

# **OWNER'S MANUAL**



# DUFOUR 385

ENGLISH MAI 2004

Name

is **DUFOUR YACHTS'** representative and will give you all the help you need to solve any problems you might have during launching, stepping the mast or with technical checks for bringing your boat into service and maintaining it. If necessary, he will help you with the administrative process of registering your boat.

As soon as you become the owner, familiarize yourself with the manual supplied with your boat, sign and date the receipt acknowledgements below, and give (or send) the last one to your agent.

Owner's Manual Receipt Acknowledgement to be kept in your Manual I, the undersigned :

Name : Address

Owner of **DUFOUR 385** no.

Confirm that I have received the **DUFOUR 385 Owner's Manual** and accept its being written in the French language. Date :

Signature :

Detach along dotted line

. . . . . . . . . . . . . . .

<b>Owner's Manual Rece</b>	ipt Acknowledgement to be returned to DUFOUR YACHTS
Z.I 1, Rı	e Blaise Pascal- 17187 PERIGNY CEDEX- FRANCE
I, the undersigned :	
Name :	
Address :	
Owner of <b>DUFOUR 38</b>	5 no:
Confirm that I have rece written in the French la	eived the <b>DUFOUR 385 Owner's Manual</b> and accept its being nguage.
Date:	
	Signature :

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# INTRODUCTION

**DUFOUR YACHTS** is delighted to present you with this manual that will enable you to get to know your boat better.

This manual has been produced to help you enjoy the use of your boat in complete safety. Read it carefully, in particular to avoid fire and flooding risks, and familiarize yourself with your boat before using it.

If this is your first boat, or if you are changing to a type of boat you are unfamiliar with, for your convenience and safety, make sure you gain experience in handling and use before taking command of your boat. Your dealer, your national yachting federation or your yacht club will be more than happy to recommend local sailing schools or qualified instructors.

# KEEP THIS MANUAL IN A SAFE PLACE AND PASS IT ON TO THE NEW OWNER IF YOU SELL YOUR BOAT.

### **NOTICE:**

Our boats are regularly improved in the light of our customers' experiences and research by the shipyard, and so the specifications given in this Owner's Manual are not contractually binding and may be changed without notice and without any obligation to update.

This manual is intended to cover as much information as possible, so certain equipment or paragraphs might not apply to your boat. In case of doubt, please refer to the inventory which should have been given to you by your agent when you placed your order.

# I. GENERAL INFORMATION

### A. DESIGN CATEGORY OF THE YACHT

Your **DUFOUR 385** comes under the OCEAN-GOING design category (category A). In normal conditions of use, your boat is designed for sailing with effective wave heights up to 4 m and winds of Beaufort Force 8 or less, and to withstand the severest conditions.

This sailing capability is equally dependent on the skills of the crew, their physical capacities, the maintenance of the boat and its equipment.

### So always take care before putting to sea.

DUFOUR YACHTS is not able to guarantee perfect functioning of the boat in exceptional sea conditions (violent storms, hurricanes, cyclones, waterspouts,...)

Design category	Type of sailing	Wind strength (Beaufort)	Wind Speed	Effective height of wave to be taken into account
А	Ocean-going	More than 8	More than 21 m/s	More than 4 m
В	Open sea	Up to and including 8	Up to 21 m/s	Up to and including 4 m
С	Inshore	Up to and including 6	Up to 17 m/s	Up to and including 2 m
D	Sheltered waters	Up to and including 4	Up to 13 m/s	Up to and including 0.3 m

### **DESIGN CATEGORIES**

### **B. CERTIFICATION**

CE regulations impose all boat hulls longer than 12m to comply with category A bis (=autocertification, stability and floating capacity to be evaluated by a recognised institution). It is the **IMCI** (International Marine Certification Institute) who has been charged to carry out this certification (see Document of Conformity = Déclaration de Conformité)

### C. IDENTIFICATION

The hull's identification number is situated on the hull, at starboard side, close to the stern. The number is composed of a series of characters and numbers starting with FR-DUF....

### D. BUILDER PLATE

1, Rue Blaise PASCAL DUFOR YACHTS LA ROCIFILIE LA ROCIFILIE FRANCE				
DUFOUR 385	C	<b>E</b> 00	509	
Cat. de Conception / Concept Class: A	В	С	D	
Nbre passagers / Max. passengers: 8	8	12	12	
Charge maxi / Max. load (kg): 2100	2100	2100	2100	
$\phi$			$\Phi$	

The builder plate is situated in the cockpit. It explains some essential information in which you find details below.

