

USE AND MAINTENANCE MANUAL

GARDASOLAR – Electric & Solar Boat

GOGO4/GOGO6

Dear **Customer**, congratulations on your purchase of a **GARDASOLAR** product!

Welcome to a new world, where you can navigate immersed in peace and quiet, with no vibrations, no smell of exhaust fumes; you are now the owner of one of the most sustainable crafts in the entire planet!

Keep up-to-date by visiting our website www.GARDASOLAR.com and discover our news for you: events, trips and competitions, new products and accessories...it will be an unforgettable experience that we will share with you!

GARDASOLAR is a 100% Italian product. Even the smallest details have been taken care of to ensure comfort and pleasurable boating never experienced before.

Please note that this manual is not a course about safety during navigation or on navigating techniques, so if this is your first boat, get some experience alongside an expert.

This manual must be kept in a safe, dry place and must always be on board during navigation.

ENJOY READING !!! **THE GARDASOLAR TEAM.**

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1 SAFETY

1.1 Indications

DANGER: this indicates a hazardous situation which, if not avoided, will result in death or serious harm to persons and/or property.

WARNING: this indicates a hazardous situation which, if not avoided, may result in death or serious harm to persons and/or property.

CAUTION: this indicates a hazardous situation which, if not avoided, may result in moderate harm to persons and/or objects.

NOTICE: this indicates a potentially hazardous situation which, if not avoided, may cause harm to persons and/or property.



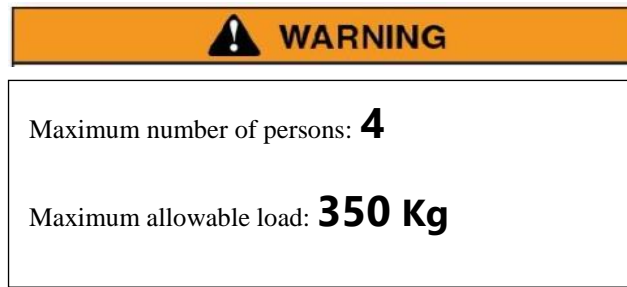
1.2 General rules



- ✓ Whoever is driving the boat must read the instructions before using it.
- ✓ Look before changing direction.
- ✓ Equipment and fittings must comply with current regulations.
- ✓ Do not use the boat under the influence of alcohol or drugs.
- ✓ Do not stand up while the boat is moving.
- ✓ Do not take on board explosives or fireworks which could cause fire and/or explosions.
- ✓ Do not leave children alone on board without adult supervision.
- ✓ Do not stand in front of the driver, blocking his view.
- ✓ Do not do sport or dive near rocks or where you don't know what is under the water level.
- ✓ Do not do sport directly in front of or behind the boat and where you can't be seen.
- ✓ Do not use the motor if there are bathers near the boat.
- ✓ Do not swim near the boat while it is moving.
- ✓ Do not try to approach the boat when the propeller is turning.
- ✓ Do not swim near boats connected to recharging points/sockets on the quay.
- ✓ Do not dive from the boat without knowing the actual water depth.
- ✓ Do not use the stern swim platform for anything other than returning on board or entering the water.
- ✓ Do not use the fore swim platform as a diving board.

1.3 Load capacity GOGO 4 version

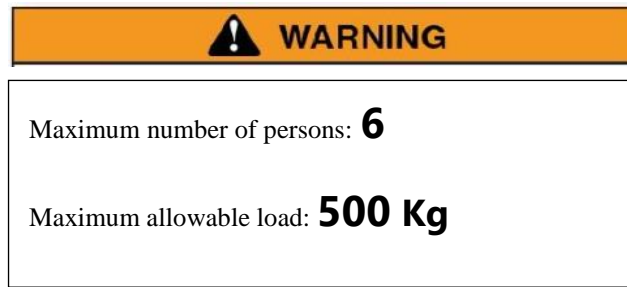
The manufacturer's plate gives indications for the use of the boat. Overloading with persons and/or objects will alter the performance of the boat. Do not exceed the maximum allowable weight shown on the manufacturer's plate.



The presence of the manufacturer's plate does not exempt the driver or the owner of the boat from using common sense or good judgment when using it.

1.4 Load capacity GOGO 6 version

The manufacturer's plate gives indications for the use of the boat. Overloading with persons and/or objects will alter the performance of the boat. Do not exceed the maximum allowable weight shown on the manufacturer's plate.



The presence of the manufacturer's plate does not exempt the driver or the owner of the boat from using common sense or good judgment when using it.

1.5 Installed power

The safety of the boat is directly linked with the installed power. Adjusting or modifying the propulsion system from its original state may cause serious harm to persons and/or property.



Maximum installed power: **2000 Watt**

Do not replace the boat motor without written authorization from GARDASOLAR. Any tampering will cause loss of warranty rights.

1.6 Stability

The stability of the boat reflects the standards of the design category shown on the manufacturer's plate.

The stability of the boat may be reduced if heavy devices are installed on the deck of the boat and if its centre of gravity is raised. The stability may also be affected by the presence of liquids inside the hull.



- ✓ Periodically check the buoyancy of your boat.
- ✓ Periodically check the condition of the passenger lockers and the service compartments/openings.
- ✓ Check the inside of the hull using the inspection openings

If liquids are present use the bilge pump if present or a liquid aspirator to remove them.

1.7 Fire

The risk of fire and spreading of fire is limited to the electrical part of the boat. Fire risk is reduced thanks to the presence of protection devices against shortcircuit currents (fuses) and the use of cables and sheathes that do not spread flame.

A portable 1 Kg powder extinguisher with extinguishing power 34BC is provided on board.



- ✓ Always check that the fire extinguisher is in good condition and that the pressure indicator, if present, is in the charged position (green area).

1.8 Flooding

The boat is self-draining and in the event of flooding the water will discharge through the drain holes placed under the passenger seats.



- ✓ During an emergency abandon the boat only in case of extreme necessity.
- ✓ Always check the design category against wind and wave conditions before going out with your boat.
- ✓ Observe the maximum weight and the maximum number of persons allowed on board as shown on the manufacturer's plate. Allow some margin to these indications in rough waters.
- ✓ If weather conditions are variable or quickly changeable do not go out with your boat.
- ✓ Always check that you have fixed the moisture drain caps to the hull, if present.
- ✓ If present, make sure that the bilge pump works properly.

1.9 Personal flotation device

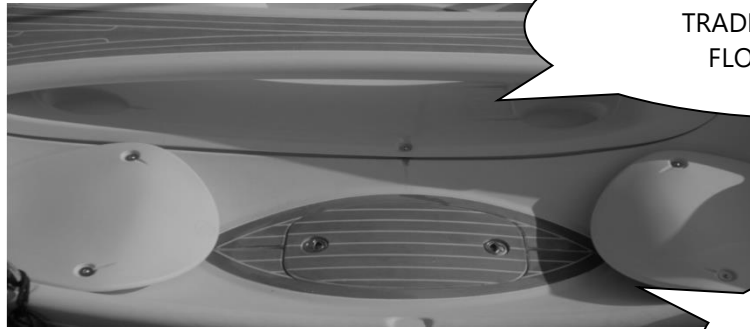
The owner of the boat, or in his absence, whoever is in charge of the boat is responsible for the use of personal flotation devices for the passengers. The operator should consult the directives and laws in force in the country of destination of the boat.

In case of doubt always allocate one suitable flotation device for each passenger on board.



- ✓ Always wear life jackets when on board.
- ✓ Children and people who cannot or don't know how to swim must always wear a personal flotation device.

GARDASOLAR advises you to place the flotation devices under the seats, if they are self-inflating, or in the central opening of the boat for traditional types. In any case the devices must be easily reached and in sight.



TRADITIONAL INFLATE
FLOATING DEVICE


SELF INFLATING
FLOATING DEVICE

1.10 Safety equipment

Consult the directives and laws in force in the country of destination and use of the boat.

1.11 Driving in a state of inebriation

It is forbidden to drive the boat while under the influence of alcohol and/or drugs.

 **WARNING**

- ✓ Under the influence of alcohol and drugs our body reactions and reflexes are impaired and may cause harm to persons and objects.

1.12 Warning

Read all warning labels on the boat.


