Excess 14

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OWNER'S MANUAL

Contents

Introduction

You have just taken delivery of your new yacht and we would like to take the opportunity to thank you for the trust you have shown in us by buying one of our yachts. The whole EXCESS team welcomes you on board.

A EXCESS is made to last and to bring you all the pleasure you should expect from a boat over a period of many years. Each boat is subject to the utmost attention to detail from the design stage right through to launching.

This manual is designed to help you to enjoy your boat comfortably and safely. It includes the boat's specifications, the equipment provided or installed, information on the boat's systems and some tips on operation and maintenance. Some of the equipment described in this manual may be optional.

Your dealer will be able to advise you and assist you with how to operate and maintain your yacht
The first time you use your boat a high level of skill and attention will be required. The proper functioning of all equipment will depend on the initial set-up being carried out correctly. For this reason the first launch must be carried out under your dealer's supervision.

Read this Owner's Manual carefully and take time to get to know your boat before you use it.

The better you know your vessel, the better your experience will be when sailing it.

Notes

- Keep this manual somewhere safe and pass it on to the new owner should you sell your boat..
- You are advised to keep any user's guides supplied by the manufacturers of any equipment for your boat (accessories, etc.), together with your manual.

For each piece of equipment on your boat, please read the instruction manuals provided by the manufacturer.

- This manual is written to help you enjoy your boat in safety. It contains details of the boat and of all the equipment provided and installed on your boat, as well as instructions for its use. Read it carefully and get to know your boat properly before using it.

- This owner's manual is not in any way a navigation or mariner's training manual. If this is your first boat or if you have changed to a type of boat with which you are not familiar, make sure that you learn how to use it and manoeuvre safely and with ease before taking the helm alone. Your dealer, national sailing or motorboat association, or yacht club will be very happy to tell you about navigation schools or qualified instructors in your area.

- Make sure that the wind and sea conditions forecast are appropriate for the design category of your boat and that you and your crew are capable of manoeuvering the boat in these conditions.

- Even with a well-adapted boat, the wind and sea conditions which correspond to the design categories A,B and C range from storm force winds for category A to severe storm conditions at the upper end of category C, and could put the boat at risk from very large waves and strong gusts. These are dangerous conditions in which only an experienced, fit and well-trained crew, manoeuvring a well-maintained boat, will be able to navigate with sufficient skill.

- This owner's manual is not intended as a detailed maintenance or repairs manual. Should any problems arise please contact your dealer. If a maintenance manual is provided, please use it.

- Always use the services of an experienced professional for the maintenance of your boat, for fitting accessories and for any modifications. Any alterations which may affect the safety specifications of the boat must be assessed, carried out and recorded by persons qualified to do so. The boat manufacturer cannot be held responsible for any modifications not approved by them.

- Some countries require you to hold a Certificate of Competency or other such qualifications, or there may be other specific regulations in force.

- Always maintain your boat well and make note of any deterioration due to wear and tear or to heavy or inappropriate use.

- Any boat – no matter how well-built – could suffer serious damage if used recklessly. This kind of use is highly unsafe. Always adjust the speed and heading of your boat according to the sea conditions.

- If your boat is equipped with a life-raft, read the instruction manual carefully. The crew must have all safety gear available onboard (lifejackets, harnesses etc.), and this must appropriate for the type of boat and for the weather conditions. In some countries it is mandatory to have this safety equipment onboard. The crew must be fully familiarised with the use of the safety gear and with emergency manoeuvres (man overboard procedures, towing another vessel etc). Sailing schools and clubs regularly run training sessions for these skills.

- It is strongly advised that everyone wears an appropriate flotation device (lifejacket or personal buoyancy aid) when on deck.. Be advised that in some countries it is mandatory to wear a flotation device which meets the national regulations at all times.

Notes on reading this manual

The various symbols used throughout the manual for crucial safety information are as follows:

Danger

Indicates an imminent danger situation which, if not avoided, will lead to death or serious injury.

Caution

Indicates a potentially dangerous situation which, if not avoided, may lead to minor or moderate injury.

Warning

Indicates a potentially dangerous situation which, if not avoided, may lead to death or serious injury.

Note

Indicates information considered to be important but not linked to a danger, for example concerning damage to property.

- While some of the information and illustrations in this manual may show details which are slightly different from those found on your boat, the key information remains the same. Future versions of this manual will show any possible modifications as required.
- Due to the constant desire to improve the products, SPBI S.A. reserves the right to make any changes considered necessary to the design or to the equipment.
  The specifications and information given are not contractual and may be modified without prior notice or updates.

CE

- This owner's manual is written in several languages. French is the authentic reference language.
- This owner's manual was written and formatted by SPBI S.A.. Any reproduction of this manual, direct or indirect, provisional or permanent, by whatever means, whether in whole or in part, as well as any modification by third parties for commercial reasons, is forbidden.

1

Technical specifications

1.1 Construction

- Model ..... Excess 14
- Architect ..... Van Peteghem Lauriot-Prévost / Nauta Design
- Builder ..... SPBI S.A
- Principal means of propulsion ..... Sail
- Build material
  - Deck ..... Laminated sandwich glass / GRP / Foam
  - Hull & Roof ..... Laminated sandwich glass / GRP / Balsa wood
- Application
  - Deck & Hull ..... Infusion
  - Roof ..... Injection

1.2 General dimensions

- L.O.A (L_{max})* 15,98m

(Including removable parts that can be dismantled (bow roller, pulpit, bowsprit), without affecting the structure of the boat)

- Hull length (L_h)* 13,35m

(Excluding: removable parts that can be dismantled without affecting the structure of the boat)

- Overall width (B_{max})* 7,88m

(Including: removable parts that can be dismantled without affecting the structure of the boat)

- Beam(B_h)* 7,88m

(Excluding: removable parts that can be dismantled without affecting the structure of the boat)

- Air draft – Empty vessel
  - Classical mast 19,77m
  - Roller furling mast 21,54m
- Draught – Boat fully laden 1,48m

1.3 Engine

- Nominal maximum propulsion power (at the propeller output) ..... 2 x 42Kw
- Maximum recommended engine size ..... 2 x 269kg

1.4 Electricity

Circuit type:

- Direct current 12V
- AC 220V
- AC (US Version) 110V

1.5 Capacities

- Fuel capacity
  - Tank 1 (*) 200L
  - Tank 2 (*) 200L
- Fresh water capacity
  - Tank 1 (*) 300L
  - Tank 2 (*) 300L
- Blackwater capacity (Toilet)
  - Tank 1 (*) 80L
  - Tank 2 (*) 80L

It may not be possible to use these capacities fully depending on the trim and load of the boat. It is recommended that you keep a reserve of 20% in the fuel tanks.

(*) Definition

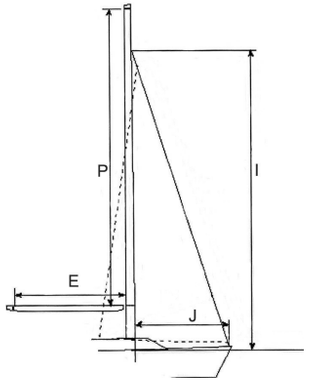
Refer to the corresponding chapter to locate the position of the tank (each tank number corresponds to its position on board).

Total mass of liquid contents of fixed tanks when full 1 104kg

Notes

- The density of a liquid can vary according to its temperature and quality.
- The volume masses chosen are:
  - 0,86kg/L for diesel fuel,
  - 1kg/L for water.

1.6 Sails



		Classical mast	Roller furling mast
I.	Distance between deck and highest genoa halyard sheave	15,5m	17m
J.	Distance between the fore of the mast and the bow fitting on the deck	5,09m	5,09m
P.	Length of the mainsail luff	16m	17,7m
E.	Length of the mainsail foot	7,16m	7,16m

• Square top mainsail	79m²	87m²
• Genoa	39m²	47m²
• Code 0	55m²	72m²
• Planned sail area*	122,2m²	134m²

(*) Definition

designated by (AS) and calculated as the sum of the projected surfaces in profile of all sails that can be established when the vessel is close hauling, on the booms, horns, bowsprits or other spars, and the surface of fore triangle(s) to the foremost forestay, fixed permanently during operation of the vessel with the mast bearing the established sails, without overlap, assuming that the jackstays and leeches are straight lines.

The surface of the spars is not included in the projected calculation sail plan area, with the exception of the wing-masts.

2

Design categories and displacement

Remark

The more options the boat has, the less room there is for provisions or personal belongings.

Design category	A	B	C	D
Maximum number of people on board (CL *)	10	12	16	20
Maximum number of people on the flying bridge	8	8	8	8
Light displacement (Mlc *)	12 893kg			
Recommended maximum load (Ml *)	4 486kg	4 506kg	4 660kg	4 829kg
Displacement with maximum load (Mldc *)	17 379kg	17 399kg	17 553kg	17 722kg
Maximum load on the manufacture's plate, in kg (Mmbp *)	1 380kg	1 400kg	1 520kg	1 780kg

Remark: It is normal for the weight shown on the manufacturer's plate (boat with empty tanks) and the maximum weight indicated in the owner's manual (boat with full tanks) to be different.

*** Definition**

CL: CREW LIMIT
Recommended maximum number of people on board when the boat is underway.

Mlc: MASS OF THE BOAT IN LIGHT CRAFT CONDITION
includes the weight of the boat in the standard ready-to-navigate configuration, keel, standard equipment, engine(s) and sails (if the boat is a sailing boat).

Ml: MAXIMUM LOAD
The recommended maximum load includes:

- The weight of all people on board (maximum of 75 kg per person);
- Personal effects and supplies;
- the cargo (where applicable);
- the content of all permanently installed storage tanks filled to 95% of their maximum capacity, including fuel, drinking water, black water, grey water, lubrication oil and hydraulic oil.

Mldc: MASS OF THE BOAT IN MAXIMUM LOAD CONDITION
Includes light ship mass (Mlc) + maximum load (Ml).

Mmbp: MAXIMUM MASS ON BUILDER'S PLATE
Maximum load on the manufacture's plate: the maximum load recommended by the manufacturer and shown on the manufacturer's plate EXCLUDES the fixed tanks when they are full (fuel, freshwater, greywater, black water).

If some of those onboard are children, the total number of people allowed onboard may be increased, provided that:

- The total weight of the children does not exceed 37,5kg;

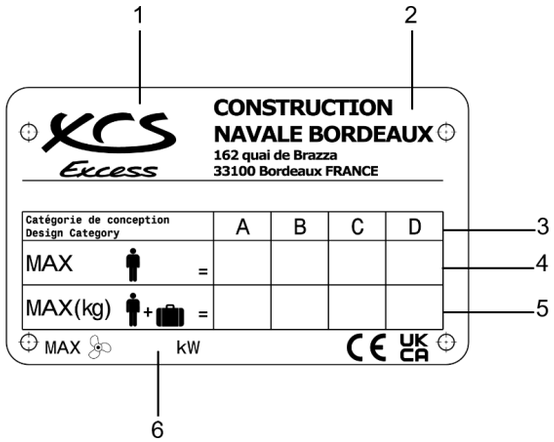
and that

- the total weight of all allowed onboard (based on about 75kg per adult) is not exceeded.

- Do not exceed the recommended maximum number of people onboard. However many people are onboard, the total, combined load of people and any gear or equipment must never exceed the recommended maximum load.
- Always use the seats or seating areas provided.
- When loading the boat, never exceed the recommended maximum load. Always load the boat with care and distribute weight evenly in order to maintain the optimum trim (more or less horizontal).
- Avoid placing heavy loads high up in the boat.

Some information is shown on the manufacturer's plate fixed to the boat. Explanations of the information given can be found in the relevant chapters of this manual.

Name plate



1. Brand name
2. Shipyard of construction
3. Design category
4. Maximum number of people onboard
5. Maximum load on the manufacture's plate, in kg *(Mmbp *)*
6. Maximum power of engine(s)

2.1 Design categories

The boat has been designed for personal, private use. It can also be used commercially, for charters with or without crew. However, the boat has not been designed as a "workboat" as defined by standard ISO 12215.

Category A

A boat which has been assigned design category A is deemed to have been designed for sailing with wind speeds below Beaufort force 10 and the associated significant wave heights.

Notes

These conditions may typically be encountered during long voyages, for example across oceans, but they can also occur close to the shore when the area is not protected from the wind and waves for several hundred nautical miles. Depending on atmospheric conditions, wind speeds may reach gusts of up to 32 m/s.

Category B

A boat which has been assigned design category B is deemed to have been designed for sailing with wind speeds of less than or equal to Beaufort force 8 and the associated significant wave heights of up to 4 m

Notes

These conditions may typically be encountered when sailing a sufficient distance off shore but may also occur close to shore when shelter may not be immediately available. These conditions may also be encountered on lakes of sufficient size to generate the aforementioned wave heights. Depending on atmospheric conditions, wind speeds may reach gusts of up to 27 m/s.

Category C

A boat which has been assigned the design category C is considered to have been designed for sailing in strong winds typically less than or equal to Beaufort 6 and the associated waives of a significant height of up to 2 m.

Notes

These conditions may typically be encountered in exposed inland waters, estuaries and coastal zones in moderate weather. Depending on atmospheric conditions, wind speeds may reach gusts of up to 27 m/s.

Category D

A boat which has been assigned the design category D is considered to have been designed for sailing in strong winds typically less than or equal to Beaufort force 4 and the associated significant wave heights of up to 0,3 m and occasional waves of up to 0,5 m.

Notes

These conditions may be encountered in sheltered inland waters and coastal areas in fine weather. Depending on atmospheric conditions, wind speeds may reach gusts of up to 12 m/s.

3

Stability and buoyancy

3.1 Stability information

- Fully laden displacement was used to evaluate the stability and buoyancy of the boat. The value of this displacement can be found in the "Technical specifications" paragraph at the beginning of this manual.
- Any changes in the distribution of loads onboard (for example by adding a raised structure for fishing, fitting a radar or in-mast furling, changing the engine etc.) can significantly affect the boat's stability, trim and performance;
- It is important to keep water in the bilges to a minimum;
- Adding weight high up on the boat will affect stability;
- In heavy weather it is important to close all the hatches, lockers and doors to minimise the risk of water pouring in;
- The boat's stability can be reduced when towing a boat or when using a davit or boom to lift a heavy load;
- Breaking waves are a serious threat to stability.

- Reduce speed in wavy conditions.
- Always adjust the speed and heading of your boat according to the sea conditions.
- All of the watertight hatches must remain closed when at sea.
- If the wind exceeds 20 knots, it is recommended that you stow all removable protection sheets (lazy bag, Bimini, awnings...).

The skipper is responsible for ensuring that the normal operating mode is maintained. This means that the boat's speed is appropriate for the sea state and it is used with a sense of "good seamanship".

- This boat is likely to capsize or be overrun if it is over-canvassed. In these circumstances, it may then sink. The sail plan should be adjusted according to wind and sea conditions and it is important to be particularly vigilant in case of gusty winds or squalls.
- This vessel is likely to capsize and remain inverted if she carries an excessive sail surface. The sail plan should be reduced if wind exceeds 15 knots..

- The boat may capsize if carrying too much sail.
- It is important to take additional precautions in the event of strong winds, rough seas or breaking waves.

3.2 Access to the boat

- It is essential that both the cockpit and the engine compartment are kept closed when at sea.
- When at sea close the guardrail side-opening or openings.
- Slamming an access hatch may cause injury : always close the hatch gently and carefully.
- Do not allow children to open or close the hatches unsupervised.
- Do not use the skipper cabin whilst under way.
- It is forbidden to climb onto the roof while under way.

- It is essential that the access doors to the saloon are kept closed when at sea.
- Close the deck hatches and portholes before each trip.
- Close all access doors and hatches in heavy weather or when the sea is rough.

Advice / Recommendation

When under way, keep hull valves and fillers in the closed position to minimise the risk of flooding.

4

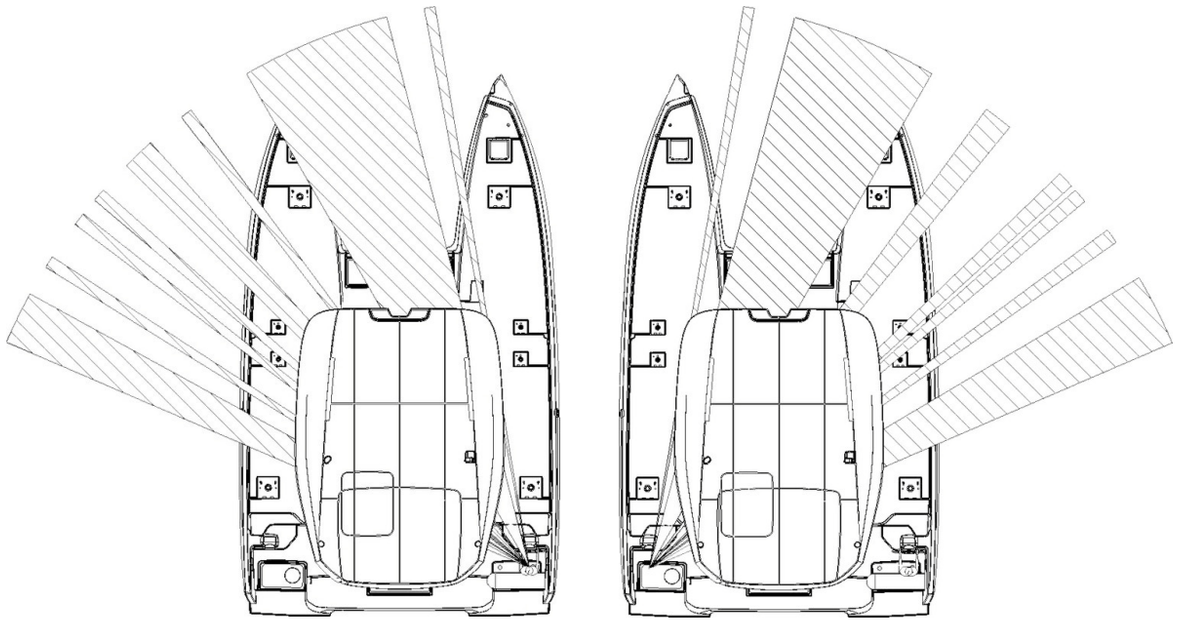
Manoeuvrability

4.1 Visibility from the steering station

- Manoeuvrability is reduced at excessive speeds.
- There is a risk of loss of control during tight turns.
- Reduce speed before making a turn in any direction.
- When the helm area has multiple steering device, precautions must be taken when moving from one steering device to another.

- The helmsman's view from the steering station may be obstructed by one or more of the following variable conditions:

1. Load and load distribution;
2. Speed;
3. Sea conditions;
4. Reduced visibility caused by rain, darkness or fog;
5. Reduced visibility caused by changing or hauling up sails;
6. Interior lighting;
7. Position of the covers or curtains;
8. Persons or mobile equipment located in the helmsman's field of view.

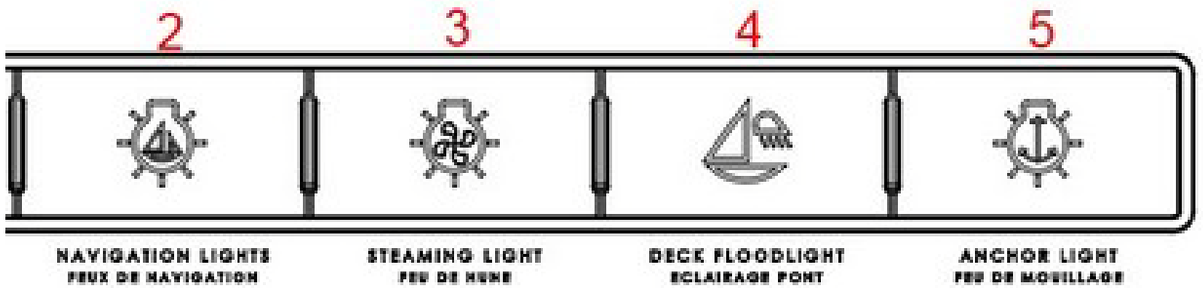


- The international rules and regulations for avoiding collisions at sea (Col Reg / RIPAM) require a full and constant lookout as well as observance of the rules of right-of-way. Observance of these rules is essential.

4.1.1 Navigation lights / Deck searchlight

- Regularly check that the navigation lights are working correctly. if a light source is faulty, replace it with an equivalent model.
- The navigation lights run on DC power.
- The deck searchlight runs on DC power. A fuse protects the electrical circuit.

Control
Location: Chart table

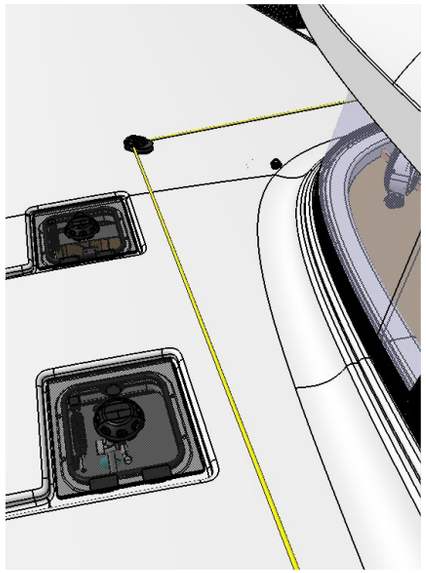


2. Navigation lights
3. Steaming light
4. Deck light
5. 360° light

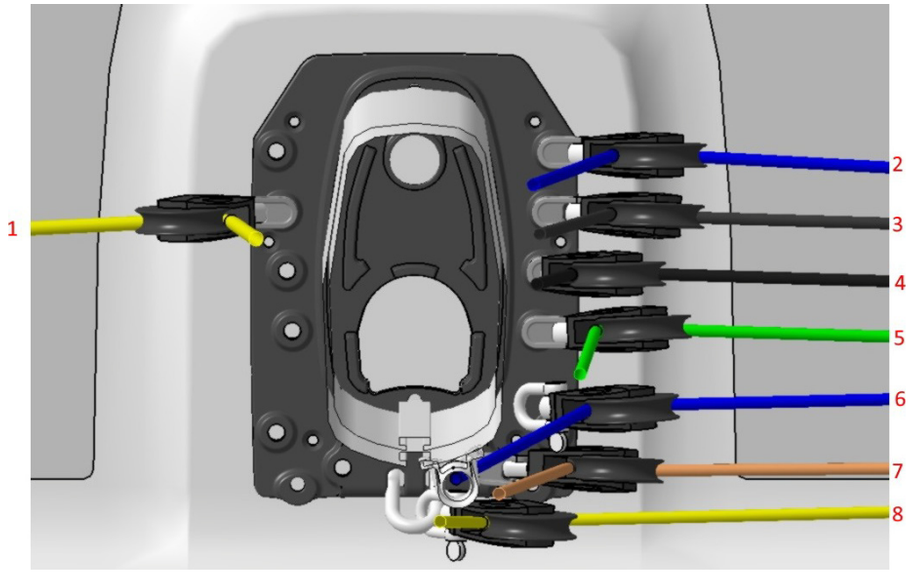
5

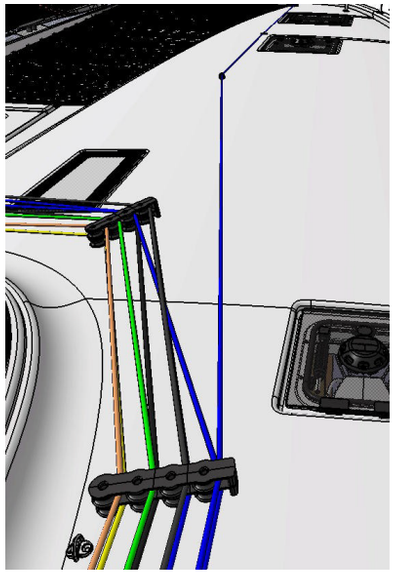
Rigging and sails

5.1 Rigging diagram



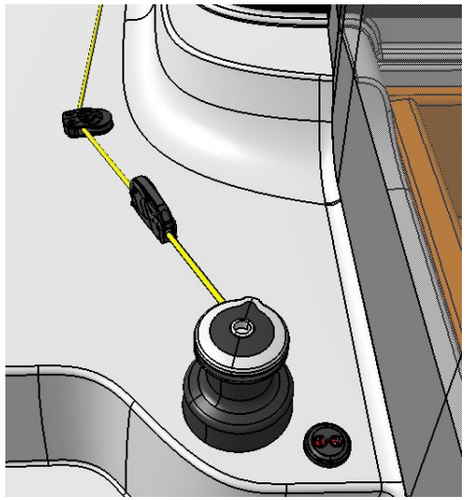
System at mast foot

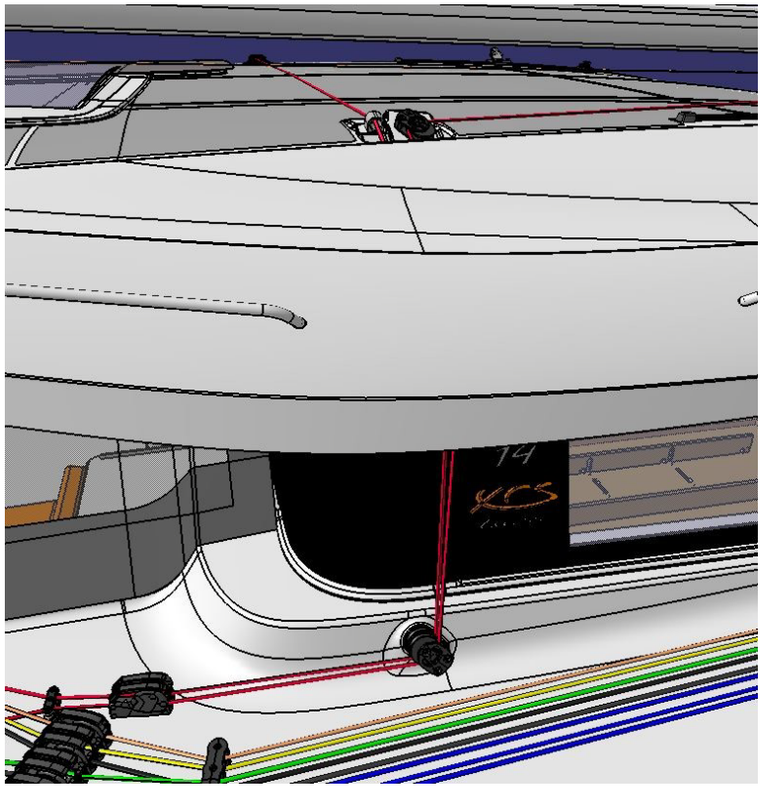


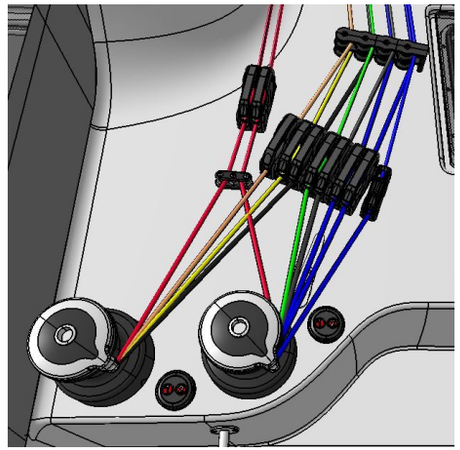


1. Spinnaker halyard
2. Genoa halyard
3. Mainsail topping lift
4. Mainsail halyard
5. Reef 2
6. Reef 3
7. Mainsail sheet
8. Reef 1

Roof







5.2 Standing rigging

- To hoist a crew member up to the top of the mast, tie a bowline with the halyard directly onto ring of the bosun's chair (never use the halyard snap shackle or a carabiner).
- Hoisting a crew member to the masthead will reduce the boat's stability. The skipper is the sole person responsible for the decision to hoist a crew member up the mast. This decision will depend on sea and wind conditions..