Design Category  $= \mathbf{A}$ 

: Ocean going (see 1.1)

design category

Max. number of persons on board = 8

# İ

Max. added load = 908 kg



CE 0609

: recommended by the yard when the boat is navigating under conditions in accordance with its

: including 8 persons, equipment, personal belongings and supplies ( excluding the capacity of various tanks (water, fuel,...) )

: CE certification number confirms that the boat complies with all CE regulations. The number indicates the code of the Certification organisation, in this case, the IMCI (International Marine Certification Institute) in Brussels, (see : Document of conformity = Déclaration de conformité)

# II. MAIN CHARACTERISTICS

Model	DUFOUR 385
Architect:	Umberto Felci
Navigation category	A
CE certification number	CE/0609
Length over all	11.72 m
Hull length	11.36 m
Waterline length	9.84 m
Maximum width	3.93 m
Draft	1.76 m
Air draft	16.20 m
Ballast weight	1950 kg
Empty weight (incl. Safety equipment)	6980 kg
Full load	8460 kg
Standard mainsail surface (approx.)	31.50 m <sup>2</sup>
Surface furling genoa (approx.)	42.60 m <sup>2</sup>
Water capacity excl water heater	320 / 440 1
(approx. 1 head / 2 head version)	
Fuel tank capacity (approx.)	160 L
Holding tank (see option's list)	401/801
Engine battery	75 Ah
Service battery (standard version)	100 Ah
Main means of propulsion	Sails
Max. Engine power	30 kW

Note :

The maximum capacity of all reservoirs (like water or fuel) can only be reached in theory. Load and stability of the boat have influence on the capacity in practice. Especially for the fuel tank a reserve of 20 % is recommended.

# III. ELECTRICAL SYSTEMS

# A. SAFETY AND OPERATING INSTRUCTIONS FOR THE ELECTRICAL SYSTEM

### WARNING

### Always:

- Check the condition of the batteries (charge and electrolyte level) and the charging system before putting to sea
- Disconnect and remove batteries for winterisation
- Do not let battery voltage drop below 10,5V during winter storage.
- Carry spare lamps for all navigation lights and interior lighting. Respect power ratings, particularly for navigation lights.
- Check operation of the navigational instruments
- Check operation of navigation lights before night sailing

### Never:

- Work on an electrical installation that is live.
- Make any modification to an installation and the relevant diagrams, unless it is carried out by an electrician qualified in marine electrics.
- Change or modify the breaking capacity of overload protection devices
- Replace electrical apparatus or equipment with units exceeding the rated capacity without upgrading wiring and protection.
- Leave the boat unattended when the electrical installation is powered, with the exception when applicable of the automatic bilge pump and the fire or theft protection circuit.

If a fuse or circuit-breaker blows continually, a specialist must be consulted to determine the origin of the short-circuit.

### **B. INSTALLING NEW EQUIPMENT**

Since the 1st January 1996, electrical equipment is subject to the European "electromagnetic compatibility" directive (Ref 89/336/CEE). Hence it is necessary to install new equipment meeting this standard and bearing the CE mark. Equipment must also be supplied with a compliance certificate and instructions for use.

In the case of 220 or 110 V installations, use only double-insulated or earthed equipment. When such equipment is being installed, respect the fitting instructions (conductor size, protection).

To avoid maintenance problems, be sure to mark in the manual and modifications that may be made to the electrical diagram.

### C. BATTERIES

The battery capacity has been designed to meet the power requirements of the on-board accessories. To avoid any problems, it is necessary to keep a close eye on the maintenance and correct charging of the batteries.

### WARNING

- When installing new electrical appliances, take care that the overall consumption of these appliances remains within the capacity of your batteries.

- Always disconnect the –ve battery terminal before the +ve terminal
- Never allow a conductive object (tools, etc) to bridge the two battery terminals.
- When handling batteries, keep them horizontal to avoid spillage of electrolyte. Wear gloves and protective clothing that will prevent any risk of contact with electrolyte in the event of a leak.
- In the event of electrolyte splashes, rinse the affected part of the body copiously and consult a doctor.

### **D. ELECTRIC WINCH**

### WARNING

It is essential to run the engine with the throttle slightly opened when using the electric winch.

### E. 220/110 VOLT INSTALLATION

Your boat is not supplied with a shore/boat supply cable or a male plug for the shore outlet. The cable must be suitable for outdoor use. Its cross-sectional area must be adjusted according to its length and the rating of the main circuit-breaker (see electrical diagram). The plug must be suitable for the female socket on the shore (if necessary, seek the advice of a professional)It should be as near as possible to the **IP 67 / IEC529** type

Disconnect current supply when the system is not being used.