Do not remove warning labels as they give indications about the safe use of the boat.

labels

1.13 The weather

Get to know the weather and weather changes, they can change navigation conditions in a very short time from good to very bad and put your safety at risk. Before setting out always check the weather forecast and weather conditions on the horizon, asking also advice from local experts where you are boating.

A sudden change in wind direction, in the speed or height of the waves are signs of worsening weather conditions.

 **WARNING**

- ✓ Wear personal flotation devices.
- ✓ If a squall or a storm approaches look for the nearest safe port to shelter from wind, waves, lightning and rain.
- ✓ If a storm hits while you are navigating, set a safe route that takes advantage of wind and wave conditions.
- ✓ In foggy conditions set a safe route and alert other boats of your presence using a sound signal.
- ✓ In case of lightning stay away from anything that might act as a lightning conductor or put you in contact with water and the cables of the electrical system.
- ✓ Watch out for water currents and gusts of wind.
- ✓ Abandon the boat only if absolutely necessary.

1.14 Reporting accidents

In the event of an accident contact the local authorities to report it. Give help to anyone who signals you an emergency situation or is evidently in difficulty.

1.15 Equipment

Typical equipment for safe boating within a mile from the coast:

- ✓ safety equipment
- ✓ spare ignition key
- ✓ waterproof electric torch
- ✓ mooring lines
- ✓ fenders
- ✓ spare propeller
- ✓ oars or paddles
- ✓ boathook
- ✓ manual bilge pump
- ✓ spares kit
- ✓ tool kit
- ✓ first aid kit

2 EMERGENCY PROCEDURES

2.1 Fire

In the event of fire:

- ✓ Stop the boat.
- ✓ Use the extinguisher to put the fire out: point the extinguisher stream at the base of the flames.
- ✓ Throw out of range of the fire all materials that may catch fire.
- ✓ Report the emergency.
- ✓ Gather all emergency devices and prepare to abandon the boat if necessary.

2.2 Abandon

- ✓ In the event of fire and if you abandon the boat, when you are in the water try to avoid the smoke carried by the wind.
- ✓ Use emergency signals.
- ✓ Stay together to facilitate rescue.

2.3 Capsizing

- ✓ Stay as close as possible to the boat, normally a boat will float even if capsized.
- ✓ You will be seen more easily by rescuers if you are on top of the boat.
- ✓ Send distress signals.

2.4 Collision

After a collision check that everyone is still on board.

- ✓ Check injury to persons.
- ✓ Check damage to objects.
- ✓ Send a rescue request..
- ✓ Stay on the boat.

2.5 Impact with land/aground

In the event of an impact, inspect the boat to check the extent of the damage.

- ✓ Check for leaks. If water is entering, give priority to stopping the water from entering before attending to refloating the boat.
- ✓ Estimate the depth of the land on which the boat is grounded in order to refloat it more easily.
- ✓ Establish whether the current, the wind and the waves will hinder or help to refloat the boat.

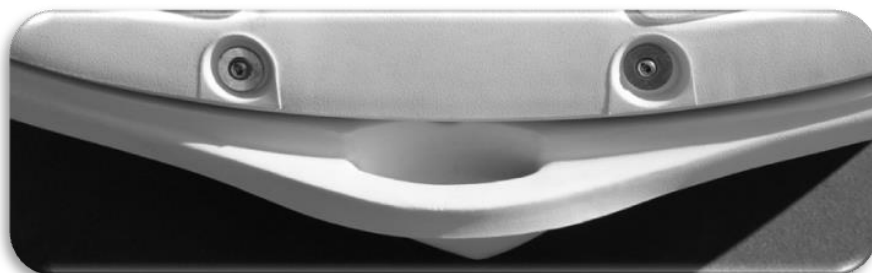
2.6 Water on board

Use immediately automatic and/or manual bilge pumps.

- ✓ Check for any new seepages after water has been drained.
- ✓ Stop navigation if the water seepage gets worse when the boat is moving.
- ✓ In the event of persistent water seepage, make for the coast in order to reach the safety of a port.

2.7 Towing

Towing a boat is the last-ditch solution in the event of breakdown or emergency. The boat has towing handles which in normal conditions allow the boat to be towed by a second boat.





WARNING

Towing or being towed puts a strain on the boat and the connection means between the two boats. Breakage of the connection means could cause harm to persons and/or objects. Be very careful.

If you attach the connection means to a structure, make sure that it can withstand the strain it will be subjected to make a fitting that can distribute the strain over the largest possible area.

- ✓ Keep the connection means out of range of people and motor propellers.
- ✓ Do not hold back with hands and/or feet the connection means between the two boats.

TOWING BOAT

- ✓ Pass the connection means to the boat in trouble.
- ✓ Make attachments by means of a bobstay.
- ✓ Give the tow start signal and accelerate slowly to avoid jerking.
- ✓ Watch out for any breakage and subsequent whiplash of the connection means.

TOWED BOAT

- ✓ Attach to connection means to the front or rear handle.
- ✓ To improve the tow, if possible use the rudder control to steer the towed boat.

2.8 Man overboard

- ✓ Stop immediately or stay in any case near the person in the water.
- ✓ Raise the alarm immediately and do not lose sight of the person in the water.
- ✓ Throw a lifebuoy or any floating and colored object to the person in the water even if he is already wearing a personal flotation device.
- ✓ Approach from downwind and move into the wind to recover the person.
- ✓ Switch off the motor during recovery to avoid injuring the person with the propeller.

2.9 Drowning

The last resort is to leave the boat and swim towards the person who is drowning. First try to throw him floating means or a rope.

- ✓ When back on board do any necessary first aid.
- ✓ Keep the person warm to avoid hypothermia.
- ✓ Be gentle when moving the person on board.
- ✓ Ask the emergency services for assistance.

2.10 Medical emergency

In the event of an emergency you could be far from the coast, so be properly prepared by attending a first aid course.

2.11 Propulsion and control system breakdown

- ✓ Switch off the motor.
- ✓ Drop the anchor so as to avoid drifting from your position.
- ✓ Try to understand if the problem can be solved by reading the manual.
- ✓ Report the emergency.

3 EU TYPE EXAMINATION CERTIFICATE

3.1 EU Type Examination Certificate GOGO4

The CE mark means that the boat complies with the European Directives 2013/53/UE for recreational craft and personal watercraft.



UDICER/NAUTITEST EUROPEAN NOTIFIED BODY N. 0966
ORGANISMO DI CERTIFICAZIONE NOTIFICATO DALLA COMUNITÀ EUROPEA

**DIRETTIVA 2013/53/UE DEL PARLAMENTO EUROPEO E DEL CONSIGLIO DEL 20
NOVEMBRE 2013
RELATIVA ALLE IMBARCAZIONI DA DIPORTO E ALLE MOTO D'ACQUA**

DIRECTIVE 2013/53/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 20 NOVEMBER 2013
ON RECREATIONAL CRAFT AND PERSONAL WATERCRAFT



CERTIFICATO DI ESAME «UE PER TIPO»
EU-TYPE EXAMINATION CERTIFICATE
733/17/UE/U

Fg 1 di 2

FABBRICANTE: GARDASOLAR SRL

Manufacturer

INDIRIZZO: VIA FORTUNATO ZENI, 8 – 38068 ROVERETO (TN)

Address

PRODOTTO TIPO APPROVATO: Unità da diporto a motore

Approved type

Pleasure motorboat

IDENTIFICAZIONE DEL TIPO APPROVATO:

Data identification of the approved type

Modello: GOGO4

Model

Lunghezza scafo (LH): 3,85 m

Length of the hull

Larghezza (BH): 2,05 m

Beam of the hull

Dislocamento a pieno carico: 850 kg

Max displacement

Materiale dello scafo: polietilene

Raw material: polietilene

Comando del timone: a distanza

Helm's control: remote control

Numero motori installati: 1 (uno) fuoribordo

Number engines installed: 1 (one) outboard

Motore Elettrico CA

Electric AC motor

Potenza massima dichiarata: 2 kW

Declared rated power

**ESEMPLARE RAPPRESENTATIVO DELLA
PRODUZIONE**

Cin: IT – GRD08057G717

Craft Identification Number

Motore: Marca e Modello: GARDENERGY – EVY 4.2

Engine: Manufacturer and model

Matricole: n. DCCB27BAC16020043

Serial number

Potenza installata: 2 kW

Installed power

UDICER/NAUTITEST S.r.l.

