SECTION 7
ON BOARD UTILITY

7.1 GALLEY / SALOON REFRIGERATORS
7.2 ALLEYWAY REFRIGERATOR
7.3 OVEN, HOTPLATE
7.4 MICROWAVE OVEN (OPTIONAL EXTRA)
7.5 ICEMAKER (OPTIONAL EXTRA)
7.6 WASHING MACHINE (OPTIONAL EXTRA)
7.7 DISHWASHER (OPTIONAL EXTRA)
7.8 AIR CONDITIONING (OPTIONAL EXTRA)

LAYOUT OF THE GALLEY COMPONENTS

1 - Touch screen.
2 - Refrigerator 24 V (optional extra).
3 - Refrigerator / freezer 220 V.
4 - Refrigerator 24 V.



The equipment presented in the ON BOARD COMFORT chapter is controlled using the touch screen located on the console at the port front side of the saloon.
The intuitive operation of the screen enables you to access the different equipment through the menu structure.
The touch screen works once the general 24 V on board circuit is switched on. Lightly touch the screen to exit the standby mode.

■ 7.1 Galley / saloon refrigerator

The boat is fitted with a refrigerator in the galley.
It may be optionally fitted with a freezer section or a refrigerator in the saloon front piece of furniture.

Once the general 24 V on board circuit is switched on, switch on the refrigerators using the touch screen.

For the refrigerator use and maintenance, read the appropriate user guides.

■ 7.2 Alleyway refrigerator, hood

The boat is fitted with a refrigerator / freezer (alleyway).
It may optionally be fitted with an extractor hood.

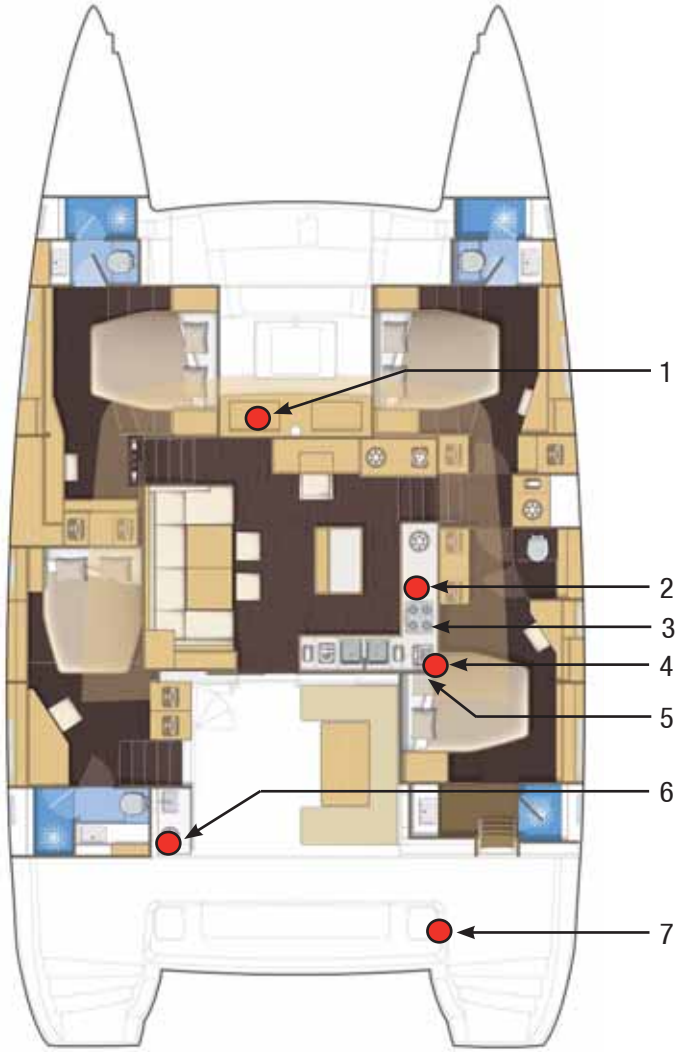
Their inverter is automatically turned on when the 24 V circuit on board is energised.
Check that the inverter is supplied by the automatic breakers of the Standard Inverter busbar in the foredeck technical room.

Once the general 24 V on board circuit is switched on, switch on the refrigerator using the touch screen.

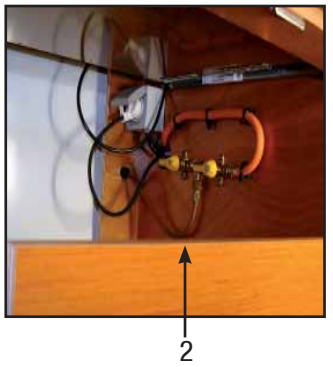
For the use and maintenance of these devices, read the appropriate user guides.

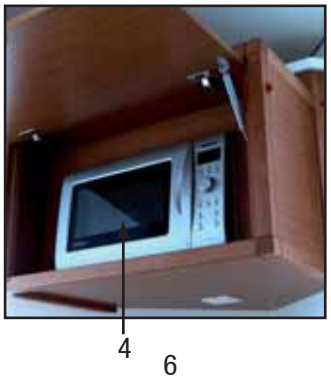
RECOMMENDATION
Defrost and drain off the refrigerators and the refrigerator / freezer before turning on the 24 V circuit on board.