Make sure all elec. appliances are earthed when necessary. Earthing is yellow or yellow/green

Only use appliances with double isolation or earthing

- Disconnect the shore/boat supply cable at the shore outlet before disconnecting it at the boat end

### WARNING

To avoid electric shocks or fire :

- Switch off the shore supply at the on-board isolator before connecting or disconnecting the shore/boat supply cable.

- Connect the shore/boat supply cable at the boat end before connecting it to the shore outlet

- Disconnect the shore/boat supply cable at the shore outlet before disconnecting it at the boat end

- Close the shore outlet cover properly

- Do not modify the shore supply cable socket. Only use compatible plugs.

### WARNING

Prevent shore power supply cable ends from falling in the water. An electric field may put in danger swimmers in the neighbourhood.

# IV. GAS INSTALLATION

### A. OPERATION ADVICE

- Read the instructions for the cooker and regulator carefully.
- Ensure that the gas cylinder and regulator are in accordance with the requirements of the cooker (flow rate, pressure, type of gas) and that the gas cylinder complies with the regulations in force in the country where it is being used.
- Shut off all appliance valves before opening the bottle valve.

### WARNING !

Appliances burning fuel use up the oxygen in the cabin and release combustion products into the boat. Ventilation is required when appliances are alight. Open the coach roof ports while you are cooking.

- Do not use the oven as a heater.
- Do not obstruct quick access to the elements of the gas installation. (cylinder locker, shut-off valve).
- The gas cylinder must always be stowed in the space provided, even spare or empty ones. Keep other equipment away from this locker.

### WARNING !

Never leave the boat unattended when gas appliances are alight.

- Close all valves in the circuit when the boat is left empty (shut-off valve, regulator valve), even if the cylinder is considered to be empty.
- After the boat has been shut up, never smoke when going below, and ensure that there is no smell of gas.
- If you smell gas, close the circuit valves and the cooker taps, ventilate the boat, and examine the leak's source. Do not start using the installation as long as the source has not been found and repaired.

### WARNING

In the event of an emergency, the circuit valves must be closed immediately.

### **B.** CHECKING THE SYSTEM

The gas system must be tested periodically:

°Close all the cooker taps.

- °Open the cooker supply and regulator valves.
- °Check all connections are gas-tight using a leak detector or by applying soapy water.

### WARNING !

Do not use solutions containing ammonia

### **DANGER!**

### Never use a naked light to look for leaks

Repairs and modifications to the system should be carried out by a qualified person. Flexible hoses must be:

- checked regularly, at least once a year,
- replaced if the expiry date marked on the hose is passed,
- replaced five years after the date of manufacture that may be marked on them,
- replaced in the event of deterioration.

### C. CHANGING THE GAS CYLINDER

### WARNING !

- Close both the cooker taps and the one in front of the cooker
- Do not smoke nor use a naked light during replacement of the gas cylinder.

# V. DRAIN AND SANITATION SYSTEM

### A. SPECIFICATIONS OF THE DRAIN SYSTEM

Pump type	Theoretical flow rate
Manuel	40.51 / 45 strokes/min.
Electric	900 l / h

Read carefully the operating and maintenance instructions for the bilge pump that goes with your boat.

### WARNING !

- Ensure that bilge pumps are in working order before putting to sea.
- Know where to find the hand pump and its handle.
- Know where to find the switch for the electric pump on the electrical panel
- Clean the well and pump filters regularly.
- The bilge pump system is not intended to keep the boat afloat in the event of damage. It is intended to remove water coming from spray, leaks from seacocks or any other moderate leaks.

### **B. PRESSURISED FRESH WATER PUMP**

Fresh water is supplied to the sink and wash basins by an electric pump. A filter is installed upstream of the pump, and must be cleaned regularly.

# Never allow the pump to run if the tank is empty. Change over to the other tank or fill up.

Hot water is produced by a water-heater connected to the engine cooling circuit and the shore electric supply.

After the water-heater has been emptied, make sure that the element is covered before power is re-applied.

### C. SEACOCKS

Seacocks are of the 1/4-turn type:

- OPEN position: handle in line with seacock body,
- CLOSED position: handle perpendicular to seacock body.



### WARNING !

- Never interfere with the tightening of the sea cocks to the hull. In the event of a leak, consult a professional.
- In bad weather or when leaving your boat, close all the sanitation system seacocks.
- Keep seacocks closed when not being used.
- During winterisation, clean and rinse the seacocks and skin fittings. Inspect the brass accessories, slight surface corrosion, consult your dealer.
- In the event of more serious corrosion, consult your dealer.

