Owner's Safety Manual

Hanse A

Sailboat “Hanse 400”

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Details:

Owner's Safety Manual
Owners Manual 400 Buch frz V14.doc
October 07

Summary

FRENCH

This manual aims to help you use your sailboat with pleasure and in complete safety. | contains general information about your sailboat and its equipment as well as their operation and maintenance. Please use this manual to familiarize yourself with your sailboat before your first trip to sea. For the use of the various devices on board your sailboat, please refer to the corresponding instruction manuals.

This owner's manual does not constitute a course in safety or navigation. If this is your first sailboat or if you are not yet familiar with the particular properties of a sailboat, please first, for your own safety and comfort, acquire the knowledge necessary for the use and proper functioning of the sailboat before taking the helm. Your retailer or the national sailing federation or your sailing club will be happy to provide you with all the information concerning training possibilities, if you wish to deepen or refresh your knowledge.

MAKE SURE that the predicted wind force and sea conditions correspond to the design category of your boat and that you and your crew are capable of maneuvering it in these conditions.

Your sailboat is adequately designed but you must be able to withstand storms from category A to serious conditions of category C, including the risk of breaking waves or gusts of wind corresponding to design categories A, Bet C. These are among the dangerous conditions in which only a competent, capable and trained crew can properly operate a well-maintained craft.

This manual does not constitute a detailed instruction manual for maintenance or troubleshooting. If you encounter difficulties, please contact your dealer. If a maintenance manual is provided, use it for the maintenance of your sailboat.

Only allow trained and competent personnel to carry out maintenance or carry out repairs or modifications on your sailboat. Modifications that could impact the safety properties of the boat must be assessed, carried out and documented by qualified specialists. The boat manufacturer cannot be held responsible for modifications that it has not authorized.

In some countries, a permit or authorization is required or certain specific regulations must be respected.

Maintain your boat correctly and take into account the wear and tear that appears over time and frequent use or following improper use of the boat.

Any boat, regardless of the solidity of its construction, can be seriously damaged by improper handling. Always adapt the speed and heading of your sailboat according to the sea conditions.

If your boat is equipped with a liferaft, read its instructions carefully.
Safety equipment corresponding to the type of boat and climatic conditions must be on board your sailboat (life jackets, seat belts, etc.). In some countries, this equipment is mandatory. The crew must be familiar with the use of all safety equipment as well as the necessary maneuvers in the event of an emergency (rescuing a man overboard, mooring, etc.). Sailing schools or clubs regularly organize training.

The crew must always wear buoyancy equipment (e.g. life jacket) when on deck. Don't forget that in some countries legal provisions require you to wear buoyancy equipment that meets national regulations at all times.

We recommend keeping this manual on board the sailboat so that you can consult it at any time or in the event of troubleshooting.

Please note that some illustrations may show equipment specifications which are not part of the contract.

FRENCH

PLEASE KEEP THIS MANUAL IN A SAFE PLACE AND TRANSMIT IT TO THE NEW OWNER IF YOU SELL YOUR SAILBOAT.

Sarl HanseYachts AG welcomes you to the circle of owners of a Hanse sailboat and thanks you for the trust you have shown in purchasing this boat.

Your dealer as well as the management and employees of the HanseYachts AG shipyard wish you lots of fun with your new sailboat.

A good course in all weathers and always a handful of water under the keel!

Limited Partnership HanseYachts AG

Management

Design category

According to a requirement of the European Directive relating to pleasure boats, each boat must be classified in a design category.

The “Hanse 400” sailboat is classified in design category A.

Design category A is characterized in the European Directive as follows:

Design Category A: Deep Sea

Concerns offshore navigation with climatic conditions that can exceed force 8 (Beaufort scale) and waves that can exceed a significant height of 4 meters for largely self-sufficient boats. Extreme weather conditions such as cyclones are excluded.

Certification

In accordance with the European Directive, we have chosen the Abis certification module for this sailboat. This is manufactured under the internal control of the site. The manufacturer confirms the conformity of the boat with the European Directive.

Genanische Lloyd AG, with its headquarters in Hamburg, has been chosen as the recognized inspection body in accordance with the European Recreational Craft Directive (see Declaration of Conformity).

Identification

The hull identification is marked on the starboard side of the transom. It is a unique sequence of numbers and letters.

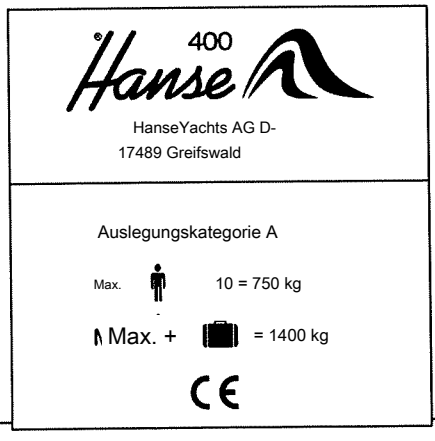
A second inscription is affixed in a concealed location, known only to the manufacturer. This number allows the identification of your sailboat in the event of theft.

It is the following number:

DE-HANJO403D808

Manufacturer's plate

In accordance with the requirements of the European Directive, the manufacturer's plate is installed in the cockpit. The specifications indicated are regulatory and are explained below:



FRENCH

Explanations

-Design category A: High seas

- - Max. W =10 = 750 kg: Maximum number of people recommended by the manufacturer when the boat is in waters Corresponding to its design category.

- Max, = + = 1,400 kg: Maximum load consisting of 10 people, reserves and provisions, basic equipment as well as personal effects (life rafts and the capacity of the tanks are not included).

Please refer to paragraph 1.2.2.

-THIS: CE mark attesting that the boat was built in accordance with the requirements of the European Directive.

Warnings

In many chapters of this Owner's Manual, you will find information intended to facilitate the use and maintenance of your voller but which also warns you of dangers. To allow better identification, these warnings are highlighted in the following tables:

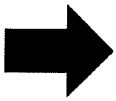
Indicates the existence of a source of extreme and real danger which is likely to cause death or serious injury if appropriate measures are not taken.

Attention

Indicates a reminder of safety measures or draws attention to operations which may be dangerous or which may result in injury to people, damage the boat or even pollute the environment.

Warning

Indicates the existence of a source of danger which could result in injury or death if appropriate measures are not taken.



Advice

Here we give you useful advice to make it easier for you to use your sailboat or its equipment.

WRITTEN DECLARATION OF CONFORMITY

of a pleasure boat to the design, construction and noise emissions requirements of Directive 94/25/EC as amended by Directive 2003/44/EC

(To be completed by the manufacturer)

FRENCH

Name of boat builder: HanseYachts AG

Address: Salinenstraße 22

City: Greifswald Postcode: 17489 Country: Allenagne

Name of Notified Body for design and construction assessment (if applicable)

Name: Germanischer Lloyd AG

Address: PO Box 11 16 06

City: Hamburg Postcode: 20416 Country: Germany ID number: 0098

EC type examination certificate number: ---------- Date: (Year/month/day) ----/--/--

according to the result of the evaluation of ESR 3.2 and 3.3 88.01.0837 Date: (Year/month/day) 2005/08/15

Name of the Notified Body for the evaluation of noise emissions (if applicable)

Name:

Address:

City: Postcode: Country: ID number:

Model used for construction evaluation A ☐ Abis ☒ B+C O B+D O B+EO B+FO GO HO

Module used for evaluation of sound emissions: A Abis GO HO Other

community directives applied

DESCRIPTION OF THE BOAT

Vessel identification number (CIN): DiE-H;ANJ;0j4:0j3;Di8:;o;8

Name of boat: Hanse 400 Type or number: Standard keel

Boat type

inflatable ☐ O motor boat

☐ sailboat other (

☐ specify):

Main propulsion mode X sails

☐ gasoline engine

☐ diesel engine ☐ electric motor

☐ oars

☐ O other (specify):

Hull type

☒ monohull D O multihull

☐ other (specify) :

Engine type

O outboard ☒ inboard (interior)

☐ rear propulsion base without integrated exhaust (Z / Stern drive)

☐ rear propulsion base with integrated exhaust (2/Stern drive)

☐ other (specify):

Construction material:

D aluminum, light alloy plastic, fully bridged reinforced resin

Steel O wood

O other (specify) :

Bridging

☐ partially bridged

☐ Open shell

☐ other (specify):

Maximum design category: ☒ ☐ O B cO D

Engine power Maximum. Recommended: 29.4 kW

Installed 29.4 kW (if applicable) 4.08

Read Length: 11.99 m Bau By: m 105. Draft T: 1.98m

Hollow on Ds keel: 1.79 m Ag total height: 60 m² 1, Rudder control: ȧ remote 7,

Maximum number of people: 10 Maximum load: 400 kg Mucc empty displacement 950 kg

This declaration of conformity is issued under the sole responsibility of the manufacturer; I, the undersigned, declare on behalf of the manufacturer of the boat, that the boat mentioned above conforms to all the essential requirements applicable in the manner specified and which it is enclosed at the type which has been approved by type GE examination.

HansgYachto ktjengesollachaft
Magh hyhkGigilowald
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Tel, +49 (0)3334/5792-0| Fax +49 (0)3834/5792-81
eripfahg@hanseyachts.com www.hanseyachts.com

Name and function: Karl Dehler

(identification of the person authorized to sign on behalf of the manufacturer or his authorized representative)

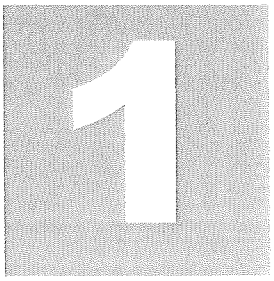
Signature and title: (or equivalent marking)

Date and place of issue: (Year/month/day) Greifswald, 2008/04/03

PMoody

Essential requirements (Reference to the corresponding article of Annexes IA & IC of the directive)	Normes	Autres documents	Dossier technique	Specify with more details (": Mandatory standards)
General requirements (2)	☒			EN ISO 8686: 2002*
Boat identification number - CIN (2.1)	☒			EN ISO 10087:2006*
Plate constructor plague (2.2)	☒	☐	☒	ISO 14945:2004
Prevention of falls overboard and re-boarding (2.3)	☒	☐	☒	EN ISO 15085:2003*; Germanischer Lloyd- Part 3- pleasure boat
Visibility from the main helm station (2.4)	☐	☐	☐	
Owner's Manual (2.5)	☒	☐	☒	EN ISO 10240:2004*
Integrity and structural requirements (3)				
Structure (3.1)	☒	☒	☒	EN ISO 12215-1:2002*; 12215-2; -4:2002*; Germanischer Lloyd- Part 3 - pleasure boat;
Stability and freeboard (3.2)	☒	☐	☒	EN ISO 12217-2:2o02*
Buoyancy (3.3)	☒	☐	☒	EN ISO 12217-2:2002*
Openings in the hull, deck superstructures and the (3.4)	☒	☐	☒	EN ISO 12216:2002*; 9093-1:1997*
Invasion (3.5)	☒	☐	☒	EN ISO 11812:2001*; 9093-1:1997*; 15083:2003*
Maximum load recommended by the manufacturer (3.6)	☒	☐	☒	ISO 14946:2001*
Life raft location (3.7)	D	☐	☒	
Evacuation (3.8)	☒	☐	☐	ISO 9094-1:2003*
Anchoring, mooring and towing (3.9)	☒	☐	☒	EN ISO 15084:2003*
Maneuverability characteristics (4)	☐	☐	☐	
Engines and engine compartments (5.1)				
Inboard engines (5.1.1)	X	☐	☒	EN ISO 16147:2002*
Ventilation (5.1.2)	☐	☐	☒	
Exposed parts (5.1.3)	☐	☐	☒	
Starting the outboard motor (5.1.4)	☐	☐	☐	
Fuel system (5.2)				
General - fuel circuit (5.2.1) Fuel	☒	☐	☒	EN ISO 10088:2001*: EN ISO 7840:1994*
tanks (5.2.2)	☒	☐	☒	EN ISO 10088:2001*
Electrical circuits (5.3)	☒	☐	☒	EN ISO 10133:2000*; EN ISO 13297:2000; Germanischer Lloyd - Part 3- pleasure boat
Steering systems (5.4)	☐	☐	☒	
General - steering systems (5.4.1)	☒	☐	☒	EN ISO 13929:2001*
Emergency devices (Emergency bar) (5.4.2)	☒	☐	☒	EN ISO 13929:2001*
Gas systems (5.5)	☒	☒	☒	EN SO 10239:2001"; DVGW G608 (Germany)
Fire protection (5.6)				
General (Fire protection (5.6.1)	☒	☐	☒	ISO 9094-1:2003*
Firefighting equipment (5.6.2)	☒	☐	☒	ISO 9094-1:2003*
Navigation lights (5.7)	☐	☒	☒	COLREG
Discharge prevention (5.8)	☒	O	☒	EN ISO 8099:2001
Annex I.B-Gas emissions Annex				See the motor manufacturer's Written Declaration of Conformity
I.C- Noise emissions Noise[1]	☐	☐	☒	2033/44/EC
emission levels (1.0.1)	☐	☐	☒	2033/44/EC
Owner's manual (1.C.2)	☐	☐	☒	2033/44/EC

[1] To be completed only for boats with inboard motors or rear propulsion base without integrated exhaust



Chapter 1- Safety instructions

1. Description of the boat

1.1. General description

You will find the general description of the sail in the standard specification and in the contract specification.