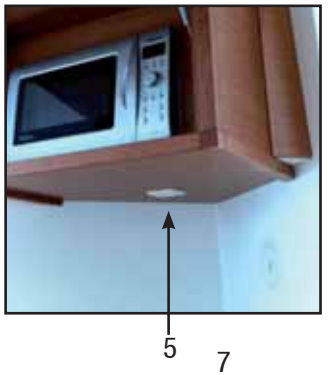
LAYOUT OF THE GALLEY COMPONENTS

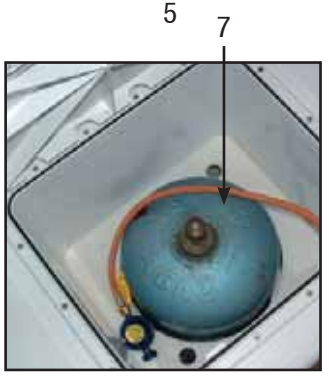


1 - Multifonction touch screen.
2 - Gas valves.
3 - Hob + traditional oven.
4 - Microwave oven.
5 - Electronically controlled valve switch (US version).
6 - Icemaker.
7 - Gas bottle and regulator.









■ 7.3 Traditional oven, hob

The boat is standard fitted with a gas cooking hob.
The gas valves are located in the cupboard at the left of the oven.
The gas cartridge is located in the cockpit seating starboard locker.

The hob has an electric ignition.
The inverter that supplies ignition is automatically operated when the 24 V system on board is switched on.

RECOMMENDATION
Shut the gas valves and the regulator tap when you do not use the hob.

■ 7.4 Microwave oven (optional extra)

The boat may optionally be fitted with a microwave oven, located in the cupboard over the galley.

SUPPLY
The 110 V - 220 V power supply (shore, generator, inverter) is automatically selected when it is switched on.
Manual control is still possible.
Please refer to the explanations on page 51, ELECTRICITY chapter.
Check that the microwave oven is switched on at the automatic breakers of the Comfort busbar in the foredeck technical room.

Switch on the microwave oven using the touch screen.

For the use and maintenance of the oven, refer to its instruction guide.

■ 7.5 Icemaker (optional extra)

The boat may be fitted as an optional extra with an icemaker located in the cockpit.
The port tank supplies it with water.

Open the fresh water valve located behind the icemaker.
Turn the switch at the bottom of the ice maker on ON.

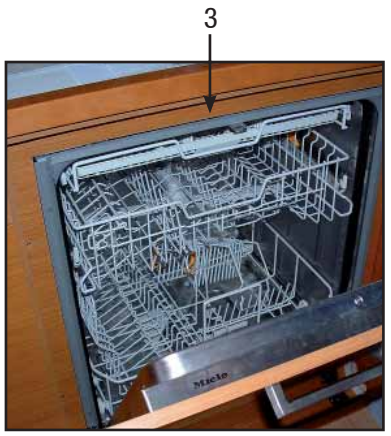
POWER SUPPLY
The 110 V - 220 V power supply (shore, generator, inverter) is automatically selected when it is switched on.
Manual control is still possible.
Please refer to the explanations on page 51, ELECTRICITY chapter.
Check that the icemaker is switched on at the automatic breakers of the Comfort busbar in the foredeck +.

Switch on the icemaker using the touch screen.

For the use and maintenance of the icemaker, refer to its instruction guide.

WASHING MACHINE - DISHWASHER

1 - Multifonction touch screen.
2 - Washing machine.
3 - Washing machine outlet valve.
4 - Dishwasher.
5 - Water supply manifold.



■ 7.6 Washing machine (optional extra)

The boat may optionally be fitted with a washing machine located in the front starboard piece of furniture in the saloon.
The washing machine fresh water is supplied by the starboard tanks.
Check its valve on the manifold under the sink is open.
Its outlet valve is located at the back of the wardrobe at the foot of the starboard front companion ladder.

POWER SUPPLY
The 110 V - 220 V power supply (shore, generator, inverter) is automatically selected when it is switched on.
Manual control is still possible.
Please refer to the explanations on page 51, ELECTRICITY chapter.
Check that the washing machine is switched on at the automatic breakers of the High Load busbar in the foredeck technical room.

Switch on the washing machine using the touch screen.
Start the washing machine.

For the use and maintenance of the washing machine, refer to its instruction guide.

RECOMMENDATION
Do not use the washing machine when sailing.

■ 7.7 Dishwasher (optional extra)

The boat may optionally be fitted with a dishwasher, located in aft galley piece of furniture.
The dish washer fresh water is supplied by the starboard tanks.
Check its valve on the manifold under the sink is open.
Its water outlet is shared with the sink.