### D. OPERATING THE SEA TOILETS

- Open the sea water inlet seacock.
- Open the bowl emptying seacock.
- Set the lever to the "FLUSH" position.
- Operate the pump.
- To empty the bowl and avoid any water slopping when heeling, set the lever to the "DRY BOWL" position.
  - Operate the pump until the bowl is dry.
  - Repeat these flushing / emptying operations as many times as is necessary to ensure complete emptying of the pipes.
  - When toilets are not being used, set the lever to the "DRY BOWL" position, or the "CLEF" position for certain models.
  - Close seacocks after use, as the toilet is below the waterline
  - Change the toilet seals regularly

# VI. FLOODING

Boat flooding risks:

- Before putting to sea, always check that portholes, deck hatches and any other openings that could allow flooding are shut.
- -When under sail, close all seacocks, except the engine water intake.
- Periodically check:
  - Skin fittings, seacocks and pipes are watertight
  - Proper emptying of the cockpit drains.
  - Watertightness of the stern gland.

### WARNING !

Cockpit locker lids must be fastened before putting to sea. This is particularly important for the lockers representing a major flooding risk

# VII. FIRE PROTECTION

### A. INSTALLATION

- Fire extinguishers are subject to national regulations, for this reason they are not supplied with your boat.

- We recommend you to equip your boat with fire extinguishers meeting the

ISO 9094-1 standard, with the following specifications:

- a) Minimum capacity per extinguisher: 5A/34B,
- b) Minimum combined extinguisher capacity: 10A/68B,
- c) 1 extinguisher within:
  - 1 m (for boats < 10 m) or 2 m (for boats > 10 m) of the cockpit
  - 2 m of the extinguisher opening for dowsing the engine,
  - d) 1 extinguisher within 2 m of the cooker,
- e) 1 extinguisher within 5 m of the bunks.
- f) CO2 extinguishers may be placed in accommodation areas only where inflammable liquids are present (e.g. galley) or where there is powered electrical equipment. There must not be more than one CO2 extinguisher per area at risk, and its maximum capacity must not exceed 2 kg.

Only compatible replacement parts must be used in fire protection systems. They must bear the same markings and be technically equivalent.

A safety cloth must be stowed in the galley in the neighbourhood of the cooker to help extinguish fire in emergency cases.

### **B. SAFETY INSTRUCTIONS**

### WARNING

It is the responsibility of the owner/ captain to :

- have fire extinguishing equipment checked in accordance with the stipulations of the builder and the regulations in your country.
- Replace fire extinguishing equipment if it has expired or been discharged, by extinguishers of equal or greater capacity.
- Show members of the crew :
  - The location and operation of fire extinguishing equipment on board
  - The location of the engine compartment extinguishing hole (located on the companionway)
- Ensure that fire extinguishing equipment is readily accessible whenever the boat is occupied.

### **NEVER:**

- Obstruct gangways to emergency exits (deck hatches)
- Obstruct safety controls (gas valves, fuel valves, electrical switches)
- Obstruct fire extinguisher storages.
- Leave the boat unattended with a cooker or heater alight.
- Use a gas lamp in the boats
- Fill a fuel tank or change a gas cylinder while the engine is running, or the cooker or heater are alight.
- Smoke while handling fuel or gas.
- Fit fee-hanging curtains near the cooker or any other appliance with an open flame.
- Store inflammable products in the engine compartment.
- Always keep the bilges clean and check that there is no fuel vapour or gas.

### WARNING

- If a CO<sub>2</sub> extinguisher is fitted, the following information must be displayed close to its location :

« This extinguisher contains CO2 – use only on electrical or cooker fires. To avoid suffocation after discharging, leave the area immediately. Ventilate before re-entering.»

- Do not open the engine compartment immediately after putting out a fire, to avoid the release of toxic smoke or spraying of burning materials (oil, water).

# VIII. ENGINE

Regular maintenance must be carried out in accordance with the engineer's recommendations.

Read carefully the engine operating instructions that come with the boat. Do not hesitate to consult your agent or a qualified professional.

### A. GENERAL PRECAUTIONS

### WARNING

### Ensure

- Ensure that the cooling circuit water intake seacock is open, and that water is coming out of the engine exhaust.
- Boats fitted with rotating seal stern gland : bleed the air from the gland after each launch.
- Do not obstruct engine vents.
- Avoid contact between inflammable materials and hot engine part

Regularly check the condition of the anodes and ensure that they are suitable for the boat's environment (fresh water, salt water).

Any engine change must respect the capacities of the boat and be performed by an engineer specializing in marine mechanics.

### **B. EXHAUST GAS EMISSION**

### WARNING !

Internal combustion engines produce carbon monoxide. Prolonged exposure to exhaust gasses can have serious consequences, and may even cause death.