Advice / Recommendation

- The first time you use your boat a high level of skill and attention will be required. The proper functioning of all equipment will depend on the initial set-up being carried out correctly.
  The first mast stepping must be carried out under the supervision of the dealer for this reason.
- Before each trip, carefully inspect the mast from top to bottom.
- Periodically check the rigging tension and the tightness of the locknuts and turnbuckle clevis pins.

- The adjustment and tensioning of the rigging must be carried out when the boat is afloat by a professional using tensiometers.
- The load measured on the shrouds must be identical to port and to starboard.
- The leeward cap shroud must never be slack when sailing.
- The correct configuration of the mast is defined by an even pre-bend (even with the mainsail reefed) and the mast must remain straight laterally.
- Regularly check the presence of the cotter pins, opened and protected by adhesive tape.
- Check the rigging after delivery of a new boat: it is worth paying attention to the adjustment of the mast during the first few sails and having all of the rigging checked by a professional after the first 150 miles with the boat..

Annual maintenance

- Every year, or every 1 500 miles, or after a winter lay-up, all rigging should be checked and re-adjusted by a professional using tensiometers.
- Worn cotter pins must be replaced with new pins of the same diameter, opened and protected with adhesive tap.

Equipment required for the measurements

Tensiometer Dillon Quick Check

PT3M tensiometer (or equivalent)

Information on the risk of demasting

- When the Genoa with furler is in position, the Genoa halyard must always be fully tightened. Regularly check the tension of the Genoa halyard when underway.
- When the Genoa sail is removed from the furler (during winter lay-up or for maintenance, for example), it is important to keep the Genoa halyard away from the forestay to avoid any risk of the halyard being wrapped around the forestay which could cause damage the forestay and the demasting of the boat.
- Running sails (gennaker or code 0) are designed to be used before the wind only, with the mainsail raised and an apparent wind of less than 15 knots. It is forbidden and dangerous to sail with only the gennaker (risk of demasting). With an apparent wind of more than 15 knots, the running sails must be furled and stored inside the boat.

5.3 Running rigging

- When the Genoa with furler is in position, the Genoa halyard must always be fully tightened. Regularly check the tension of the Genoa halyard when underway.
- When the Genoa sail with furler is removed (during winter lay-up or for maintenance, for example), it is important to keep the Genoa halyard away from the forestay which could cause the halyard to break and the boat to be demasted.

- Check the general condition of the halyards and sheets and look out for any signs of wear.
- Regularly check the condition of the cams.
- Regularly clean the blocks with fresh water.
- Avoid aggressive gybing in order to reduce premature wear on the sheets, attachment points and gooseneck.
- If halyard tension (mainsail/genoa) is too great, this can lead to problems when hoisting/furling.

5.4 Sails

When travelling at over 20 knots, you are advised to stow the lazy bag.

Advice / Recommendation

When the sailing season is over and, if possible, before Winter, take all the sails to a professional for servicing and for any necessary repairs.

General points

- The working life of a sail depends above all on regular maintenance.
- When sailing, trim the sails to account for the stress placed on the fabric in order to reduce the chance of damage from strain.
- Secure your boat against wear and tear: Cover or protect gear with rough or sharp surfaces (spreaders, stanchions, etc.).
- Keep a sailmaker's kit and explanatory booklet onboard so that you can carry out emergency repairs whilst waiting for a professional sail-maker.
- Rinse the sails in fresh water regularly and dry them quickly to avoid mildew. Avoid drying the sails on the mast in the wind: Allowing them to flap freely wears the seams and increases the risk of tearing the sails on the rigging.
- UV rays are harmful for sails: If you are keeping your sails rigged, even for as short a period as 24 hours, cover them with a sail cover or protective fabric.
- The genoa can be fitted with an anti-UV strip: Make sure that the furling direction on the furling drum is correct (the UV strip must appear on the outside).
- Never use force if the sail sticks when furling or unfurling. If this happens, check that a halyard is not rolled around the forestay.
- The leech line must be released at the end of every sailing trip. If kept under constant tension, the leech line will cease to be adjustable after several trips..

Sail storage/folding

- Remove the sails if your boat is not to be used for a long time.
- Avoid storing sails wet to prevent mould and mildew.
- Fold the sail parallel to the foot into a concertina, then roll it up to fit into the bag.

Maintenance / Maintenance

If an anti-UV strip is attached to the sail, it must be changed every 5 years or so..

Sail reduction table

Apparent wind: 30-70°				Apparent wind > 70°			
Apparent wind (Knots)	**Mainsail**	**Genoa**	**Code 0**	**Apparent wind (Knots)**	**Mainsail**	**Genoa**	**Code 0**
0-5	High	0%	100%	**0-16**	High	0%	100%
0-23	High	100%	0%	**0-20**	High	100%	0%
23-28	1st reef	100%	0%	**20-24**	1st reef	100%	0%
28-33	1st reef	75%	0%	**24-30**	2nd reef	75%	0%
33-38	2nd reef	60%	0%	**30-34**	3rd reef *	60%	0%
38-45	2nd reef	40%	0%	**34-38**	3rd reef *	40%	0%
45-55	3rd reef *	0%	0%	**38-50**	0%	25%	0%
> 55	0%	0%	0%	**> 50**	0%	0%	0%

*: 0 % if the mainsail is fitted with 2 reefs.

- A label on the steering position indicates the sail plan recommended by the manufacturer.
- To avoid any risk of demasting or capsize, the skipper must take it into account.
- The skipper has sole responsibility for set-up of the sails based on the apparent wind and the sea state, to ensure safe sailing.
- It is possible to sail close-hauled supported by the motor but it is forbidden and dangerous to sail into the wind under motor power only.

5.5 Deck fittings

General points

- Inspect each piece of deck gear regularly (blocks, shackles, swivels, cams, etc): Check that there is no cracking, corrosion or deformation.
- When replacing a piece of deck gear, make sure that you use a model with the same strength specifications.
- Failing to check deck fittings regularly and to replace worn ropes means that a block or hoist may suddenly break, causing an accident involving serious injury and damage to the boat.

Maintenance

- Upon return from sailing always rinse the deck fittings with fresh water.
- Wash deck gear regularly with a gentle soap, turning the sheaves of each block. Rinse afterwards with fresh water.
- Never use grease on deck fittings (except winches).
- Never use caustic-based cleaning materials on deck fittings (such as some teak cleaners).

5.6 Winches

Manual winches

Do not leave loose ropes on the winches - secure them to cleats.

Electric winches

- The electric winches are powered by direct current.
- A breaker protects the electrical circuit.
- An operation relay is fitted to the electrical circuit.
- A load controller is fitted to the electrical circuit: This system protects the winches against overload by temporarily interrupting the electrical supply. The load controller is programmed in the factory.
- Inserting a winch handle into an unloaded winch automatically disconnects the motor transmission and allows it to be used manually.

The use of an electric winch for furling/unfurling the genoa or any other foreward sail must be strictly avoided (risk of the forestay breaking which may lead to dismasting).

- Avoid bulky clothing, long hair and jewellery that might become caught in the winch when it is moving. Avoid riding turns when using the winches.
- Refer to the manufacturer's instructions for use and maintenance.

Remark

Operating the electrical winches requires heavy battery usage: Make sure the battery bank is systematically recharged after a day's sailing.

6

Safety

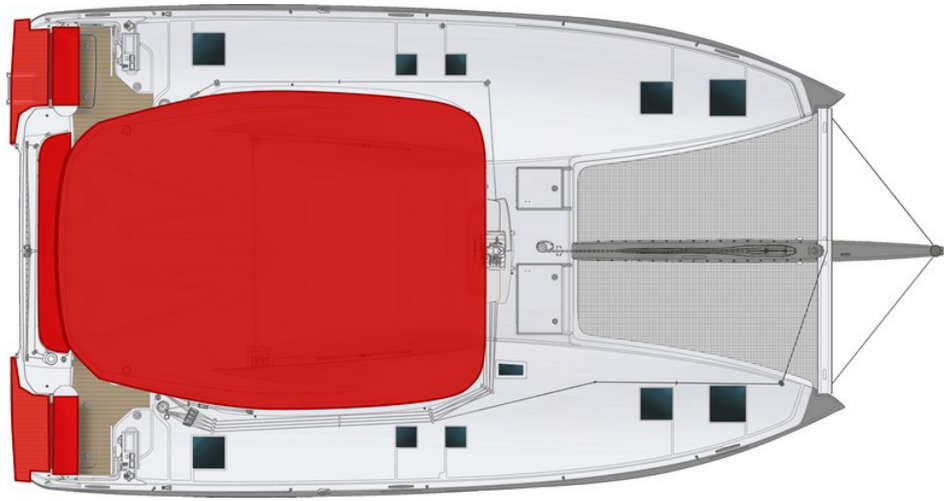
6.1 Preventing man overboard situations and means of reboarding

6.1.1 Prevention of man overboard

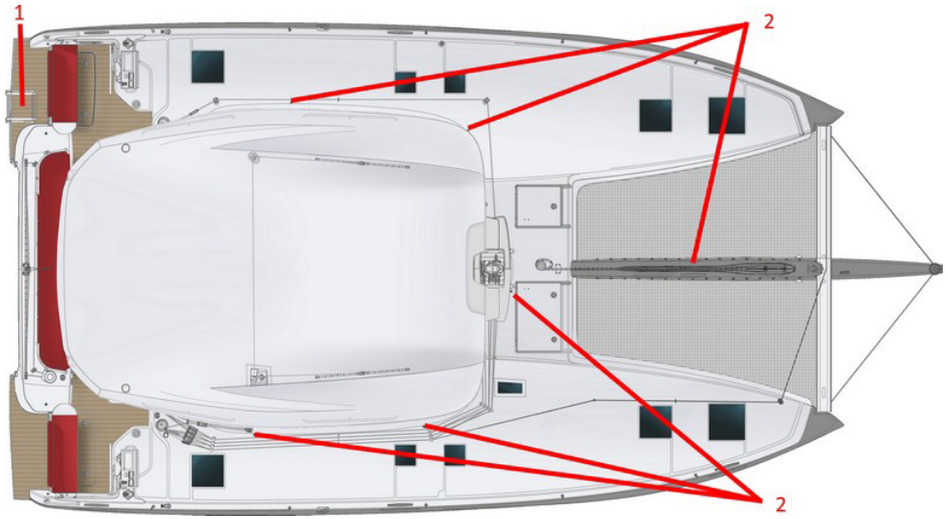
Use the seats provided.

- The off-limits areas of the working deck when under way are cross-hatched below:

- "Working deck" refers to the exterior parts of the boat where people stand or walk during normal use.



NOTE: Standing on the sunbed must be strictly avoided.



1. Reboarding device
2. anchoring points for lifelines

- Regularly check the tension of the lifelines and the attachment points.
- Regularly check the guardrails:
  - With metal guardrails look out for signs of corrosion (particularly at connecting points).
  - With synthetic guardrails, change them as soon as they show signs of wear due to chafing or UV.

Synthetic guardrails

- The lifelines are an important safety feature, incorrect installation risks causing a passenger to fall overboard. If in doubt about installation, please consult your dealer.
- The lifelines should be replaced by a professional to prevent any risk of a fall overboard.

According to the equipment level of your boat, textile lifelines may be fitted:

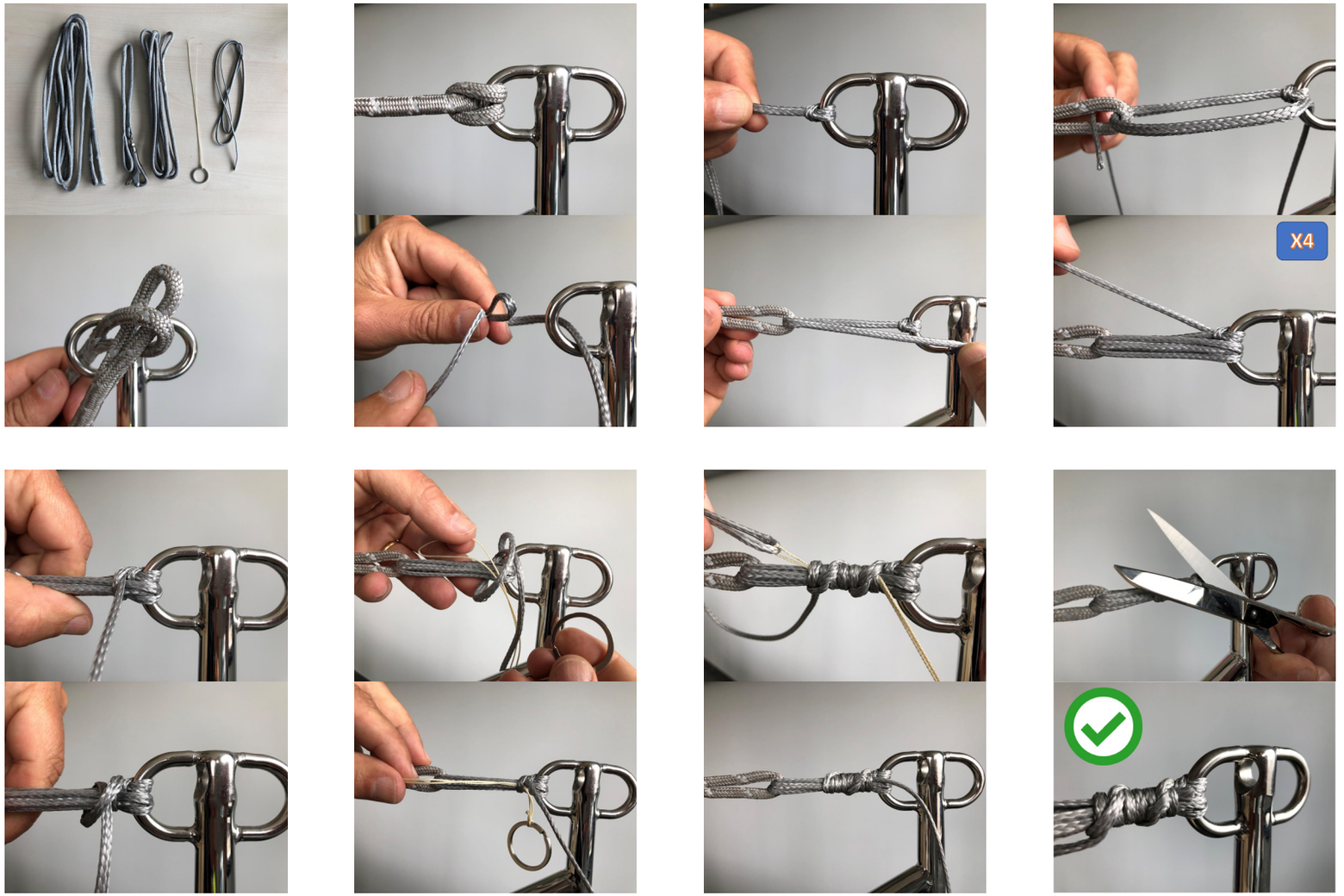
- The lashing at the ends of the lifelines is used to adjust the tension of the lifelins.
- The service life of a textile service life is between 5 and 7 years, depending on the area and the sailing schedule for the boat.
- It is recommended that the lifelines are checked annually to detect any traces of wear or fraying.
- After 7 years or in the event of fraying, it is vital to change the lifelines.

Example of chafing (the red core is visible)

Maintenance

- Rinse the lifelines regularly with clean water.
- It is possible to remove the textile lifelines during the boat's winter lay-up to protect them from UV. Ensure that each lifeline is correctly labelled to ensure they can be correctly repositioned during refitting.

Fitting of a textile lifeline



Link to installation video: https://youtu.be/LoEEox73svI

6.1.2 Reboarding

- Some types of reboarding equipment have a locking device when folded up: It is important to keep the means for getting back onboard deployed and ready to use once the boat is in use (at anchor, moored or at sea).
- Make sure that means for getting back onboard are readily accessible and easy to use by someone alone in the water.

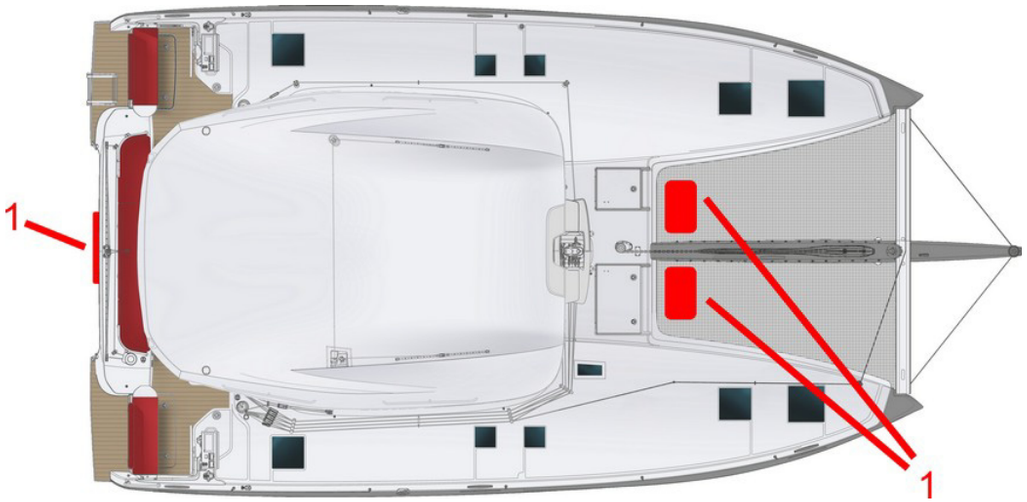
A reboarding device must be usable from the water by a single person with no external help.

Reboarding device (Swimming ladder)

6.2 Storing the liferaft

- Before putting to sea, carefully read the launching instructions shown on the liferaft.
- It is the responsibility of the skipper to ensure regularly that the liferaft is properly secured in place.

The liferaft (not supplied) must be stored in the space provided for it (Ref 1). In category A, the life raft must be installed on the transom only.



B I B

A pictogram allows for easy location.

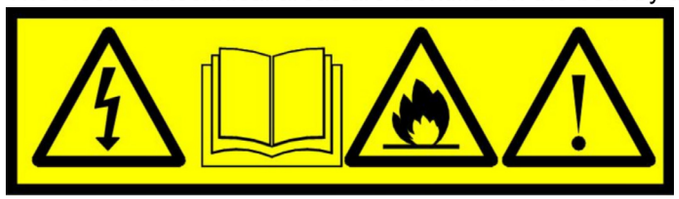
6.3 Securing moveable items

Technical areas may not be used as storage compartments.

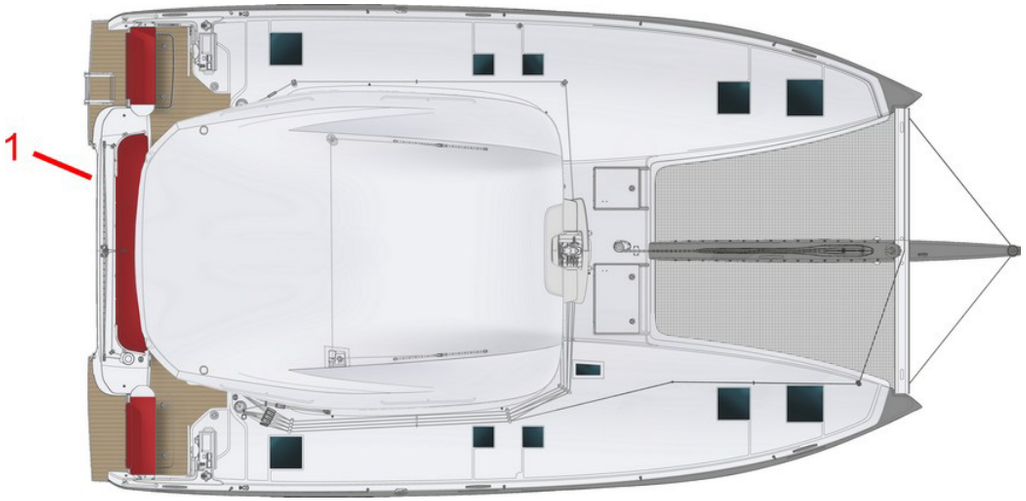
- Ensure that movable items are firmly secured when sailing.
- Do not store anything below the floorboards.