1.2. Primary data?

1.2.1. Main dimensions

Length excluding tax	LoA	12.10 m
Hull length	L_H	11.99 m
Waterline length	Lm	10.80 m
Bau	By	4.08m
Mast height from waterline		19.52 m
Draft [1]	Imax	
Standard keel		1.98m
Short keel (optional) [3]		1.65m
Sail		
Main sail		52.20 m²
Self-tacking jib		36.20 m2
Tormentin		
Genoa 140% (optional) [1]		53.40 m²
Gennaker (optional) [3]		120.00 m²
Full sail		105.60 m²

2All measurements, weights and areas are approximate values.

S According to contract specification

French

Attention

The indicated sail area must not be increased without the agreement of the shipyard.

Diesel tank	1401
Fresh water tank	300 |
Headroom	+ 1.95m
Maximum number of people	10

1.2,2. Travel and load

		Short keel (optional)	Standard keel
Empty travel	Mico	8,120 kg	7,950 kg
Weight of liquids in fixed tanks		!Textmark not defined, INHALT_KR kg	!Textmark not defined, INHALT_KR kg
Basic equipment?		100kg	100kg
Life raft		30kg	30kg
Loading (provisions)"		310kg	310 kg
Personal effects		150kg	150kg
Marginal loading"		100kg	100kg
Number of people (10 people)?		750 kg	750 kg
Fully loaded boat total weight ready| mDC to navigate		9,560 kg	9,390 kg

) As indicated on the manufacturer's plate

**) must be stored as low as possible and as close as possible to the center of the fly

Attention

It is the responsibility of the owner or skipper not to exceed the weight of the boat in accordance with the table above.

1.2.3. Maximum number of people and load

The European Directive requires that a recommendation be fixed for each boat on the maximum number of people who can be on board the boat when it is in its intended navigation zone. This sailboat is designed for the high seas, that is to say for deep-sea cruises.

This category is considered appropriate for waves that can exceed a significant height of 4 meters and for a wind force greater than 8 on the Beaufort scale, provided that:

- The crew has sufficient knowledge and experience;
- The boat is satisfactorily constructed and its equipment is well maintained.

Life jackets must be provided for all people on board. The inflatable life raft with which the sailboat must be equipped must be able to carry the number of people on board.


Attention

When traveling, wear your personal rescue equipment (life jacket, etc.)!


Warning

The recommended maximum number of people must not be exceeded. Regardless of the number of people on board, the total weight of people and equipment must never exceed the recommended maximum load.


Warning

The boat's stability properties are designed for the stated weights and for stowage and storage of cargo in accordance with regulations.


Advice

BUOYANCY: The buoyancy of the boat could be influenced by the various interior design possibilities as well as by the loading of the sailboat. As much as possible, heavy loads should be placed as low as possible and in the center of the Sailboat. The standard sailboat is calculated with the following loading:
half full diesel tank, half full fresh water tank, storage box with 60 kg and kitchen with 40 kg.

Users of this boat must respect the following recommendations:

- The crew members must be sufficiently trained;
- The boat must not be loaded beyond the limit recommended by the manufacturer;
- As much as possible, remove water in the bilges;
- Large weights placed above the center of gravity reduce stability;
- In case of bad weather, portholes, deck hatches, cockpit lockers and companionway must be closed to minimize the risk of flooding;
- Stability is reduced when davits are used to drag or lift heavy weights;
- High waves are a real danger for the lateral stability of the boat.


Attention

Avoid weather conditions in which high waves may break sideways onto the boat. Plan outings taking into account the weather forecast.

Additional load

The European Directive requires the manufacturer to issue a recommendation regarding the maximum additional load. This includes the people and equipment indicated in paragraph 1.2.2 with". The maximum load is indicated on the manufacturer's plate. For the sailboat "Hanse 400", the maximum load is 1,400 kg.


Warning

When loading the boat, the maximum recommended load should never be exceeded. Loading must be carried out carefully and loads must be distributed appropriately to maintain design stability. As much as possible, the charges

Heavy items should be placed as low as possible.

The weights of fresh water and diesel were not taken into account in the calculation of the maximum weight.

Attention

When using the storage compartment under the floor resp. under beds, ensure that stored objects do not damage the system and components of the electrical installations installed here.

1.2.4. Motorization

Details of the engine type and its technical specifications can be found in the engine user manual as well as in the contract specification.

Max power (EN ISO 8665)	max. 29.4 kW (40 hp) 1
Number	
Cooling	indirect (sea water/fresh water)

1.2.5. Electrical installation

The sailboat is equipped with an electrical system with a direct voltage of 12V as well as an electrical system with an alternating voltage of 230 V.

Do not make any modifications to the electrical system or connection diagrams.
Only qualified and experienced personnel can work on the electrical installation.

Hazard

Open the control panels only when they are de-energized because you could come into contact with live parts not protected by fuses. There is a risk of electric shock.

Hazard

If direct current (DC) and alternating current (AC) electrical installations are handled improperly, there is a risk of fire and explosion.

ALTERNATE CURRENT 230 V

Warning

Never work on the live alternating current electrical system.

Observe the following advice:

- If possible, only use electrical receivers with protective earth conductors.

- Connect metal enclosures or electrical appliance installations to the protective earth conductor in the boat (green or green with yellow stripes).

Attention

Never leave the dock connection cable floating in water.
This could cause injury or death to nearby swimmers!

Attention

To avoid electrocution and reduce the risk of fire:

- Do not modify the electrical installation. Only specialized and qualified personnel in marine electrical systems may carry out work on electrical installations!

- If possible, only use double insulated or triple wired devices!
- First turn off the power to the dock switch before connecting or disconnecting the boat connection cable.
  le
- First connect the hook-up cable to the boat before connecting the hook-up cable to the dock.
- First unplug the connection at the dock.
- When the reverse polarity display is activated, disconnect the connection immediately!
- Close the dock plug cover.
- Do not modify terrestrial connections, use only compatible connectors.

12V direct current

For the 12 V installation on board, the power supply is provided by batteries.

Distribution is via the main fuse panel. The labels next to the switches designate the different users. If necessary, your dealer can provide you with the connection diagram.

Changing the batteries

When removing the batteries, always disconnect the negative pole first and ensure that the pole terminal does not come into contact with other parts of the electrical installation! Be careful not to touch the two poles of the battery simultaneously with the instrument you are using, which would produce a short circuit.

Use only an insulated tool to unscrew or screw the pole terminals on the batteries.

Risk of fire and injury!

When connecting batteries, always be sure to connect the positive terminals first and then connect the negative terminals.

Electric winches

Attention

The strengths of electric winches should not be underestimated and should therefore be used with caution. Any improper use may damage the boat and result in e.g. ex. : the breakage of the downhaul attachment points or their sinking into the mast; breakage of sail clews or deck fittings damage or breakage of the furler! ;

1.3. General plan

1.3.1. Description of the structure

Structure

The “Hanse 400” sailboat is a cruise boat whose hull is either made of fiberglass-reinforced polyester or epoxy (optional). The polyester deck.

The properties of all materials used meet the requirements of classification societies or ISO standards.

[4] Regardless of contract specification.

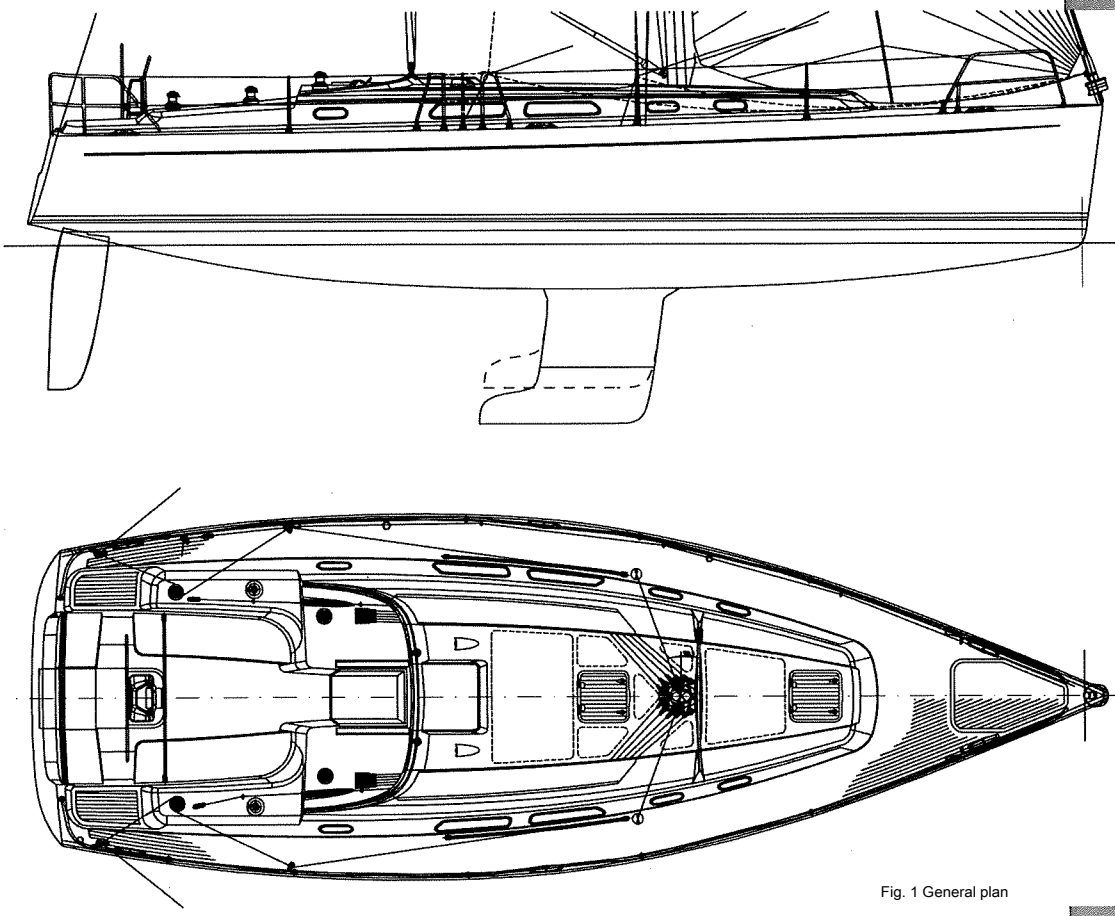


Fig. 1 General plan

If you require these materials or technical data sheets, please contact your dealer.

Be sure to always navigate in sufficiently deep water. It is in fact impossible to take into account strong collisions with underwater obstacles in the sailboat sizing calculation.

Advice

Bottoming out or colliding with an object below the waterline can damage the hull and thus reduce its strength.

Protection

Protection against osmosis is guaranteed by the use of an isophthalic acid-based gelcoat as well as an isophthalic acid-based resin for the outer layers of the hull. The epoxy hull (option) is protected as standard. Additionally, interior areas that may be exposed to water are protected with Topcoat paint.

All parts that are not made of fiberglass are necessarily color preserved or are made of anti-corrosion materials.

It is advisable to protect the hull from dirt and encrustation with Antifouling paint.

Deck covering

All areas of the deck are treated with a non-slip coating.

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Hardware and deck hatches

All the fittings as well as the deck panels are made with anti-corrosion materials, resistant to seawater. Reinforcements are placed at the mounting points of this equipment.

The portholes and deck hatches are certified and meet regulatory requirements in order to be able to withstand the impact of waves.

Bridge

The working deck includes all areas that must be used for the normal operation of the boat. The bathing platform resp. the mirror is not part of the working bridge (Fig. 2).