### C. SAFETY

### **DANGER !**

- In order to avoid all risk of serious injury from the propeller, the engine must not be started when there are swimmers near the boat.
- Whenever possible, the engine must be stopped for any engine maintenance or checking operations. If not, special attention must be paid to moving items (belts, etc...) in order to avoid any risk of injury.
- Do not combine sailing and using engine power if the boat is heeling more than 10 %

### D. WINTERISATION

In particular, follow the instructions for winterisation.

In the absence of other instructions, proceed as follows:

- Close the engine water intake seacock,
- Disconnect the pipe from the engine water intake seacock,
- Drain the sea-water circuit,
- Place the pipe into a drum of -25° anti-freeze coolant,
- Run the engine until the fluid comes out of the exhaust,
- At the end of this operation, re-connect the pipe to the seacock,

- Attach a notice to the electrical panel and the battery isolator to the effect that the engine water intake seacock is closed.

# IX. FUEL INSTALLATION

Flexible fuel pipes must be:

- replaced by pipes bearing the same markings
- replaced in the event of deterioration.

### WARNING !

- Depending on the trim and loading of your boat, the whole of the nominal fuel capacity may not be usable. Always maintain a 20 % reserve for safety.

### Never:

- Store inflammable materials in unventilated spaces
- Smoke while filling tanks
- Obstruct ventilation openings (vents, engine ventilation grills)
- Modify the installation, unless this is carried out by a technician qualified in this field.

# X. STEERING SYSTEM

The steering system plays a vital role in the safety and comfort of your boat.

### A. STEERING WHEELS

The Dufour 385 is fitted with a double wheel and a system of rudder cables and chains.

Periodic checks to be performed:

- Check the play in the various components (rudder stock/bearings, rudder cable tension and wear). In the event of doubt or a problem, consult your agent.

### **B. EMERGENCY TILLER**

### WARNING

The Dufour 385 is equipped with an emergency tiller that must be kept readily accessible, we advise you to stow it in a cockpit locker near the tiller deck plate.
It is only designed for sailing at reduced speed in the event of damage to the helm.

How to install:

- Unscrew the tiller deck plate cover located in the cockpit floor,
- Fit the tiller onto the head of the rudder stock.

# XI. SAILING

### WARNING

- Under all circumstances, suit the speed of your boat to the surrounding conditions and always maintain a safety margin. Pay particular attention to :

- The state of the sea, currents, the strength of the wind
- Other boat movements
- Manoeuvres in port
- When passing through mooring areas
- Obey the rules of priority as defined in the rules of the road and imposed by the COLREG.
- Ensure that you always leave enough room for stopping or manoeuvring if necessary to avoid a collision.
- Respect speed limit zones
- Out of courtesy and for the safety of other boats, take care not to create a large wash.

### WARNING

- You must fit your boat with grab lines. Fixing points are provided on the deck. Refer to the boat's deck fittings drawings.
- The stability of your boat was designed taking into account the shipyard catalogue options. Any alteration to on-board weight distribution (for example : adding a radar, changing the engine, etc...) can affect the stability, trim and performance of your boat.
- Towing a boat causes a significant extra strain that will have an unfavourable effect on the stability of your boat.

### - Never :

Use the boom to lift heavy weights.

# XII. LIGHTNING PROTECTION

Your boat is protected against lightning. The rigging is electrically connected to earth. Nonetheless, for your safety, it is necessary to respect certain precautions.

### A. MAINTENANCE

If the boat has been struck by lightning:

- the protection installation must be inspected to detect physical damage and check the integrity of the device, as well as the continuity of the earthing.

- the compasses, electrical and electronic devices must be examined in order to ascertain if damage or calibration changes have occurred.

### **B. PROTECTION OF PEOPLE DURING A THUNDERSTORM**

### WARNING

During a thunderstorm, it is preferable to obey the following instructions : - People should stay below as far as possible.

- People should stay out of the water and not let their arms or legs hang into the water.

- Whilst maintaining satisfactory control of the boat and its sailing, people should not touch any part connected to a lightning protection installation, especially not in such a way as to from a link between such parts.

- It is desirable that people should avoid any contact with metal parts of the rigging, the spars, deck fittings and the lifelines.

# XIII. ENVIRONMENTAL PROTECTION and SAFETY

We recommend keeping yourself informed about local regulations concerning respect for the environment, and to obey international regulations against pollution in the marine environment (MARPOL) as well as codes of good practice.

### WARNING !

- Most cleaning products, engine oils and hydrocarbons are likely to affect the environment, so they should be discharged in authorized locations (check with the Harbour Master's Office).