- The technical areas are identified in the boat by the pictogram below:

- The electrical technical areas are identified in the boat by the pictogram below:



6.4 Deck Layout



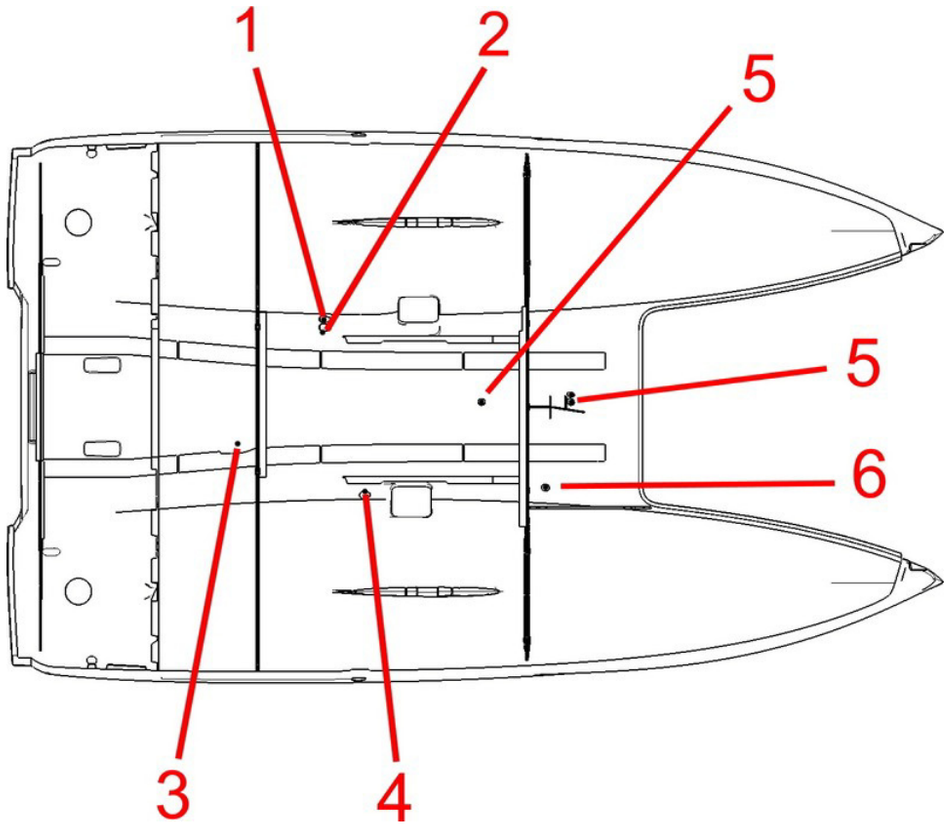
1. Lifebuoy support bracket
(ring lifebuoy not supplied)

6.5 Information on flooding risks and boat stability

6.5.1 Hull openings

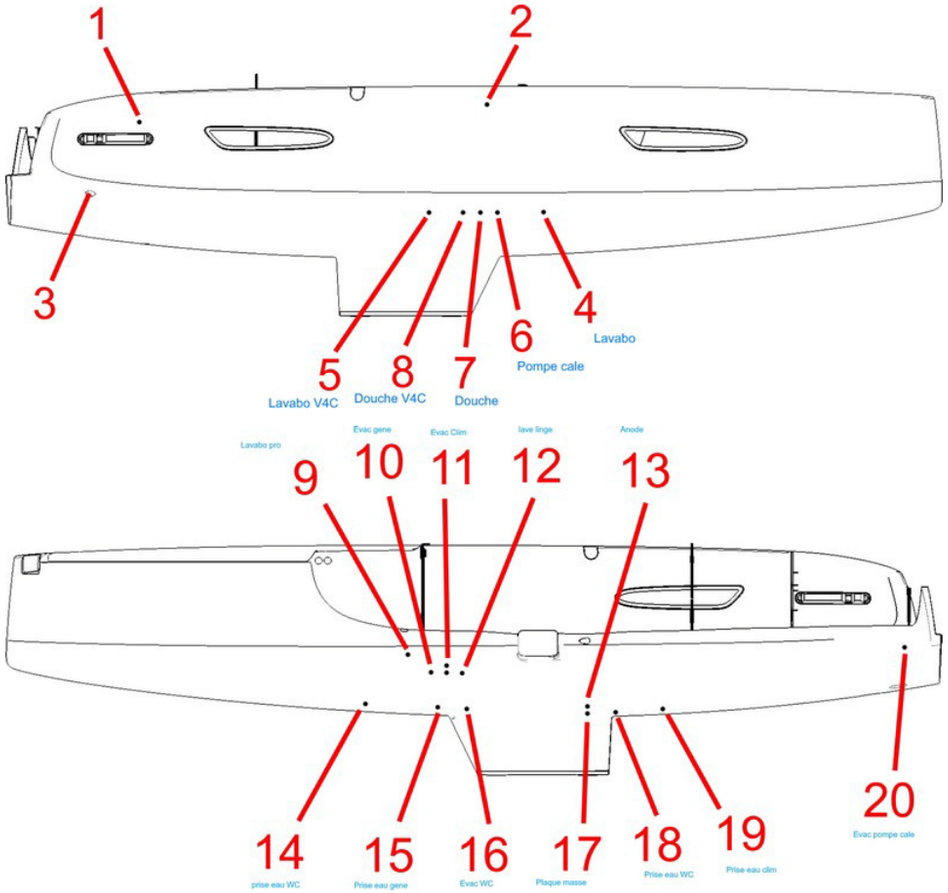
Valves, thru-hull inlets and other brass or bronze fittings have a lifespan of around 5 years. All valves, thru-hull inlets and other brass or bronze accessories must be checked by a professional every year and replaced as necessary.

Top hull view



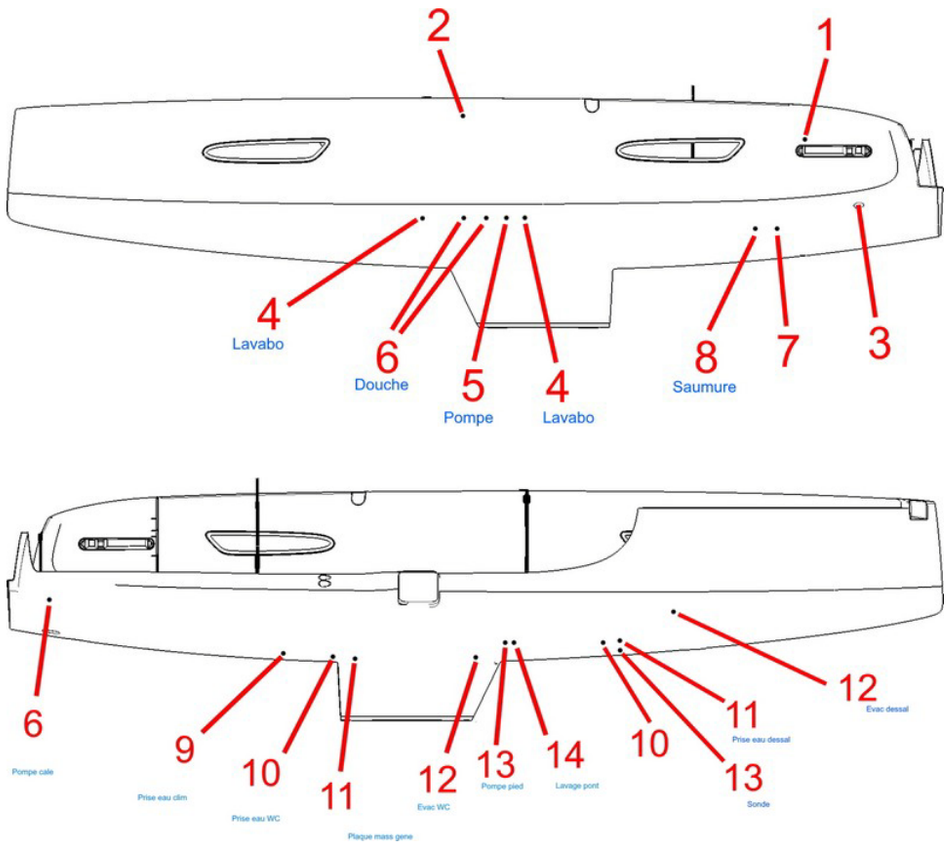
Reference	Designation	Valve
1	Gas locker outlet	No
2	Fridge drain	No
3	Galley sink drainage	Yes
4	Icebox drainage	Yes
5	Chain locker draining	No
6	Generator drain	No

View of hull, starboard side



Reference	Designation	Valve
1	Fuel tank vent	No
2	Blackwater tank vent (2 heads layout)	No
3	Blackwater tank vent (4 heads layout)	No
4	Engine exhaust	No
5	Head washbasin drainage	Yes
6	Electric bilge pump drainage	No
7	Depth sounder "realvision"	No
8	Air conditioning drainage (x 2)	Yes
9	Brine drainage (Watermaker)	Yes
10	WC seawater intake	Yes
11	Air conditioning seawater intake	Yes
12	Blackwater drainage tank	Yes
13	Deck washing seawater pump connection	Yes
14	WC seawater intake	Yes
15	Blackwater drainage tank	Yes
16	Watermaker seawater intake	Yes

View of hull, port side



Reference	Designation	Valve
1	Blackwater tank vent (4 heads layout)	No
2	Blackwater tank vent (2 heads layout)	No
3	Fuel tank vent	No
4	Air conditioning drainage (x 2)	Yes
5	Head washbasin drainage	Yes
6	Shower drainage	Yes
7	Bilge pump drainage	No
8	Air conditioning drainage (x 2)	Yes
9	General anode	No
10	Engine exhaust	No
11	Heating exhaust	No
12	Generator seawater intake	Yes
13	Generator exhaust	No
14	Blackwater tank vent	No
15	Blackwater drainage tank	Yes
16	Seawater electric pump connection	Yes
17	WC seawater intake	Yes
18	Generator drain	Yes
19	WC seawater intake	Yes
20	Generator & DC / AC converter earth plate	No
21	Electronic sensor	No
22	Air conditioning seawater intake	Yes
23	Head washbasin drainage	Yes

6.5.2 Drainage system

General points

- It is the responsability of the skipper to have at least one bailer or bailing bucket on board, lashed down to prevent it being accidentally lost.
- The inner moulding of the hull is equipped with channels: these are the draingage channels. The drainage channels allow the water to drain down to the lowest point in the boat, where it can be discharged. It is important to allow the water to flow freely down to this lowest point of the boat, which means.
- regularly cleaning the lowest point of the boat and the drainage channels.

Diagram of Layout – Drainage channels

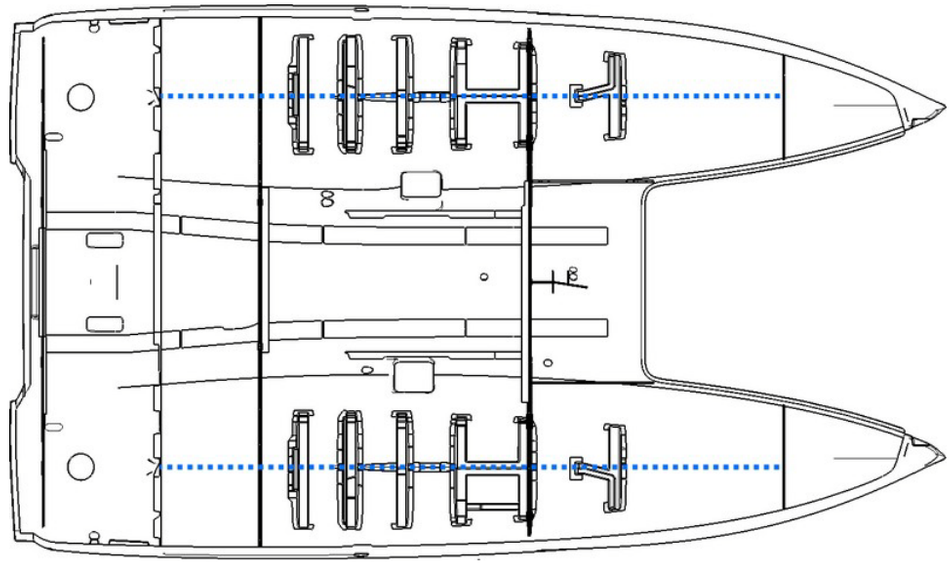
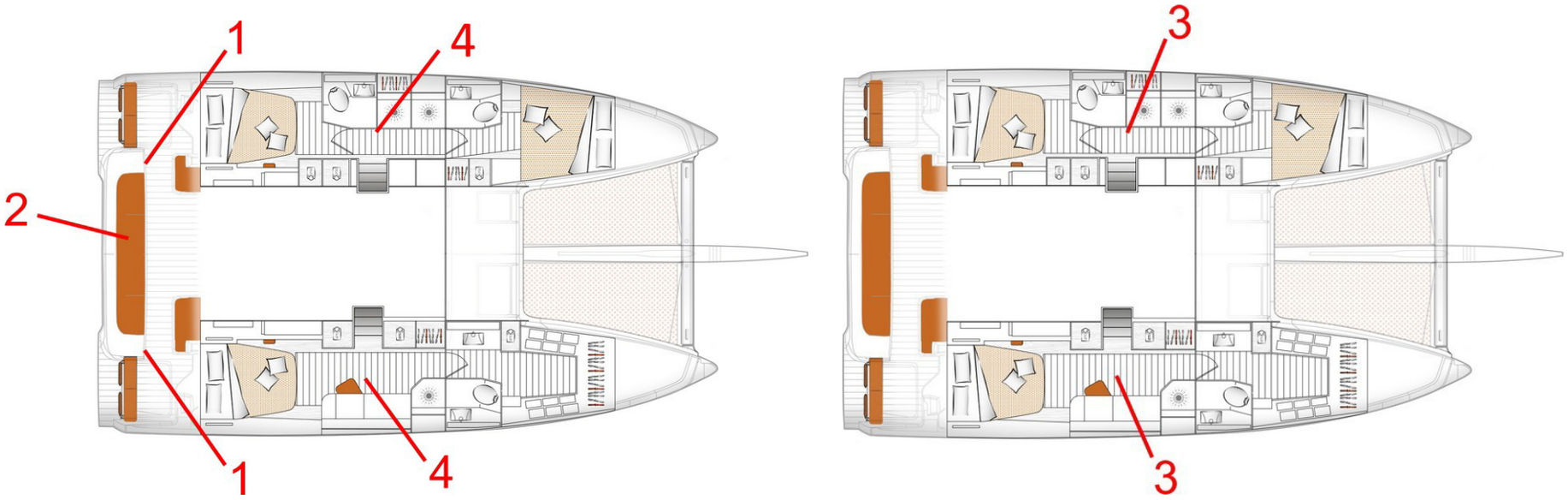


Diagram of Layout – Bilge pumps



Reference	Designation	Rate
1	Manual bilge pump	32L/minute *(*)*
2	Manual bilge pump lever	—
3	Electric bilge pump	129L/minute
4	Electric bilge pump switch	—

(*) 45 strokes/minute

Secondary drainage system
Manual bilge pump

- The manual bilge pump is in the cockpit.
- The bilge pump lever is located nearby.

Remark

The manual bilge pump lever must remain accessible at all times.

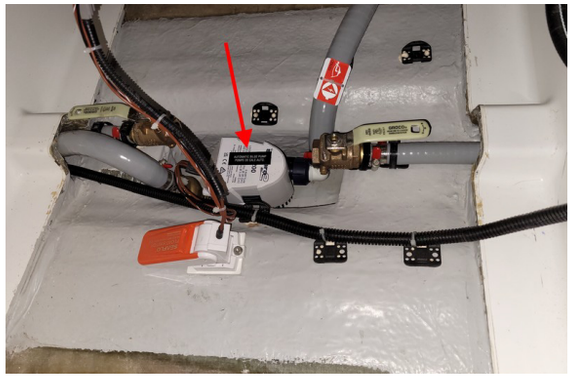
Operation

I. Attach the lever to the manual bilge pump.
II. Repeatedly work the lever up and down to its fullest extent.

Main drainage system
Electric bilge pumps

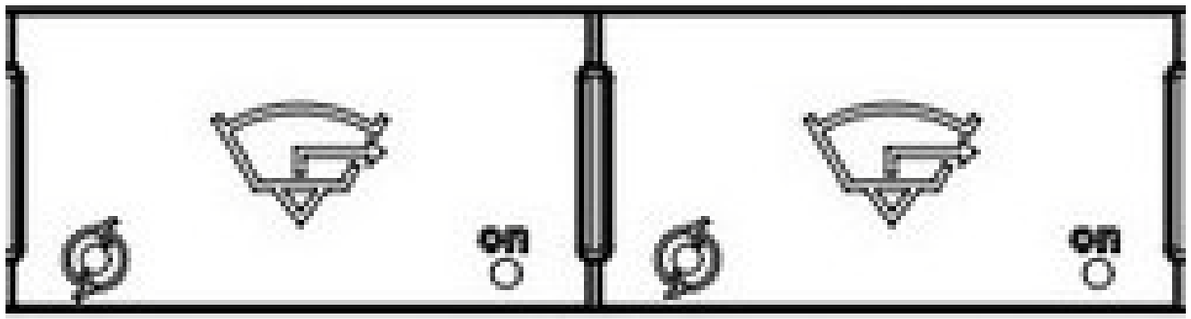
- The bilge pumps are powered by DC.
- The electric bilge pump must only be used to discharge stagnant water at the bottom of the bilge. It must not be used to pump out any oil-based products (petrol, oil) or inflammable liquids.

Location of the electric bilge pumps



Control

Location: Electrical panel



Starboard electric bilge pump

Port electric bilge pump

- Pressing the switch once activates the "automatic" mode of the bilge pump: The pictogram lights up red.
- Pressing the switch twice activates the "forced run" mode of the bilge pump: The indicator light ON turns on (bottom right).
- When the indicator light on the bottom left lights up, the bilge pump is in operation.

Operation

I. Turn on the battery switches.
II. Switch on the bilge pump (Ref 4).

If the boat is equipped with an automatic bilge pump, the switch has an always-on position.

Bilge pump maintenance

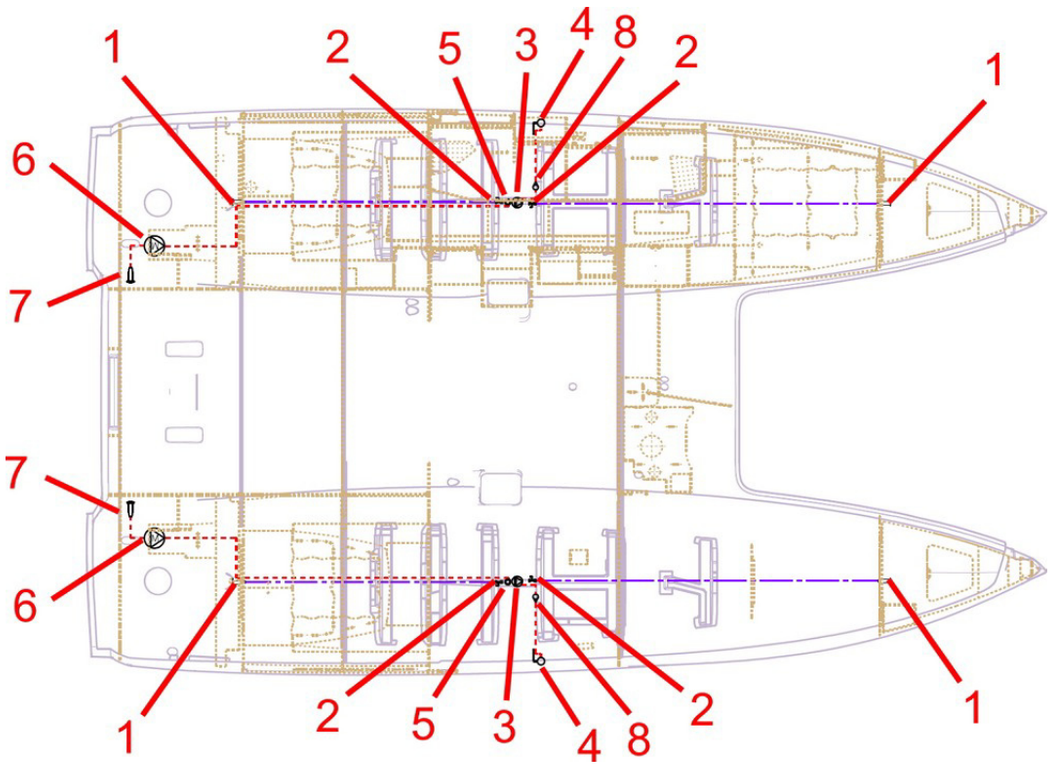
- The total capacity of the bilge pump system is not designed to drain the boat in case of damage.
- Keep the water level in the bilges to a minimum.
- Never store anything at the very bottom of the boat: Allow bilge water to flow freely down to the lowest point of the boat.
- The bilge pump system is not designed to cope with a breach of the hull.

Advice / Safety precautions

- Check that each bilge pump is working at regular intervals.
- Clear the points and suction filters of the bilge pump of any debris that could clog them.
- If the watertight partitions which seal off the fore and aft points are fitted with valves they must be closed at all times and only opened to drain water into the main bilge.
- Drains must be kept clean and unobstructed.

Please refer to the manufacturer's notes in the instructions for checking and maintaining the bilge pumps.

Diagram of Layout – Drying out the bilge



Drainage hose – 20mm diameter

Drainage hose – 25mm diameter

1. Bulkhead fitting
2. Valve closure
3. Electric bilge pump
4. Electric bilge pump drain valve
5. Manual bilge pump suction strainer
6. Manual bilge pump
7. Kitchen sink thru-hull drainage
8. Non-return valve

6.6 Emergency systems in case of steering gear failure

Emergency tiller

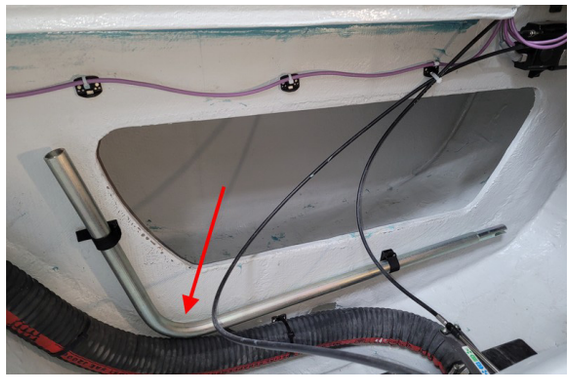
The emergency tiller is designed only to enable navigation at a reduced speed in case of steering gear failure.

Location of components

Port emergency tiller access point

Starboard emergency tiller access point

Emergency tiller



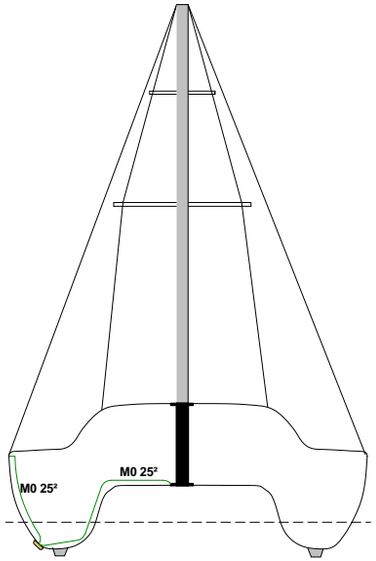
Instructions in the event of steering gear failure

I. Unscrew the filler using a winch handle.
II. Fit the emergency tiller (Ref 2) in the square on the rudder post.

6.7 Information on lightning-related risks

- The skipper must check the weather conditions before deciding to put to sea. If there is a risk of thunderstorms, the skipper must avoid putting to sea.
- A lightning safety device is installed on the boat.
- A general anode dedicated to grounding of the rigging is connected to the mast pillar and the port cap shroud chainplate.

Electrical earthing



Anode

Precautions to be taken by the occupants of the boat during a storm

- Ensuring the safety of everyone on board is the fundamental goal of lightning protection.
- Turn off the engine, turn off the battery switches and disconnect all electronic and electrical equipment, including equipment mounted on the mast.
- Occupants should stay as much as possible inside the closed vessel.
- Occupants should not be in the water or let their arms or legs hang in the water.
- Occupants should avoid touching any part connected to a lightning protection device, especially in such a way that the parts become connected.
- Occupants must avoid contact with the metal parts of the rigging, spars, deck fittings and boat wiring. Even inside the boat, occupants should stay as far as possible away from the mast.

Maintenance

- Flexible radio antennas should not be tied down during a thunderstorm.
- If the boat has been struck by lightning, the compass and electronic and electrical equipment must be examined to determine whether any damage or calibration change has occurred.
- If the vessel has been struck by lightning, the lightning protection device must be inspected for damage and to verify the integrity of the device and continuity of the earthing.

6.8 Informations in case of grounding of impact

- In the event of grounding or impact with an unidentified floating object, lift the floors and check that there is no leakage of seawater.
- If there is a leak of seawater (even a small one), reduce speed, contact the emergency services and follow their advice.
- Take the boat out of the water immediately and have it professionally inspected.

7

Information relating to fire risks and risks of explosion

7.1 Propulsion engines and other fuel-burning equipment

The risks associated with motorisation are described in the ENGINE chapter.