Warning

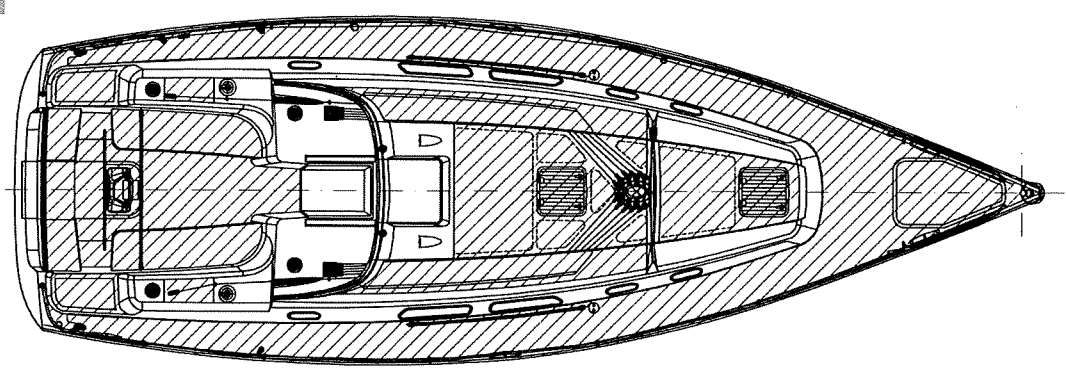
At sea, do not go to an area of the boat that is not essential for its proper functioning. You risk going overboard.

Only walk or stay on the seating areas in the cockpit to move around the deck! Use safety cords. Do not step on the sliding hatch and its cover!

It is generally recommended that people on deck wear a life jacket or safety harness.

When departing or docking in a port or in pairs with another boat, be careful not to find yourself between the edge of your sailboat and the quay or the second boat!

The rear of the cockpit is not equipped with footrests. Please be careful when you are in this location.



WA working bridge

Fig. 2 working deck

Do not walk on the downhill garage!

Attention

Do not leave objects lying around in the work deck area or towards emergency exits. Be sure to secure all parts of the equipment to avoid falling!

Sectors

The boat is equipped with a double circular stainless steel rail with a front and rear stainless steel balcony.

Handrails and bathing ladder

The handrails and the arrangement of the fittings provide protection against going overboard.

The fold-out swimming ladder is installed on the transom. It unfolds to below the waterline. Getting back on board the sailboat is ensured by the swimming ladder. Familiarize yourself with using the swim ladder and practice getting back on board the boat, for example during a man overboard (MOB).

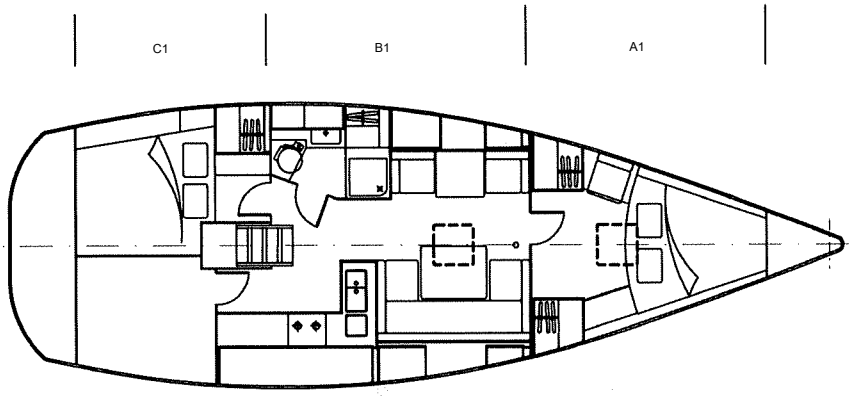
Attention

Before going out to sea, explain these details to the crew! We do not recommend sailing alone.

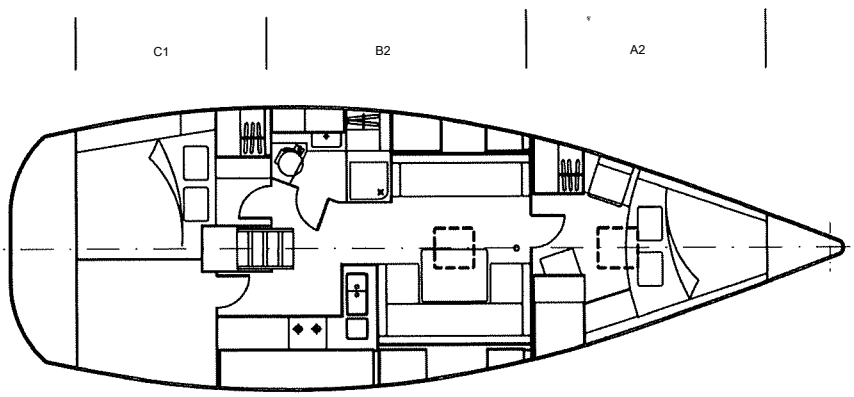
1.3.2. Development plan

Refer to Fig. 3 (example of interior layout).

Variant 1



Variant2



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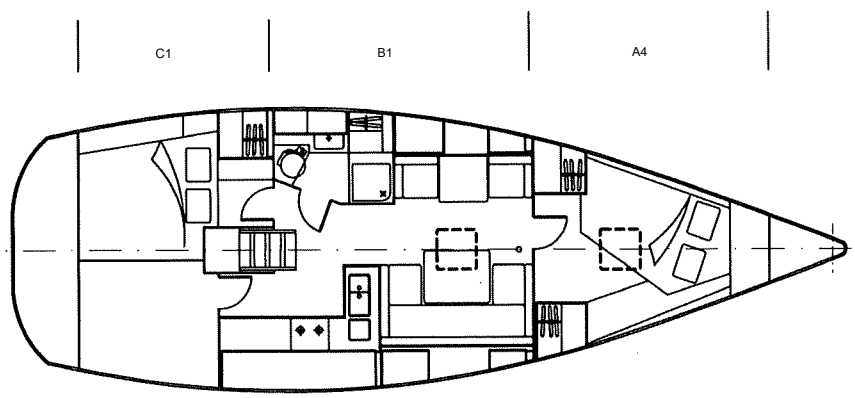

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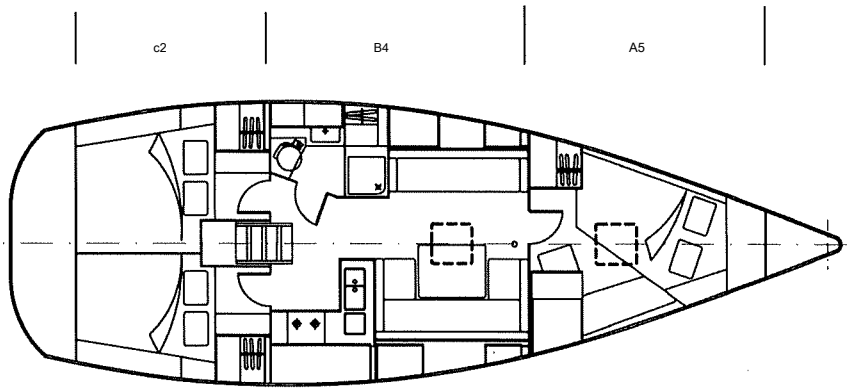


Variant 5

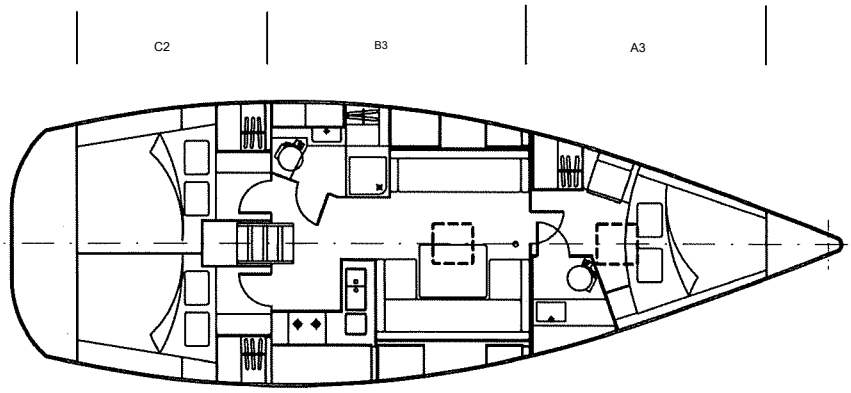


Fig. 3 Example of interior design

1.4. Propulsion

1.4.1. Engine room

The engine room is located under the companionway. All the equipment necessary to propel the boat is located in this location.

The engine room is closed and is ventilated by an air supply duct as well as another duct allowing its evacuation. The motor housing is lined with fire-resistant insulation. Access to the engine room is achieved either by raising the companionway, which allows access through a door located behind the companionway or through a door located in the rear cabin.

Hazard

Never remove the rotating element protections while they are in operation. Never touch rotating parts. Walk only in areas designated for this purpose.

Attention

The engine room is not a storage area. Do not leave loose objects lying around. Store flammable liquids in containers provided for this purpose or in trunks outside!

1.5. Safety instructions

1.5.1. Flooding, waterproofing

The sailboat “Hanse 400” is built with great care in accordance with established technological regulations. However, external events, improper handling or unforeseen events can create a risk of flooding and lead to its sinking.

The strength of the hull, its embedded elements and its on-board systems is calculated in such a way as to enable it to safely cope with the existing constraints during navigation in the conditions planned for its design.

It is necessary to maneuver and equip your sailboat according to maritime rules. In some cases, standard equipment provided by the shipyard may not be sufficient.

The sailboat is equipped with a self-draining cockpit so that water can be evacuated outside in the event of rough seas or heavy rain.

In case of risk of flooding, portholes and deck hatches must be closed.

Attention

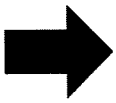
During navigation, all portholes and deck hatches must be closed!

Attention

Close the porthole in the cockpit, insert and secure the bulkhead to prevent water from entering inside the boat !

Avoid dangerous weather conditions and plan sea trips based on the weather forecast.

Consider the following tips:



Advice

- Maintain order on board so that systems remain accessible at all times!
- Check the tightness of the valves and hull fittings!
- Keep bilge pumps ready to operate!
- Equip your boat with leak-proof equipment!
- Buckets are an effective aid for emptying the sailboat.
- Adapt your sailboat to the weather conditions!
- In bad weather, close the portholes, deck hatches and sea breams as much as possible!
- Do not make any technical modifications without the agreement of the shipyard!
- Inspect your sailboat regularly and particularly any repairs carried out!
- Avoid stalling or failing!

1.5.2. Openings in the hull, sea valves

Openings in the hull of the boat represent a risk of water entry. They require your full attention.

They were chosen and installed according to recognized technical rules. It is necessary to regularly check their condition.

All underwater openings can be closed using sea valves. If you leave the boat unattended for a long period of time, you should always close them.

For safety reasons, the pipe connections are fitted with double clamps. Do not modify them!

The openings in the hull allowing the passage of instruments (e.g. log) have a particular construction and cannot be closed by means of sea valves.

Attention

When not in use, keep the sea valves in the closed position.

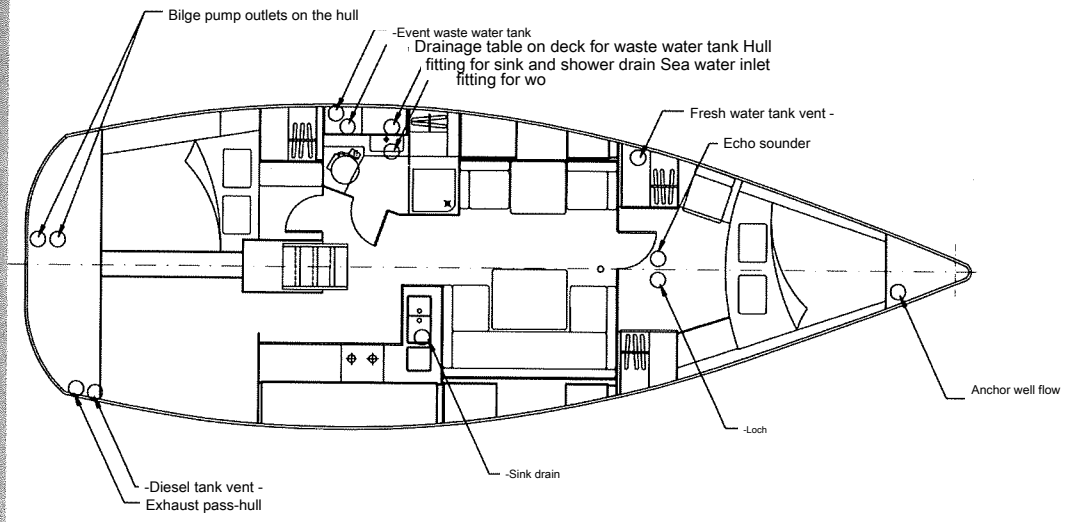
You acknowledge that these are closed as follows:

Closed - Lever is perpendicular to pipe

Open - Lever is aligned with pipe

To avoid any danger, we recommend always having a set of pinoches of different sizes on board. In the event of damage, they allow you to close the openings quickly and efficiently.