- Certain products can likewise represent a risk for your own and others' safety, which is why it is important to read and obey the instructions for use.

- Substances uses must be labelled an stored in an appropriate, ventilated place in the boat.

# XIV. SAFETY EQUIPMENT

There is no harmonization of obligatory safety equipment across the European Community. You should seek information about national requirements for CE-marked boats.

In France, yachts bearing the CE mark must carry the facilities and safety equipment stipulated for the category of sailing chosen by the yachtsman within the following limits:

Design Category	Possible sailing categories
А	1.2.3.4.5.6
В	2.3.4.5.6
С	4.5.6
D	6

If your boat is equipped with a life-raft, read its instruction manual carefully. The crew should be familiarized with the use of all safety equipment (harnesses, flares, life-raft, etc...). Training sessions are organized regularly by sailing schools and clubs.

# XV. HANDLING, TRANSPORTING, LIFT OUT

When craning, take care that the slings are correctly positioned and are not fouling the propeller, the saildrive or a fragile sensor.

Lifting frames should be wide enough, or fitted with spreaders to avoid exerting excessive lateral pressure on the rubbing band.

Avoid letting slings foul the lifelines. During transport or lift out, the keel should be in proper contact with its support, and should be taking most of the boat's weight.

Cradle pads must be positioned against structural elements and exert only the pressure necessary for the boat's good balance.

Whenever the boat is out of the water, use the opportunity to inspect the propeller, rudder, skin fittings and sensors.



# PLANS DUFOUR 385

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# I. Presentation plan





# III. Deck fittings plan

	Rep.	Description	Number	Rep.	Description
I	1	Bow fitting	1	42	Winch handle holder
	2	Forestay chainplate	1	43	Reinforced stanchion for life line gate*
	3	Rubbing plate	1	44	Folding pad eye *
	4	Port pulpit	1	45	Support for bowsprit pole *
	5	Starboard pulpit	1	46	Folding pad eye *
	6	Bow protection plate *	1	47	Deck vent
	7	Electric windlass *	1	48	Dorade box + protection *
	8	Removable inner forestay chainplate *	1		
	9	Roller furling guide block on stanchion	1		
	10	Stanchion	8	51	Deck hatch T44
	11	Stanchion base	14	52	Deck hatch T20
	12	Sheet lead for roller furling system	4	53	Roof portlight T4
	13	Gooseneck at mast step	1	54	Deck hatch T00
	14	Mast step base	1	55	Cockpit portlight T1 *
	15	Shroud chainplate	2	56	Hull portlight
	16	4 wheel turning block	1	57	Sliding hatch
	17	Toe rail in aluminium	1	58	Companion way access panel
	18	Fairlead amidships	2		
	19	3 wheel turning block *	1		
	20	Mooring cleat	6		
	21	Genoa track + car + end fittings	2		
	22	Double cleat *	1		
	23	Mainsail track, complete	1		
	24	Vertical turning block	2		
	25	Triple cleat	1		
	26	Single cleat	1	А	Life line fixing points
	27	Clam cleat	2	-	(on port and starboard mooring cleat )
	28	Halyard winch	1	В	Towing point (Port and starboard)
	29	Jamming cheek block	2	G	
	30	Folding pad eye	1	С	Portlights that must be shut while
	31	Single cleat	1		Navigating
	32	Sheet winch	2	D	« Man overboard » safety ladder
	33	Port pushpit	1		
	34	Starboard pushpit	1	E	Storage space for life raft
	35	Aft port fairlead	1		
	36	Aft starboard fairlead	1	F	Fixing points for life belt
	37	Optional winch *	1	G	Storage locker that must be shut while
	38	Hinges for helmsman seat	2		Navigating
	39	Bathing ladder	1	L_	
	40	Back stay chainplate	2	*	Option
	41	Folding pad eye *	2		

Number 



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# IV. Sail plan

Ι	14.025 m
J	4.39 m
Р	12.80 m
E	4.25 m
LP	6.15 m
Genoa surface	42.6 m <sup>2</sup>
Mainsail surface	31.5 m <sup>2</sup>



# V. Halyard and sheet rigging plan

Rep.	Description classic mast	
1	Single block + swivel shackle	4
2	Fiddle block	1
3	Mainsail sheet - Ø12 - white/red	1
4	Fiddle block + cleat	1
5	Fiddle block	1
6	Boom downhaul - Ø12 - white/red	1
7	Rigid boom vang *	1
8	Mainsail halyard - white/red	1
9	Adjusting line mainsail track car - white/red	2
10	Reef no. 1 – white/blue	1
11	Reef no. 2 - white/green	1
12	Genoa roller furling line - white/blue	1
13	Genoa sheet - Ø14 - white/blue	2
14	Genoa halyard – white/blue	1
15	Spinnaker halyard -Ø12 - white/yellow *	1
16	Single block + swivel shackle *	2
17	Spinnaker sheet – Ø12 – white/yellow *	2
10	Removable inner forestay halyard Ø12 - white/green	
18	24	1
19		