via Riviera del Brenta, 12 – 30032 Fiesso d'Artico (VE) Italy tel +39 041 5161 880 – fax +39 0415169 478 (Sede Legale)

via Andrea Giacinto Longhin, 3 – 35129 Padova (PD) Italy tel +39 049 7808532 (Direzione Tecnica)

E-mail direzione@udicer.eu

Mod.UN/EC 01/53

UDICER/NAUTITEST EUROPEAN NOTIFIED BODY N. 0966
ORGANISMO DI CERTIFICAZIONE NOTIFICATO DALLA COMUNITÀ EUROPEA

**DIRETTIVA 2013/53/UE DEL PARLAMENTO EUROPEO E DEL CONSIGLIO DEL 20
NOVEMBRE 2013
RELATIVA ALLE IMBARCAZIONI DA DIPORTO E ALLE MOTO D'ACQUA**

DIRECTIVE 2013/53/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 20 NOVEMBER 2013
ON RECREATIONAL CRAFT AND PERSONAL WATERCRAFT



CERTIFICATO DI ESAME «UE PER TIPO»

EU-TYPE EXAMINATION CERTIFICATE

733/17/UE/U

Fg 2 di 2

Numero massimo persone trasportabili: 4 (quattro)

Number of people recommended by the manufacturer

Portata massima raccomandata dal fabbricante: 350 kg

Manufacturer's maximum recommended load

MODULO: B - Allegato II della Decisione n. 768/2008/CE (effettuato secondo le modalità indicate nel punto 2, secondo trattino, di tale modulo).

Module: B - Annex II to Decision No 768/2008/EC (carried out in the manner specified in the second indent of point 2 of that module).

CATEGORIA DI PROGETTAZIONE: C e D

Design category

CONCLUSIONI DELL'ESAME

Conclusions of examination

**Udicer/Nautitest dichiara che il prodotto sopra descritto soddisfa i requisiti stabiliti dalla Direttiva 2013/53/UE
Udicer/Nautitest declares that the product described above satisfy all requirements of the Directive 2013/53/EU**

CONDIZIONI DI VALIDITÀ

Conditions of validity

Il fabbricante non può apportare al prodotto tipo approvato modifiche che possono influire sulla conformità ai requisiti essenziali applicabili e/o alle modalità di uso prescritte. Nel caso, tali modifiche dovranno essere oggetto di ulteriore approvazione da parte di Udicer/Nautitest.

The manufacturer cannot make changes in the approved type product that could influence the accordance with essential applicable requirements and/or the modalities of prescribed uses. In the case, those modifications must be object of additional approval by Udicer/Nautitest.

LISTA DEI DOCUMENTI TECNICI SIGNIFICATIVI:

List of the relevant parts of the technical documentation

- disegni

Fiesso d'Artico, 10 luglio 2017



IL DIRETTORE
Ing. MAZZINO BOGI

UDICER/NAUTITEST S.r.l.

via Riviera del Brenta, 12 – 30032 Fiesso d'Artico (VE) Italy tel +39 041 5161 880 – fax +39 0415169 478 (Sede Legale)

via Andrea Giacinto Longhin, 3 – 35129 Padova (PD) Italy tel +39 049 7808532 (Direzione Tecnica)

E-mail direzione@udicer.eu

Mod.UN/EC 01/53

3.2 EU Type Examination Certificate GOGO6


The CE mark means that the boat complies with the European Directives 2013/53/UE for recreational craft and personal watercraft.

UDICER/NAUTITEST EUROPEAN NOTIFIED BODY N. 0966
ORGANISMO DI CERTIFICAZIONE NOTIFICATO DALLA COMUNITÀ EUROPEA

**DIRETTIVA 2013/53/UE DEL PARLAMENTO EUROPEO E DEL CONSIGLIO DEL 20 NOVEMBRE 2013
RELATIVA ALLE IMBARCAZIONI DA DIPORTO E ALLE MOTO D'ACQUA**

DIRECTIVE 2013/53/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 20 NOVEMBER 2013
ON RECREATIONAL CRAFT AND PERSONAL WATERCRAFT

CE

 **CERTIFICATO DI ESAME «UE PER TIPO»**
EU-TYPE EXAMINATION CERTIFICATE
1065/17/UE Fg 1 di 2

FABBRICANTE: GARDASOLAR SRL
Manufacturer

INDIRIZZO: VIA FORTUNATO ZENI, 8 – 38068 ROVERETO (TN) ITALIA
Address

PRODOTTO TIPO APPROVATO: Unità da diporto a motore
Approved type Pleasure motor boat

IDENTIFICAZIONE DEL TIPO APPROVATO:
Data identification of the approved type

Modello: GOGO6
Model

Lunghezza scafo (L_H): 3,85 m
Length of the hull

Larghezza (B_H): 2,05 m
Beam of the hull

Materiale dello scafo: polietilene
Raw material: polyethylene

Comando del timone: a distanza con trasmissione meccanica
Remote control

Numero motori installati: 1 (uno) fuoribordo
Number engines installed: 1 (one) outboard

Motore elettrico CA
Electric AC motor

Potenza massima dichiarata: 2 kW
Declared rated power

**ESEMPLARE RAPPRESENTATIVO DELLA
PRODUZIONE**

Cin: IT – GRD08046E717
Craft Identification Number

Motore: Marca e Modello: GARDENENERGY – EVY 4.2
Engine: Manufacturer and model

Matricola: n. DCCB27BAC16020042
Serial number

Potenza installata: 2 kW
Installed power

UDICER/NAUTITEST S.r.l.
via Riviera del Brenta, 12 – 30032 Fiesso d'Artico (VE) Italy tel +39 041 5161 880 – fax +39 0415169 478 (Sede Legale)
via Andrea Giacinto Longhin, 3 – 35129 Padova (PD) Italy tel +39 049 7808532 (Direzione Tecnica)
E-mail direzione@udicer.eu

Mod.UN/EC 01/53

UDICER/NAUTITEST EUROPEAN NOTIFIED BODY N. 0966
ORGANISMO DI CERTIFICAZIONE NOTIFICATO DALLA COMUNITÀ EUROPEA

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NOVEMBRE 2013

RELATIVA ALLE IMBARCAZIONI DA DIPORTO E ALLE MOTO D'ACQUA

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ON RECREATIONAL CRAFT AND PERSONAL WATERCRAFT



CERTIFICATO DI ESAME «UE PER TIPO»
EU-TYPE EXAMINATION CERTIFICATE
1065/17/UE

Fg 2 di 2

Numero massimo persone trasportabili: 6 (SEI)

Number of people recommended by the manufacturer

Portata massima raccomandata dal fabbricante: 500 kg

Manufacturer's maximum recommended load

MODULO: B - Allegato II della Decisione n. 768/2008/CE (effettuato secondo le modalità indicate nel punto 2, secondo trattino, di tale modulo).

Module: B - Annex II to Decision No 768/2008/EC (carried out in the manner specified in the second indent of point 2 of that module).

CATEGORIA DI PROGETTAZIONE: D

Design category

CONCLUSIONI DELL'ESAME

Conclusions of examination

Udicer/Nautitest dichiara che il prodotto sopra descritto soddisfa i requisiti stabiliti dalla Direttiva 2013/53/UE
Udicer/Nautitest declares that the product described above satisfy all requirements of the Directive 2013/53/EU

CONDIZIONI DI VALIDITÀ

Conditions of validity

Il fabbricante non può apportare al prodotto tipo approvato modifiche che possono influire sulla conformità ai requisiti essenziali applicabili e/o alle modalità di uso prescritte. Nel caso, tali modifiche dovranno essere oggetto di ulteriore approvazione da parte di Udicer/Nautitest.

The manufacturer cannot make changes in the approved type product that could influence the accordance with essential applicable requirements and/or the modalities of prescribed uses. In the case, those modifications must be object of additional approval by Udicer/Nautitest.