Note concerning the boat's tender

The risks associated with other fuel-burning equipment are described in the FUEL-BURNING EQUIPMENT OTHER THAN FOR PROPULSION chapter.

- If the tender is fitted with a more powerful outboard motor than 25kW, it must have on board a portable extinguisher with a rating equal to or greater than 8A / 68B.
- Place for storage of tender petrol tank: on deck.

7.2 Electrical system

The risks associated with the electrical systems are described in the ELECTRICAL SYSTEM chapter.

7.3 Gas system

The risks associated with the gas system are described in the LIQUEFIED PETROLEUM GAS (LPG) SYSTEM chapter.

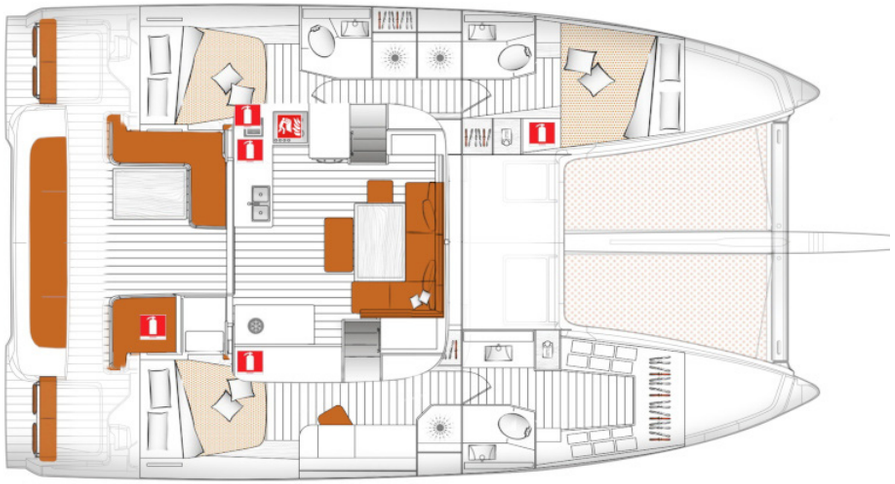
7.4 Fire fighting and prevention equipment

7.4.1 Fire-fighting equipment

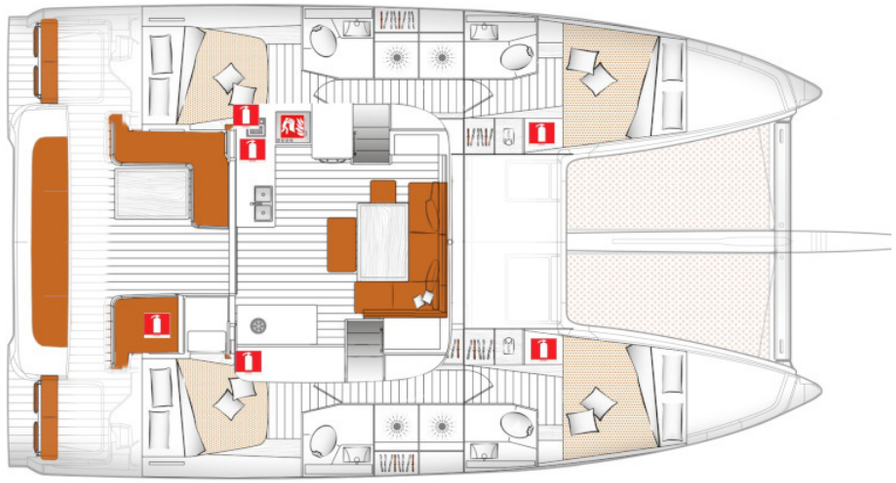
Portable fire-extinguishers and fire blanket (not supplied)

When in use, this boat must be equipped with portable fire extinguishers of the following extinguishing capacities, located in the following places:

3-cabin layout



4-cabin layout



Location	Minimum extinguishing capacity
Port side aft cabin hanging locker	5A / 34B
Starboard aft cabin hanging locker	5A / 34B
Forward port cabin wardrobe	5A / 34B
Forward staboard cabin wardrobe	5A / 34B
Galley	5A / 34B
Cockpit seat	5A / 34B

- The location of the portable fire extinguishers is shown by the pictogram below:

- When in use, this boat must be equipped wih a fire blanket to protect the cooking equipment and/or the galley, installed in the following place: near the cooking equipment.

Maintenance of the fire-fighting equipment

Never:

- Obstruct the passages leading to the emergency exits and the hatches;
- Obstruct or block safety controls, for instance fuel shut-off valves, gas taps, electrical system circuit-breakers;
- Obstruct the access to the portable extinguishers stored in lockers;
- Leave the boat unsupervised when cooking equipment and/or heating equipment is in use;
- Modify any of the boat's installations (especially the electrical, fuel or gas installations) or allow unqualified personnel to proceed with modifying these installations;
- Fill the fuel tanks or replace gas bottles while the engine is running or while cooking or heating equipment is in use;
- Use gas lamps in the boat;
- Smoke when handling fuel or gas;
- Obstruct the ventilation of the compartments or spaces, in particular those containing the engines, tanks or batteries.

The owner/person operating the boat must:

- Have fire-fighting equipment checked as frequently as recommended by the manufacturer;
- Replace portable fire extinguishers, if outdated or discharged, with extinguishing apparatus of equal capacity;
- Provide at least one fire bucket with a lanyard, in a readily accessible place, for protection of the deck;
- Have fixed fire extinguishing systems filled or replaced if they have been discharged or have expired.

Responsibility of the owner/boat operator

It is the responsibility of the owner/boat operator to:

- Ensure that the fire-fighting equipment (portable extinguishers, bucket and fire blanket) is readily accessible when there are people onboard;
- Ensure that the engine compartment fire extinguisher discharge port is readily accessible;
- Show the members of the crew:
  - The location and use of the fire-fighting equipment;
  - Location of discharge ports in engine compartment;
  - The location of evacuation routes and fire exits.
- Equip the vessel with one or more portable extinguishers whose heads are compatible with the diameter of the opening in vertical use.
- Unlock all deck hatches and fire escape openings when the vessel is occupied.

Notes for the attention of the boat user

General points

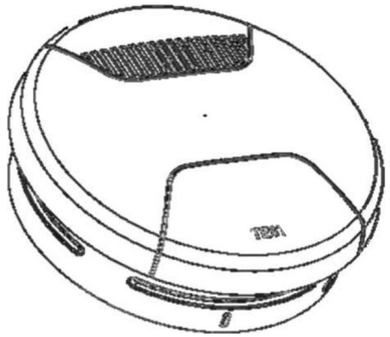
- Check that the bilges are clean and frequently check that there are no fuel/gas vapours or fuel leaks.
- When replacing components of the fire-fighting equipment, use only appropriate components of the same code designation or with the equivalent technical capacity and fire resistance.
- Do not install free-hanging curtains or other fabrics near or above the cooking appliances or other equipment with a naked flame.
- Do not store combustible materials in the engine compartment. If non-combustible materials are stored in the engine compartment they must be secured so there is no danger of them falling on the engine shaft and they do not obstruct access to and from the compartment.
- The fire exits other than the door or main companionway are identified by the following symbol:

7.4.2 Smoke alarm

- The smoke detector is not a gas detector.
- The smoke detector is sensitive to dust and steam: avoid exposing the detector to these environments to prevent the triggering of unwanted alarms.
- Never use a rechargeable battery.
- Never trigger the alarm deliberately to check the operation of the detector.
- A dirty detector may activate incorrectly or late. It is important to clean each detector for the safety of people onboard.
- Never cover the smoke detector (with paint or ceiling panels, for example) and in general do not alter the appearance of the detector.
- Do not fit the smoke detector in a different location from the one specified for the purpose.

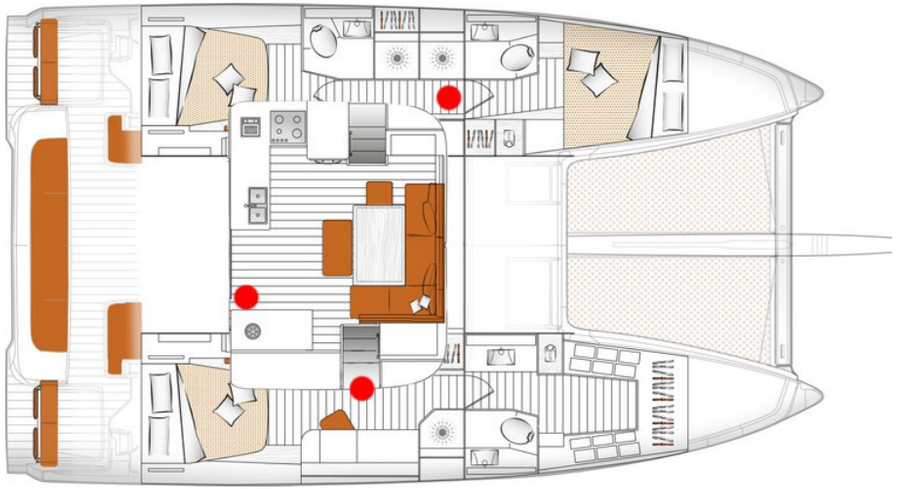
General points

- The smoke detector is a photoelectric detector which operates with a 9 V alkaline battery (battery included).
- The detector emits a flashing red light every minute in normal operation.
- The smoke detector is designed to operate between 0° and + 50°C.
- Whenever any smoke is detected, the 85 dB alarm is triggered.
- The smoke detector is not designed to stop a fire from breaking out. It serves to warn the people onboard of the danger.
- The detector is a device which warns people onboard in the event of smoke.
  Actions to take if the alarm is triggered: The skipper should check the source of the smokeand attempt to extinguish the fire with the resources at his/her disposal. If the fire spreads, the skipper must immediately evacuate the entire crew.
- The service life of the smoke detector is approximately 10 years. Beyond 10 years, replace the smoke detector with an identical device.

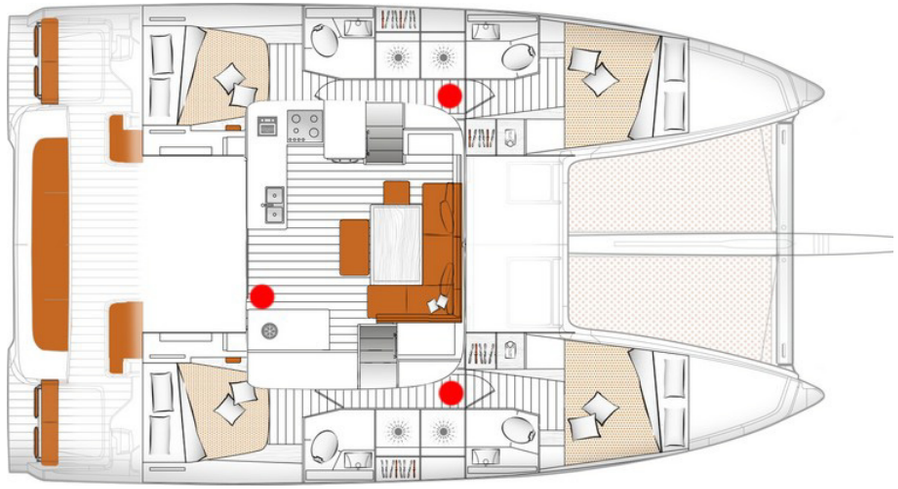


General view

Location



3-cabin layout



4-cabin layout

Commissioning of the boat

When the boat is first delivered, ensure that the battery protector is removed.

Maintenance

The smoke detector must be routinely tested when boarding or weekly if staying onboard for a prolonged period of time. If the device is faulty, change the battery. If the device is still faulty after changing the battery, replace the detector with the same model (consult your dealer).

TEST button

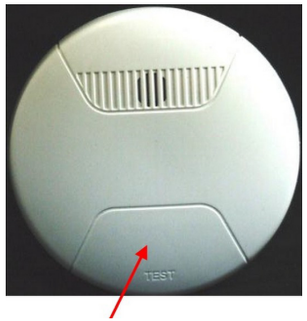
Regularly check that each detector is working correctly by pressing and holding the device's TEST button for around ten seconds:

- The detector's light flashes, then the alarm starts up.

  Remark

  The alarm emits are very loud noise (approximately 94 dB at one metre), remember to use hearing protection during the test.

- When the TEST button is released, the alarm stops immediately.



Changing the battery

- The smoke detecter will emit an audible beep every minute for a month when the battery level is too low to operate.
- In that case, change the battery as described below:
  - Remove the detector from its mounting (turn anti-clockwise), remove the empty battery and replace it with the same model of alkaline 9 V battery, ensuring a battery life of 5 years.
  - Connect the battery as shown in its housing (ensure the battery polarity +/- is correct).
  - Return the detector to its mounting (turn clockwise) until it fits perfectly.

Annual routine maintenance

- Remove the detector from its housing (turn anti-clockwise) and clean the vents on the side of the device with a vacuum cleaner or a soft brush.
- Use a damp cloth to clean the exterior of the detector cover.

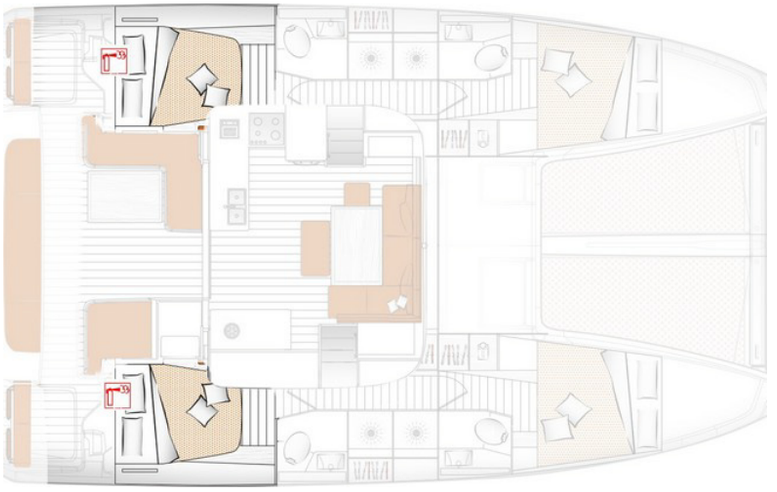
Winterisation

- To ensure optimal operation, it is recommended that the smoke detector is stored for winter in a fresh and well-ventilated place, having removed the battery.
- Once one person is onboard, it is important to replace the smoke detector in the position specified for the purpose, having first reinstalled the battery.

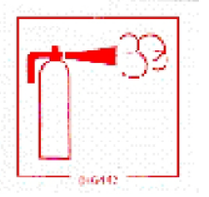
7.4.3 Extinguisher access port (Engine compartment)

The engine compartment has a port that makes it possible to discharge the extinguishing product inside without opening the usual access hatches.

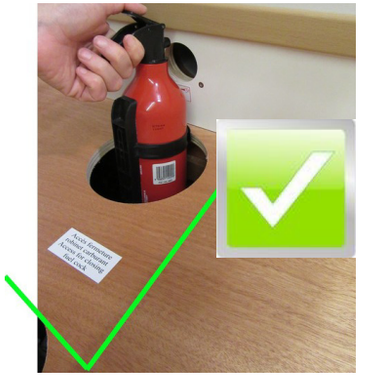
Location of the fire extinguisher port



A pictogram allows for easy location.



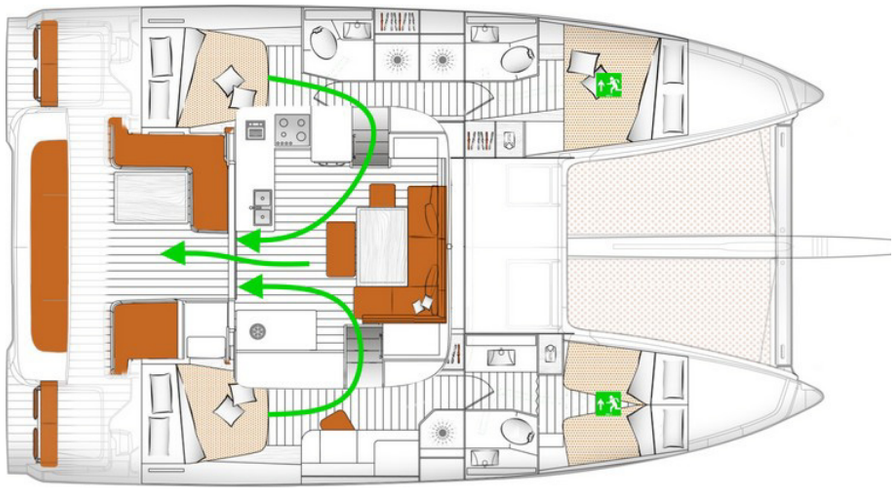
Operation

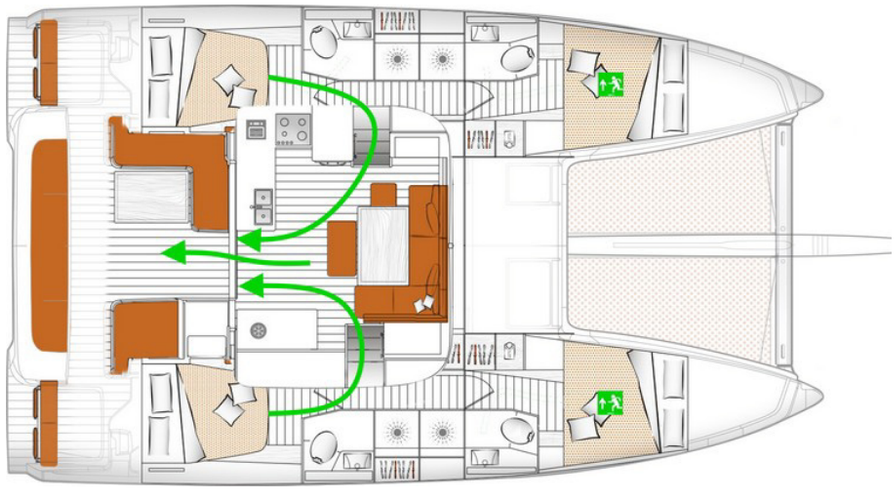


150mm diameter

7.5 Emergency exits in case of fire

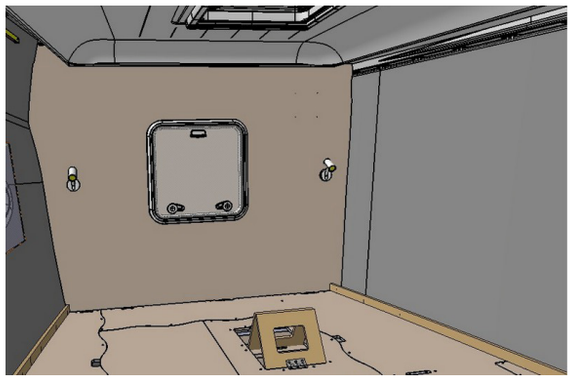
Location

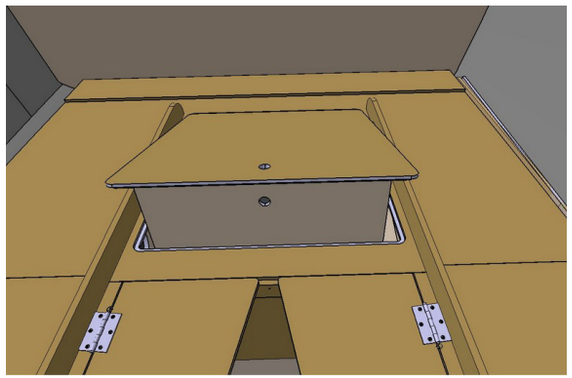




- Sliding hatch
- Forward cabin deck hatch

Deployment of the steps for the forward cabin emergency exit





7.6 In the event of capsize

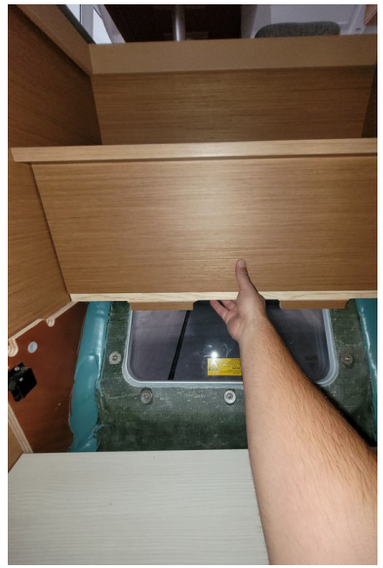
- In the event of capsize break the glass of the "manhole" cover using the hammer if necessary.
- The life-rafts are accessible on the transom (see the beginning of the chapter).

1.

2.

3.

4.



5.

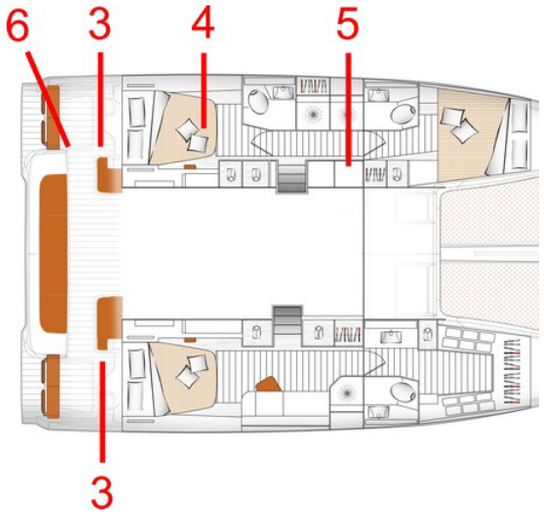
8

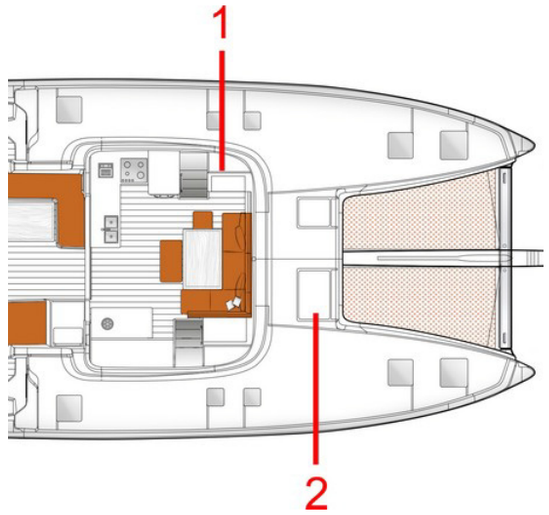
Electrical system

8.1 General information about the electrical system

- A risk of fire or explosion may result from careless use of the DC and AC systems.
- A risk of electrocution may result from careless use of the AC system.

- Never:
  - work on a live electrical system;
  - modify the elecrical system of the vessel or the relevant diagrams: It is important that installation, maintenance and any modifications be carried out by a qualified marine electrician;
  - change or modify the strength of the safety devices protecting against power surges;
  - Install or replace the electrical devices or equipments with components that exceed the rated current of the circuit;
  - leave the boat unsupervised when the electrical system is live, apart from when the automatic bilge pump and the boat's fire protection and security system are in use (where installed).
- Electrical connections change over time. It is necessary to have the boat's electrics checked regularly and at least once every two years by a professional. Special attention should be paid to the tightness of the electrical connections.





1. Navicolor touchscreen, Electrical panel, Fuses
2. Generator battery
3. Port engine battery, Battery switches, Fuses, Battery chargers, Power distributor
4. Service batteries
5. Circuit breakers
6. Battery switches

8.2 DC installation (12V or 24V)

8.2.1 Battery use and distribution

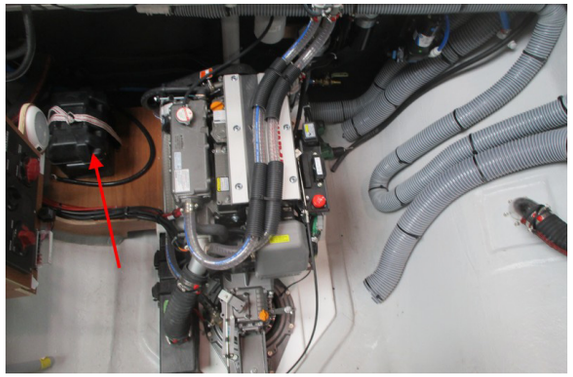
- All work carried out on a battery must only be carried out by someone qualified to do so. Whenever working on a battery, wear safety goggles and protective clothing.
- Never smoke or produce a spark near a battery: this may cause an explosion.
- If any acid accidentally splashes on your skin or in your eyes, rinse it off immediately and thoroughly with fresh water. See a doctor immediately.
- Never touch the battery terminals: you may suffer an electric shock.
- It is essential that you disconnect the battery charger before disconnecting the battery terminals for maintenance (either by disconnecting the AC shore power socket or by cutting the AC circuit breaker of the battery charger).
- Refer to the manufacturer's instructions for use and maintenance.