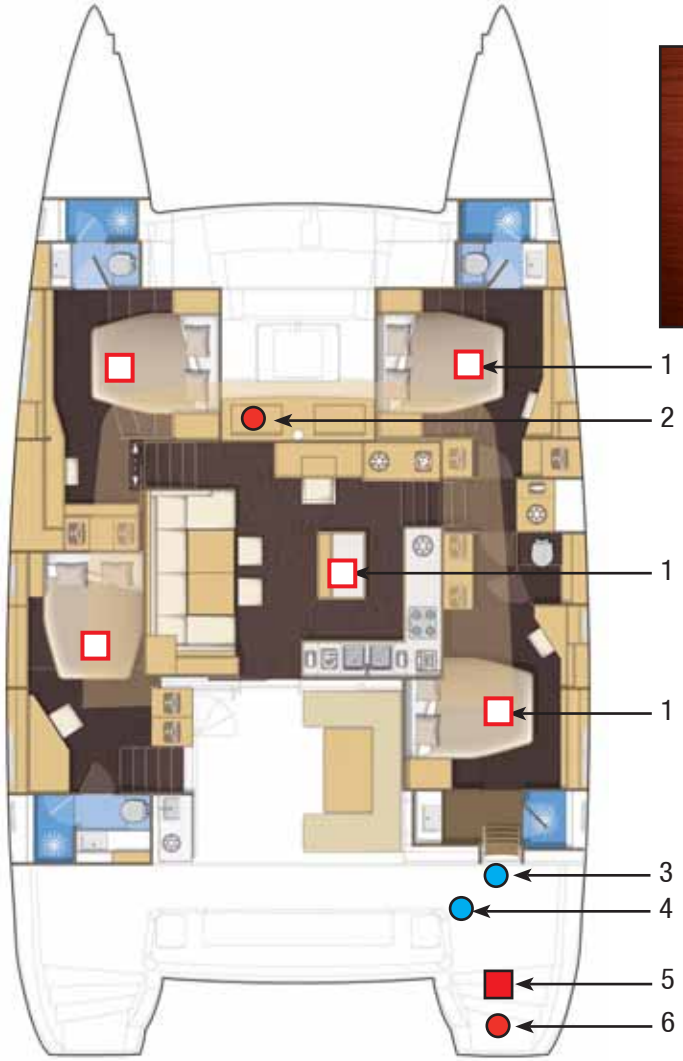
POWER SUPPLY
The 110 V - 220 V power supply (shore, generator, inverter) is automatically selected when it is switched on.
Manual control is still possible.
Please refer to the explanations on page 51, ELECTRICITY chapter.
Check that the dishwasher is switched on at the automatic breakers of the Comfort busbar in the foredeck technical room.

Switch on the dishwasher using the touch screen.
Start the dishwasher.

For the use and maintenance of the dishwasher, refer to its instruction guide.

RECOMMENDATION
Do not use the dishwasher when sailing.

AIR CONDITIONING

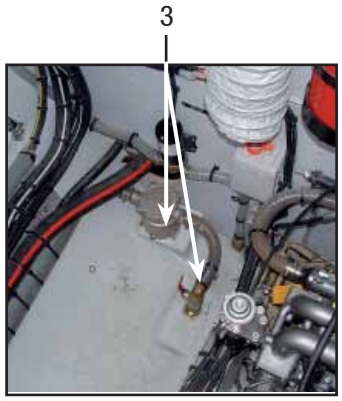


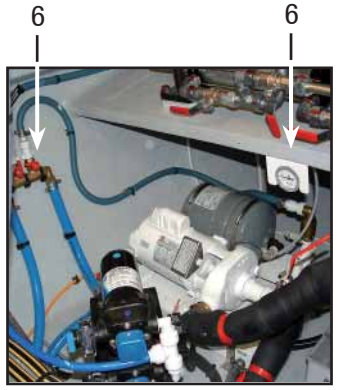
AIR CONDITIONING CONTROL

AIR CONDITIONING PUMP

CENTRAL CONTROL PANEL

1 - Unit heater.
2 - Multifonction touch screen.
3 - Filter + sea water intake valve.
4 - Air conditioning drain valve.
5 - Air conditioning unit + central control panel.
6 - Glycol circuit filling valve + pressure gauge.





■ 7.8 Air conditioning (optional extra)

The boat may be fitted with an optional reversible air conditioning system.
The air conditioning group is located in the starboard engine compartment.
It is an ice water circulation system.
The compressors (engine compartment) are pre-set by the Builder on the automatic mode ; they produce either cold or heat according to the exterior temperature and to the selected temperature.
Unit heaters are fitted in every cabin and in the saloon.

Before you start the system :
- Open the sea water circulation system (suction valve and drain valve) in the starboard engine bilge.

POWER SUPPLY
The 110 V 6 220 V power supply (shore, generator, inverter) is automatically selected when it is switched on.
Manual control is still possible.
Please refer to the explanations on page 51, ELECTRICITY chapter.
Check that the Air Conditioning system is switched on at the automatic breakers of the Air Conditioning busbar in the foredeck technical room.

Switch on the Air Conditioning system using the touch screen.

Switch on the air conditioning, then regulate the temperature and ventilation using the saloon (access on the chart table) or cabin controls.
Depending on the location and season, use either the Heat (hot air) or Cool (cold air) modes when switching on the air conditioning.