LISTA DEI DOCUMENTI TECNICI SIGNIFICATIVI:

List of the relevant parts of the technical documentation

- disegni

Fiesso d'Artico, 23 giugno 2017



IL DIRETTORE
Ing. MAZZINO BOGI

UDICER/NAUTITEST S.r.l.

via Riviera del Brenta, 12 – 30032 Fiesso d'Artico (VE) Italy tel +39 041 5161 880 – fax +39 0415169 478 (Sede Legale)
via Andrea Giacinto Longhin, 3 – 35129 Padova (PD) Italy tel +39 049 7808532 (Direzione Tecnica)

E-mail direzione@udicer.eu

Mod.UN/EC 01/53

4 WARRANTY

4.1 Type of warranty

GARDASOLAR covers warranty of its own products on the following conditions:

Legal warranty:

Validity period 2 years from delivery date of the boat and/or part.

This is applied if manufacturing defects are found or if the goods purchased do not respect all the features promised by the seller.

Applicable only if whoever purchases the boat uses it for personal use and not in the sphere of his professional activity.

The right of legal warranty IS NOT valid for companies or freelance professionals who purchase the goods against invoice.

The defect must be reported immediately, at most within 5 days of its discovery.

Commercial warranty

Validity period 1 year from delivery date of the boat and/or part.

This is applied if anomalies caused by prolonged use in time are found.

The warranty right is not applicable if the damage has been caused by improper use of the product.

The fault must be reported within the validity period of the warranty.

4.2 Replacement under warranty

During the warranty period, GARDASOLAR, at its own discretion, will repair or replace free of charge faulty parts that they have found to be faulty after examining them.

Parts are considered faulty when their condition endangers safety during navigation or when they do not permit full functionality of the boat in normal conditions of use.

In this case transport charges will be at the expense of GARDASOLAR.

Expenses incurred for repair or replacement without the consent of GARDASOLAR will not be acknowledged.

Any warranty claims will be excluded if the Purchaser does not inform GARDASOLAR, in writing, of any defects immediately after they have been discovered or if the defect is attributable to disregard for the operating, maintenance or installation instructions, improper or unsuitable use, wrong or negligent handling, normal wear, or modifications to the Product made by the Purchaser or by third parties.

The duration of the warranty period will not be extended by the repair or replacement of any parts during the warranty period.

Apart from the above, there are no other warranties or obligations for GARDASOLAR.

GARDASOLAR expressly declines all responsibility for special damages of any kind.

If it is necessary to return a part under warranty the Purchaser agrees not to make any deductions against this from due payments while warranty claims are pending.

In line with its eco-friendly policy GARDASOLAR reserves the right to use reconditioned parts or repaired products in the warranty process. These products and parts will be comparable to the original ones for functionality and performance and guaranteed for the remainder of the original warranty period.

In no case may any repair or replacement under the terms of this Warranty exceed the fair market value of the product.

The acceptance of any product returned to or refunded by GARDASOLAR is not to be considered an admission that the product is faulty. Removed parts that are replaced become property of GARDASOLAR.

4.3 Exclusions

Warranty does not cover:

- ✓ External surfaces subject to wear through use (plastics and rubber parts).
- ✓ Fabric covers and other materials such as polythene, EVA, PVC and similar.
- ✓ Latches of passenger lockers and technical compartments.
- ✓ Physical/chemical damage caused by acids, solvents or any external agent.
- ✓ Anything caused by negligence, improper use, overloading and accidents.
- ✓ Damage arising from installation of inboard and outboard motors not authorized by GARDASOLAR.
- ✓ Costs connected with launching/landing expenses and transport for repair to a service centre if not authorized by GARDASOLAR.
- ✓ Equipment and accessories not installed by GARDASOLAR.
- ✓ Damage or deterioration of surface finishings, such as discolouring, superficial cracking, fading or oxidation, stainless steel or plastic losing their shine, or adhesion of antifouling paints to the hull.
- ✓ Breakage or loss of boat components.
- ✓ Improper use of the trailer during the various phases of launching, landing, driving and turning.
- ✓ Any fault or defect caused by defectiveness with consequent damage, cost or expense.
- ✓ Faults or defects arising from a previous repair made by personnel not authorized in writing by GARDASOLAR.
- ✓ Any declaration or implication concerning the speed, autonomy, consumptions or estimated performance of the boat.

4.4 Warranty limits

Apart from what is stipulated in this Warranty, there are no other explicit or implicit warranties given by GARDASOLAR on its products.

GARDASOLAR declines all responsibility for economic and commercial losses, moral damages deriving from the breakdown of the product, negligence, design defects, manufacturing defects, lack of warnings and/or instructions, lack of navigability and any other theory of responsibility not expressly envisaged in the terms of this warranty.

4.5 Modifications

Any modification to the GARDASOLAR product is solely at the responsibility of whoever makes the modification.

5 RESPONSIBILITY

5.1 Owner/user responsibilities

The responsibilities of the boat owner are:

- ✓ To insure the motor and the boat both for navigation and for transport by trailer.
- ✓ To observe the Navigation Code.
- ✓ To carry out proper maintenance of the boat and its systems.
- ✓ To check that safety devices and equipment are on board.
- ✓ Not to endanger his own and his passengers' safety.
- ✓ To instruct passengers about safety on board.
- ✓ To know all systems on board.
- ✓ To inspect the boat before and after navigation.
- ✓ To avoid the use of drugs and/or alcohol.
- ✓ To observe environmental regulations.
- ✓ To report accidents or anomalies during navigation.
- ✓ Not to exceed the maximum number of persons allowed on board as shown on the manufacturer's plate.
- ✓ Not to exceed in any case, considering people and objects, the maximum allowable weight as shown on the manufacturer's plate.
- ✓ The owner/user of the boat must give assistance to people in difficulty as far as possible without putting at risk his .

6 BOAT

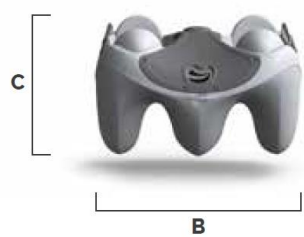
6.1 **Features**

All GARDASOLAR products are under constant review for improvement, so it may happen that some illustrations used in the manual do not show in detail the actual components installed. Some pictures may show accessories that are not installed or not available for your boat.

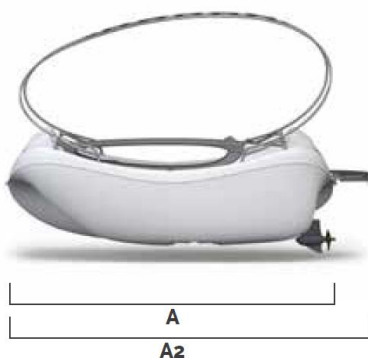
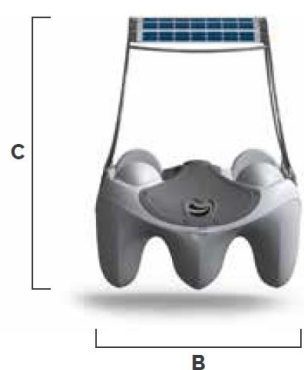
Some accessories may be installed only during production of the boat. Contact GARDASOLAR for further information about accessories.