General points

- The boat is equipped with a direct current electrical system.
- The boat's electrical system comprises service batteries and the engine battery or batteries. The service batteries serve as the power supply for all the boat's electrical components. The "engine" battery is used only for powering the electric starter of the propulsion engine.
- The boat may also be equipped with:
  - a generator powered by its own battery.
- the batteries are charged either by a load distributor or:
  - by the alternator linked to the engine when the engine is running,
  - by the battery charger (where installed).
- It is essential that a professional engineer connects the batteries when the boat is first launched.
- Always check the condition of the batteries and charge system before putting to sea.
- The battery banks are isolated from one another by a charge divider (see below).

Battery bank

Engine batteries (2 x 50A)
Location: Port and starboard engine compartment



Generator battery (1 x 50A)
Location: Locker forward

Service batteries (2 x 95A)
Additional service batteries (6 x 95A)
Location: Port aft cabin

Maintenance

- Keep the batteries clean and dry.
- Regularly check that the terminals and connection cables are clean. If necessary, apply a thin coating of paraffin on the terminals to prevent corrosion.
- Regularly recharge all of the batteries onboard.
- Keep the batteries charged at all times: this will improve their lifespan.
- Avoid long periods of electrical inactivity (for example when wintering the boat).

Maintenance of lead batteries

- Check the water levels in the batteries annually and top them up with distilled water if they are low.
- Keep all metallic objects away from the batteries.
- Lead batteries contain sulphuric acid: be careful not to knock them over whenever handling them.

Maintenance of watertight batteries

- This type of battery needs no maintenance and does not produce any gas during normal use. No ventilation is needed.
- The optimum temperature for use is between 10°C and 30°C. Lower temperatures will reduce the available capacity. Higher temperatures will increase the batteries' self-discharge rate.
- Never open watertight batteries.
- Never add acid or distilled water.
- The pressure valves are used to seal the batteries and cannot be opened without being permanently broken.
- If the batteries overheat, a build-up of gas may develop: stay away from the batteries.

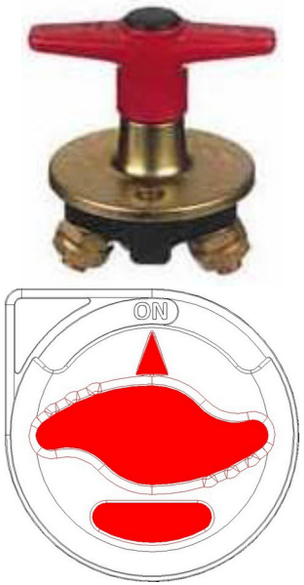
8.2.2 Battery switches

- Turn off all battery isolators before leaving the vessel: **failure to do so may result in critical damage to the entire battery bank**.
- Avoid touching the battery isolators when they are live.
- Never switch off the battery isolators when the boat's engine is running (risk of serious damage to the charging circuit).

Manual battery switches

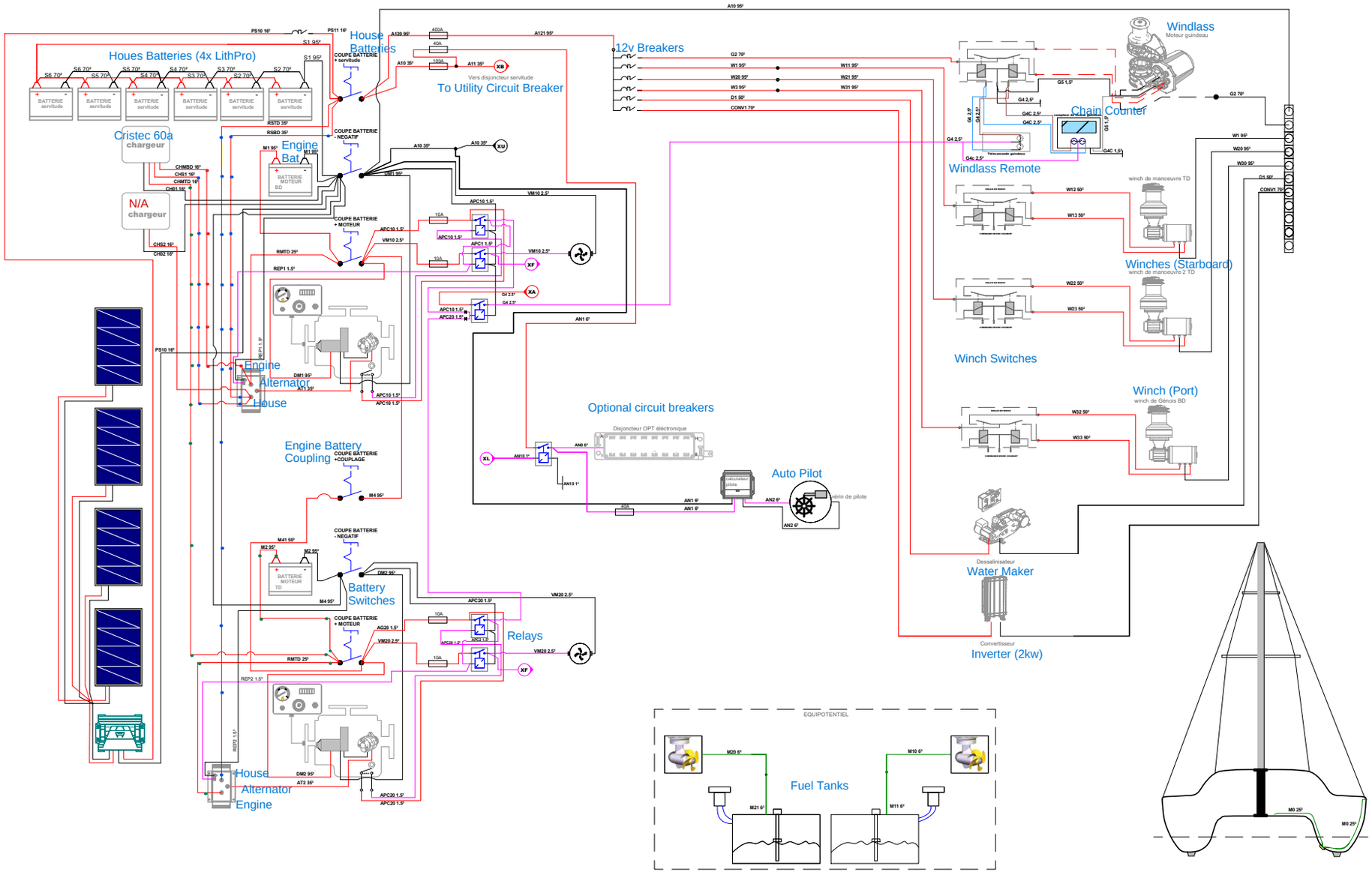
To make the system live, manually turn the positive and negative battery isolator switches.

Positive isolator switch

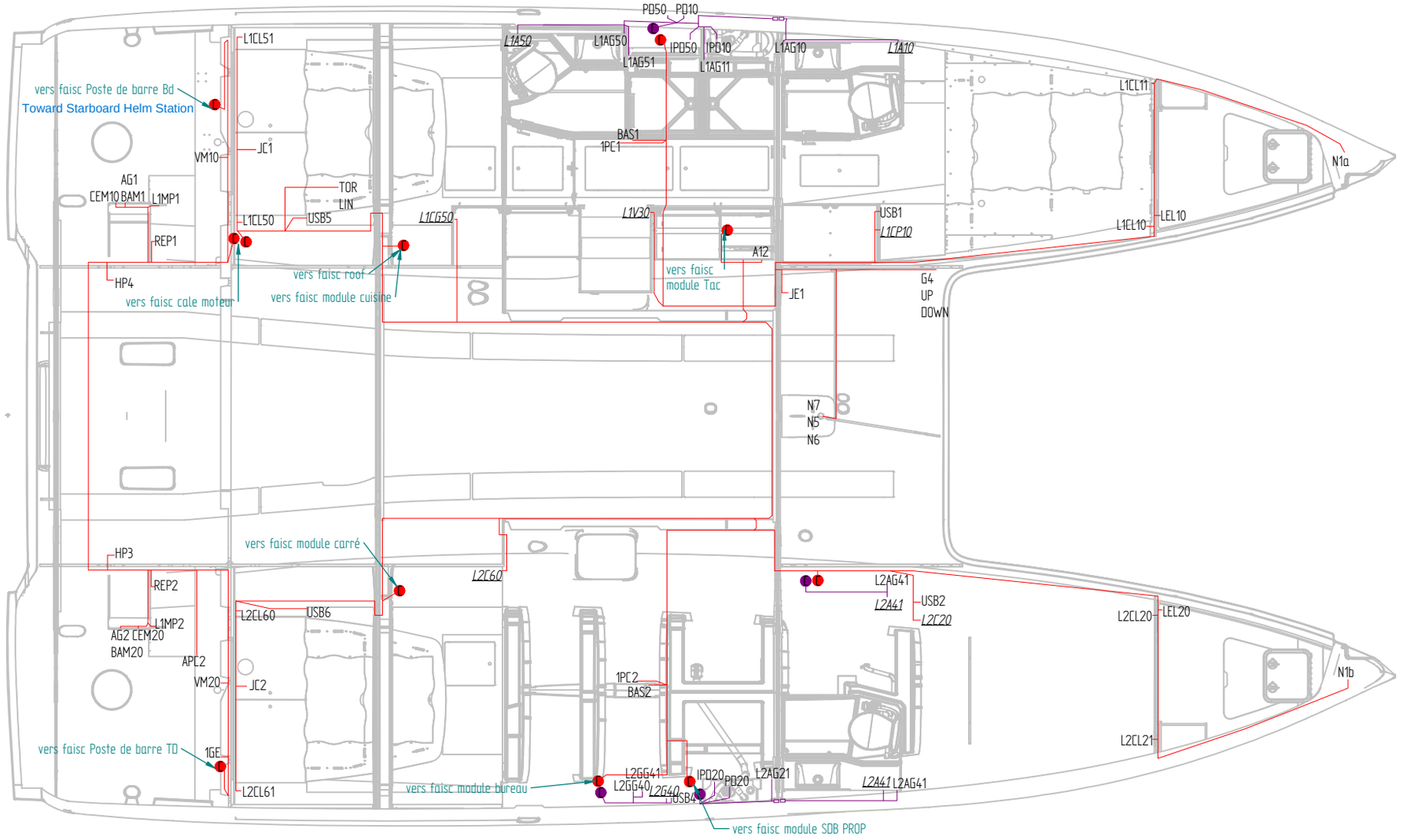


Negative isolator switch

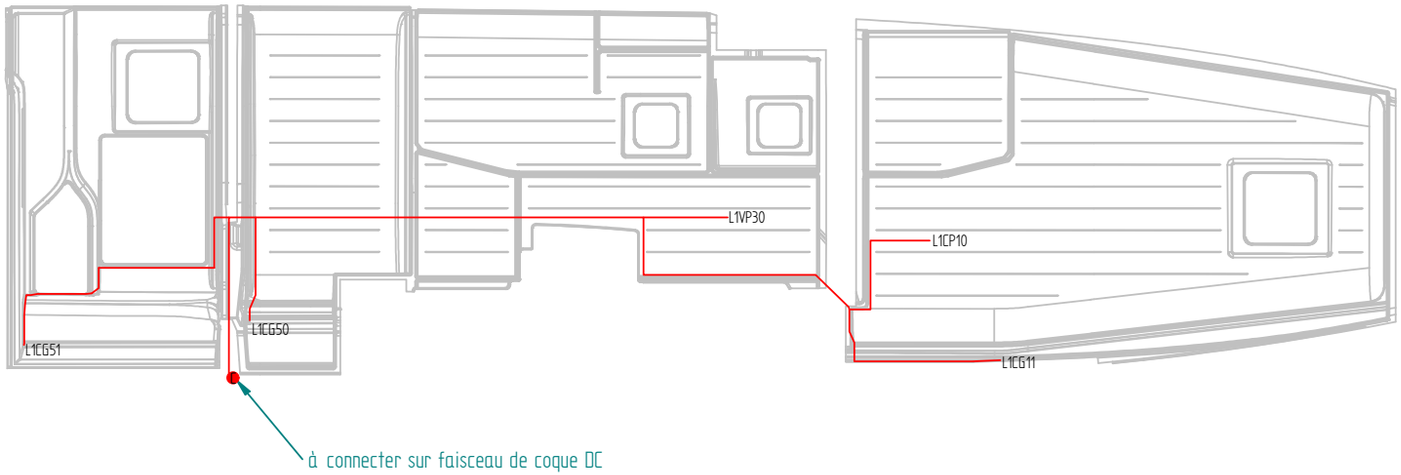
8.2.3 Diagram of layout - DC electrical circuit

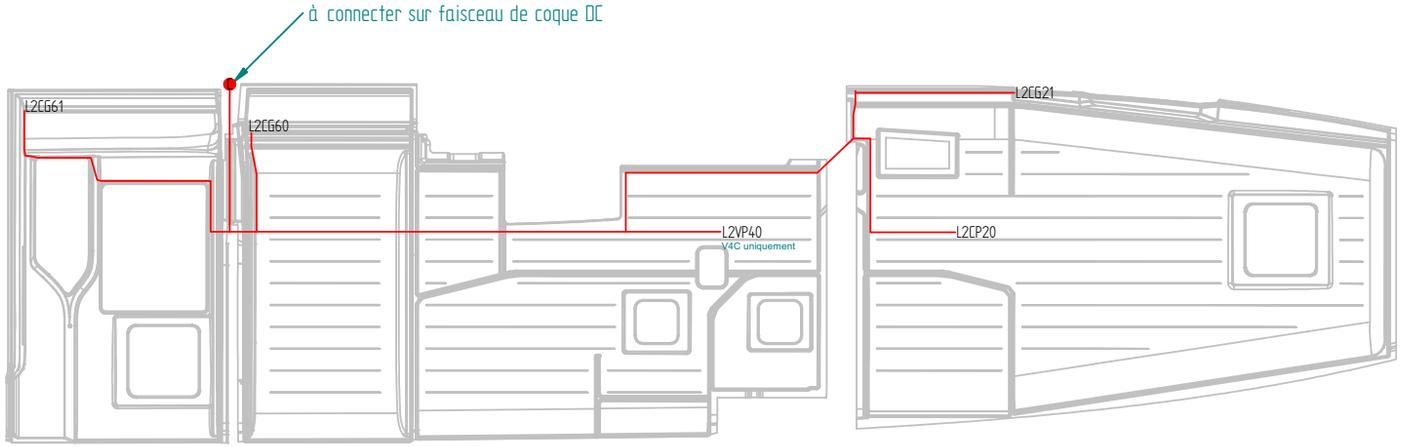


8.2.4 Installation of the hull wiring loom - DC electrical circuit

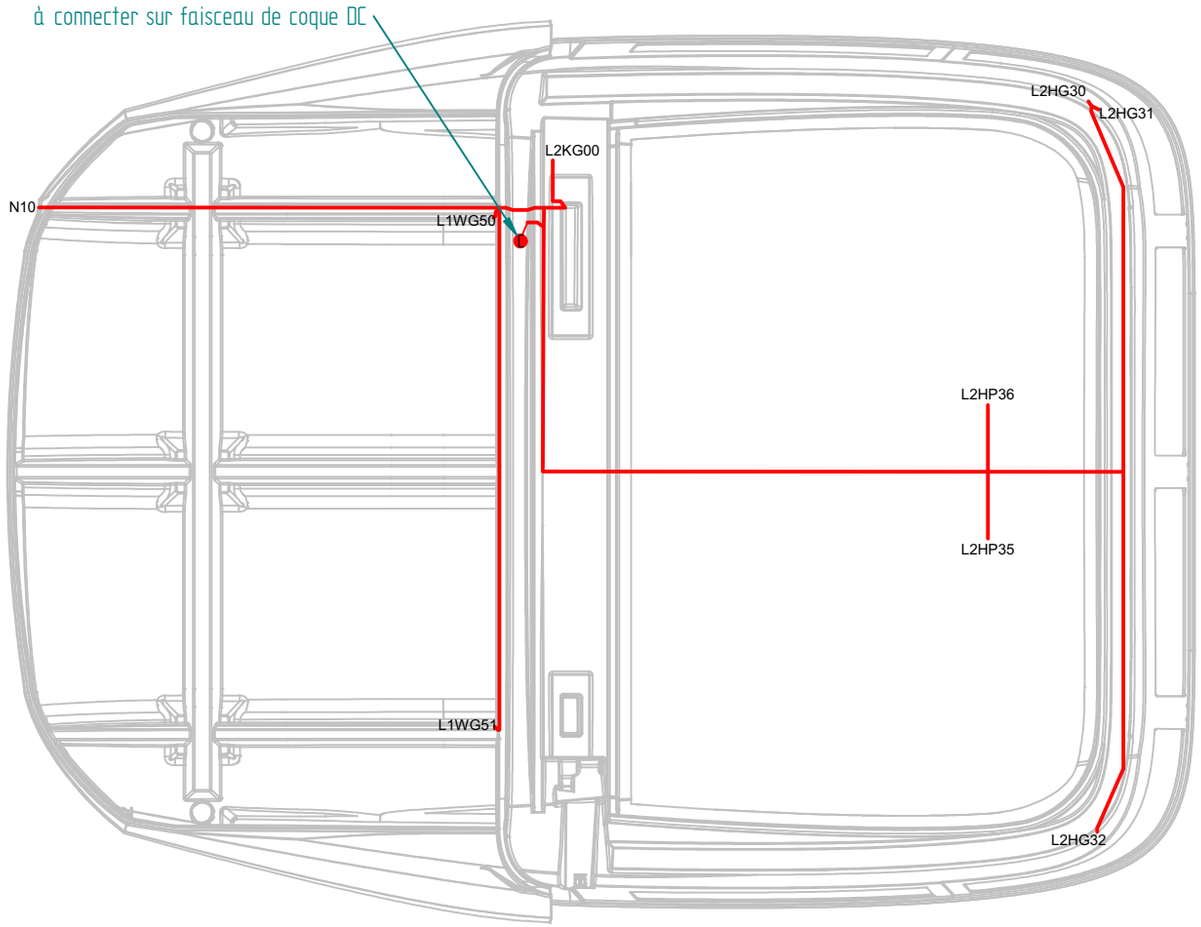


8.2.5 Installation of deck counter-moulding wiring bundle - DC electrical circuit



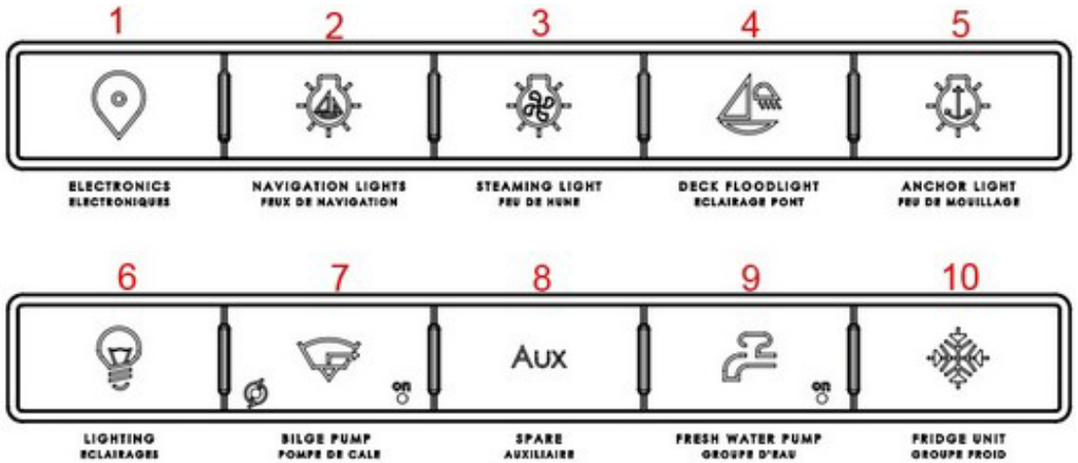


8.2.6 Installation of roof wiring bundle - DC electrical circuit



8.2.7 Electrical panel

Location: Chart table

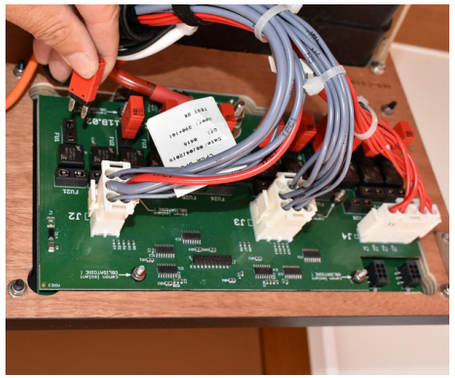


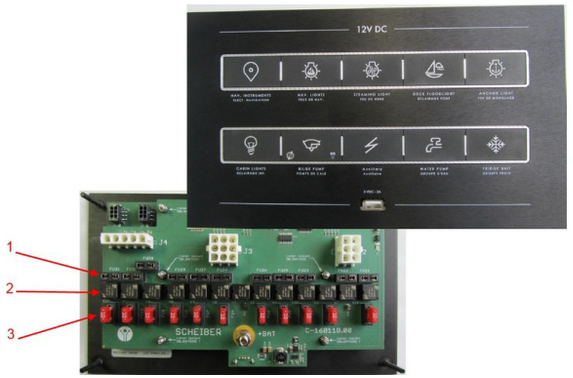
1. Electronic instruments
2. Navigation lights
3. Steaming light
4. Deck light
5. 360° light
6. Lighting
7. Bilge pump
8. Available
9. Water unit
10. Fridge

Remark

- The 10 silicone keys switch on the desired DC elements via relays.
- When one of the switches on the panel is flashing, it means that the circuit breaker behind the electrical panel of the faulty switch must be reset.

A circuit breaker protects the circuit of each DC component. An additional fuse holder allows the desired element to be supplied directly by shunting the relay.





1. Additional fuse holder (for inserting a fuse to power a DC component in defect mode)
2. Relay box
3. Fuse

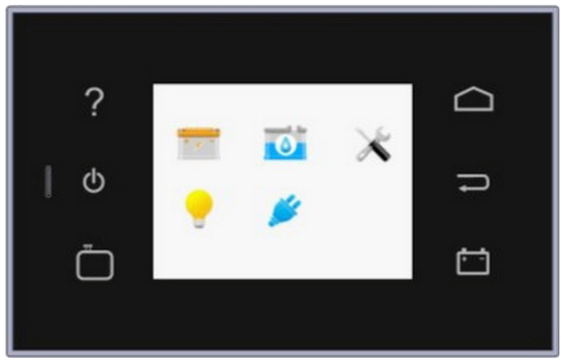
Designation	Safety fuse	Fuse in defect mode (by-pass)
Water unit	FU 3	FU 23
Electric bilge pump	FU 2	FU 22
Auxiliary	FU 4	FU 24
Refrigeration unit	FU 1	FU 21
Navigation lights	FU 8	FU 21
Steaming light	FU 9	FU 29
360° light	FU 7	FU 27
Electronic instruments	FU 5	FU 25
Deck light	FU 6	FU 26
Lighting 1	FU11	FU 31
Lighting 2	FU 10	FU 30

8.3 Touch screen

The screen NAVICOLOR is a touch interface for viewing and controlling the auxiliary functions of the boat:

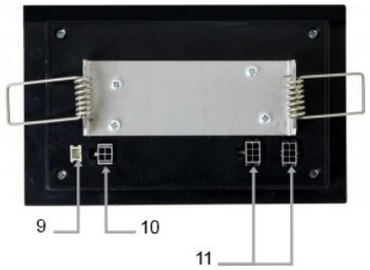
- Fuel level,
- Fresh water level,
- Battery voltage,
- Starting the generator,
- Management of boat's AC supply sources,
- Network viewing and diagnostics.