C | B | A1, A2, A4, A5



A3

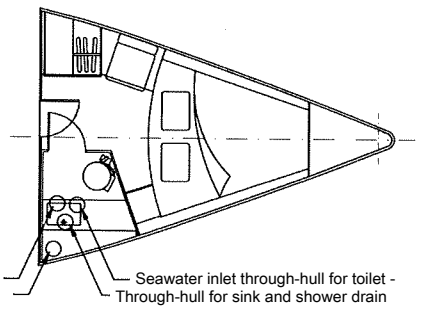


Fig. 4 Location of openings in the hull

1.5.3. Stability

Stability is the property of an aviary allowing it to right itself after having suffered damage caused by wind or waves. This is guaranteed when there is not too much water in the boat. The shape, weight distribution and calculation of dimensions ensure
to the sailboat sufficient stability.

Any modification to the distribution of masses on board can considerably influence the lateral stability of the sailboat and its sailing properties.

1.5,4. Fire protection

Fire prevention

Like ingress of water, fire constitutes a great danger for any boat as well as for a sailboat. A synthetic sailboat is made of a flammable material, even if it is fire resistant. During the construction of this sailboat, we attached great importance to fire risks, in particular the choice of materials and their treatment.

The engine chamber is lined with a soundproof, fire-resistant material that provides high fire resistance for a short period of time.

Warning

When refueling with diesel, the engine, heater and gas cooker must be turned off.

Smoking and handling an open flame are prohibited!

The holds must be kept clean and checked at regular intervals to determine the presence of oil or diesel leaks or diesel vapors. No flammable materials should be stored in the engine room. Non-flammable materials located in the engine room must be secured so that they cannot collide with machinery. They must also not block access to the engine room.

We have kept flammable materials such as curtains away from the gas stove. Be sure to do the same.

Show your crew how to use fire extinguishers!

The main sources of fire are the engine and the gas stove as well as any open flame.

The boat owner/skipper is responsible for having portable fire à extinguishers on board. Your sailboat must be equipped with appropriate portable fire extinguishers, in accordance with the recommendation below. Follow regional regulations regarding the number and equipment of portable fire extinguishers. The boat must not be used if this condition is not met.

Portable fire extinguishers should be located in the following locations:

• In the starboard aft cabin team	powder extinguisher	min. 10A/34B
• In the starboard hatch of the forward powder extinguisher cabin (Variant A1, A2, A4, A5)		min. 10A/34B
• In the port side of the forward powder extinguisher cabin (Variant A3)		min. 10A/34B
• UNDER THE COCKPIT porthole cover	powder extinguisher	min. 10A/34B

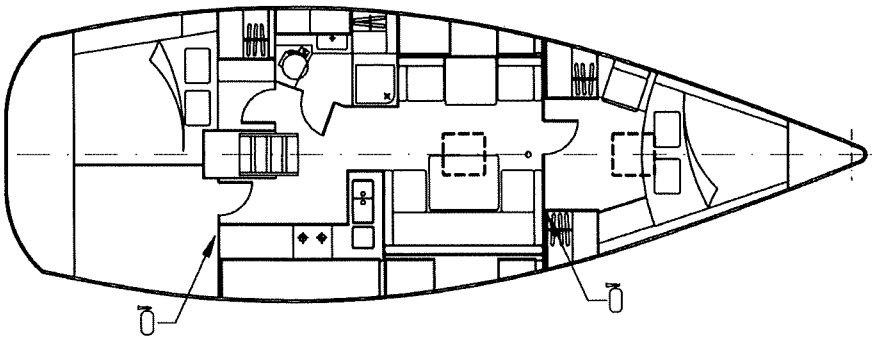
The CO extinguisher must be used to fight fire only in the kitchen. For other areas, use powder extinguishers.

Please note that following the use of a powder extinguisher, dry powder will spread in the area of use. || It is absolutely essential to ventilate the cabin thoroughly before entering it again.

SIVONE

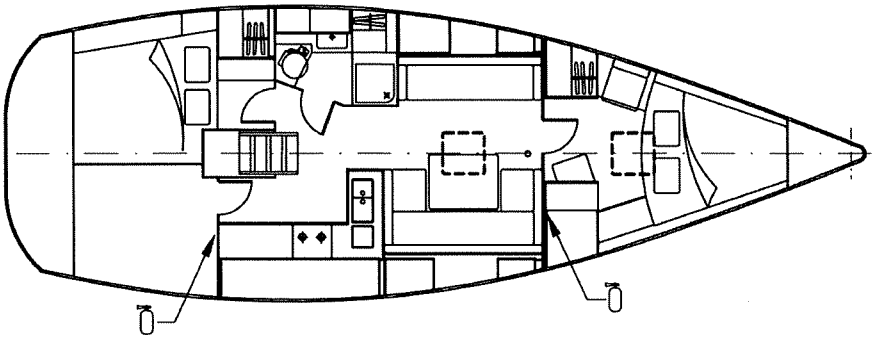
Variant 1

C1 | B1 | A1



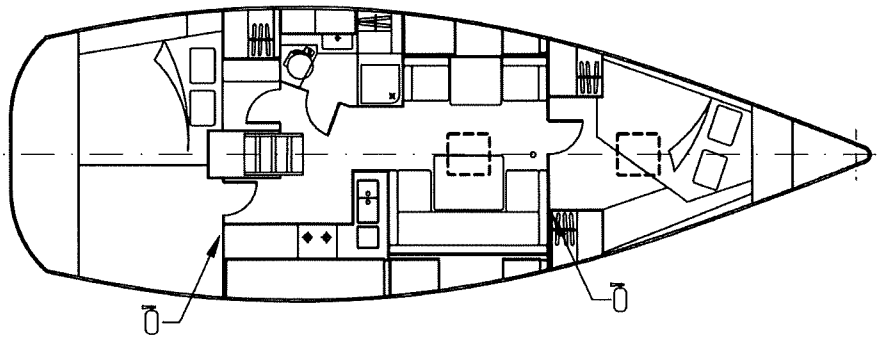
Variant 2

C1 | B2 | A2



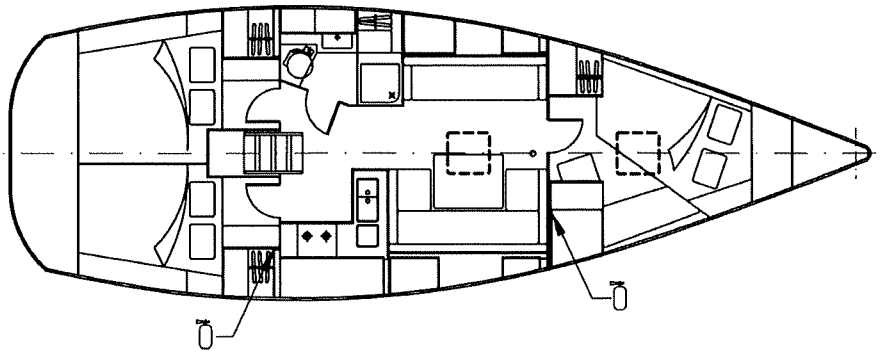
Variant 3

C1 | B1 | A4

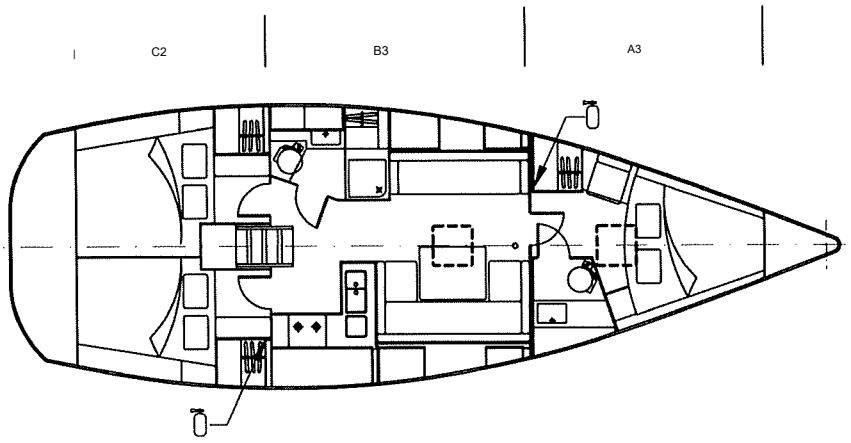


Variant 4

C2 | B4 | A5



Variant5



All variants: a fire extinguisher in the cockpit storage box (see marking outside the box) Fig. 5 Position of portable fire extinguishers

Complete your safety equipment with a fire blanket which is very effective around the gas stove, particularly in the presence of hot grease

Advice

Respect the check periods for fire extinguishers and ensure that they are ready for use.

Fire extinguishers whose use date has passed or which have already been used must be replaced by extinguishers of the same fire class and with the same or greater capacity. If parts of the fire extinguishers need to be replaced, only use suitable replacement parts which have the same function or which have the same technical and fire protection properties.

Explain to the crew and your guests how the alarm and extinguishing equipment works. We recommend also providing alternative fire-fighting solutions such as buckets of water, fire blankets, etc.

The skipper must inform the crew regarding:

- the location and use of fire extinguishers;
- the location of the opening to the engine room allowing the use of the fire extinguisher;
- as well as the location of emergency exits.

Make sure fire extinguishers are easily accessible when the boat is in use.

Attention

Never:

- block the passage to the emergency exits;
- obstruct deck hatches when people are on board:
- modify safety installations, such as diesel valves and electrical switches;
- obstruct the fire extinguishers located in the lockers;
- leave the sailboat unattended when the gas stove or heating is running;
- use gas lamps in the sailboat!

- modify the sailboat's installations (in particular the systems

electric, diesel and gas);

- fill the diesel tanks when the engine is running or when the heater is on;
- smoke when handling diesel

Active fire fighting

Hazard

Any fire is an immediate danger for you, the crew and the sailboat! Everyone on board must fight the fire by all means and without hesitation, immediately after its discovery.

All people who cannot actively fight the fire must go to the deck using the emergency exits and put on a life jacket. The areas where the fire is located must be isolated to prevent any entry of air, as far as possible during fire fighting.

In case of fire in the kitchen:

- Close the gas supply valve!
- Smother the flames with a fire blanket!
- Use the fire extinguisher if the fire has spread to the furniture!

In the event of a fire in the engine room:

In the event of a fire and if safety regulations allow it, you must immediately switch off the engine! Do not open the portholes!

- Switch off the engine!
- Close the diesel inlet valve!
- Do not open the portholes!
- Behind the hatch, between the steps and the engine room, there is a small opening. Insert the tip of the fire extinguisher and empty it completely into the engine chamber.
- Only open the engine room when you are certain that the fire is out, the engine room has cooled and you are able to fight a new fire that may arise.

A fire on a sailboat may require external intervention. Try to establish a radio link (Mayday or Pan Pan). Prepare distress signals.

In the event of a fire in the engine compartment, persons not directly involved in fire-fighting must leave the passenger compartment through the deck porthole resp. the forward cabin/foredeck.

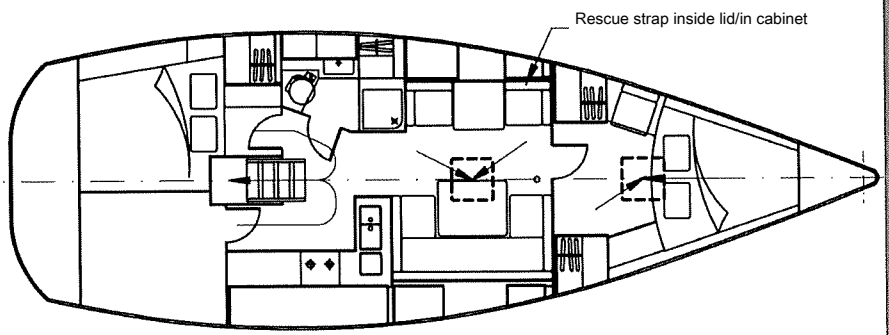
In case of fire in other areas

Try to fight the fire with the fire blanket or with water if there are no flammable liquids present. Otherwise, fight the fire with the fire extinguisher.

To facilitate exit through the deck porthole, use the rescue strap in case of emergency.
The rescue strap for the emergency exit should only be used in an emergency, as this may result in damage to the surface of the window frame.