Note: in case of a fall in pressure, open the filling valve located in front of the pressure gauge in the starboard engine room to increase the pressure in the circuit (maximum one bar).
Caution: this circuit carries water and not glycol.
- Ensure that the water pump is switched on first.
- If the pressure falls regularly, consult a professional.

For the draining, use and maintenance of the air conditioning system, refer to its instruction guide.

SECTION 8
PROPULSION

8.1 ENGINES
8.2 FUEL
8.3 PROPELLERS, ANODES, SHAFT LINE BRAKE
8.4 BOW THRUSTER

PLACE OF THE ENGINES

1 - Fuel tanks.
2 - Fuel sectioning valve.
3 - Expansion tank.
4 - Sea water filter.
5 - Fuel filter.
6 - Engine.
7 - Engine water inlet valve.
8 - Diesel oil tank fillers.

Each hull has the same components.

Nota : each valve in the boat is identified.

BUTTON ON THE CASE OUTSIDE HAND LEVERS

INSIDE HAND LEVER CASE

■ 8.1 Engines

• ACCESS
You have access to the engines through the transom extension hatches.

RECOMMENDATION
Stop the engine before opening the hatches.
In case you have to intervene when the engine is running :
- Stay away from belts and mobile parts.
- Be careful with full clothes, long hair, rings, etc. (they may be caught).
- Wear appropriate clothes (gloves, caps, etc.).

• STARTING
Before starting the engines :
- Check that the fuel valve is open (pull rob located at the bottom of the cupboard in the port hull aft cabin or under the right side of the berth in the starboard hull aft cabin).
- Open the valves of the engine cooling systems.
- Switch on the electric system turning their engine cutouts to ON (access in the engine bilges).
- After having checked that the inverter controls are set on Neutral, start the engines.

• INVERTER CONTROLS USE
The boat is fitted with an inverter case located on the fly bridge wheelhouse and a second optional case located at the chart table.
The electric inverter controls require 24 V supply.

When functioning, you can see two red diodes turned on on the inverter control case.

To enable the other inverter controls :
- Check the enabled case controls are set on Neutral.
- Press the black button located at the bottom of the case you wish to enable. The two red diodes light up.
The diodes of an ineffective case would be switched off.

To disconnect the engines :
- Press the black button while operating a control. The red diode flashes on and off, the engine may be accelerated to the neutral.
- Do the same with the second control in order to accelerate the second engine to the neutral.

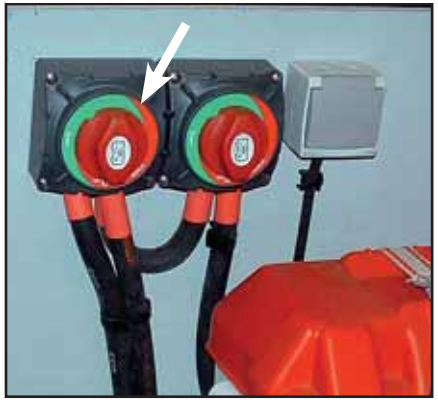
To get back the inverter function :
- Put the control back on neutral. The red diode stops flashing.

Every time the control is set to neutral (whether clutched or not), you will hear an informative tone.

If you hear an alarm when the boat is energised :
- Press the black button located at the bottom of one of the controls (fly bridge or saloon) to stop the alarm.

In case of an emergency stop, take into account the lag of the electronics protecting the engines.
The control case generates a time-lag which only allows the shifting from a sailing trim (forward or backward) to the other when the rating is close to the idle speed.

COUPLING CUT OUTS



ENGINE WATER SUCTION VALVE

WATER FILTER + FUEL FILTER

Carefully read the engine instruction guide supplied with the boat ; it gives you detailed explanations as to the best use of the engines and relative operations.

• ENGINE START WITH BATTERY COUPLING
In case one of the start battteries is not available :
- Turn to the ON position the coupling cutout (Port engine bilge).
- Start the engine concerned.
- Turn the coupling cutout back to the OFF position.

Nota : in the standard configuration,the engine batteries are recharged by their respective engines.

• MAINTENANCE OF THE ENGINES
Follow the instructions for maintenance appearing in the guide supplied with the engines.

• ENGINE WATER INLETS
The engine water inlets (access through the engine holds) must be open before starting the engine.

Keep the engine water inlet rose boxes as clean as possible.
Brush the stainers when the boat is carrenned.

Be careful : do not cover the strainers with antifouling paint.
Get into the habit of checking immediately after starting an engine that water is expelled with the exhaust gases.

If water does not flow out :
- Stop the engine immediately.
- Check that the valve is open.

Close the water inlet valve if the boat is left unattended for long.
Inspect and clean the water strainers regularly (access in the engine bilges).

• VENTILATION OF THE ENGINE BILGES
The engine bilge ventilators start up automatically as soon as the engines start.