6.2 Dimensions GOGO 4 -Electric & Solar

Electric



Solar

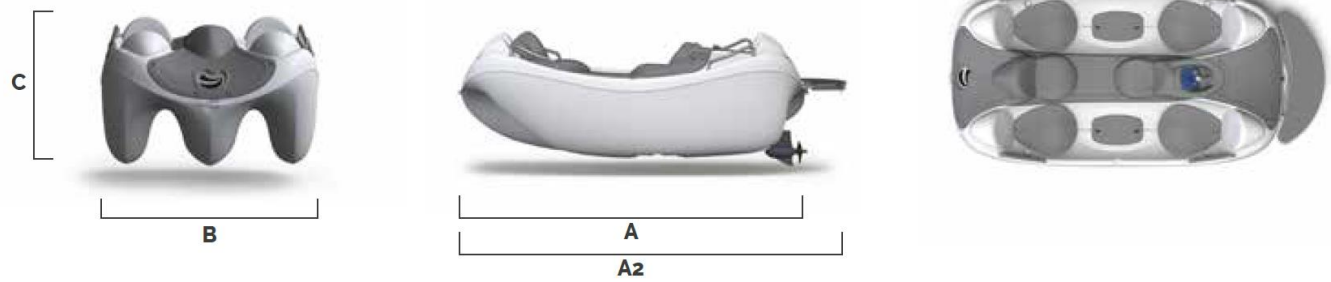


DIMENSIONS (mm)	VERSIONS	
	ELECTRIC	SOLAR
A	3.850	3.850
A2	4.150	4.150
B	2.050	2.050
C	1.300	2.650

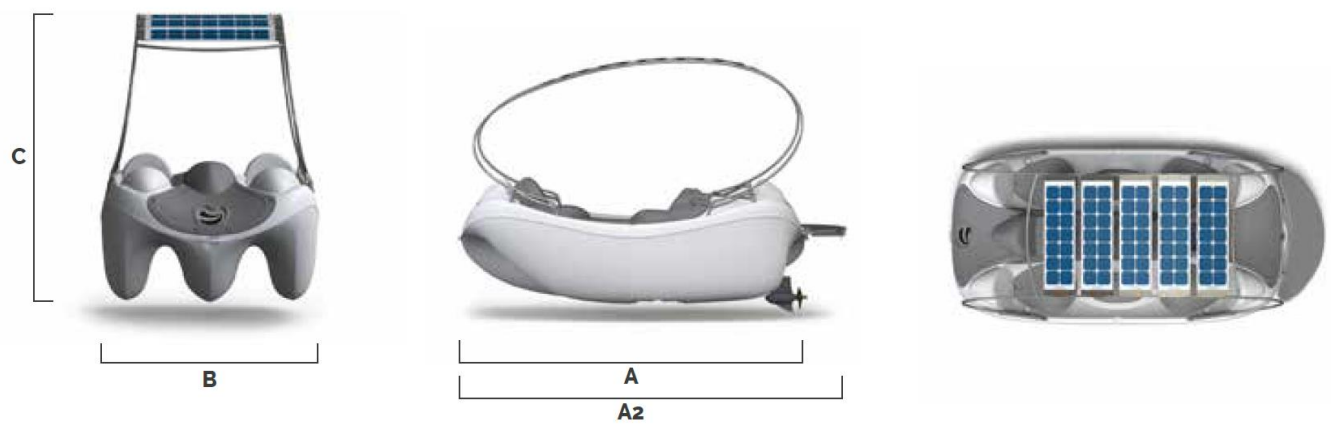
	WEIGHTS (kg)	
	ELECTRIC	SOLAR
Hull weight	360	400
Energy Kit	LIGHT	424
	STANDARD	456
	RANGE	488
	ENDURANCE	514
	CRUISE	552

6.3 Dimensions GOGO 6 -Electric & Solar

Electric



Solar



DIMENSIONS (mm)	VERSIONS	
	ELECTRIC	SOLAR
A	3.850	3.850
A2	4.150	4.150
B	2.050	2.050
C	1.300	2.650

Weights and measures mentioned are indicative only and subject to change

	VERSIONS	
	ELECTRIC	SOLAR
Hull weight	365	405
Energy kit	LIGHT	429
	STANDARD	461
	RANGE	493
	ENDURANCE	519
	CRUISE	557

6.4 Craft Identification number CIN

Each craft is marked with its identification number CIN (Craft Identification Number) showing the following information:

- Manufacturer's code	GRD	(GardaSolar)
- Country of manufacture code	IT	(Italy)
- Serial number	YYYYY	(Serial)
- Month of manufacture (letter)	A-L	(A=January - L=December)
- Last digit of year of manufacture	0-9	(1=2011)
- Last 2 digits of model sales year	0-9/0-9	(11=2011)



6.5 Manufacturer's plate

Each boat has a permanently fixed plate, separate from the craft identification number, showing the following information:

Manufacturer's name;

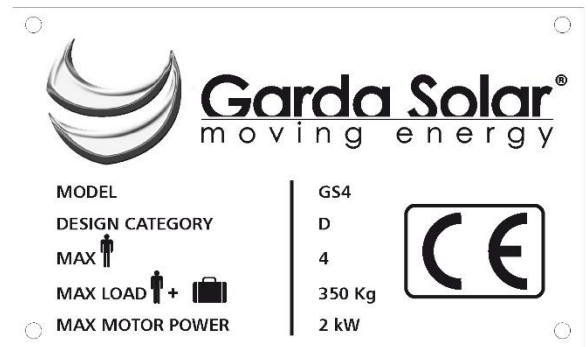
CE marking;

Design category;

Maximum load capacity advised by manufacturer;

Maximum number of persons for whom boat has been designed;

Maximum motor power.



6.6 Motor plate

Each motor has an identity plate showing technical data and the manufacturer's serial number.



6.7 Performance

See boat's technical data sheet.

6.8 Design category

The boat's design category is **category D**, as shown also on the manufacturer's plate.

A. HIGH SEA: designed for long-distance voyages, where the wind force may be higher than 8 (Beaufort Scale) and the significant wave height over 4 m, but excluding exceptional circumstances; fully self-sufficient craft.

B. OFFSHORE: designed for ocean cruising, where the wind force may be up to 8 and the significant wave height may reach 4 m.

B. NEAR THE COAST: designed for coastal cruising, big bays, estuaries, rivers and lakes, where the wind force may be up to 6 and the significant wave height may reach 2 m.

D. IN PROTECTED WATERS: designed for cruising in sheltered coastal waters, in small bays, lakes, waters and canals, where the wind force may be up to 4 and the significant wave height may reach 0,3 m, with occasional waves having maximum height up to 0,5 m, for example caused by passing crafts.

The significant height is the average of one third of the highest waves among those present in a given area of water.

7 HULL

7.1 Layout



7.2 Passenger lockers



7.3 Cleats



7.4 Handles



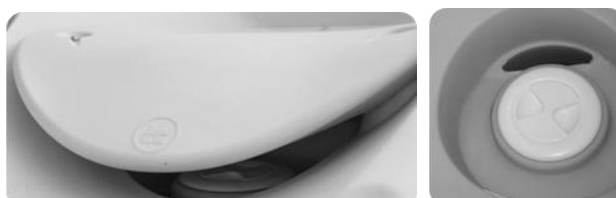
7.5 Landing wheels



7.6 Glass-holder



7.7 Inspection caps



7.8 Watertight caps

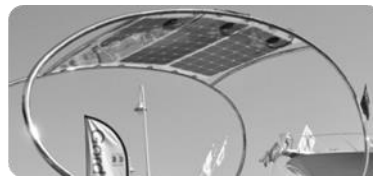


Do not remove the watertight caps as they guarantee extra buoyancy to the boat when they are closed.

7.9 Storage tray



7.10 Solar roof



Solar roof is an active photovoltaic system that can help to recharge batteries, and according to sun insolation and speed required, it allows complete free navigation by sun renewable energy. Standard power installed is 300Watt peak.

7.11 Swim platform



7.12 Swim platform ladder



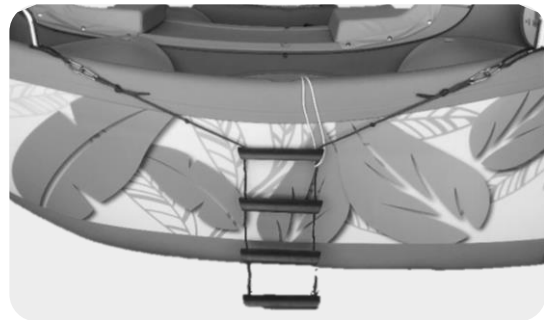
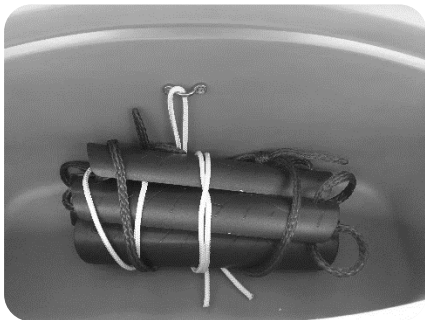
7.13 Removable side ladder

According boat version are supplied different type of side ladder. You can find it inside the storage space (passenger lockers) or fixed directly on boat deck.