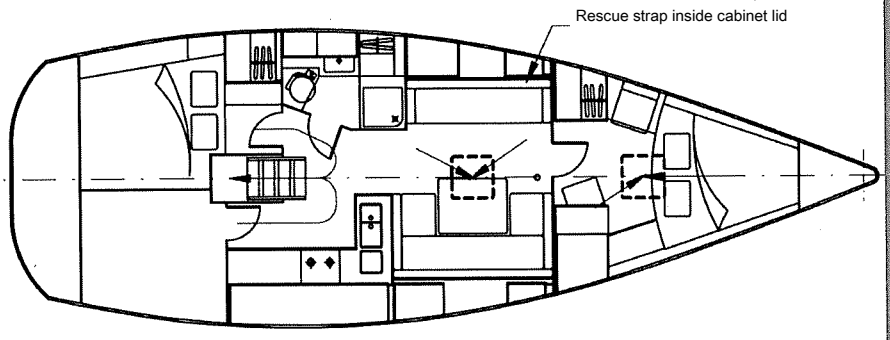
Variant 1

c1 | B1 | A1



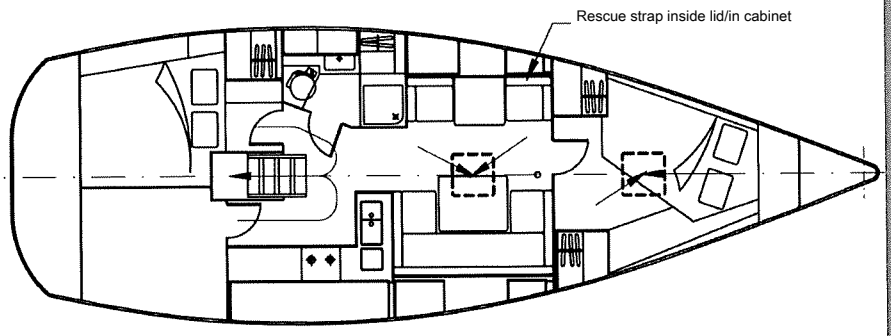
Variant 2

C1 | B2 | A2



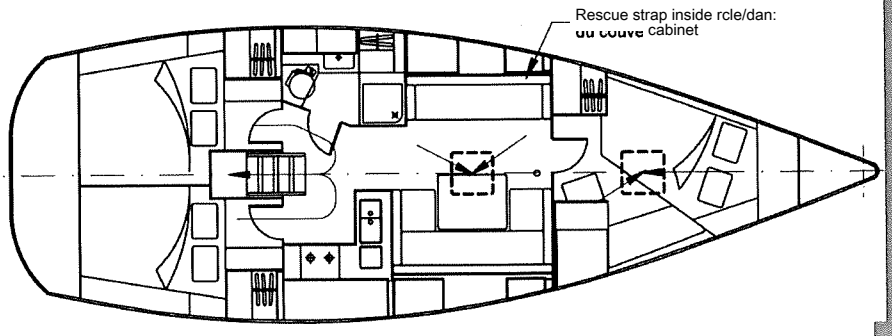
Variant 3

C1 | B1 | A4

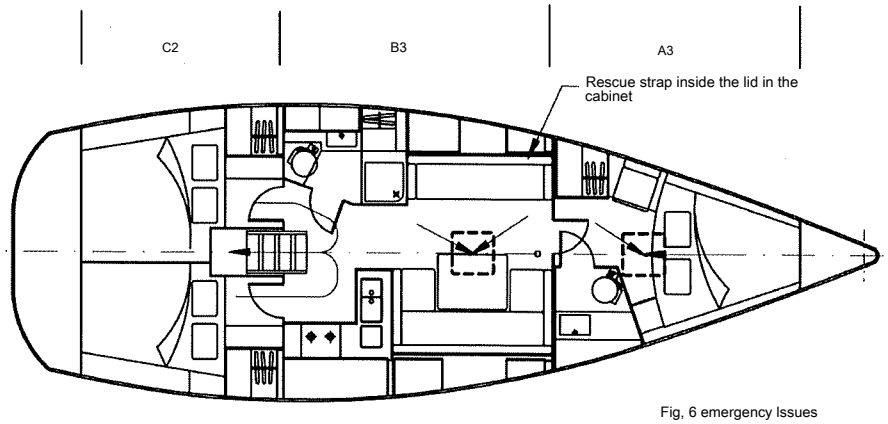


Variant 4

C2 | B4 | A5



Variant 5



Fig, 6 emergency Issues

Warning

The storage space of the rescue strap must not be modified!
Free access must be guaranteed at all times! !

Safety instructions on gas operation:

The sailboat is equipped with a gas unit. When using it, please scrupulously respect the following instructions.

Attention

In the event of disturbances in the operation of the installation, it is imperative to close the valve in the cabinet near the cooker.

What to do if you smell gas:

If you smell gas, close the gas cylinder valve and ventilate the boat thoroughly. It is possible to detect the presence of gas using gas detectors.

Have a specialist investigate and remedy the cause of the gas before using the gas system again!

Instructions to avoid any malfunction of the gas bottle:

- Close the supply valves as well as the valves on the gas bottle when the gas cooker is not running. In case of emergency, close the valves immediately.
- Make sure that the valves of the various devices are closed before opening the gas bottle valve!
- Check the gas bottle regularly for leaks. Check all connections with soapy water. (When doing this, the valves on the devices must be closed and the valves on the gas cylinder must be opened.)
- If leaks appear, close the valves on the gas bottle and have the system repaired by a specialist before any further use.
- As flames consume oxygen, be sure to ventilate the boat sufficiently.
  Do not use the gas stove to heat the saloon.
- Never obstruct access to the gas bottle.
- The valves of empty gas cylinders must be closed and disconnected from the system. Keep lids and caps within easy reach. Store reserve gas bottles as well as empty gas bottles on deck or in a space provided for this purpose and with sufficient ventilation to the outside!

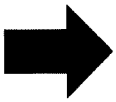
• Never use the gas cylinder storage box to store other objects!

• Never leave your sailboat if the gas stove is running.

• Check the gas system hoses regularly, at least once a year.
Have them replaced if they are defective.

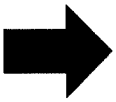
• If you change the gas stove, make sure the new unit has the same pressure.

• Never use the gas stove during large waves or at sea (in case your sailboat is not equipped with a gas stove on gimbals)



Advice

Observe the inspection intervals for complete installation! The check should only be carried out by professionals specializing in gas systems installed on boats.



Advice

If the boat is under the German flag, you undertake, as the owner, to have the gas installation checked every two years by a specialist recognized by the German Association of Gas and Water Installers, with authorization for caravans and boats.

Observe the following instructions as well as the instruction manuals of the manufacturers of the individual devices!

The leaking gas is heavier than air. It concentrates at the bottom of the hull. There is then a risk of asphyxiation and explosion. If you smell the presence of gas, never use a fire or an unprotected light source or even electrical appliances!

Attention

- To check the pipes, never use solutions containing ammonia.
- Never use an unprotected flame to check for a leak.
- Do not smoke or use an unprotected flame when connecting or replacing gas cylinders.

2

FRENCH

Chapter 2-Other technical installations

1. Facilities and systems

1.1.	Tank capacities	
· 1 diesel tank	about n 140|	The diesel tank is located under the berth in the rear cabin. It is equipped with an electric gauge, an inspection cover, connection pipes with valves and drain valves and is provided with an air vent.
1 tank fresh water	of approximately 300	The fresh water tank is located under the forward cabin berth. I| is equipped with an inspection cover and connection lines with valves and is provided with a ventilation vent.
1 waste water tank	of approximately 30	The waste water tank is located in the immediate vicinity of the toilets. The tank is securely fitted. It is equipped with a sink on the deck to allow emptying on land and a valve in the hull to allow emptying into the sea as well as an air vent.

1.2 Water systems

1.2.1. Fresh water

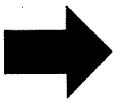
The sailboat has 1 fresh water tank with a total capacity of approximately 300 liters, equipped with an inspection hatch on the upper part for cleaning.

The filling table is located on the foredeck.

Before filling, check that the inscription on the sand corresponds to that of the water gentle.

The withdrawal from the tank and the supply of cold water to the taps is carried out by a pressurized water pump (12V). A pressure tank provides continuous pressure in the fresh water system. The pump is activated when the taps are opened. By closing the taps, the pump is stopped by the back pressure.

If the pump continues to operate, the system must be checked for leaks.



Advice

If air bubbles come out of a faucet, please immediately turn off the corresponding pressure water pump on the main panel. The pumps may run empty for a short time. If they run empty for a longer period, the pump impeller may be damaged.

You can obtain replacement impellers from shipchandlers or from your dealer. Always indicate the exact type of pump when ordering.

If fresh water is stored for a long time, disease-causing germs can develop. Use appropriate and authorized germicidal products to avoid this phenomenon.
Change the fresh water at regular intervals and clean the tank.

An electric water heater is installed to produce hot water. Cold water is supplied by the pressure pump. Due to loss of pressure in cold water system when filling the water heater, the pressurized water pump automatically turns on.

Advice

Purge the system and empty the tanks when the temperature is likely to drop below freezing.

Attention

Do not turn on the electric water heater when there is no water in the system. This can damage the heating rod!

1.2.2. Sea water

Sea water is used for two circuits:

- for engine cooling (see paragraph 1.7.4)
- for flushing toilets

Attention

Sea water valves must be closed after use!

For fault-free operation of the circuits, sea water must be cleaned of impurities. Please check the seawater filters regularly and clean or replace the filter cartridges if necessary.

Make sure that the filter lids are tightly closed and that the hose clamps are secure to avoid any risk of water ingress.

1.2.3. Wastewater

Sewage corresponds to the evacuation of toilets. Sea water is used to flush the toilet, The contents of the toilet are discharged from the toilet bowl to the waste water tank.

The waste water tank with a capacity of 30 liters is a fixed tank installed in the immediate vicinity of the toilet. The tank ventilation vent is located on the lateral side of the sailboat.

Emptying the waste water tank can be done on land via the sink located on the deck or in the sea. Please check the compatibility of the pipes with the use of chemicals.

Before leaving port, consider using available sewage pumping facilities to empty the sewage tank.

Draining on land

The drain is located on the deck and is marked “Waste”.

Advice

Make sure the waste water tank is well ventilated, otherwise it could be damaged when emptying.

Advice

To empty the tee tank, follow the following steps:

- Open the sand on the deck and insert the flexible suction pipe
- Vacuum/pump
- Close the sand on the deck.

Drainage by sea

To empty the sewage tank from the sea, you must open the sea water valve.
Then close the sea water valve when the waste water tank is empty.

Advice

Please note that in some ports and shipping areas emptying into the sea is not permitted (e.g. Baltic Sea Convention). Let your crew and guests know.

Attention

Toilets and waste water tanks must not be emptied near shore or in a protected area (see also paragraph 3.8)!

To do this, the exit to the sea can be closed and sealed.

Using the facility

To use the toilet, refer to the symbols located near the toilet. Do not throw away solid materials or objects that could block them.

System Maintenance

Do not use aggressive liquids, harsh cleaning products or deodorizers to clean the installation as this could damage the pipe system.

To protect the installation during wintering, never use pure anti-freeze.
Contact your reseller if necessary. Always empty the installation completely if negative temperatures are forecast.

1.2.4. Bilge pumps

The anchor locker and cockpit are self-draining and do not require pumps. The openings must not be obstructed.

The sailboat is equipped with a manual bilge pump and an electric bilge pump, each with a capacity of 30 liters/min. Check their operation regularly.

The manual bilge pump is located near the helm station in the cockpit. The electric bilge pump is located under the floor towards the companionway.

The electric bilge pump can be used in two ways:

- Automatically The pump turns on when a certain level is reached in the bottom of the bilge.

- Manually The pump is controlled manually from the bilge pump control panel.

Check if the valves are open or closed. Make sure that there is no oil in the engine chamber bilge.

Warning

Please check the operation of the bilge pumps regularly. Clean the dust on the pump suction tip.

Warning

Bilge pumps are not designed to allow you to control damage. See paragraph 1.4 Safety instructions.

The sailboat must also be equipped with a bucket connected to a rope or a bailer.

1.3. Diesel system

The diesel tank with a capacity of approximately 140 liters is located under the berth of the rear cabin. It can be filled by the corresponding container located on the deck with the inscription "Fuel" or "Diesel". To do this, unscrew the cover. Check the cleanliness of the filter.

You can control the fill level on the main control panel.

The diesel reaches the engine through an suction condition and a pre-filter equipped with a water separator. Because of the short lines, the system consists mainly of fire-rated fuel pipes.