■ 8.2 Fuel

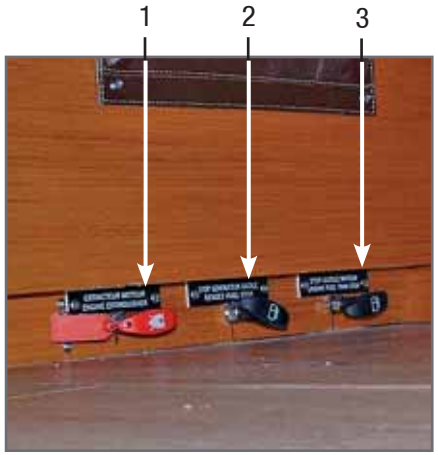
• FUEL TANKS
The boat is fitted with two tanks.
Each of them is filled separately.
Each of them has a gauge which can be checked from the multifunction touch screen.

• FILLING
To prevent any handling mistake, never fill the water and fuel tanks at the same time.
During filling, avoid handling contaminants near the fillers.

Open and close the filler caps with the suitable key.

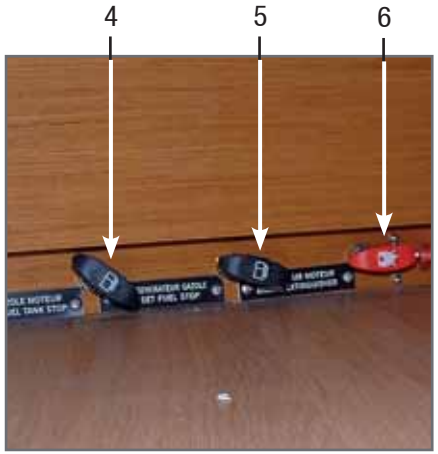
Use both fillers to fill the tanks with fuel.

FUEL TANK PULL ROBS + ENGINE EXTINGUISHERS



1 - Port engine hold extinguisher release mechanism.
2 - Cut off device of the generator tank supply (portside).
3 - Cut off device of the port tank supply.

(access with the pull robs located at the bottom of the cupboard in the port hull aft cabin).



4 - Cut off device of the starboard tank supply.
5 - Cut off device of the generator tank supply (portside).
6 - Release mechanism of the starboard engine bilge extinguisher.

(access with the pull robs located under the right side of the berth, in the starboard hull aft cabin).

DANGER
Stop the engine and put out your cigarettes during fuel tank filling.

• MAINTENANCE OF THE TANKS
Regularly check the O ring of the fillers for good condition (in order to prevent water entering the tanks).
Do not turn off the fuel taps after each use (except in case the boat is unattended for long).
Keep the fuel tanks as full as possible (to avoid condensation).
Every year check the fuel system for condition (hose, valves, etc.).

Have a professional carry out the works on the damaged parts of the fuel system.

Nota : the capacity of the tanks indicated in the page 'SPECIFICATIONS' may be not completely useable according to the trim and load of the boat.
Always keep 20% fuel as a reserve.

• FUEL FILTER
In order to prevent any water infiltration, the fuel runs through two filters : the first one is on the pipe that links the tank to the engine (designed as a water decanter and pre-filter), the second one is an integral part of the engine (designed to filter fuel finely).
To know when you have to intervene and how frequently you have to change it, refer to the engine instructions for use.

Drain it by undoing the knurled screw on the base of the decantation bowl (but not removing it).
Allow to flow into a box till the fuel looks clean.
Do it several times a year.

Change the pre-filter at least once a year (access to it when you remove the bowl).

■ 8.3 Propeller, anodes, shaft line brake

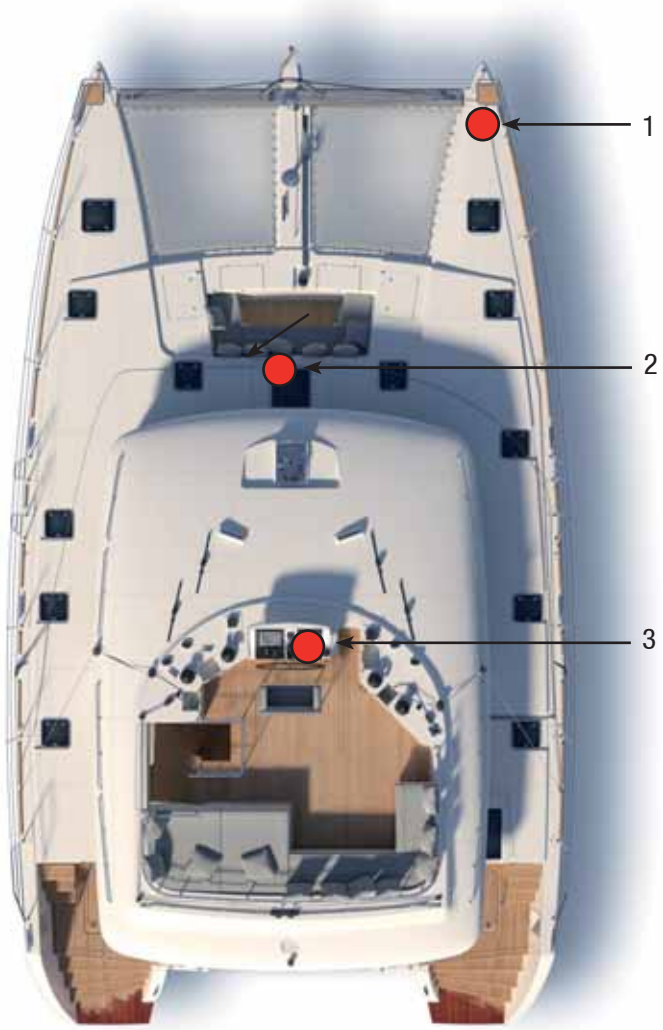
• PROPELLERS
The propellers supplied with your boat are the result of tests carried out jointly with the engine manufacturer.
Do not change them without consulting a specialist.