7.13.1 Stainless steel side ladder



7.13.2 Plastic side ladder



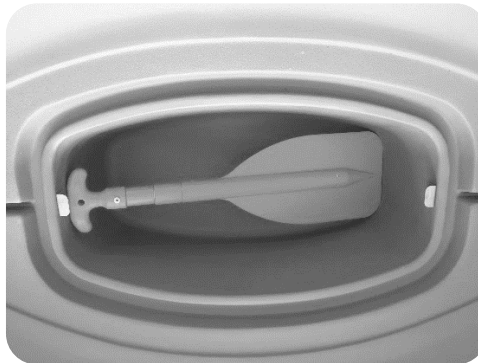
7.14 Stays

Check and replace them when they start showing signs of wear through use or UV rays.



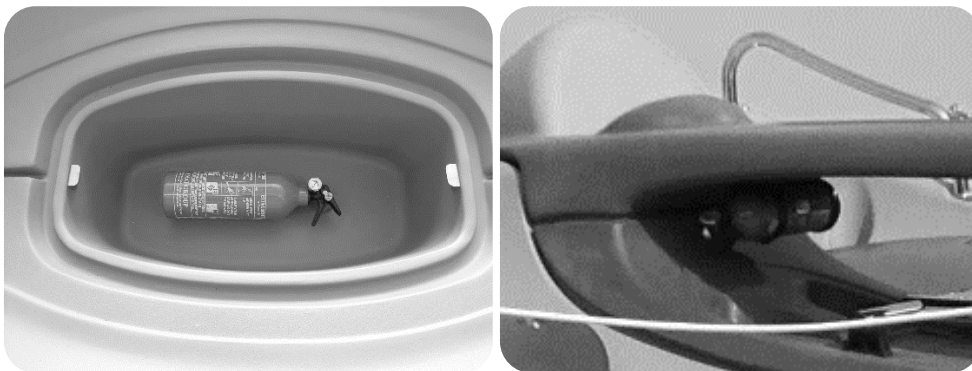
7.15 Emergency paddles

Every boat is supply by 2 emergency paddles that normally are located inside the storage space (passenger lockers) or fixed directly on boat deck.

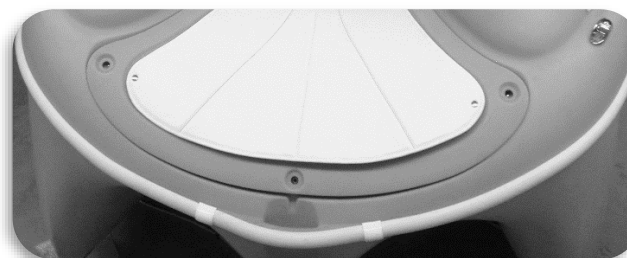


7.16 Fire extinguisher

Every boat is supply by one emergency fire extinguisher that normally are located inside the storage space (passenger lockers) or fixed directly on boat deck.




7.17 Fenders



8 ELECTRICAL SYSTEM

8.1 Electric circuit

Low voltage refers to voltages under 50V.
High voltage refers to voltages over 50V.

 **DANGER**

- Do not work on systems under power.
- ✓ Never modify an electrical system. Call in a technician specialized in marine electrics.
- ✓ Do not install or replace materials or electrical appliances with other electrical appliances that exceed the circuit amperage.

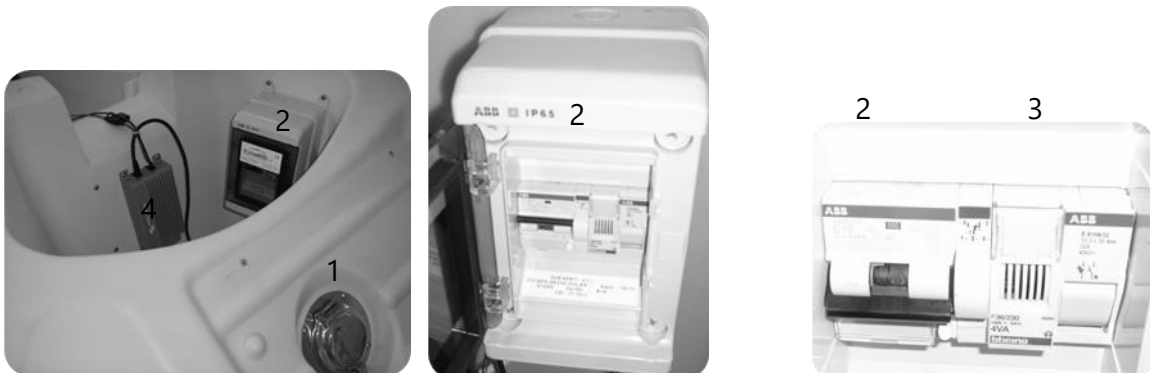
8.2 Basic components

- ✓ Recharging system 230V
- ✓ Instrument panel
- ✓ Joystick
- ✓ Battery state of charge indicator
- ✓ Electric switchboard
- ✓ Batteries
- ✓ Motor controller
- ✓ Accessories

8.3 Recharging system 230V

The recharging system 230V consists of the following components:

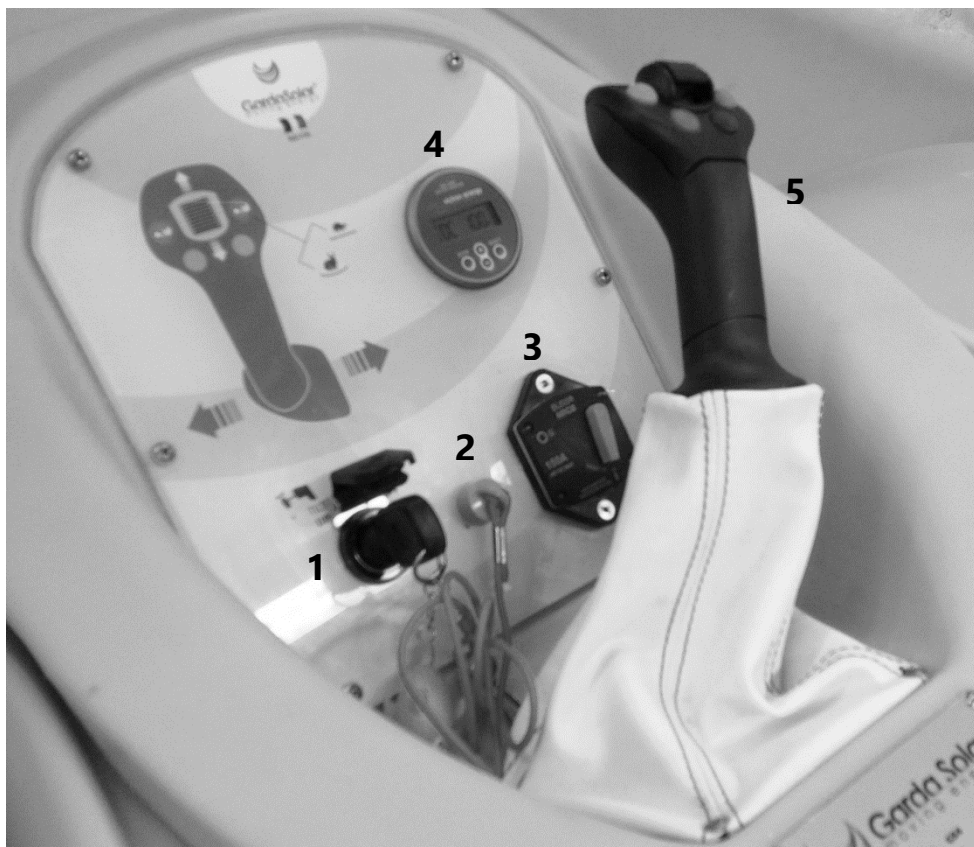
1. Socket 230V
2. Automatic residual switch with overload protection
3. Buzzer to indicate cut-out has tripped (optional).
4. Battery charger 230V.