Make sure the return lines are always open to ensure return to the tank.

Supply

Fueling the boat with diesel must be done carefully to prevent drops from falling on the deck or into the water. Always have a cloth handy.
Open the lid and insert the funnel or filling gun. Be sure to make contact with the filler neck (grounding). You can then start provisioning.

Attention

Only refuel with fuels (diesel) recommended by the engine manufacturer.

Advice

Use only clean diesel. Check and clean filters and water separators regularly.

Do not fill the supply hose completely. When you hear the sound of diesel rising, you can finish the supply.

Closing the tank in case of danger

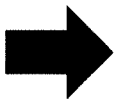
If leaks appear in the diesel circuit or if a fire occurs in the recording chamber, the engine supply can be closed by means of a valve.

1.4. Control system

The rudder is operated by means of a steering wheel located in the cockpit.

The rudder transmission is accessible through a locker located in the floor aft of the cockpit.

The rudder transmission is carried out by a rigid system.



Advice

Make sure your rudder operates without play and is not seized.

In the event of a rudder malfunction, you can use the emergency tiller.

To use the emergency tiller, proceed as follows:

- Open the rudder housing and check the transmission mechanism.
- Remove the emergency bar cover on the deck.
- Remove the emergency bar from its housing and place it in the housing provided on the deck.
- Maneuver from the bridge..

Attention

In the event of a rudder malfunction:

- Place your boat facing the wind,
- Install the emergency tiller as previously indicated.

Find a safe anchorage. Be careful when doing this in the shallows.

Advice

The area where the rudder is located is not a storage area.

Removable rudder components must be protected with waterproof grease for winter storage.

1.5. Electrical installations

The boat has two electrical systems: a direct voltage of 12V and an alternating voltage of 230 V.

You will find information on their scope and equipment in the instruction manuals as well as in the contract specifications. Observe the operating instructions including connection diagrams for electrical devices and installations!

Electrical systems can be connected and controlled from the general control panel.

Attention

When the engine is running, do not disconnect the main switch (battery switch) as this will destroy the alternator diodes.

1.5.1. Direct current installation

The direct current installation takes care of starting the engine and powering the navigation instruments, lighting and part of the electrical equipment.

Use the 230 volt installation when you are earthed by a shore power supply.

FRENCH

Power distribution is carried out by the general control panel located in the saloon.
The circuits are equipped with switches allowing centralized use. Fuses protect all current circuits in the system against overload. Fuses indicate if there is an error in the system. Your dealer can possibly provide you with the electrical diagram if you wish.

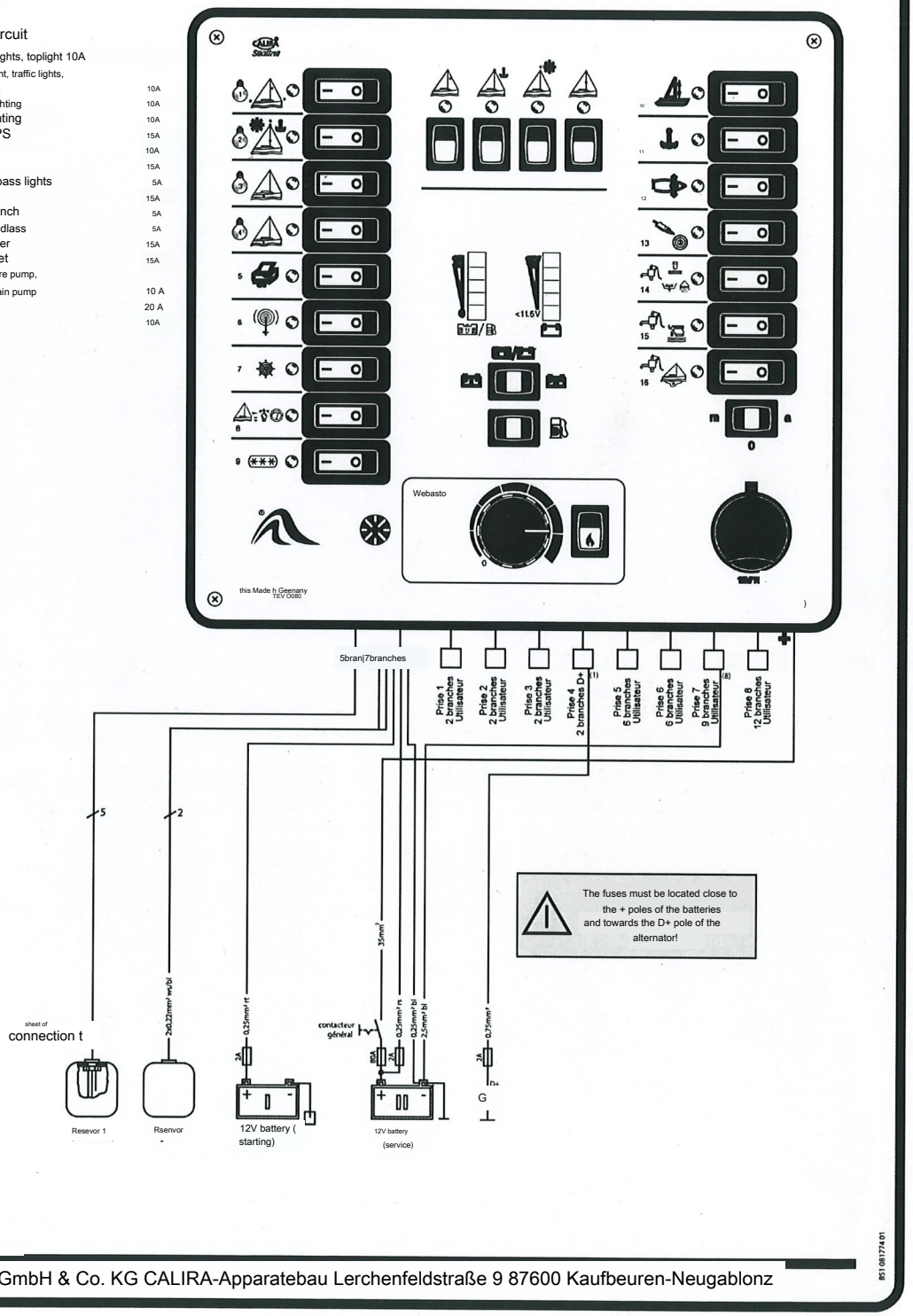
CALIRA Connection plan Panel 331 Kanse A

Sealne

Art.-Nr. EO8 012 331/HAN

Electrical circuit

1 = Navigation lights, toplight	10A
2 = Anchor light, traffic lights, bridge light	10A
3 = Interior lighting	10A
4 = Interior lighting	10A
5 = Plotter/GPS	15A
6=Radio	10A
7 Autopilot	15A
8 = IS 12, compass lights	5A
9 = Refrigerator	15A
10 = Electric winch	5A
11 = Electric windlass	5A
12 = Bow thruster	15A
13 = 12V socket	15A
14 = Water pressure pump, shower drain pump	10 A
15 = Toilet pump	20 A
16 = Bilge pump	10A



Trautmann GmbH & Co. KG CALIRA-Apparatebau Lerchenfeldstraße 9 87600 Kaufbeuren-Neugablonz

Fig. 7 AC connection panel

Below you will find the detailed description of the different electrical circuits.

Remember that battery power is only available for a limited time.
If the voltage drops below 10.5 V, it is necessary to recharge the batteries by starting the engine.

The main circuits operating with 12 V direct current are as follows:

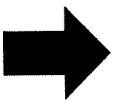
- Position lights
- Interior lighting and deck lighting
- Electrical appliances
- 230 V devices using current converters (according to the contractual specification)

Interior lighting and deck lighting operate using halogen or fluorescent bulbs which have low energy consumption and require relatively little current. The navigation instruments also consume very little current.
However, we recommend turning off devices not in use. You can do this from the general control panel.

If it is not possible for you to recharge the batteries at sea, you must save electrical energy. Navigation lights have absolute priority. If, in the event of a power failure, there is a power fault, all other energy-consuming devices must first be switched off.

We recommend connecting energy-consuming devices according to their importance:

- At night, only the position lights
- Chart table lighting only when in use
- Connect the navigation instruments to the "stand-by" function as soon as possible
- VHF only if necessary



Advice

If an autopilot is installed on your sailboat, be aware that it can consume a lot of current depending on the sea state because the control motor may have to make large course corrections, especially in the presence of large waves.

General lighting should also only be used when necessary. We also recommend giving up refrigerators, heaters or other appliances that consume a lot of energy.

Don't forget to recharge the batteries at sea. Starting the engine under sail allows you to recharge the batteries to the desired level so that you can later plug in energy-consuming devices.

In the event of a breakdown, be sure to check the electrical systems and installations to find the cause of the charging fault.

MOTOR BATTERY

The engine battery is used for starting the engine.

BATTERY SWITCH

The battery switches are located under the chart table.

Gel batteries require little maintenance and should be well charged. Please check them regularly.

During the winter, it is necessary to store well-charged batteries in a dry place protected from frost.

Make sure the poles are clean and protected from corrosion by grease.

1.5.2. AC installation

The 230 V power supply on board the sailboat is provided either by the quayside, by the batteries using a converter (optional) or by the generator (optional).

It is not possible for you to connect to land via a shore socket or if your sailboat is not equipped with a generator, you must use the 230 V instruments via the converter, saving energy because the capacity of the batteries is limited. It may be necessary to start the engine to recharge the batteries. This is why you must use the 230 V installation with shore power.

Power distribution is carried out by the general control panel located in the saloon.
The circuits are equipped with switches allowing centralized use. Fuses protect all current circuits in the system against overload. Fuses indicate if there is an error in the system. Your dealer can possibly provide you with the electrical diagram if you wish.

CONNECTION TO THE DOCK

If your sailboat is equipped with shore power, you have 230 V current available. A suitable connection cable allows you to receive power while saving batteries.

The shore power is protected by a fuse. Connection is made using a compatible dock connection cable.

Please note that the power from the dock may sometimes be limited so that it cannot be used for heating.

Attention

Connect the shore power first on board the sailboat then at the dock.
The voltage is then available immediately.

To turn off the connection, first unplug the shore power.

Arrange the cable so that it does not hang in water and that the connection sockets are protected from water or waterproof (folded).

For your safety, the dock connection is equipped with a differential switch which places the installation off.

Advice

Test this differential switch regularly by activating the switch or using an electrical tester.

BATTERY CHARGER

Batteries can be charged by battery chargers when connected to the dock or when operating the generator. Do not modify the charging circuit, which could damage the batteries. Observe the instructions for use of the battery charger.

CATCHES

230 V sockets are found on board the sailboat in different locations.

1.5.3. Navigation systems

Navigation systems are installed as an option.

Position lights are installed as navigation lighting. They include navigation, topmast and anchor lights.

Have spare bulbs.

1.6. Anchoring, Towing and Mooring

1.6.1. General

It is the responsibility of the boat owner or skipper to ensure the presence on board and in sufficient number of mooring and towing hawsers, anchors and anchor chains depending on the planned navigation areas. You must also master the measures to take in the event of towing.

1.6.2. Anchorage

The bow anchor is located on the bow fitting, ready for use.

The anchor chain falls into the anchor locker. The end is fixed there.

Attention

Please note that anchor retention may not be sufficient in the event of poor sea conditions, rough seas, waves and strong winds and you must then take precautions to increase anchor retention or anchor elsewhere.

1.6.3. Towing

The mooring hawser can be used for towing. However, it is preferable to use a special towing hawser of the same diameter. Attach the towing hawser to the two mooring cleats at the front like a bridle. If towing distances are longer, place a hawser of equal diameter around the sailboat to distribute the forces.
Other locations are contraindicated for towing (e.g. foot of the mast or lifelines). The towing hawser must be attached in such a way that it can be released in the event of too heavy a load. Avoid scratching the hull!

Attention

Please note that when towing, the speed must be lower than the hull speed otherwise the sailboat risks being damaged. The hull speed for this sailboat is approximately 8.0 knots (= 14.8 km/h).

In addition, depending on the weather conditions and the presence of hollows or the depth of the seabed, it may be necessary to reduce the speed considerably in order not to damage the boat.

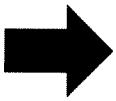
1.6.4. Mooring

To moor the boat, use the mooring cleats located at the front and rear of the sailboat which are sufficiently sized to withstand the nominal traction forces found in the protected pots.

Attention

Use winches or mooring cleats in pairs to moor the sailboat.

If the boat remains unattended for a long time, remember to protect the moorings against friction or accidental release.