• FOLDING PROPELLERS (OPTIONAL EXTRA)
Remove the folding propellers at the end of each season, dismantle them and clean them carefully.
Grease the thrust bearing surfaces and teeth.
Check that the blades move easily.

• ANODES
Make sure that the anodes of the shaft lines have a good metal contact.
Replace the anodes before they are 50 % corroded.
Never paint the anodes.

• SHAFT LINE BRAKE (FOR THE 110 CV ENGINE VERSION)
A hydraulic brake prevents tthe propeller and shaft line from spinning around when sailing.
It automatically engages when the engine stops and is released as soon as the engine starts.
Periodically check the reverse gear oil level.

BOW THRUSTER



BOW THRUSTER JOYSTICK

THRUSTER FUSE

1 - Bow thruster.

2 - Fuse.

3 - Bow thruster joystick.

■ 8.4 Bow thruster (optional extra)

The bow thruster (access front point to starboard) operates with 24 V using the service batteries, engines switched on.

The bow thruster is controlled from the helm station.
After switching on the domestic cut-out switch and starting the engines, press on the yellow control button for a few seconds, until the lights stay on.

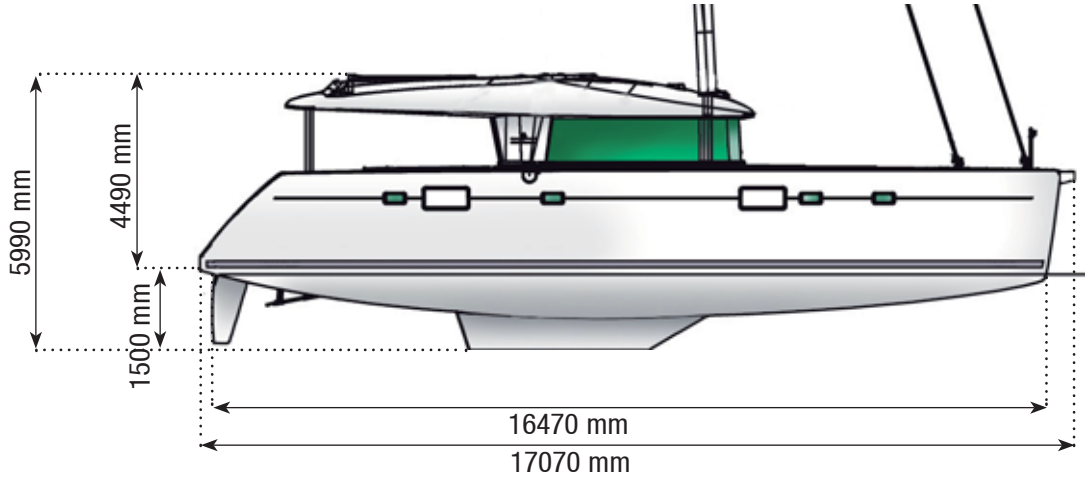
To lock the control, carry out the same procedure until the lights go out.

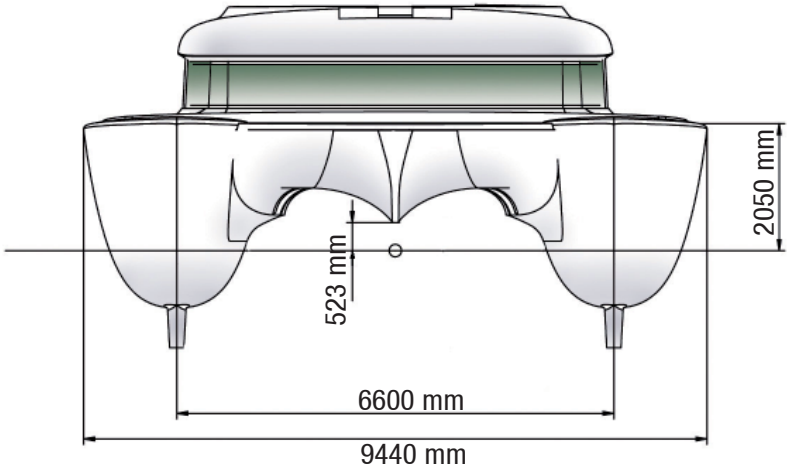
In the event of operation failure, check the fuse located in the technical room of the foredeck.

For use and maintenance of the bow thruster, refer to its instruction guide.