8.4 Dashboard

The dashboard contains:

1. Ignition key
2. Dead man switch
3. Main switch
4. Battery state of charge indicator (Victron battery monitor , Led or Display version)
5. Joystick



Ignition key

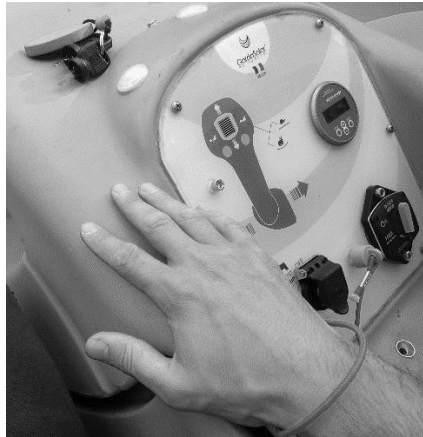
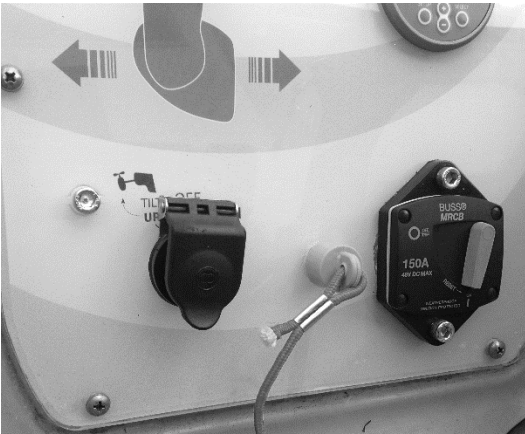
Three fixed positions are given:

LEFT:	TILT UP	corresponds to RAISED propulsion unit (optional).
MIDDLE:	OFF	corresponds to REST position.
RIGHT:	ON	corresponds to ON position.



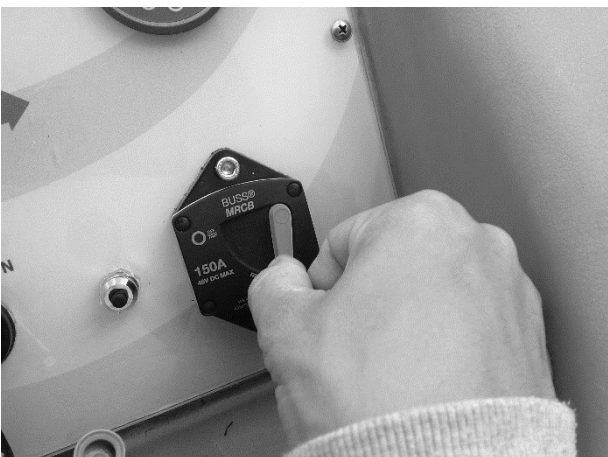
Dead man switch

Before start the boat whoever is driving the boat must plug into control panel and slip the dead man cable onto his wrist. This device switches the motor off completely if it becomes unplugged.



Main switch

This device cuts off completely the main power direct from main battery cable.



Joystick

The joystick allows you to steer the boat and to give forward drive, reverse drive and if enabled the second speed option.

The functions are:

- ✓ Forward drive
- ✓ Reverse drive
- ✓ First speed
- ✓ Second speed

Forward drive

When the green button is pressed, FORWARD drive is enabled.

When the button is released, the drive control is disabled.

Reverse drive

When the red button is pressed, REVERSE is enabled

When the button is released, the drive control is disabled.

Change speed

The speed change button, if present, allows a second speed to be activated, if it has been set.

The button has a spring release, so simply press and release it to change its status and enable the speed change.



8.5 Battery state of charge indicator

8.5.1 Battery monitor (if present)

This instrument allows you to monitor the boat energy consumptions and gives useful information for keeping an eye on the state of charge of the batteries. Depending on the increase in charging voltage and the decrease in charging current, it is possible to establish whether the battery is fully charged or not.



Instrument readings:

V Battery voltage: this reading is useful for estimating the approximate state of charge of the battery. A 12V battery is considered discharged when it cannot maintain a voltage of 10,5 V in charging conditions.

I Current: this represents the actual current flow of the battery, input or output. A discharge current is shown by a negative reading (output current from the battery).

CE Consumed energy: shows the quantity of Ah consumed by the battery. For a fully charged battery this value is equal to 0,0 A (synchronized system). If the battery absorbs a 12 A current for 3 hours, this value is equal to -36,0 Ah.

SOC State of charge: this is the ideal indicator for checking the actual charge level of the battery. The reading shows the amount of residual energy actually present in the battery. A fully charged battery will show a reading of 100,0%. A completely discharged battery will show a reading of 0.0%.

TTG Time to go: this is an estimate of how long the battery can supply the present load before requiring a recharge.

Full charge

When the battery voltage exceeds a certain level during a preset period and the charge current is lower than a certain level in the same period, the battery may be considered fully charged. These preset levels of voltage, current and duration are called “Fully Charged Parameters”. In general, for 24V acid batteries, the voltage charge parameter is 26,4V, whereas the current charge parameter amounts to 1% of the battery total capacity (for example, 2A for a 200 Ah battery). A charge time parameter of 3 minutes is sufficient for most batteries.

8.5.1.1 Synchronization of the device

In order to have a reliable reading, the state of charge displayed by the battery control device and the actual charge level of the battery must be continually synchronized. This can be done by fully charging the battery so that the instrument will automatically read the new status of fully charged.

If necessary, the instrument may also be synchronized manually (in other words, set on “full battery charge”). Synchronization may be obtained, after having fully charged the battery, in normal mode by holding down simultaneously buttons + and - for 3 seconds, or in configuration mode by using the SYNC option (see instrument instructions manual).

If the instrument does not synchronize itself automatically, check that the values of charged voltage, tail current and charge time have been configured correctly. When the voltage supply to the BMV is interrupted, the battery control device must be synchronized again before starting to work again correctly.

8.5.2 Led indicator console (if present)

This led indicator allows you to monitor the battery energy levels and gives useful information for keeping an eye on the state of charge of the batteries. Depending on the increase in charging voltage, it is possible to establish whether the battery is fully charged or not.



1. Battery state of charge led indicators (led actives show state of charge level)
2. Forward status (active in forward)
3. Speed status (active if speed changed)
4. Reverse status (active in reverse)
5. Motor status (green if motor in standby by or operating)
6. Alarm status (red blinking if alarm present see below status legend)
7. Bluetooth status (blue if connected to the app)

8.5.2.1 LED INDICATOR ALARMS LEGEND

1 blink	Forward/Reverse alarm
2 blinks	Wrong Start operation alarm
3 blinks	Dead man switch broken or not inserted alarm
4 blinks	Over temperature alarm
5 blinks	Resolver sensor alarm
6 blinks	Starting operation alarm
7 blinks	Motor drive communication alarm (normally if motor not powered or motor broken)