Location: Chart table



Touch screen operation

Front view



Rear view

1. Direct access to home page
2. Previous page
3. ON/OFF button
4. Tank menu
5. Back
6. Light sensor
7. Next page
8. Direct access to battery page
9. Connector for temperature sensor
10. Bus
11. CAN connector

Remark

The menus may vary depending on the specific equipment of each boat.

Battery measurement menu access

Fresh water tank level menu access

AC supply distribution menu access

Interior lighting menu access

Adjustment menu access (Access to it is restricted by a code supplied on request to the yard)

- CAN network display (Controller Area Network)
- Parameterization of lighting
- Configuration of the 'gauge' pack
- Configuration of source selectors

Return to preceding page

8.4 AC system (110V or 220V)

8.4.1 General points

- The boat is equipped with an alternating current electrical system.
- The electrical system of the boat consists of an AC shore socket and if appropriate:
  - 1 Generator,
  - 1 DC/AC converter.
- The AC electrical system is used to power the following components (where installed):
  - Air conditioning,
  - Household appliances,
  - Water heater,
  - Interior AC sockets,
  - Battery charger(s).

Guidelines for using the AC electrical system correctly

- If a DC/AC converter is fitted on board: it is essential to switch off the DC and AC circuits before working on the cabin AC sockets.
- Never let the end of the boat/shore supply cable hang in the water: This may result in an electric field that could injure or kill nearby swimmers.
- Incorrect use of alternating current systems will result in a danger of electrouction.
- Do not work on a live AC system.

- To reduce the risk of electric shock and fire:
  - Switch off the switch on the boat's shore cable before connecting or disconnecting the power cable from the shore cable.
  - Connect the shore cable to the boat's power supply input connector before connecting it to the shore socket.
  - If the reverse polarity indicator is activated, immediately disconnected the switch of the shore to boat cable (if fitted).
  - If the reverse polarity indicator is activated immediately disconnect the cable.
  - First disconnect the shore line on the quay.
  - Ensure the protective cover of the power supply input of the shore to boat cable is properly closed.
  - Do not alter the connections of the shore power supply cable: only use compatible plugs and sockets.
- Electrical connections change over time. It is necessary to have the boat's electrics checked regularly and at least once every two years by a professional. Special attention should be paid to the tightness of the electrical connections.

Advice / Recommendation

Every month, you are advised to test the circuit breaker or residual current differential switch, recognisable by its "test" button.

- Do not modify the vessel's electrical installations or the relevant diagrams. Installation, maintenance and modifications must be carried out by an electrician qualified in marine electricity. Have all electrical installations checked (tightening and connections) every year.
- Disconnect the boat's shore power when the system is not in use.
- Connect the relay boxes or metal casings of the installed electrical equipment to the boat's protective conductor (green or green with yellow stripe).
- Use double-insulated or earthed appliances.
- If the reverse polarity indicator is activated, do not use the electrical installation. Rectify the polarity fault before using the vessel's electrical installation (this applies only to polarised circuits with a polarity indicator).

8.4.2 AC shore socket

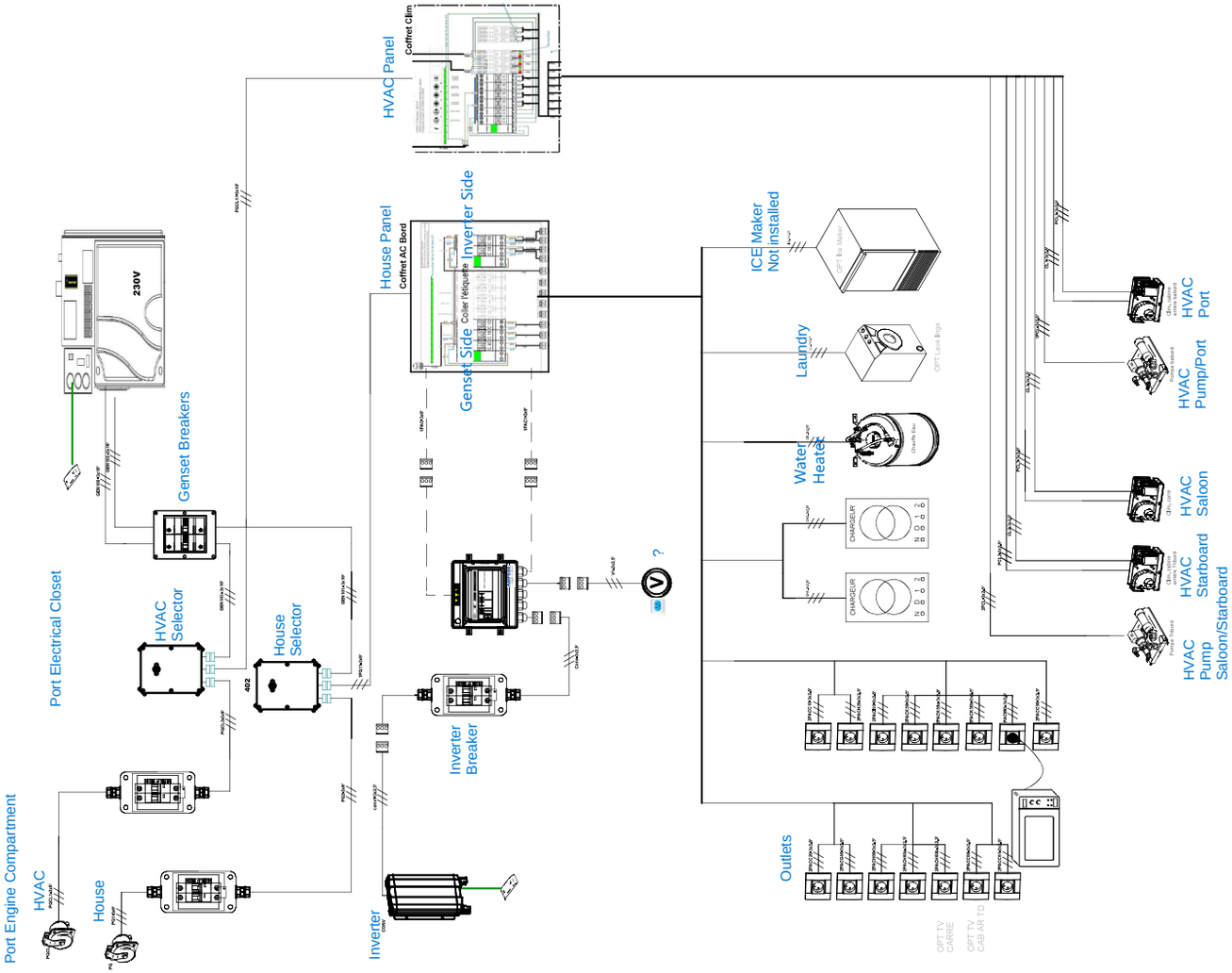
Operation

- First plug the extension cable into the AC socket on the boat, then into the socket onshore.
- First unplug the extension cable from the socket onshore, then from the AC socket on the boat.

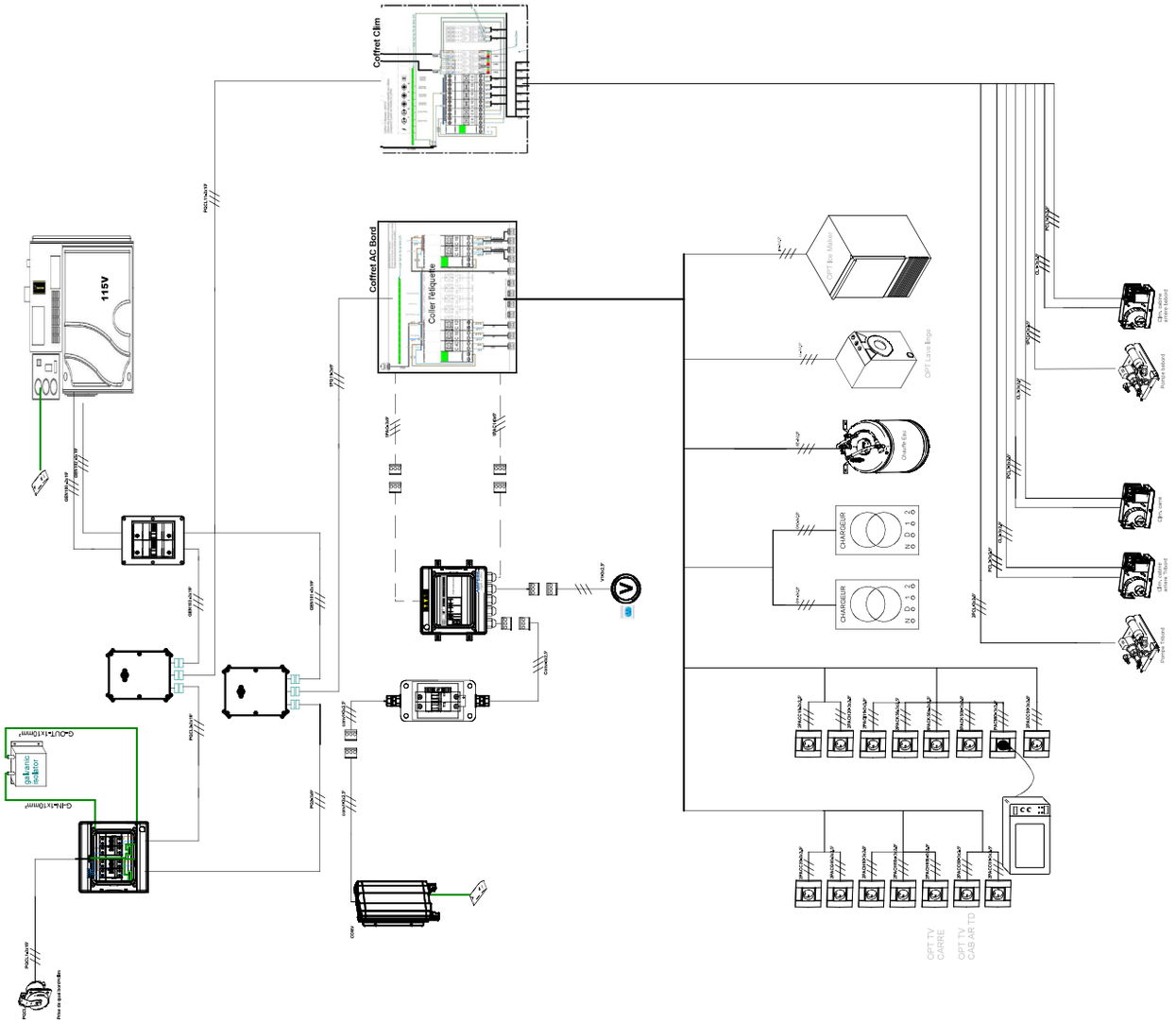
If the power cable falls into the water, it is recommended that the cable is replaced to prevent any risk of fire.

8.4.3 Diagram of layout - AC electrical system

Europe Version (220V / 50Hz)



US Version (110V / 60HZ)



8.4.4 DC/AC converter

- Never:
  - connect the inverter AC lead to an AC terminal or to the onboard generator.
  - disconnect the wiring from the inverter when in use.
  - open the inverter.
- Refer to the manufacturer's instructions for use and maintenance.

Description

- The inverter converts the DC voltage of the service battery bank to AC voltage. The circuit between the inverter and the batteries is protected by a fuse or a circuit-breaker.
- The inverter is earthed by an earthing plate located under the hull (see Chapter: EARTHING PLATES).
- The voltage measurement delivered at the converter output is visible on the touch screen.

Operation

Remark

Simply cutting the AC power supply at the switch panel does not cut the AC power supply to the cabins: it is also necessary to disconnect the DC supply.

Power supply for the 220V AC electric sockets in the cabins:

- Once there is sufficient nominal voltage coming from the AC switch panel, AC power is supplied by the onshore socket or by the generator.
- If there is insufficient nominal voltage coming from the AC switch panel, the AC power supply automatically switches over to the inverter. In this way, the power for the 220V sockets in the cabins can be supplied by the inverter, itself supplied by the service battery bank. Be careful to disconnect the inverter circuit to prevent the AC power supply automatically switching over and to prevent accidental discharge of the service battery bank. This can be done by:
  - setting the inverter's circuit-breaker to the OFF position; or,
  - setting the switch located on the inverter to the OFF position.

Operation

- The inverter is fully automatic.
- A remote control is located near the boat's switch panel. To start the converter put the switch on the invertor in the "REMOTE" position then put the switch located on the remote control in the "ON" position.
- If the switch on the inverter is in the "OFF" position, you cannot use the remote control to start it.
- The DC/AC converter operates by default when shore power is not supplied. It is controlled by a relay connected to the shore power supply. This converter powers the indoor sockets and some onboard appliances.
- When shore power is not connected, the relay automatically connects the inverter to a part of the onboard AC circuit.
- When the shore power socket is plugged in and powered, the relay automatically disconnects the inverter.

Maintenance

- Check at least once a year that the inverter cables and connections are securely tightened.
- Clean the inverter by removing any accumulated dust to ensure good ventilation.

8.5 Protection against electrolysis / Earthing plate

8.5.1 Anodes

- Never cover the anodes in antifoul.
- During the first few weeks that the boat is in the water, check the anodes and replace them if necessary: they erode very rapidly during this period.

General points

- The sacrificial anode protects the submerged elements of the boat against electrolysis.
- A sacrificial anode is a consumable part that protects submerged metal parts by its dissolution (oxidation). The anodes used are made of a metal that is more readily reductive than the metal they are protecting.
- On a new boat, all the underwater metallic components seek to reach the same electric potential, which leads to the rapid deterioration of the anodes during the first few weeks in the water.
- You can put several anodes on the hull.

Cleaning anodes

Use emery paper. Do not use metal brushes or steel tools to clean the boat as this may damage the galvanic protection.

Maintenance

- At least 2 times a year, check the corrosion on all of the anodes. Change the anode if necessary (Before it has lost 50% of its weight).
- Use the appropriate anodes for the cruising area: magnesium anodes for fresh water; zinc anodes for seawater.
- If the motor mountings are raised, the anodes are out of the water: in this case the anodes can no longer protect the sterndrive: take note of the skipper's recommendations.
- When the boat is kept in a dry dock, a light deposit of dust will settle on the anodes: clean the anodes before relaunching.

Replacing the anodes

- The anodes are fastened with screws and nuts. First, remove the screws and nuts that hold the anode, then clean the contact surface. Press the new anode to obtain a good electrical contact.
- Change all the anodes every year.

8.5.2 Earthing plates

Never antifoul over the earthing plates.

- An earthing plate is a shot-peened plate mounted on the hull to recreate an earth neutral point on the electrical circuit of the equipment supplying AC power (AC/DC convertor). The earthing plate earths this equipment.
- The earthing plate is not an anode: it must not be allowed to deteriorate.
- If the earthing plate deteriorates, consult a professional immediately to determine the cause. Because it is mounted across the hull below the waterline, deterioration of the earthing plate puts the boat at risk of sinking.

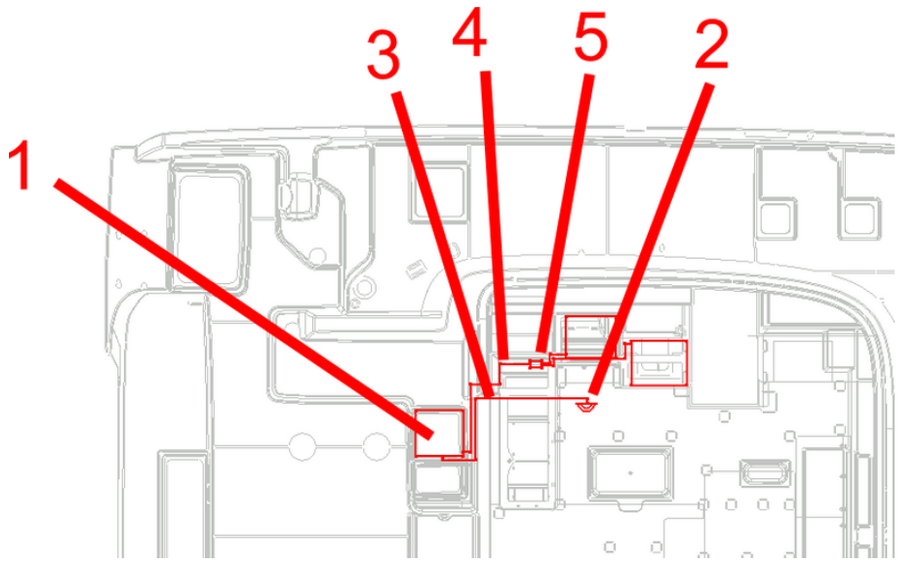
9

Liquefied Petroleum Gas (LPG) System

9.1 General points

- The working pressure of the LPG unit is 28 millibars
- Recommended cylinder capacity:
  - Europe Version: 2,75 kg of butane.
  - US Version: 5 lb of propane.
- Have the hoses, the entire LPG system and the flue pipes in the LPG system inspected professionally and regularly (or at intervals determined by the national requirements of the country in which the boat sails), and have them replaced if damage is detected.
- Taps attached to empty cylinders must be closed and disconnected. Protective covers, lids or caps must be held in place. Spare bottles must be stored outside on the boat and protected from weather and mechanical damage. If a gas leak occurs, it is essential that the gas escapes outside.
- Do not impede access to the components of the LPG system.
- Do not use the housings or the LPG bottle lockers to store other equipment.
- Check the vent pipes at least once a year. Replace them if they have deteriorated or split.

Location of components



1. Gas cylinder locker
2. Gas locker outlet
3. Drain
4. Gas system
5. Gas supply valve

Layout of components

Gas cylinder locker

Location: Cockpit

Cooker

Solenoid (US Version)

Location: Galley (Under the sink)

9.2 Operation of the LPG system

- Valves for supply lines and cylinder valves must be closed when appliances are not in use, before changing a cylinder and immediately in case of emergency.
- Appliance valves must be closed before opening the cylinder valve.
- Ventilation is necessary when appliances that consume oxygen from inside the boat are used.
- If the stove is not suspended by gimbals, it should not be used when wide roll angles or continuous listing are likely.
- Please refer to the manufacturer's notes for the use and maintenance of the LPG cooker.

9.3 Verification of the LPG system

- When the cooker is on, ventilate well to prevent any risk of asphyxiation.
- Do not use the cooker as a means of heating.

- If a leak or fire from an LPG tank is detected, close the main LPG supply valve and do not use LPG appliances.
- Do not use an installation with a leak before it has been inspected and repaired by a competent person.
- Do not modify the boat’s LPG system. Installation, modification and maintenance should be carried out by a qualified individual. Have the system checked at regular intervals or as prescribed by national requirements.
- Never use a naked flame to check for leaks.
- Do not use a hotplate or an oven to heat the living areas.
- Fuel-burning equipment with a naked flame consumes the oxygen in the cabin and leaves combustion residue in the boat. Ventilation is necessary when this equipment is used.Open the vents provided for this purpose when using this equipment. Do not use a hotplate or an oven to heat the living areas. Never obstruct the openings provided for ventilation.
- Ventilation requirements have been calculated for LPG appliances as installed. Additional ventilation openings may be required if other appliances are installed in addition to these (please consult a professional).
- Never leave the boat unsupervised when equipment using LPG with a naked flame is on.
- Do not smoke or use a naked flame when replacing LPG bottles. Close the tap on the empty bottle before detaching to replace it.
- To ensure sufficient ventilation, make sure that you open the hatches or ports near the hotplate when using it.

Do not use solutions containing ammonia when testing for leaks manually (ammonia, which is present in certain soaps and detergents, attacks brass connections. Although the damage may at first be impossible to detect, the cracks and leaks may appear several months after contact with the ammonia).

Remark

Leak tests carried out by the boat user are not a substitute for regular and complete checks of the LPG circuit by a competent professional.

The LP system should be tested for leakage before each use in any of the following ways:

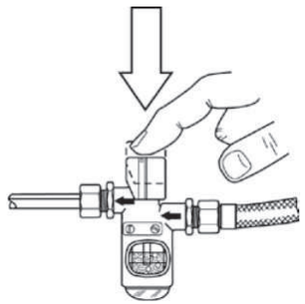
- If the LPG circuit is equipped with a pressure gauge:
  - Before each use, close the appliance valve, open the LPG cylinder valve, allow the pressure gauge to stabilize, close the LPG cylinder valve and observe the pressure indicated by the pressure gauge near the LPG cylinder for 3 minutes. The pressure indicated by the manometer should be constant if there is no leak in the system.
  - The pressure indicated by the manometer should be constant if there is no leak in the system. If bubbles are observed in the detector liquid, there is a leak.

  Remark

  The pressure gauge only indicates vapour pressure, which is a constant at a given temperature. It gives no indication of the amount of LPG remaining in the cylinder..

- If the LPG circuit is equipped with a bubble leak detector, use it as follows:
  - Regularly observe the bubble leak detector.

    or
  - Once the installation is pressurised and stabilised, press the detector push button. The installation is not leaking if bubbles do not appear in the detector liquid. If bubbles are observed in the detector liquid, there is a leak.



Carry out a manual search by applying a foaming solution, soapy water or a detergent (with the burner taps closed and the installation and gas bottle taps left open). Foaming solutions for detecting leaks in gas installations conforming to EN 14291 are adequate for these requirements.

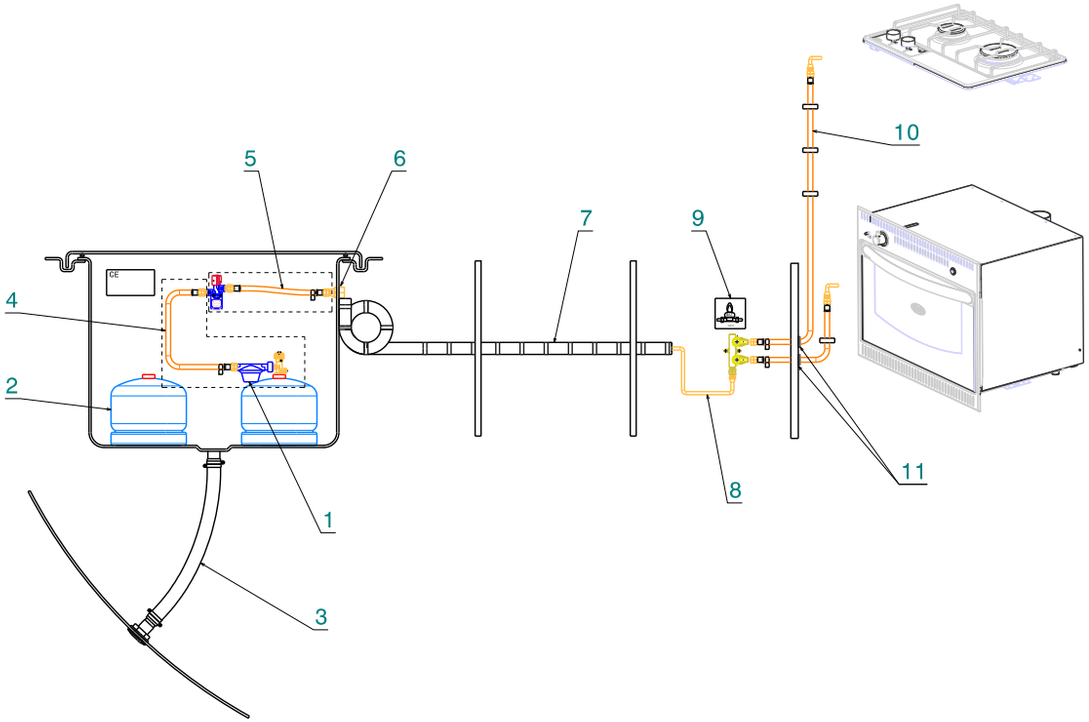
- If an LPG leak is detected or suspected, immediately take the following measures:
  - Cease use of all LPG appliances;
  - Disconnect the LPG supply from the supply valve(s);
  - Extinguish all naked flames and other sources of ignition (heaters, cooking appliances, pilot lights, etc.);
  - Do not operate electrical switches;
  - Evacuate the area if possible.