\* Option



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# VI. 110 V circuit diagram

Rep.	Description
	Equipment
A	Shore power connection*
В	Electric box with main switch *
C	Electric box with differential *
D	Battery charger*
E	Connecting box*
F	Water heater
G	110V - 60Hz socket*
b g	Cable Colours Light blue Green Brown
m	Block
n r	Diack
,	Green vellow
	White
<i>w</i>	
**	Option Not supplied
	rior suppriou



# VII. 220 V circuit diagram

![](_page_35_Figure_1.jpeg)

![](_page_36_Figure_0.jpeg)

# VIII. Charging and power circuit diagram

Rep.	Description
Α	Electric windlass*
В	Remote control for windlass *
С	Relay for windlass remote control *
D	Electric panel with terminals
E	Battery charger*
F	12V switch panel
G	80 Amp unipolar circuit breaker for windlass *
Η	Service batteries (2 as standard)
	(3*)
Ι	Fuse 125A
J	Service battery switch
Κ	Fuse 5A*
L	Alternator
Μ	Current distributor
Ν	Starter
0	Engine battery
Р	Engine battery switch
Q	Windlass relay*
B-	Connection – chart table
B+	Connection + chart table
R	Fuse 5A for engine compartment ventilator
S	Relay for ventilator
Т	Electric ventilator
Z-	Connection – engine compartment
*	Option

![](_page_38_Figure_0.jpeg)

# IX. 12v / 220 v electric switch panel diagram

		Security
Rep.	Description	level
1	Navigation light	6A
2	Steaming light	6A
3	Anchor light	6A
4	Refrigerator	10A
5	Saloon lights	16A
6	Cabin lights	16A
7	Water circuit	10A
8	Bilge pump	16A
9	Shower water evacuation pump	10A
10	Navigation instruments	10A
11	Autopilot	20A
12	12V socket – HiFi	10A

![](_page_40_Figure_0.jpeg)

# X. Electric panel terminal diagram

Rep.	Description
-	Battery negative pole
+	Battery positive pole
~	
C1	Navigation lights and compass
C2	Steaming light
C3	Anchor light
C4	Relay for refrigerator thermostat
C5	Saloon lights
C6	Cabin and toilet cabin lights
C7	Water circuit
C8	Bilge pump
C9	Shower water evacuation pump
C10	Navigation instruments*
	And reading light at chart table
C11	Autopilot *
C12	12V socket and HiFi *
1	
TI	Battery engine test
GI	Tank level indicator G0
B+	Light bulb + chart table
B-	Light bulb – chart table
Z-	Light bulb – engine compartment
	Cable colours
n	Black
r	Red
W	White
0	Orange
m	Brown
b	Blue

\* Option

![](_page_42_Figure_0.jpeg)

# XI. 12 V installation drawing

Rep.	Description
1	Port light
2	Starboard light
3	Windlass *
	Relay for windlass *
4	Adjustable spot light
5	Ceiling and interior light
6	Ceiling light toilet +interior
7	Bulkhead mounted light
8	Loudspeaker HiFi/radio CD *
9	
10	Chart table reading light
11	12V switch panel
12	12V socket
13	Cooling circuit
14	Shower water evacuation pump
15	Bilge pump
16	Engine starting battery
17	General circuit breaker
18	Service battery
19	Distributor
20	Water circuit
21	Bilge ventilator
22	Battery charger*
23	Compass
24	Navigation instruments *
25	Stern light
26	Steaming light
27	Anchor light
28	Battery switches
29	Fuel gauge
30	Autopilot engine *
31	Speed and depth sounders *

\* Option

![](_page_44_Figure_0.jpeg)

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# XII. 220 V installation drawing

# Rep.Description1220V socket ( or 110V )\*2Water heater3Battery charger \*4General circuit breaker \*5Shore power connection \*6Electric box \*\*Option

![](_page_46_Figure_0.jpeg)

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# XIII. Steering wheel drawing