Advice

Before setting sail, the skipper must check that:

- Anchor and anchor chain are available.
- The necessary mooring and towing hawsers are on board and in good condition.

Attention

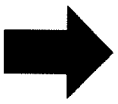
Use only mooring cleats and winches to moor the boat. Lifelines and other points on deck are not suitable.

1.7. Motor installation

1.7.1. Engine room

The centrally arranged and stably fixed main engine occupies almost the entire space of the engine room. It is fixed on a support which absorbs vibrations and noise ("silent blocks"). The area under the engine is designed as an oil recovery pit and must be cleaned regularly. You can immediately recognize whether there are any sealing defects in the oil circuit by the light coloring of the base. The area under the engine must be checked regularly to enable possible oil leaks to be identified in time. Always keep this area clean.

All openings in the hull are equipped with valves. Before setting off, check whether they are in the open position and check the cleanliness of the seawater filters.



Advice

Refer to the instructions for use of the engine as well as the notes concerning its operation and maintenance,

During regular checks, remember to check the saildrive membrane. The detailed description of the saildrive can be found in the engine instruction manual.

1.7.2. General

The motor power must not exceed 1 x 29.4 kW. Any design modification must be subject to prior approval from your reseller. The manufacturer will not be held responsible for any design changes not authorized by the manufacturer.

Reduce your speed on busy shipping lanes or in poor visibility.
Reduce your speed and keep watch for your own safety and the safety of others.
Obey speed limits and signs to avoid large waves.

Respect the priorities as required in the sea lanes regulations (COLREGs).

Always respect your distance so that you can stop or maneuver your sailboat to avoid a collision.

1.7.3. Navigational instruments

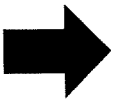
WHEEL BAR

Rev counter

This instrument indicates the number of engine revolutions per minute. The number of revolutions during navigation depends on external conditions and the type of engine.

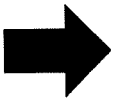
Alarm system

The alarm is triggered when the cooling water temperature is exceeded or when the oil pressure is too low. The oil pressure switch sounds the alarm when the engine is on but not yet running.



Advice

If the alarm sounds when the engine is running, stop the engine immediately and investigate the cause of the fault.



Advice

Be sure to let the engine run slowly when hot and do not push it to full power until operating temperature is reached.

1.74. Cooling system

The engine is equipped with a double cooling system with fresh water exchanger.

The interior system is a closed circuit. In case of frost, add anti-freeze in the internal circuit. The temperature is regulated by a thermostat. In winter, the cooling water does not need to be drained if it is mixed with an anti-freeze intended for negative temperatures.

The external circuit sucks in seawater through the valve located at the front of the engine room. The cooling water is brought to the exchanger then projected into the exhaust system. The exhaust gases are thus cooled and the sound reduced. The exhaust gases are discharged at the rear of the sailboat.

The exchanger is used to cool the engine oil, the primary circuit cooling water and the reverser hydraulic oil. The exchanger is equipped with a protective zinc anode to prevent corrosion by electrolysis.

The seawater filter must be cleaned regularly.

Attention

Check the seawater filter regularly. Depending on water quality, cleaning may be necessary.

Attention

After starting the engine, check if the exhaust is also releasing water in addition to the exhaust gas, even if intermittent.

The cooling circuit must also be checked and secured.

Before starting the engine:

- Check that the sea water valve is open,
- Check the ventilation of the engine room,
- Check for any oil leaks in the engine room,
- Keep the engine room door closed (danger from loose objects)

When the engine is running:

- Perform a visual check to see if water is coming out of the exhaust.

If the motor overheats, the temperature controller triggers an optical and acoustic alarm. In this case, stop the engine and check the cooling water circuit!

Attention

If the engine does not start after the third attempt, close the seawater inlet valve. Restart the engine. If the engine starts, open the seawater inlet valve again (within 30 seconds).

1.7.5. Exhaust

Exhaust gases are evacuated towards the rear of the boat, which reduces noise emissions. The exhaust consists of pipes with a water collector that simultaneously dampens the sound. The exhaust is part of the seawater cooling system. In this arrangement, the exhaust gas system meets the requirements of Directive 2003/44/EC, Annex I.C.

Under the elbow pipe, water is fed into the exhaust pipe and then discharged to the outside together with the exhaust gases. This cools the exhaust and simultaneously absorbs sound.

It is very important that the cooling circuit works. As already indicated in the paragraph on the cooling system, check the water output from the exhaust when the engine is running. The exhaust gas must not form black smoke or appear bluish. If this is the case, either the engine air filter needs to be cleaned - which you can do yourself - or a specialist needs to readjust the engine settings.

For safety reasons, pipe connections are installed on the suction side with double clamps.

If the boat is not in use, close the seawater valves and drain the water from the exhaust.

Winterizing Tips

The fresh water and sea water circuits must be drained according to the detailed instructions contained in the engine maintenance manual and the pipes must be ventilated.

1.7.6. Lubrication

Lubrication of the engine is carried out according to the instructions contained in the instructions for use of the engine and other installations.

When changing the oil, the oil must be pumped out using a pump. When changing the filter, you should use a cloth to wipe off the oil and prevent dirt.

Change the oil at least once a year even if you have used your boat rarely.

A well-maintained engine should never leak. However, the engine mount has a curved shape to prevent small quantities of oil from reaching the bottom of the bilge and possibly mixing with the bilge water that will be pumped out. However, if the water accumulating in the bottom of the bilge is mixed with traces of oil, the mixture must be pumped into a separate container using a small bilge pump and disposed of properly.

1.7.7. Inverter

The reverser allowing you to go from forward to reverse and vice versa is hydraulically transmitted and is directly connected to the engine. Refer to the user manual and specific maintenance instructions.

The reverser is designed in such a way as to be able to respond to each of the maneuvers. However, avoid sudden changes from full forward to full reverse even if it is a hydraulic transmission.

1.7.8. Tours

Motor speed and inverter are controlled by a mechanical circuit with Morse control cables. Transmission is carried out hydraulically (see paragraph 1.7.7).

1.7.9. Saildrive

The sailboat is equipped with a Saildrive installation. The transmission is similar to that of a Z drive. The only difference is that the propeller is located under the boat, waterproofing is ensured by a seal through the hull.

Attention

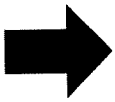
Regularly check the tightness of the saildrive seal.

Attention

Avoid tailgating which can damage the propeller or saildrive.

Advice

Check all underwater parts of the propeller before wintering and remove shells and other deposits if necessary.



Advice

Watch out for trash floating in the water. Trash and plastic bags can damage the propeller and saildrive and thus shorten their lifespan.

1.7.10. Helix

The propeller is sized in relation to the expected performance and speed. Pay attention to unusual vibrations of the propeller which could appear following damage to the propeller.

Winterizing Tips

Before wintering, the propeller must be inspected, any encrustations removed and the mechanism must be greased. In the event of deformation, dents or breaches, the propeller must be repaired and balanced by a professional.

1.8. Aeration

Ventilation is carried out through the deck hatches. The engine room is passively ventilated (no electric fan). Air circulation must not be obstructed and the ventilation system must not be modified.

Good ventilation prevents corrosion, moisture stains and the formation of fungus. This applies to both summer and winter. The low humidity of the air in winter, on clear days, allows the boat to dry well.

Advice

Ventilate the boat as often and as long as possible for your personal well-being. Air humidity and temperature changes can lead to the appearance of mold.

FRENCH

In closed cabins or cockpits, carbon monoxide can accumulate. Carbon monoxide may form as a result of engine exhaust gases

- è at low speed, with tailwind resp. at the pier,
- Or from neighboring boats.

Carbon monoxide is an odorless, colorless and extremely toxic gas. Inhalation may cause injury or death.

Provide sufficient ventilation!

1.9. Heating

If your sailboat has heating (optional), refer to the instructions contained in the instructions for use.

Advice

Advice: Refer to the instructions contained in the instructions for use of the heater and the instructions concerning its maintenance

The hot air pipes of the heater must be kept clear.

Attention

Do not block or block openings. Otherwise there is a risk of fire.

1.10. Gas installation

1.10.1. Facility

The gas bottle is stored on the port side in the cockpit locker. The gas installation for the gas cooker is installed in accordance with the European standard EN ISO 10239. Refer to the rules in force in the country corresponding to your flag!

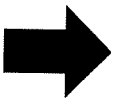
Warning

You should never:

- Modify the state of the gas bottles.
- Create openings to the interior of the boat from the gas bottle storage box.
- Install electrical systems or pipes in the gas cylinder storage box.
- Use the gas cylinder storage box as a storage area.

Any modification to the gas installation can only be carried out by a professional specializing in gas systems installed on boats or by the shipyard itself.

The gas bottle storage box is ventilated directly to the outside. Any water that may have entered is evacuated through the opening.



Advice

Keep the ventilation opening clear. Control regularly if it is not obstructed!

5 As per contract specification

1.10.2. Replacement of the gas bottle

To replace the gas bottle, follow these steps:

- Turn off all gas-powered appliances.
- Turn off the engine and generator.

Hazard

Do not smoke or use an unprotected flame when replacing the gas cylinder.

• Close the gas bottle valve.

- Loosen the pressure reducer on the gas cylinder valve. Use only appropriate tools so as not to damage the connections and the installation.
- Detach the empty gas bottle from its base and take it out of the storage box.

• Insert the new gas bottle into the base.

- Attach the bracket to the gas bottle.
- Check whether the connection pipe on the gas bottle is not damaged.

Danger

Gas cylinders with a damaged connection pipe must not be used. Gas may escape.

- Install the nut carefully and tighten it by hand.
- Now tighten the nut with a suitable tool.
- Check the tightness of the connection.

Hazard

Never use grease on the gas cylinder connection or valves.

1.10.3. Operation of the gas installation

Use of the gas system requires great care. This is why you must respect the following order:

• Check if the gas stove valve is closed.

- Open the gas cylinder valve.
- Open the valve in front of the gas stove. It is located in the storage room next to the oven.
- Open the valve of one of the lights, keep it pressed (ignition lock) and light the gas.

• Keep the valve pressed until the flame has stabilized.

Warning

The oven can only be used when the cooker is blocked!

To turn off, follow the following order:

• Close the valve on the gas bottle; the flame goes out.

- Then close the valve in front of the gas cooker and the fire valve.

1.11. Corrosion protection, painting system

During the construction of the boat, high quality materials were used. They are mostly resistant to corrosion.

The marine climate is very aggressive so that an oxidized film can form on metal parts, especially near rusty elements. This corrosion is only superficial and can be removed with suitable metal polish.

Take care that aluminum alloy components and equipment as well as rust and acid-resistant parts (stainless steel) are not in permanent contact with other metals.

The wooden parts do not require special protection. Their maintenance is described in paragraph 5.

Antifouling can be applied to the hull to prevent the formation of shells.

1.12. Instruction manuals and user manuals

In accordance with the contract specification, instruction manuals and operating instructions may be attached.

Warning

Read them carefully and follow the instructions and notes they contain!

2. Commissioning

21. Transport, crane, launching

2.1.1. General remarks

Transport by sea is preferable to transport by land.

If your sailboat is transported by land, a special convoy is necessary because the dimensions of the boat exceed the usual dimensions on roads and railways.

Make sure the carrier uses a special truck intended for transporting boats.

It is common these days to lift boats with a crane or travel lift. If possible, a hoist should be used so that no force crushes the boat (see also paragraph 2.1.2).

It is also possible to take out/launch a boat using a conventional slip.

For all these types of transport, protect areas likely to be subject to friction.

HAS

Attention

Secure the boat when lifting, especially with a rope.
Protect the straps to prevent them from slipping.

Do not park under the boat when it is in the straps!

2.1.2, Attachment points for crane, support points for slip and transport

Crane

In many ports, sailboats are lowered using a crane with straps. The straps must be placed in such a way as to ensure the stability of the hull and the distribution of weight so that the sailboat is in a horizontal position as much as possible.

The boat should only be lifted with the straps. The exact location of the straps is shown in the “profile view” graphic (with the boat submerged and the sections

transverse), The correct position of the straps must be marked by labels under the lifting rails.

The rear strap is towards the saildrive. It must not touch the propeller or the saildrive!

Briefs

If the sailboat is grounded using a conventional slip, we recommend using a suitable cradle for transport and storage to prevent it from tipping horizontally or vertically. The sailboat can rest on its keel.

If the sailboat must rest on its keel for a long period, the front and rear of the boat must be supported effectively in order to relieve the structure.

Storage

In principle, the storage of an aviary is carried out using an appropriate transport and storage cradle. The supports must have a flat surface before being affixed. Three-point support is permitted.