To change an LPG bottle:

1. Close the tap on the LPG bottle
2. Detach the LPG bottle
3. Replace the LPG bottle
4. Attach the new LPG bottle
5. Open the tap on the LPG bottle

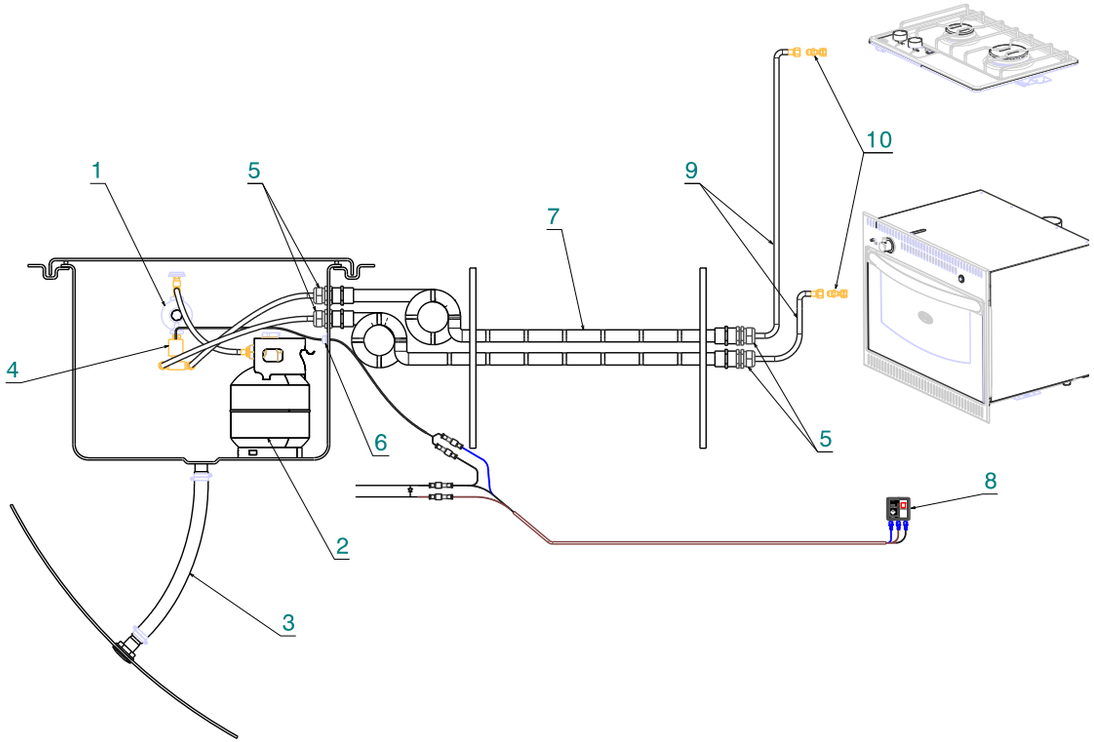
9.4 Diagram of layout

Europe Version



1. Regulator valve
2. Gas cylinder
3. Drain
4. Gas bottle connection kit
5. Bubble tester kit
6. Rubber washers
7. Ringed PVC sheath
8. Copper gas connection kit
9. Label
10. Gas appliance connection kit
11. Bulkhead fitting

US Version



1. Regulator valve
2. Gas cylinder
3. Drain
4. Electromagnetic valve (12V)
5. Bulkhead fitting
6. Wire passage
7. Ringed PVC sheath
8. Solenoid switch
9. Plastic propane pipe
10. Gas appliance connection kit

Onboard comfort

10.1 Fuel-burning equipment for purposes other than propulsion (Generator, Heating)

- Make sure that the ventilation openings in the engine (and, if installed, generator) compartment are well-cleared.
- Stop the engine and refrain from smoking while the fuel tank is being filled.
- Have your fuel circuit checked regularly by a professional engineer.
- Avoid any contact between inflammable materials and the hot sections of the engine.
- Take all necessary precautions to avoid contact with naked flames and other hot areas.
- Do not obstruct or modify the ventilation system.
- Fuel stored outside the tanks (jerrycans, portable fuel tanks, etc.) must be stowed on deck and protected from bad weather and mechanical damage.

10.1.1 Generator

- Refer to the manufacturer's instructions for use of the generator.
- Never start the generator when the air conditioning is already on. Always turn off the air conditioning before turning off the generator.
- Never connect the shore power to the generator: you may suffer an electric shock.
- An extinguisher access port is provided on the generator in the event of a fire starting in the generator.

General points

- The generator is a machine which can produce AC electrical power using mechanical power (fuel). The generator powers onboard equipment operating at 220V or 110V, moored or sailing.
- The generator starts with its own battery (12V circuit).
- Make sure that there is enough fuel in the fuel tank before using the generator. The generator is supplied with fuel by the port/starboard tank.
- The cooling water and exhaust gases are separated in the separator to avoid noise pollution. The seawater is discharged below the waterline. The exhaust- pipe is located above the waterline. Check visually that the exhaust gases are being expelled properly.
  Make sure that the ventilator in the generator compartment is working.
- Check to see if any leaks appear (seawater, coolant, fuel, exhaust gases). If there is a leak, stop the generator at once and have the leak repaired.
- The generator is earthed by an earthing plate which is located under the hull (see Chapter: EARTHING PLATES).
- Maintenance of the generator must only be done by qualified and proficient personnel. Before working on the generator, it is imperative to isolate the generator's battery power, to prevent it from starting accidentally.
- The generator can be started by the switch on the generator itself or by the switch on the control panel.

Starting up

- Fill the generator with water to prevent the seawater pump from running dry (refer to the supplier's recommendations).
- Open the raw water intake valves and evacuation valves.
- Open the fuel supply valve.
- Turn the generator's battery switch to the ON position.
- Switch the generator's circuit-breaker to the ON position.
- Turn on the generator using the remote control (located near the main switch panel).
  or on the generator itself.
- Make sure that no AC equipment is running. Toggle the shore power/ generator switch.

In the event of the generator catching fire

- Do not open the generator.
- Cut the power supply (electrical and fuel) to the boat's engines, to the generator and to the ventilators.
- Use the extinguisher access port on the generator to discharge the contents of the portable extinguisher.

Extinguisher access port

11

Water systems

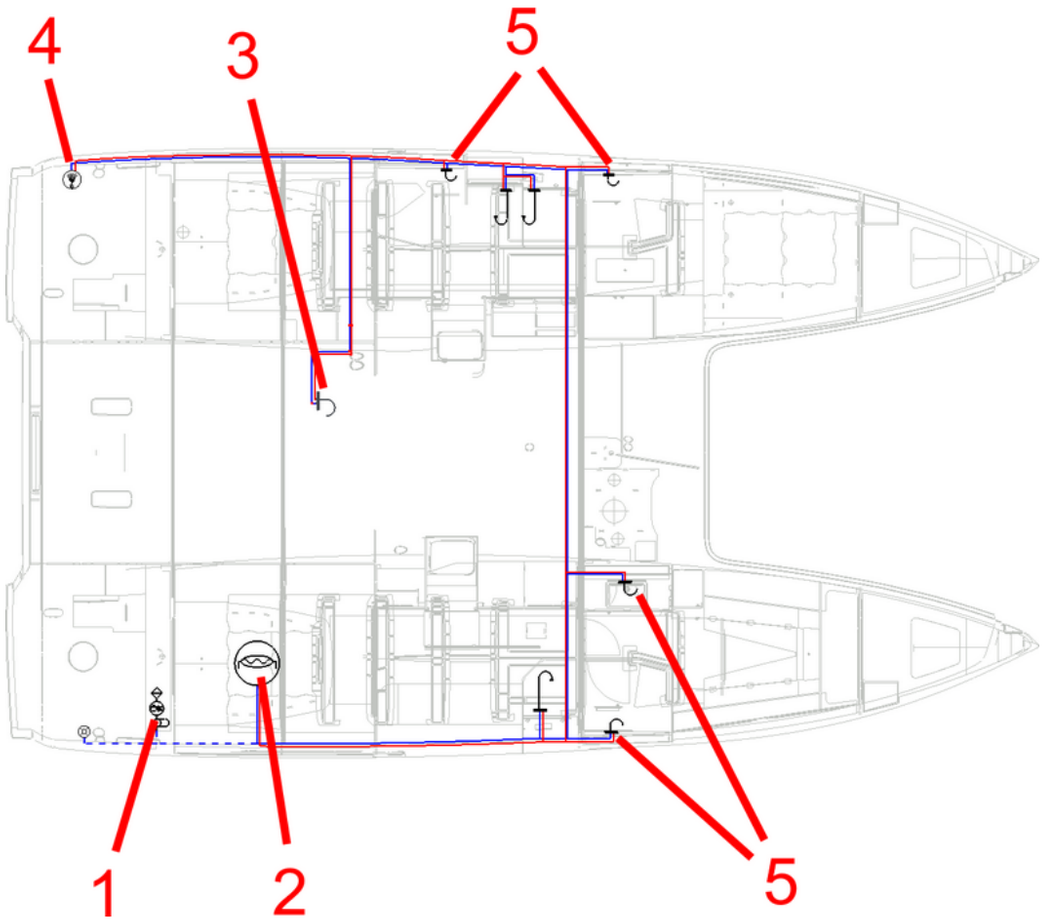
11.1 General points

- Regularly check water-tightness of joints in the water system installations. Check that screws and bolts are well tightened and replace them if they are worn or corroded.
- Disconnect the onshore shore water supply before leaving the boat (if fitted).
- If the boat is sailing in temperatures below freezing, antifreeze can be used in the water systems: use a non-toxic antifreeze for potable water.
- Never use automobile antifreeze: risk of poisoning.

- It is essential to rinse the entire on-board water system the first time the boat is used (the water system is protected in the factory by a non-toxic antifreeze).
- The water tanks may have had an anti-algae treatment using a copper sulphate based product. It is advisable to renew the treatment according to the area in which the boat is sailing.
- Drain all the water systems during winterisation (in particular the cockpit shower and water heater) to avoid damage from freezing.
- Clean/change the filters regularly.
- The onboard water from the boat's tank(s).
- Particular care must be taken when filling the tank(s) to prevent contamination of the entire plumning circuit with water which is not fit for drinking or food use.

11.2 Fresh water distribution system

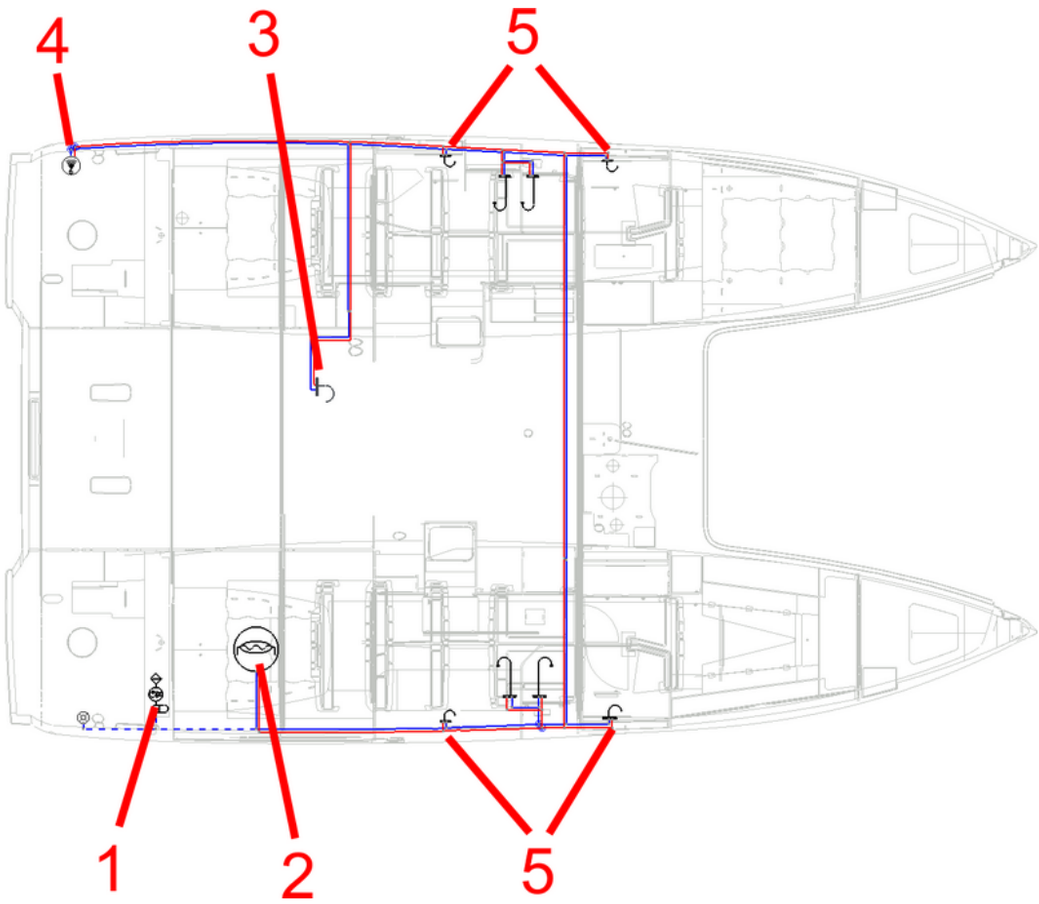
3 cabins 2 heads version



Cold water system – 20mm diameter
Cold water system – 12mm diameter
Hot water system – 20mm diameter
Hot water system – 12mm diameter

1. Water unit
2. Water heater
3. Galley sink mixer tap
4. Cockpit shower
5. Head sink mixer tap

4 cabins 2 heads version



- Cold water system – 20mm diameter
- Cold water system – 12mm diameter
- Hot water system – 20mm diameter
- Hot water system – 12mm diameter

1. Water unit
2. Water heater
3. Galley sink mixer tap
4. Cockpit shower
5. Head sink mixer tap

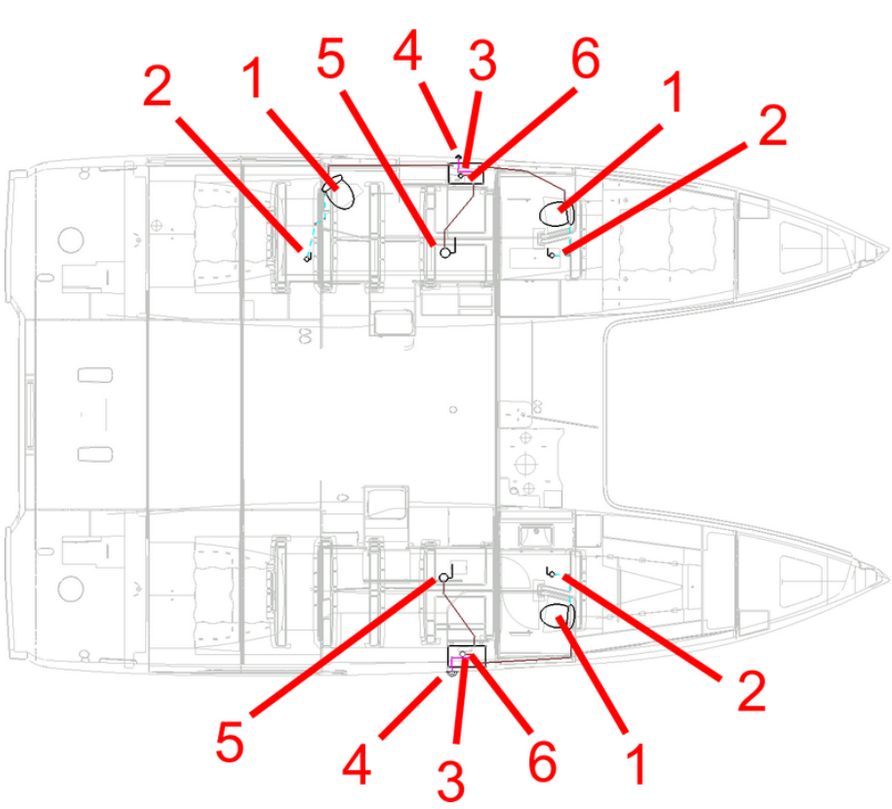
11.3 Blackwater system (Toilet)

General points

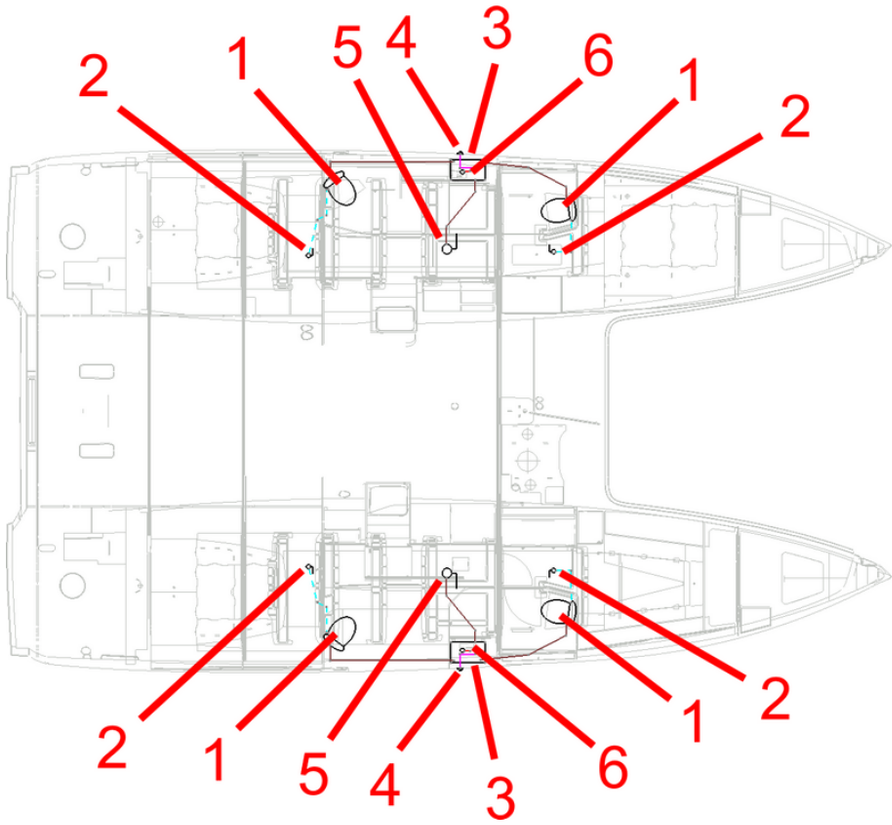
- Blackwater is human waste including water flushed from the toilets.
- Close the valves after each use and especially when the boat is unattended.
- Regularly check the valves and thru-hull seacocks for proper operation and watertightness.
- Regularly check the tightness of the flexible pipe clamps and connections.

Diagram of blackwater system

3 cabins 2 heads version



4 cabins 4 heads version



1. Manual toilet
2. Seawater intake
3. Blackwater tank
4. Blackwater tank vent
5. Drainage of blackwater tank into the sea
6. Black water tank drainage cap

Your boat is fitted with a blackwater tank

To minimise odours from this tank, we suggest following the use and maintenance guidelines below:

Holding tank

- A blackwater tank is used solely for the temporary collection of water from the toilets.
- The tank can be emptied in 2 ways:
  - By connection to a pumping system that empties the tank by suction. This system uses the "WASTE" deck connection.
  - Via the thru-hull fitting, which empties directly into the sea (provided that the laws of the country in which the vessel sails permit dumping into the sea).
- Only use water-soluble toilet paper to avoid blockages.

Remark

Sanitary towels and other items (paper handkerchiefs, dressings etc.) in the toilets and blackwater tank will result in blockages.

- Faecal matter causes the formation of unpleasant odours in the blackwater tanks, to which the use of salt water for flushing the toilets also contributes. Algae present in salt water also give off unpleasant odours.
- Completely empty the blackwater system before leaving the vessel unattended in temperatures below freezing.
- Ask for information about the laws in force in your country or your marina about discharging your waste waters into the sea.

Use of toilets

- Every time the toilets are used, flush afterwards with copious amounts of water in the bowl using the toilet pump (manual or electric).
- When you are leaving the boat for several days, flush with fresh water. You may wish to use the shower in the head for this purpose. Seawater allowed to stagnate in the bowl gives off bad odours.

Maintenance of blackwater tank

Never use automobile anti-freeze in the blackwater system: risk of poisoning.

Advice / Recommendation

Respect local regulations regarding the emptying of blackwater tanks.

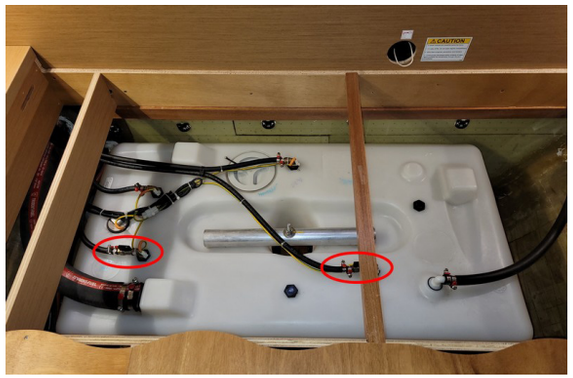
- The risk of unpleasant odours forming increases when the waste water remains in the tank for a long time.
- Whenever possible empty the tank regularly, even before it is full.
- Every time the tank is emptied put in about 5 litres of fresh water and add an appropriate detergent additive (available from chandleries). A very simple method is to add soda salts, which clean and disinfect at the same time.
- Before winterising, flush the tank with copious amounts of fresh water filling it through the 'WASTE' deck connection. Leave at least 5 litres of fresh water mixed with a detergent additive.
- Disinfecting: Disinfect the tank once a year by filling it with a solution of Javel water (1 to 1000).

Engine

12.1 Information relating to fire risks and risks of explosion

- Make sure that the coolant is circulating properly.
- Make sure that the vents of the engine compartment/of the fuel tank compartment are fully clear.
- Stop the engine and refrain from smoking while the fuel tank is being filled.
- Have your fuel circuit checked regularly by a professional engineer.
- Avoid any contact between inflammable materials and the hot sections of the engine.
- Never switch off or cut off energy to the electric system when the engine is running.
- Never block access to the fuel supply valve.
- Do not obstruct or modify the ventilation system.
- Never turn the engine over when the boat is on land.
- Fuel stored outside the tanks (jerrycans, portable fuel tanks, etc.) must be stowed on deck and protected from bad weather and mechanical damage.
- Check regularly that the engine compartment/petrol tank compartment is clean and dry.
- The fuel lines may become worn with age or be damaged by some impacts, pinch points or abrasion. Some lines, particularly those with a steel core, are subject to corrosion. For safety reasons, it is important to visually inspect their condition and operation at regular intervals and replace defective parts.

Fuel supply valve



Port tank: Port side engine supply valve
Starboard tank:Starboard engine supply valve & Generator supply valve

12.2 Danger from moving mechanical parts

- Keep away from the drive shafts and the mechanical parts of the engine when they are in motion (including belts, moving parts and hot components).

- Be careful if you have long hair, bulky clothing, rings etc. (these may become caught).

12.3 General points

- Do not install an engine more powerful or heavier than recommended for this boat, since doing so may compromise the boat's stability.
- Any alteration or modification to the exhaust system of the propulsion engine(s) is prohibited.
- Make sure you have enough fuel before sailing.
- Stop the engine before opening the engine compartment.
- Do not close the fuel supply valve between each use of the engine (except in the event of prolonged disuse).
- Get the whole propulsion system checked at least once a year by a professional engineer.
- Always start the engine with the control lever in neutral.

Type of motorisation

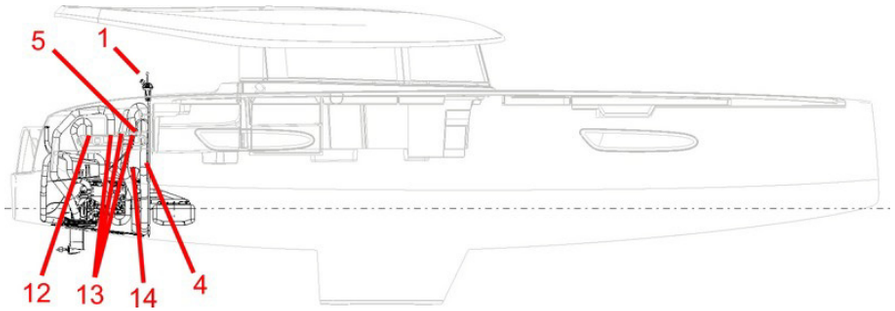
- Your boat is fitted with two in-board diesel engines.
- The transmission is Sail-drive type.