SECTION 9
WINTER STORAGE HANDLING

9.1 LAYING UP
9.2 PROTECTION
9.3 HANDLING
9.4 MAST STEPPING, MAST UNSTEPPING


5990 mm
4490 mm
1500 mm
16470 mm
17070 mm


2050 mm
523 mm
6600 mm
9440 mm

■ 9.1 Laying up

Take ashore all the ship's log, the ropes that are not used for mooring, the galley equipment, supplies, clothes, the safety equipment, domestic batteries, the gas cylinders.
Check the expiry dates of the safety equipment.
Have the liferaft overhauled.

Take advantage of this laying up to draw up a complete inventory of the equipment.

■ 9.2 Protection

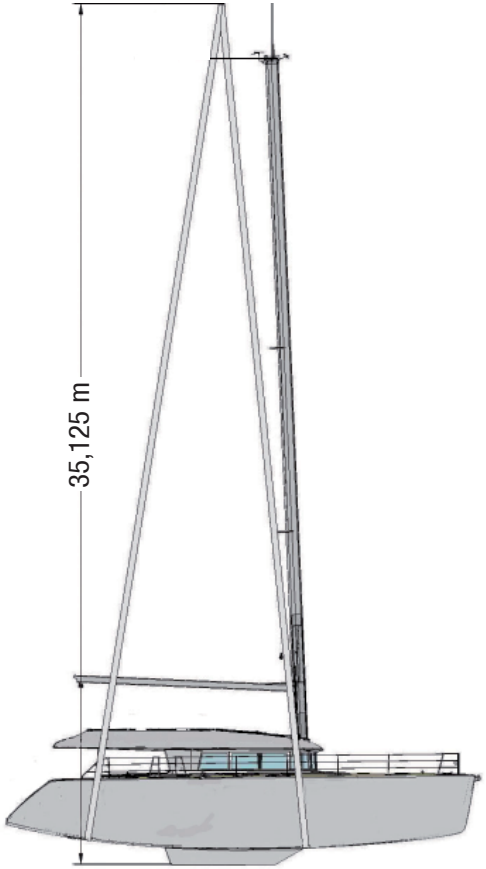
• INSIDE
Drain all the fresh water pipes and rinse them (do not use a chlorine based product).
Lubricate and close all the water inlet valves and sea cock fittings.
Rinse and completely drain the heads bowls and pumps.
Retract the sounder and speedometer sensors.
Seal air inlets as much as you can.
Install an air dehumidifier in the saloon and leave the cabin and storage unit doors open (lockers, ice boxes).
Leave the cushions outside for long before putting them back into the boat in the upright and side position in order to have minimum contact surfaces.

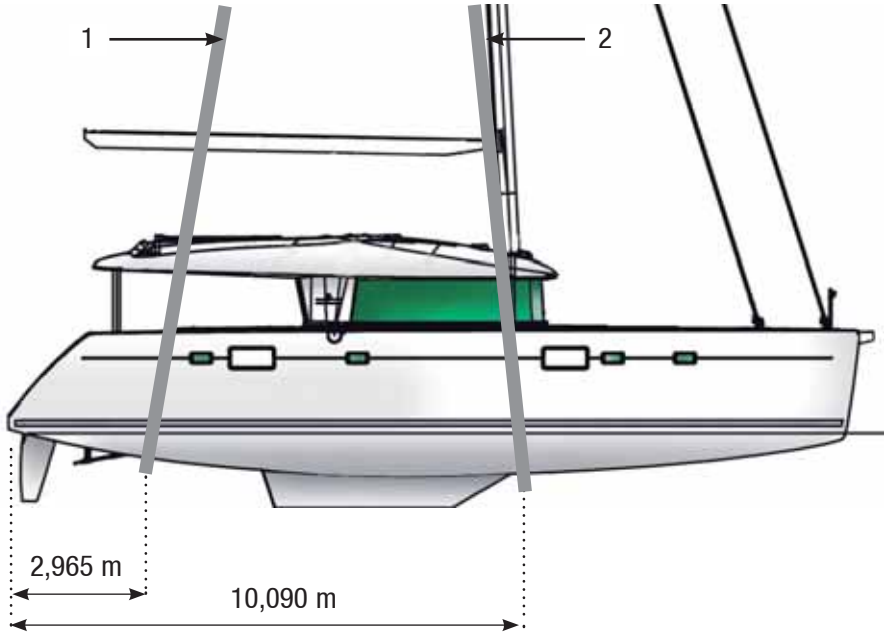
• OUTSIDE
Thoroughly rinse the hull and deck.
Lubricate all the mechanical and mobile parts with vaseline (bolts, hinges, locks, etc.).
Protect all ropes and mooring lines against chafing.
Protect the boat to the highest degree with fenders.
Make sure the boat is properly moored.

RECOMMENDATION
All these recommendations do not make up an exhaustive list. Your dealer will give you the advice you need and will carry out the technical maintenance of your boat.

• ENGINES
The engine winterization shall be carried out by a professional.
Depending on the boat location, afloat or ashore, winterization is different.