The light construction offering good sailing properties means that the yacht must be handled with the greatest care on the support bearings when stored. The planking must be treated with caution. The shoring must always be carried out flat (not too soft).

When storing the boat, always ensure that it rests evenly on all the props. | It is also important to ensure that the props never support the total weight of the boat. The keel must be supported separately to “compensate” for its weight. For uniform load distribution, the fittings must always be large.
The minimum dimensions are 200 mm x 300 mm.

Transportation

Transporting a boat by land should only be carried out by a specialist carrier.

Generally speaking, the rules set out in the “Slip” paragraph apply. In addition, the sailboat must be supported under the front and rear in order to relieve the structure. The sailboat must be supported by a minimum of 2 appropriate straps.

22 Underwater painting

If no underwater paint has been applied to the hull of your sailboat by the manufacturer or your retailer, we recommend having one applied by a specialized company before the first launch. This increases the lifespan of your boat and reduces resistance during navigation.

2.3. Engine, Propeller

The boat comes with a ready-to-run engine. Check that the batteries are correctly connected and that there is diesel in the tank.

Only start the engine when the boat is in the water and the seawater valve is open. Start-up is carried out according to the corresponding instruction manual.

After starting the engine, check that cooling water is coming out of the exhaust.

When starting the engine, refer to the instruction manual. Do not run the engine at full throttle and respect the recommended oil change intervals.

24. Equipment

The boat is equipped with basic nautical equipment allowing it to travel. It is generally necessary and useful to supplement this basic equipment with additional equipment depending on the chosen navigation area.

Equip your boat according to your navigation area.

25. First release

Before starting a long-distance journey, we advise you to first familiarize yourself with your sailboat and its equipment, even if it is not your first boat.

Your dealer will be happy to accompany you during your first outing at sea to provide you with all the useful information.

To begin, sail under the engine to familiarize yourself with the maneuvers to be carried out under the engine. Consider the effects of the propeller on reverse and forward travel.

26. Mancevres on the engine

Before starting the engine, refer to the instructions in the engine instruction manual.

- Disconnect the shore power.
- Check if the gear lever is in neutral.
- Begin the engine ignition procedure.
- If the engine does not start, repeat the ignition procedure after a short break.
- If the engine still does not start after 3 attempts, find the cause.

After starting up and having checked that all systems are working and in particular the water cooling system, you can make your first trip to the sea. Pay attention to the rotating effect of the propeller and maneuver carefully.

We also recommend practicing at anchor.

27. Systems control

Unless otherwise specified, the boat is delivered in working order. When delivering the boat, we endeavor to provide you with the necessary knowledge and special features.

Before the first start-up, we advise you to check all the systems on board, step by step. Use the steps in this owner's manual to do this. You will learn the layout and operation of the systems.

Also carry out these checks when the boat has not been used for a long period of time and at the start of each season.

3. Protection of the environment

When designing and building our boats, we attach great importance to ensuring that the materials used are not harmful to the environment as long as their use is consistent. There are a series of regulations to respect in the field of environmental protection and we ask you to respect them when using the boat. Below we provide some special instructions for using your boat while respecting the environment.

Sailing is a peaceful sport. Be sure to operate your sailboat in a responsible manner so as not to degrade nature more than necessary.

Please note the following paragraphs.

3.1. Diesel and oils

Diesel and oils represent a danger to the environment because they pollute, weaken and degrade nature in the long term.

Handle these products with great care to avoid spilling into the sea when filling or emptying.

Before pumping the bilges, check that the water does not contain oil. However, if water accumulating in the bottom of the bilge is mixed with traces of oil, the mixture should be pumped into a separate container using a small bilge pump and disposed of appropriately once ashore.

3.2. Waste

Waste of all kinds must be disposed of according to environmental rules. This is why you must sort your waste on board then dispose of it on land in the containers provided for this purpose in the ports.

You can reduce the amount of waste by, in particular, reducing packaging. Use packaging that you can then reduce in volume.

Glass packaging must not be thrown into water!

3.3. Noise

Noise is also a nuisance to the environment. During the construction of our sailboats, we took sound protection measures to reduce the sound volume and particularly the engine below the authorized legal values. Maintain the sound insulation of the engine room by keeping it clean and not covering it with paint.

Also choose a motor speed that keeps the sound volume within bearable limits.

3.4. Swell

Reduce your speed in a narrow passage area or in a protected maritime area.

Obey speed limits.

3.5. Exhaust gas

Exhaust gases represent unavoidable pollution of the environment. We choose our engines based on their level of exhaust gas emissions. Be vigilant about the color of the exhaust gases which is an indication of poor engine tuning. A bluish or black color reveals a serious fault in the engine adjustment. Get it fixed!

In port, do not run the engine as an auxiliary to allow you to recharge the batteries but rather use shore power.

3.6. Antifouling, Painting

Underwater painting (antifouling) helps prevent the appearance of shells on the hull. There are different types of paint. We recommend the use of a non-toxic antifouling.
Ask your dealer or a ship chandler for advice.

When carrying out sanding or stripping work, a protective cover should be placed under the boat or an efficient vacuum cleaner should be used to collect the dust according to the manufacturer's instructions. Ask the owner of the location where your sailboat is located for advice during this work.

3.7. Remove the vomit

Where possible, use mechanical methods to remove layers of paint. Do not use solvents.

3.8. Wastewater

Toilets produce the majority of wastewater on board. These are stored in the corresponding tank and are sucked up to be evacuated ashore. At the port, it is preferable to use the sanitary facilities at the dock.

Remember that treaties prohibit the disposal of sewage at sea, for example in the Baltic Sea. Some countries have adopted rules requiring the sealing of sea discharge valves.

3.9. Nature protection

When using your boat responsibly, be careful not to harm nature more than necessary.

Respect the instructions of protected areas and national parks.

Navigate with caution staying away from these areas and do not take unnecessary risks in difficult areas.

Comply with international treaties to keep the seas clean.

4. Maintenance

4.1. Exterior inspection

Wintering is the right time to carefully inspect the hull and all the supporting parts. If the varnish layer is damaged and the laminates or wood are visible, the painting must be completely redone, starting with sanding, then applying a filler to fill in and finally applying the varnish layer. Your dealer can provide you with specific advice.

You will find information on all technical equipment either in this manual in the corresponding section or in the manuals provided by each device manufacturer (in the appendix to this manual) .

4.2. Maintenance and cleaning

Cleaning the boat should be done, as much as possible, only with fresh water. To remove stubborn dirt, environmentally friendly cleaning products suitable for polyester and varnished surfaces can be used. Do not use products containing silicone.

There are special products for further treatment such as filling and covering polyester surfaces. Use only appropriate products.

Metal parts can only be cleaned with metal polish. Note that the aluminum parts are anodized and should not be cleaned with polish or abrasive products.

4.3. Rigging and sails

4.3.1. Rigging

Stainless steel parts showing traces of humidity or a thin oxidized film must be polished to maintain their properties.

4.3.2. Sails

Sails made of synthetic material are sensitive to UV radiation and must always be covered.

4.4. Paintings

Antifouling is only applied to the submerged part of the boat and must be regularly treated or renewed depending on the frequency of use of the sailboat. If possible, do not change the paint brand if you do not know the compatibility of the systems.

Dispose of sanding dust according to the manufacturer's instructions.

The interior varnish only needs to be treated if it is damaged. If necessary, consult your dealer on this subject.

4.5. Wear and spare parts

If damage occurs while using the boat, use only original parts or parts of the same quality if possible. This mainly applies to parts which undergo a certain tension such as rigging parts, fittings, etc.

Your dealer can provide you with useful information.

4.6. Repairs

Repairs to the hull, propulsion system, rigging, tanks and sails must be carried out by a specialized company because they have the appropriate technique and know-how to carry out these repairs and return you a perfectly repaired sailboat. This particularly applies to structural damage.

We can assist you and recommend specialized companies that can carry out this type of repair in a professional manner.

4.7. Inspection of facilities and systems

Reliable operation of each system is important for safe use of the sailboat. Regularly check the proper functioning of installations and systems. To do this, use this manual and the instructions provided.

Appropriate measures must be taken to prevent damage to the diesel lines.

Attention

Avoid flammable liquids or elements coming into contact with the hot parts of the engine!

Attention

Equipment that operates with flammable elements (diesel or gasoline) must not be stored in a place not intended for this purpose!

4.8. Hivemage

Wintering corresponds to the period during which your boat remains unattended for a long time. During this period, it must be placed securely and stored away from bad weather conditions.

Refer to paragraph 2.1 Transport, crane, launching.

Remove all waste.

Remove all valuables. The cushions must be stored in dry, ventilated and frost-free places.

- If the boat is covered with a tarpaulin, make sure that air can circulate well under it.
- If possible, keep ventilation openings open.

The cover must be well fixed to avoid any friction on the hull.

4.8.1. Hull and deck

- If possible, clean your sailboat as soon as it comes out of the water. High pressure cleaners will remove dirt and encrustations.

For boats that have sailed in salt water, remember that salt residue fixes the water and causes accelerated corrosion.

Cleaning the boat should be done, as much as possible, only with fresh water. To remove stubborn dirt, environmentally friendly cleaning products suitable for polyester and stained surfaces can be used.

There are special products for further processing such as filling and covering polyester surfaces. Use only appropriate products.

Metal parts can only be cleaned with metal polish. Note that the aluminum parts are anodized and should not be cleaned with polish or abrasive products.

4.8.2. Rigging

Before wintering, rinse the rigging and sails with fresh water. During winterization, the rigging must be subjected to a thorough visual inspection, in particular the running rigging but also the blocks, the mast and the boom as well as the ball bearings. Minor damage can be easily repaired when the rig is on land.

The seams must be checked in detail and repaired if necessary.

4.8.3. Electrical elements

Contacts must be protected from corrosion and fixed firmly. Test connections annually.

Batteries must be removed, fully charged and stored in a dry, frost-free place. If you leave them on board the sailboat, they need to be recharged regularly, approximately every month.

4.8.4. Systems and tanks

Also flush the waste water pipes. Empty the fresh water and waste water tanks and all their pipes. Open the valves and clean the connections.
Cover the tank inspection hatches with gauze or rags (air: YES, dust: NO).

It is recommended to fill the tank with diesel to reduce the appearance of condensation.
Check that the conduits are firmly attached.

Bleed the seawater circuit of the engine system as well as the exhaust system. If the internal cooling circuit contains anti-freeze, it does not need to be bled.

4.9. Crane and storage

Epoxy hulls (which offer better sailing performance) require special attention when dry wintering. Take special care when placing the boat in cradles to avoid any pressure points. The skates should have a minimum dimension of 200 mmx 300 mm with protections (fabric for example).

As a general rule, be careful to have equal pressure on both sides of the sailboat and that the keel is equally resting on a support. Apply these instructions also for polyester shells.

5. Safety equipment

The boat is not equipped with safety equipment. Equip the boat with life jackets depending on the number of people on board. For offshore cruises, you must have sufficient numbers of automatically inflatable life rafts ready for use to allow the people on board the sailboat to be boarded at the same time (10).

The liferaft container can be attached outside the rear balcony.

Attention

¦S You use automatically inflatable life rafts or life jackets, respect their inspection periods!

Life jackets can be stored in the cockpit lockers. If necessary, additional safety equipment must be | brought on board.

6. Warranty

For any warranty requests, contact your dealer.

7. Final remarks and advice

In the previous sections, we have tried to give you some advice regarding the use of your boat.

You certainly already have your own experience in this area. Our advice should be seen as additional and cannot replace your personal experience as a sailboat owner or skipper.

As a shipyard, we have delivered to you a safe and reliable sailboat with regard to current technologies and in compliance with the European Directive relating to pleasure boats and which meets the constraints of its use.

Damage can of course occur in extreme cases such as tailgating, collisions etc.

The owner or skipper is responsible for having safety equipment on board the sailboat and providing a sufficient number of life jackets for each person on board. This also involves the purchase and maintenance of the life raft, distress lights, first aid kit, tools, spare parts, etc.

As the European Directive relating to pleasure craft is very attentive to safety and protection against fire, you must explain to your crew the handling of safety devices and fire extinguishers.

We are constantly working on the future development of our sailboats. Please understand that we reserve the right to change the form, equipment and technology. For this reason, the indications, illustrations and descriptions contained in this manual cannot constitute grounds for complaints.

If your sailboat is equipped with parts that are not described in this manual and for which no description appears in the owner's manual, consult your dealer who will inform you about their correct use and maintenance.

FRENCH

8. List of manuals, plans and instructions for use provided

See delivery documents.