### Rep. Description

- 1 Emergency tiller
- 2 Steering wheel (2)
- 3 Compass
- 4 Rudder stock stop
- 5 Rudder stock spindle
- 6 Rudder + stock
- 7 Bush
- 8 Nylon O-ring Higher and lower rudder
- 9 bearings
- 10 Rudder stock shaft
- 11 Grab rail on console
- 12 Autopilot chain \*
- 13 Autopilot engine \*
- 14 Autopilot sprocket \*
- 15 Backing plate
- 16 Square
- 17 Sheath end
- 18 Sheath
- 19 Chain set 5/8P
- 20 Cable Ø5
- 21 Quadrant
- 22 Bulckhead instrument
- 23 Bulckhead instrument + brake

\* Option

![](_page_48_Figure_0.jpeg)

# XIV. Gas circuit diagram

### Rep. Désignation

- 1 Gas cylinder \*\*
- 2 Gas cylinder valve \*\*
- 3 Expander \*\*
- 4 Connecting piece
- 5 Connection / size 6x8
- 6 Watertight through bulkhead fitting
- 7 Plastic piping
- 8 Copper conduit 6x8
- 9 CE gas tap (under the cooker/oven)
- 10 Long connecting pipe
- 11 2 burner cooker and oven
- \*\* Not supplied

![](_page_50_Figure_0.jpeg)

# XV. Abandon ship plan

Rep.	Description
EXIT	Emergency exit
Ex	Recommended space for extinguishers
LA	recommended space for exanguishers
1	Under chart table **
2	Under saloon bench **
Wh	Access hole to engine compartment For extinguisher

\*\* Not supplied

![](_page_52_Figure_0.jpeg)

# XVI. Fresh water circuit diagram

### Rep. Description

- 1 Deck filler
- 2 Water infill
- 3 Vent
- 4 Ventilation piping
- 5 Front water tank
- 6 Cold water piping
- 7 2 way collector
- 8 Shower mixing tap
- 9 Pressurised water circuit
- 10 Sweet water filter Piping for hot water heat exchange through
- 11 engine
- 12 water heater
- 13 Galley mixing tap
- 14 Deck shower
- 15 Aft water tank
- 16 Hot water piping

![](_page_54_Figure_0.jpeg)

# XVII. Drain system diagram

### Rep. Description

### Electric bilge pump

- 1 Strainer
- 2 Evacuation piping Ø20
- 3 Electric bilge pump
- 4 Deck outlet

### Manual bilge pump

- 5 Strainer
- 6 Evacuation piping Ø25
- 7 Manual bilge pump8 Deck outlet

![](_page_56_Figure_0.jpeg)

# XVIII. Skin fitting location drawing

Rep.	Function	Ø
1 2 3 4 5 6 7	Skin fittings and valves Galley sink evacuation Wash basin evacuation Toilet infill Toilet outlet Holding tank outlet* Water foot pump infill *	1" 1" 3/4" 1"1/4 2" 1/2" 3/4"
89	Shower water evacuation Skin fittings Water evacuation electric bilge pump Water evacuation manual bilge pump	3/4" 1"
*	Option	

![](_page_58_Figure_0.jpeg)

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# XIX. Engine installation drawing

Rep.	Description
	General
1	Engine
2	Saildrive
3	Sea water pump for engine
4	Engine base in polyester
5	Engine control panel
6	Propeller
7	Anode
	Cooling circuit / Exhaust
	system
8	Sea water valve
9	Sea water piping
10	Sea water filter
11	Anti-siphon valve
12	Waterlock
13	Exhaust piping
14	Exhaust outlet
	Fuel circuit
15	Deck filler for fuel
16	Fuel infill
17	Fuel tank vent
18	Ventilation piping for fuel tank
19	Fuel tank
20	Emergency fuel shut-off handle
21	Fuel supply piping
22	Fuel return piping
23	Fuel filter
	Ventilation
24	Ventilation piping
25	Bilge ventilator
26	Ventilation grills
	Various
27	Engine starting battery
28	Engine command

30 Circuit breakers

![](_page_60_Figure_0.jpeg)

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# XX. Holding tank fitting drawing

![](_page_61_Figure_1.jpeg)

![](_page_62_Figure_0.jpeg)

# XXI. Holding tank fitting drawing in 3 cabin version

Rep.	Description
	3 cabin version
1	Through hull fitting & valve 3/4"
2	Through hull fitting & valve1" 1/4
3	
4	Piping Ø20
5	Anti odour piping Ø38 *
6	Anti odour pipingØ51 *
	3 way valve in plastic PVC Ø38
7	*
8	Holding tank in polyethylene *
9	Deck outlet in aluminium Ø50 *
10	Vent in brass *
11	Manual evacuation pump *
12	Deck outlet in aluminium Ø38 *
13	Piping Ø25
	Googeneek
	OUDSENECK
	* Optional equipment
* *	Supplied as standard

![](_page_64_Figure_0.jpeg)

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