CRANING INSTRUCTIONS





1 - CMU Strap 16 tons / 16,775 m.

2 - CMU Strap 16 tons / 16,515 m.

RECOMMENDATION
Get a diver intervene for the strainers and sea cock fittings.

■ 9.3 Handling

The initial launching and the first tests of the different equipments shall be carried out by your dealer so you can expect to enjoy the warranty in case of some equipment failure.

All further handling shall be carried out with the highest care by professionals.
If the Lagoon boatyard is not involved in handling operations, they cannot cover under garantee any possible accidents linked to handling.

If later you have to launch your boat yourself, you should take the following precautions :
- Retract the sensors under the hull into their housings (they may be damaged by the handling straps).
- Check the water intake strainboxes for cleanliness.
- Turn off all the water inlet and drain valves (sink, washbasin, heads, engine).
- Check the anodes are in good condition and properly installed. An anode shall never be painted.

- Install a fore mooring rope, a rear mooring rope and fenders.
When lifting with the crane, check that the straps are not over any device (sounder, speedometer, etc.) or over the propeller.

The crane hook will be fitted with a gantry or a spreader system with two straps.
The straps shall not be connected directly onto the hook, as it would result in unusual compressive stresses on the hull.

- Crane lifting should be carried out slowly.
- Control the movement of the boat using mooring ropes.

DANGER
Do not stay on board or under the boat during craning.

■ 9.4 Mast stepping, mast unstepping

Mast stepping and mast unstepping shall be carried out by a specialist.

SECTION 10
UPKEEP MAINTENANCE

10.1 MAINTENANCE SCHEDULE

■ 10.1 Maintenance schedule

The information given hereafter are only examples and it is not an exhaustive list.
They must be adapted, according to the use of your boat.

WARNING
Follow without fail the recommendations given in the instruction guides by the manufacturers of the components added to the boat.

HULL / DECK FITTING / HULL	
Clean the hull with appropriate products	QUATERLY
Clean s/s parts	QUATERLY
Dismount, clean and grease winches	ANNUAL
Check the watertightness of the sea-cock fittings	Bi-ANNUAL
Clean the sea cock fittings and strainers from the outside	Bi-ANNUAL
MOORING / WINDLASS	
Rinse ground tackle and anchor locker with fresh water	WHEN USED
Check the gypsy and anchor/chain fastening device	Bi-ANNUAL
Check windlass brake system	QUATERLY
Check mooring lines and fenders	BI- ANNUAL
Check the electric connections (remote control, relay, etc.)	QUATERLY
RUNNING / STANDING RIGGING / SAILS	
Lubrificate the different travellers with teflon	QUATERLY
Check and tighten the different shackles	QUATERLY
Check the running rigging tightening	QUATERLY
Check the halyard and sheet for wear points	QUATERLY
Rinse the whole running rigging and sails	QUATERLY
Check the mainsail battens and main seams	QUATERLY
UPHOLSTERY AND COVERS	
Rinse / clean the different covers	QUATERLY
Dry the outside upholstery before its storage	WHEN USED

REFRIGERATION UNIT	
Defrost the refrigerator and freezer	QUATERLY
Check the door joints	QUATERLY
AIR CONDITIONING	
Check the sea cock and clean / change the different sea water filters	QUATERLY
Dust off the unit heater fans	ANNUAL
ELECTRICITY	
Check and tighten the battery terminal connections and main switch connections	BI-ANNUAL
Check and tighten the main relay terminals (winches, windlass, etc.)	BI-ANNUAL
ENGINES AND GENERATOR	
Check oil level	QUATERLY
Check belt tension	QUATERLY
Clean the sea water strainer	QUATERLY
Check for leaks (oil, water, fuel) and smokes	QUATERLY
Check and drain the decanter filters (fuel)	QUATERLY
General overhaul	ANNUAL
WATERMAKER	
Check and clean the sea water suction strainers	QUATERLY
General inspection by the manufacturer	ANNUAL

PLUMBING	
Check the automatic bilge pumps and alarms	QUATERLY
Clean grey water collecting boxes	QUATERLY
Rinse the black water tanks	QUATERLY
Check the manual bilge pumps	QUATERLY
Check the pressure water pumps	QUATERLY
Check the different drains and scuppers	QUATERLY
Open and close the different valves on board + grease if necessary	BI-ANNUAL

YOUR LAGOON 560

NAME OF THE BOAT : .....

VERSION : .....

DATE OF DELIVERY : .....

REGISTRATION NUMBER : .....

DOOR KEY NUMBER : .....

HULL NUMBER : .....

MAKE OF THE ENGINE : .....

NUMBERS OF THE ENGINE KEYS : .....

STARBOARD ENGINE SERIAL NUMBER : .....

STARBOARD GEAR BOX SERIAL NUMBER : .....

PORT ENGINE SERIAL NUMBER : .....

PORT GEAR BOX SERIAL NUMBER : .....

OWNER'S NAME : .....

ADDRESS : .....

.....

.....

Phone N° / Address to contact in case of emergency

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PERSONAL NOTES

Your dealer's stamp

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