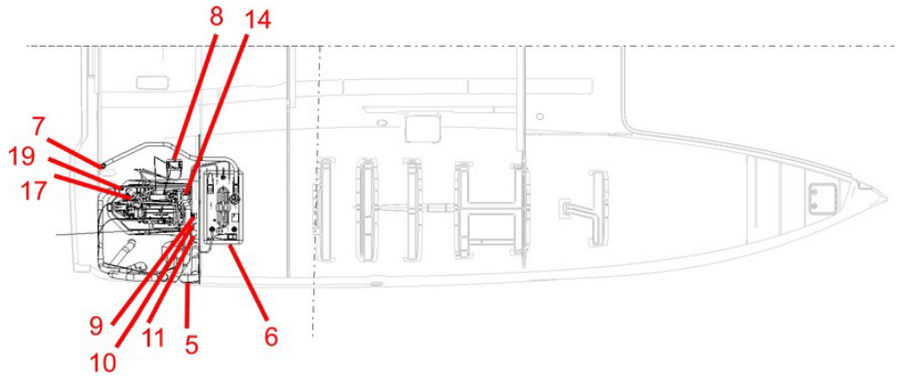
Do not install engine(s) on this boat which are more powerful than the recommended power output, this may cause a loss of control of the boat and lead to serious injuries or death.

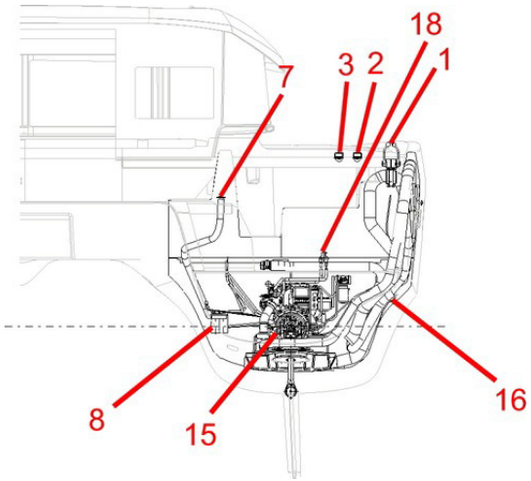
Advice / Recommendation

- Regularly check that the O ring on the filler cap is in good condition to prevent water ingress.
- Keep the fuel tank as full as possible to prevent condensation.
- Be careful with any possible risk of oil and fuel spillage.
- Follow the engine manufacturer's instructions exactly.
- Never switch off the battery isolators when the boat's engine is running (risk of serious damage to the charging circuit).
- Regularly check the oil level (a gauge is provided for this on the engine).
- Regularly drain the engine according to the engine manufacturer's instructions.
- Capacity of drainage oil tank: 2 x 5,5L.

12.4 Engine installation







1. Engine control lever
2. Starboard engine control panel
3. Port engine control panel
4. Non-return valve
5. Fuel tank vent
6. Fuel tank
7. DIESEL deck filler
8. Engine battery
9. Expansion tank
10. Seawater filter
11. Fuel filter
12. Hot air extraction
13. Fresh air inlet
14. Engine compartment ventilator
15. Seawater intake
16. Engine exhaust
17. Propulsion engine
18. Anti-siphon valve
19. Water trap

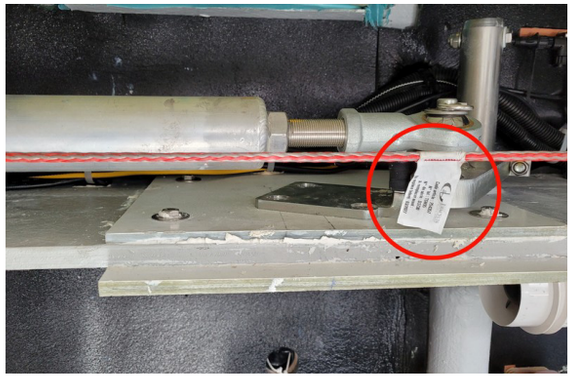
13

Steering system

13.1 General points

- The steering operates by steering cables.
- The steering system is an important safety feature. For this reason, an annual inspection of the whole system must be carried out by a professional engineer.
- Owners are expected to operate the boat in a reasonable manner, with the direction of the helm (in degrees/seconds) set according to the actual speed of the boat.
- Be aware of movements of the helm when going astern.

- Regularly check the tension of the steering cables and the tightness of the steering components. If needed, adjust the tension of the steering cables. Don't tighten the steering cables excessively. When properly adjusted the steering should work smoothly, with no play at all and no stiffness in the tiller or wheel (consult your dealer).
- Regularly grease the chains and pinions.
- Do not grease the steering cables or the pulleys.
- Maintain the nylon, ertalon or teflon bushes with only a suitable lubricant.
- Each ring is a wearing part: make sure you change them regularly (Please contact your dealer).



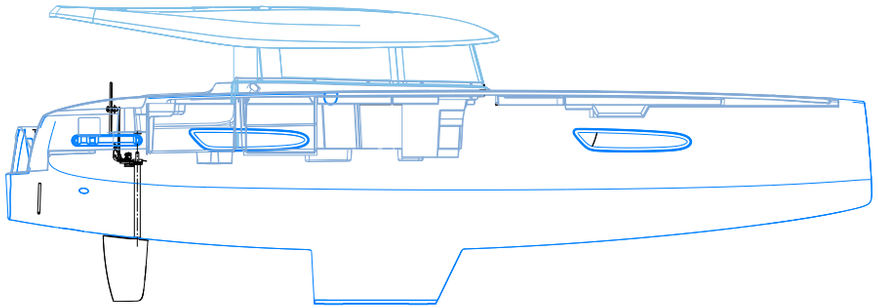
NOTE: The textile lines on the boat have a lifetime of 5 years.
Beyond 5 years (the expiry date is sewn on the textile lines) the textile lines must be changed.

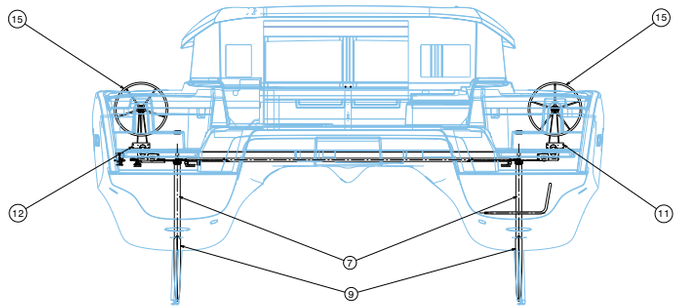
- The steering bearings do not require any special maintenance.
- It is only recommended that you regularly rinse the bearings of the steering system with fresh water when taking the boat out of the water.

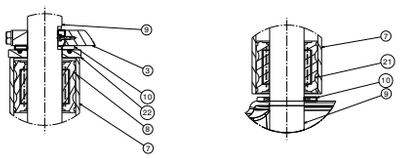
Remark

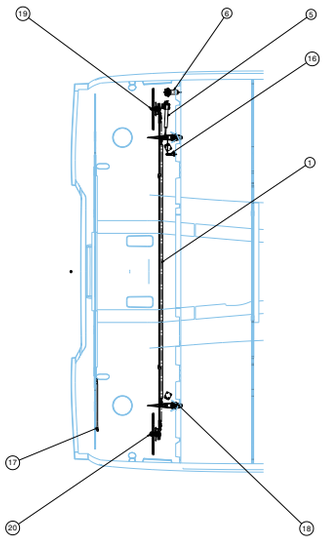
Greasing the steering bearings creates a risk of them seizing with dust and no longer working properly.

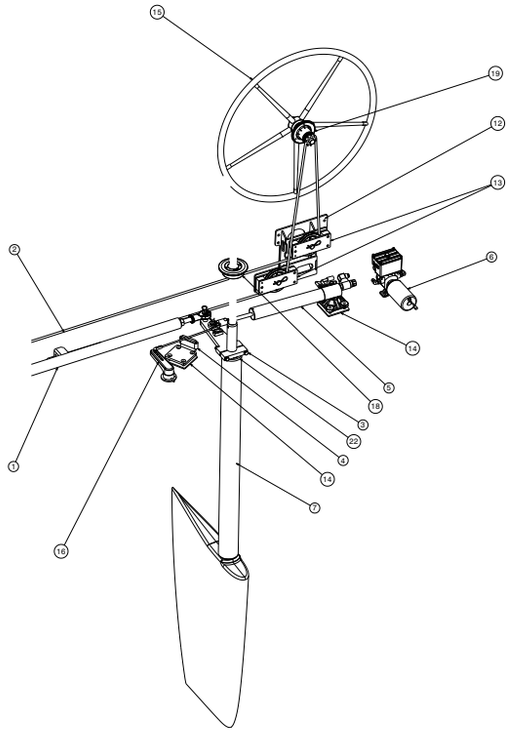
13.2 Diagram of layout











1. Connecting rod
2. Line
3. Stock arm
4. Stock arm stop
5. Pilot actuator (Option)
6. Hydraulic pump (Option)
7. Rudder tube
8. Waterproof roller bearing
9. Rudder
10. Balance bush
11. Starboard sheave support
12. Port sheave support
13. Sheave
14. Back plate
15. Steering wheel
16. Autopilot (Option)
17. Emergency tiller
18. Access hatch to emergency tiller
19. Steering Gear (without brake)
20. Steering Gear (with brake)
21. Roller bearing
22. Thrust bearing

14

Deck fittings

14.1 General points

Alcohol, solvent or acetone-based solutions must not be used to clean/maintain the outer surfaces of the boat. A warm, soapy, water-based solution is best for this purpose.

14.1.1 GRP

Advice / Recommendation

The boat's polyester outer skin is strong enough to withstand the design pressure but it is not designed to withstand localised damage caused by impacts against hard/sharp objects. If the outer skin is damaged, it must be repaired immediately.

- Regularly brush the deck using a gentle de-greasing agent then rinse the deck with fresh water.
- Use as few cleaning agents as possible.
- Don't use solvents or aggressive detergents.
- Don't dump cleaning agents into the water: Consult the harbourmaster's office to find out the conditions of water use and the maintenance area for cleaning your vessel.
- Do not use a pressure washer.

14.1.2 Plexiglas (PMMA)

Advice / Recommendation

Never use solvents, alcohol, acetone or detergents on plexiglass.

- Rinse plexiglas with fresh water.
- Use a polish paste for thin scratches.
- Consult your dealer if deep scratches occur.

14.1.3 Stainless steel

- Passivating paste is an acid-based product whose purchase and/or use may be subject to regulation.
- Please contact your dealer.

Stainless steel is an alloy of iron and carbon (steel) with the addition of chromium. The chromium creates a protective film which insulates the steel from the surrounding environment. This coating is usually invisible due to its thinness. Thus, despite its name, this steel is not stainless and requires a minimal level of maintenance:

- Chromed tools are preferable whenever handling stainless steel;
- Re-nourish the protective film regularly with passivating paste.

14.1.4 Solid wood on exterior wooden panelling

Advice / Recommendation

Never use detergents, acetone or other harsh products on the wood.

- Wood exposed to harsh conditions such as salty air and UV rays tends to become whiter and to lose its natural colour. This phenomenon has no effect on the intrinsic qualities of the wood, but can spoil its aesthetic appeal.
- To maintain the colour of the wood, regularly wash the woodwork in fresh water using a sponge (if necessary, use a mild soap).
- It is recommended that you oil the external woodwork regularly using teak oil in order to protect it from harsh conditions.

14.1.5 Exterior upholstery

If the wind exceeds 20 knots, it is recommended that you stow all removable protection sheets (Bimini, awnings...).

Advice / Recommendation

Never:

- use a heat source (hairdryer/clothes dryer);
- use detergent, silicone, acetone, chlorine-based products or hot water;
- use a high-pressure cleaner.

- Bring the removable cushions inside (washed with soapy water then dried) when the vessel is unoccupied.
- Put canvas sheets/protective covering over the fixed upholstery.

Maintenance

To maintain the quality of the fabric, spray regularly with clarified water and brush with a soft brush (such as a clothes brush). A thorough clean every 2 years is recommended.

Stain removal

Follow these steps for routine cleaning:

- Remove as much debris as possible using a soft brush;
- Spray the fabric with water;
- Prepare a cleaning solution using mild soap and water (do not use detergent);
- Wash with a soft brush;
- Wait for the soap solution to act;
- Rinse thoroughly in fresh water;
- Dry in the open air.

14.2 Anchoring, mooring, towing

14.2.1 Anchor points

Anchoring points showing visible signs of deterioration must be replaced.

Responsibility

It is the responsibility of the owner/user of the boat to ensure that the berthing lines, towing cables, chains and mooring lines and the anchors are adequate for the intended use of the boat, i.e. that the lines or chains do not exceed 80 % of the breaking strength of the corresponding anchor point.

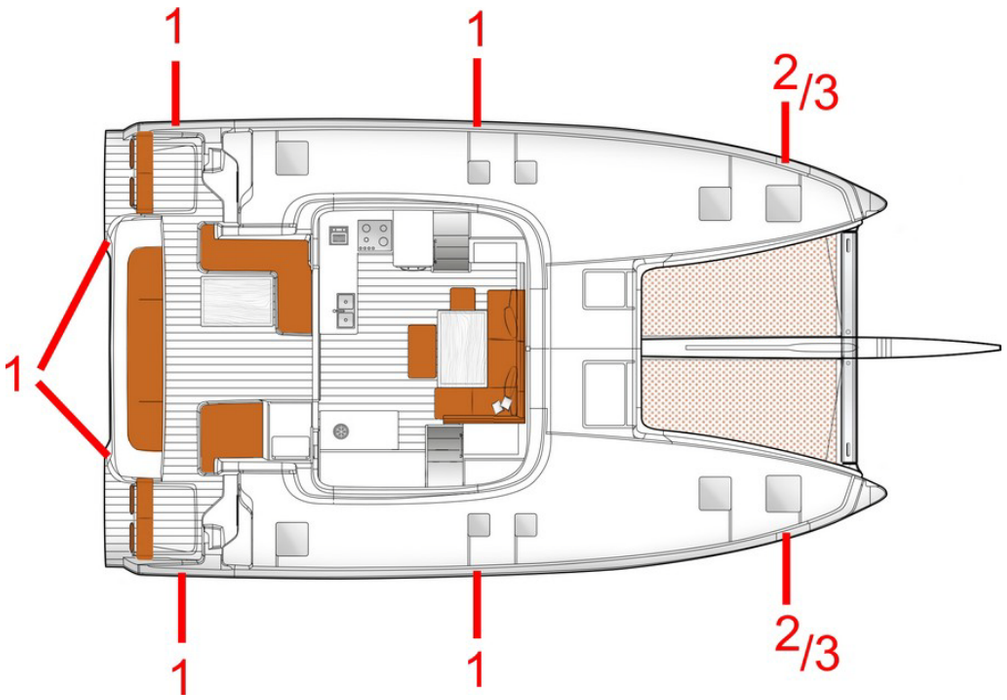
	Aft mooring	Forward mooring	Mooring & Towing
Reference *(Diagram on next page)*	1	2	3
Anchor Point Breaking Strength	37,9kN	54,3kN	54,3kN
Mooring Line/Chain Breaking Strength	30,3kN	43,4kN	43,4kN

14.2.2 Towing

- Generally the breaking strength of lines/chains must not exceed 80% of the breaking strength of the anchor points.
- Always tow or be towed at low speed. Never exceed the maximum speed of a displacement hull during a tow.
- Be particularly vigilant when the end of a towing cable is being thrown or received (the end may become caught in the propeller).
- A towing cable must always be secured in such a way that it can be released under load.
- Do not try to stop the boat by using a boathook or your foot, hand or any other part of your body.

Responsibility: It is important that the owner thinks through the actions required when securing a towing cable onboard.

Location of attachment points

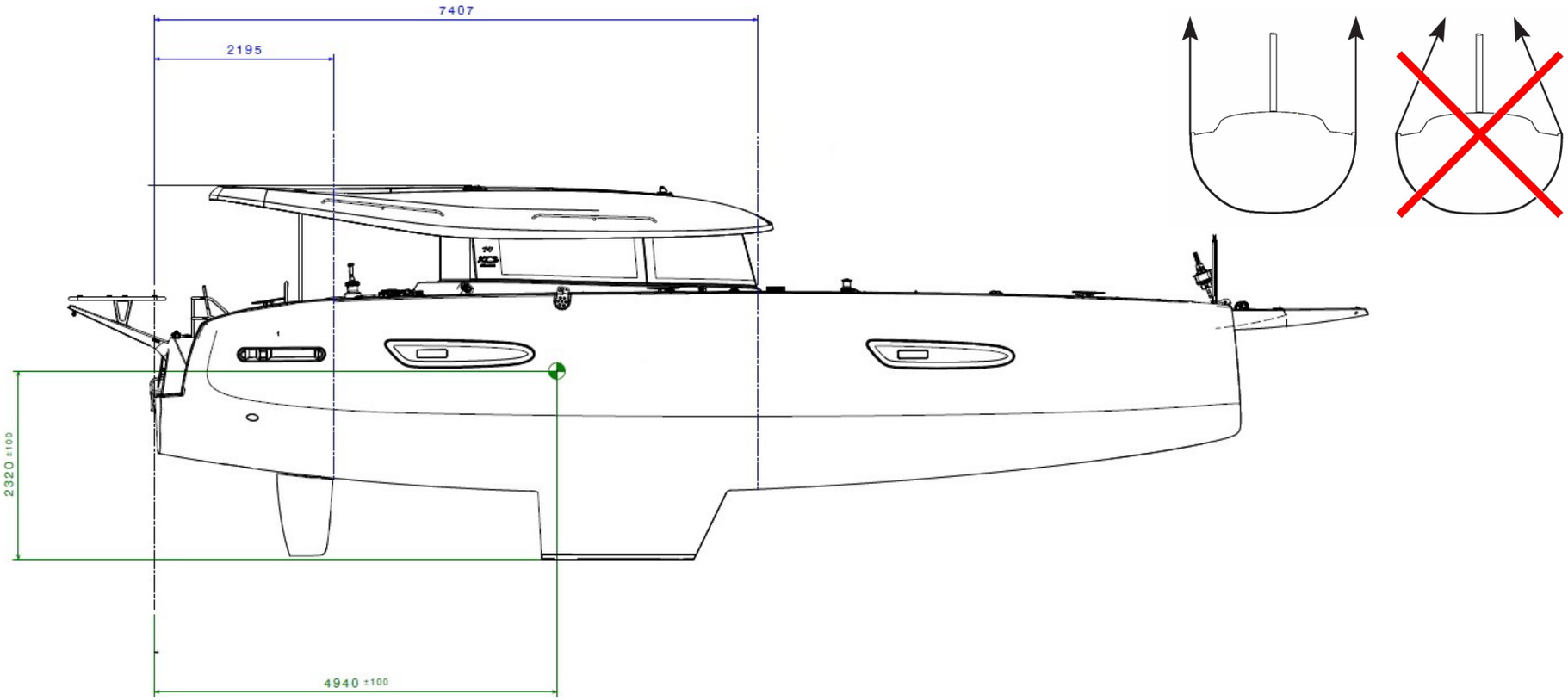


1. Aft and middle mooring cleat
2. Forward mooring cleat
3. Anchoring and towing cleats

15

Handling and transport

15.1 Lifting diagram

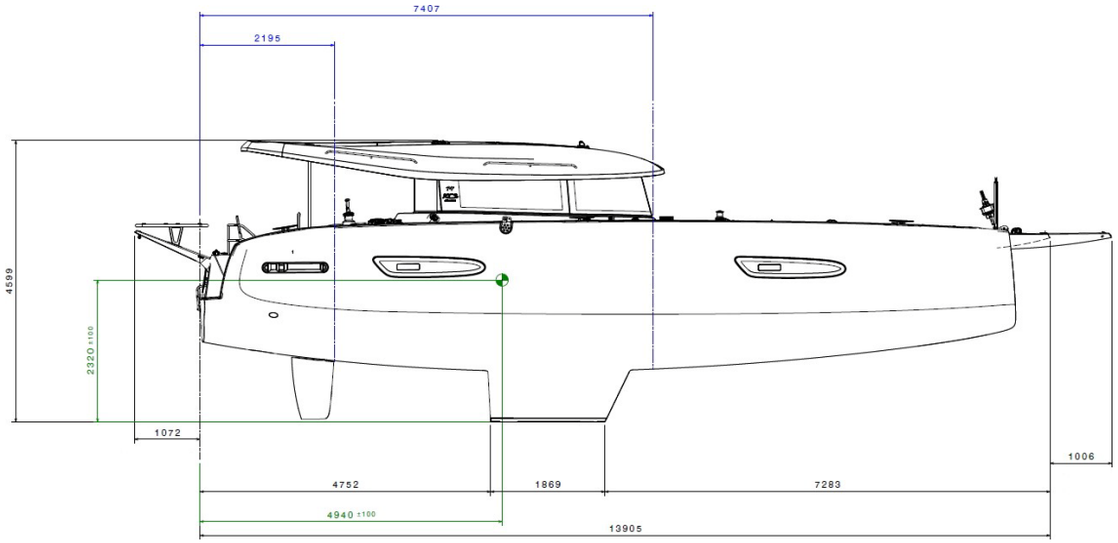


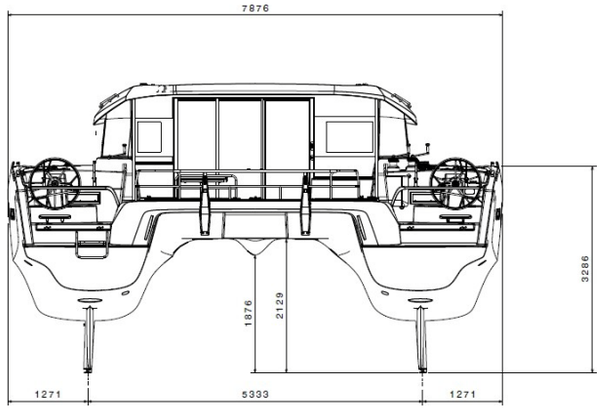
NOTE: Measurements are expressed in mm.

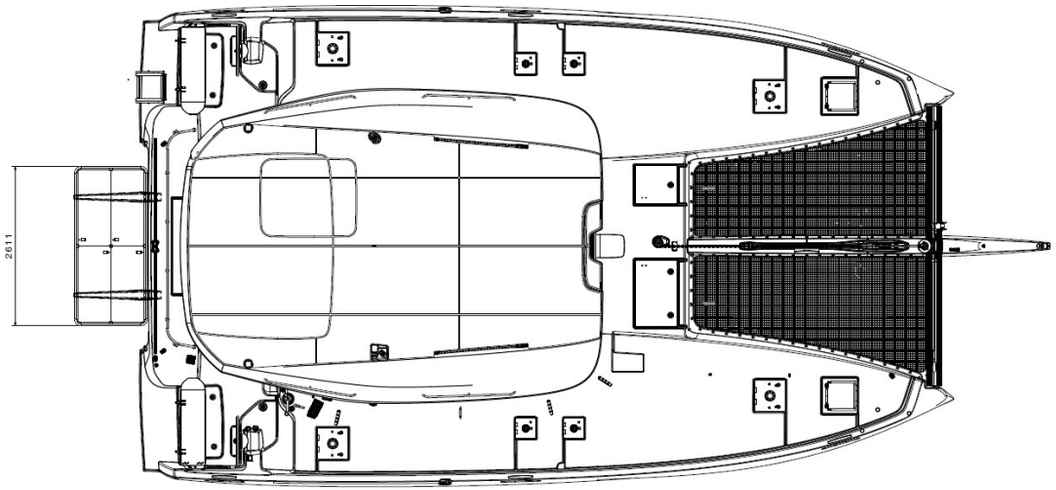
The position of the lifting slings is shown in the pictogram below:

15.2 Transport

Packing plan







NOTE: Measurements are expressed in mm.

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Environment

Waste management

- Make sure you know the local enviromental regulations and follow the codes of best practice.
- Do not pump out the toilets or the contents of the black water tank near the coast or in areas where this is forbidden. Use the pump-out facilities available in ports or marinas to empty the contents of the black water tank before leaving port.
- Make sure you know the international regulations to prevent pollution in the marine environment (MARPOL Convention) and follow these as much as possible.

- Throw all packaging in the recycling containers provided.
- Once a piece of equipment has stopped working completely, find out about the relevant recycling regulations from your nearest recycling centre or from your dealer.
- Make sure you follow the relevant local laws when scrapping.
- Some onboard equipment can have a toxic effect on the environment and on human health due to the specific substances they contain: Do not throw any equipment in household waste containers and absolutely never dispose of equipment in the sea.
- Dead batteries are toxic to health and to the environment. Batteries must not be put in with household waste and must be recycled separately. Contact the harbour master or a specialist company about recycling them.

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