8.5.3 Display monitor (if present)



STARTING PAGE: active only for few seconds after key is turned ON



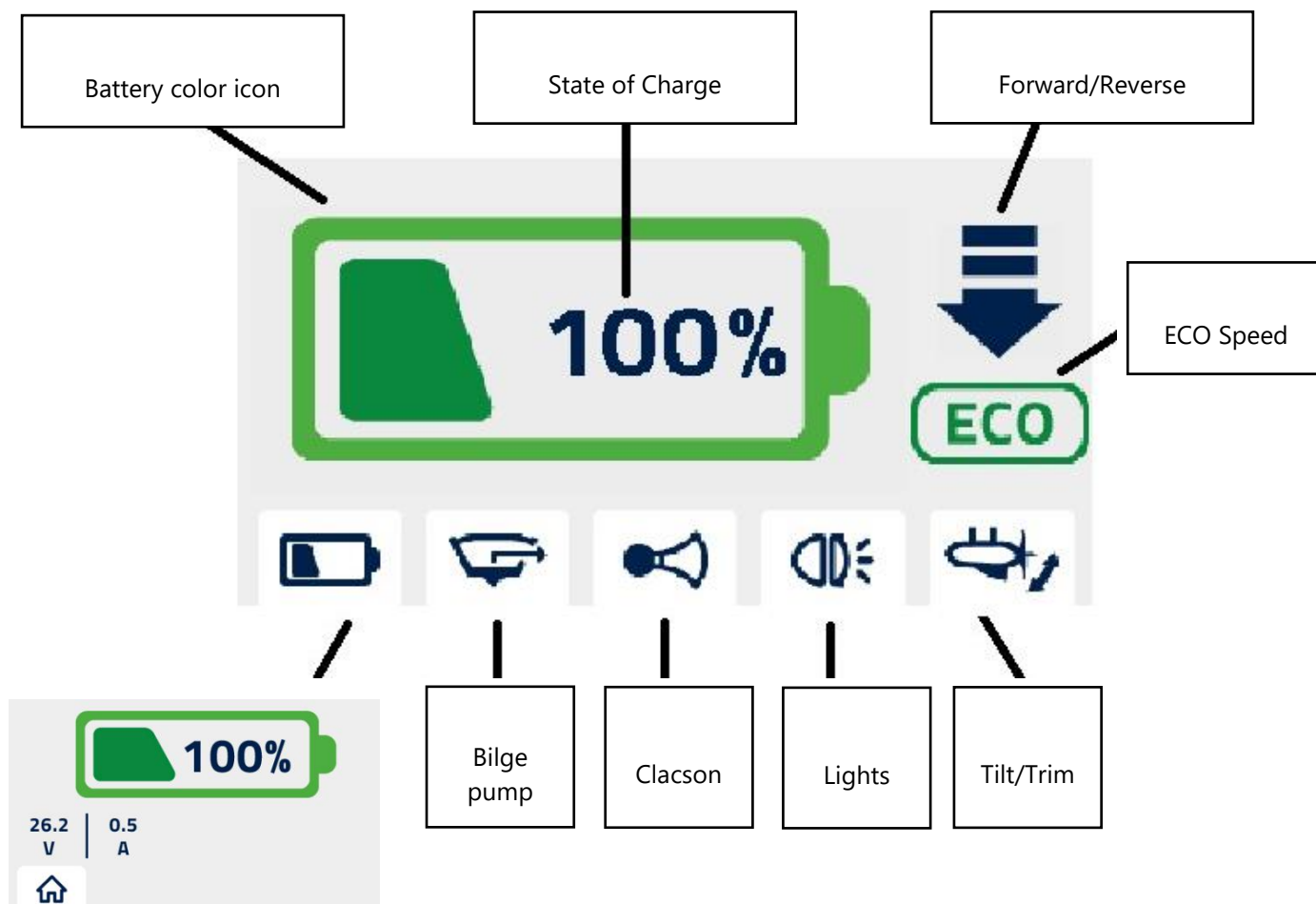
WARNING START PAGE: Read User Manual Before Boat use. Confirm by button pressing only when User Manual and relative warnings are clear. On this page are indicated :

- Battery state of charge
- Battery voltage
- Motor Current



HOME PAGE:

HOME PAGE: Icon presents according option installed



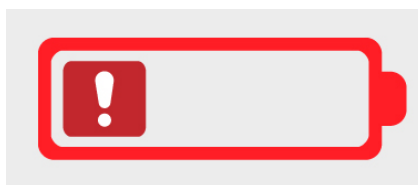
100% - 50% STATE OF CHARGE: GREEN BATTERY STATUS



50% - 20% STATE OF CHARGE: YELLOW BATTERY STATUS



20% - 0% STATE OF CHARGE: RED BATTERY STATUS



CHARGING: BOAT IS UNDER CHARGING



8.6 Electric switchboard (if present)

The electric switchboard is connected to all the boat's electrical users and devices.

The main switch of the boat is located inside the switchboard. The fuses are located outside or inside the electric switchboard.

Fuses

The fuses may be automatic type with mechanical reset or the standard type to be replaced if they trip.

Always check the state of the fuses and in the event of replacement or mechanical reset try to discover what caused the fuse to break/trip.



8.7 Batteries

The batteries are located and fixed inside the central technical compartment of the boat. Their position is fixed and establishes the centre of gravity of the boat, as well as the safety and seaworthiness features of the boat.



8.8 Accessories (Option)

8.8.1 Bilge pump.

8.8.2 Lights.

8.8.3 12V Socket

The 12V socket allows small electrical devices to be connected. Check the battery state of charge and how much the device you connect will affect the autonomy of the boat. The maximum available current is 3A.

NOTICE

Always check that the device you are connecting is compatible with the socket. Do not connect devices having a current consumption/absorption over 3A.

9 PROPULSION UNIT

9.1

9.2

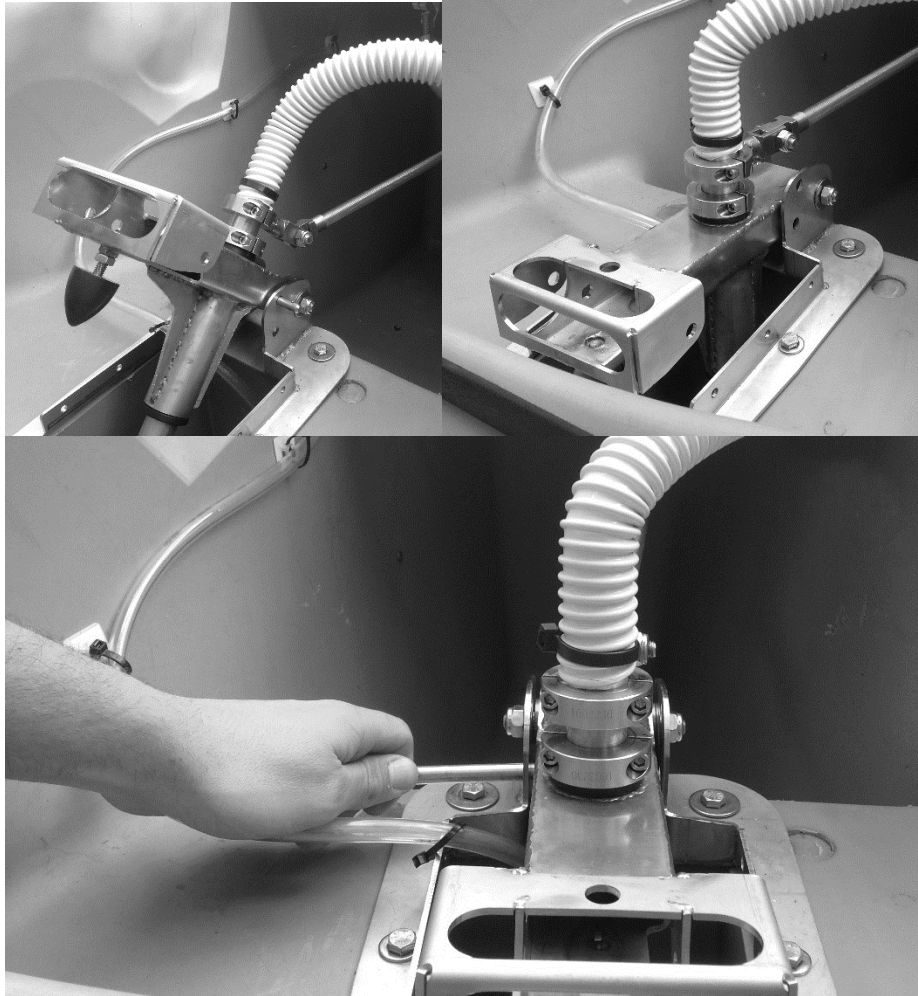
9.3 **Propulsion unit**

The propulsion system is electric and includes mechanical built-in rudder function. The propulsion unit consists of a thrust propeller coupled to an electric motor underwater. The electric motor is enclosed in a hydrodynamic housing and functions as rudder. The unit is supported by a fixing system inside the boat and includes built-in system for motor tilting, where supplied.



9.4 **Manual tilt system**

Standard version with mechanical motor tilt should be managed manually by operator.



9.5 Electric tilt system

The electric motor tilt system is optional and by means of an electric actuator allows the propulsion unit to be moved.

9.6 Electric motor

In normal use the electric motor is completely underwater. When not in use, the motor must be raised so that it is out of the water by motor tilt.

9.7 Propeller

The installed propeller is a clockwise propeller (clockwise with forward drive). All propeller characteristics can be requested from the manufacturer. When removing the propeller, care must be taken in order to avoid damaging the motor shaft. When removing the propeller, take care not to lose the fixing key to the motor shaft.

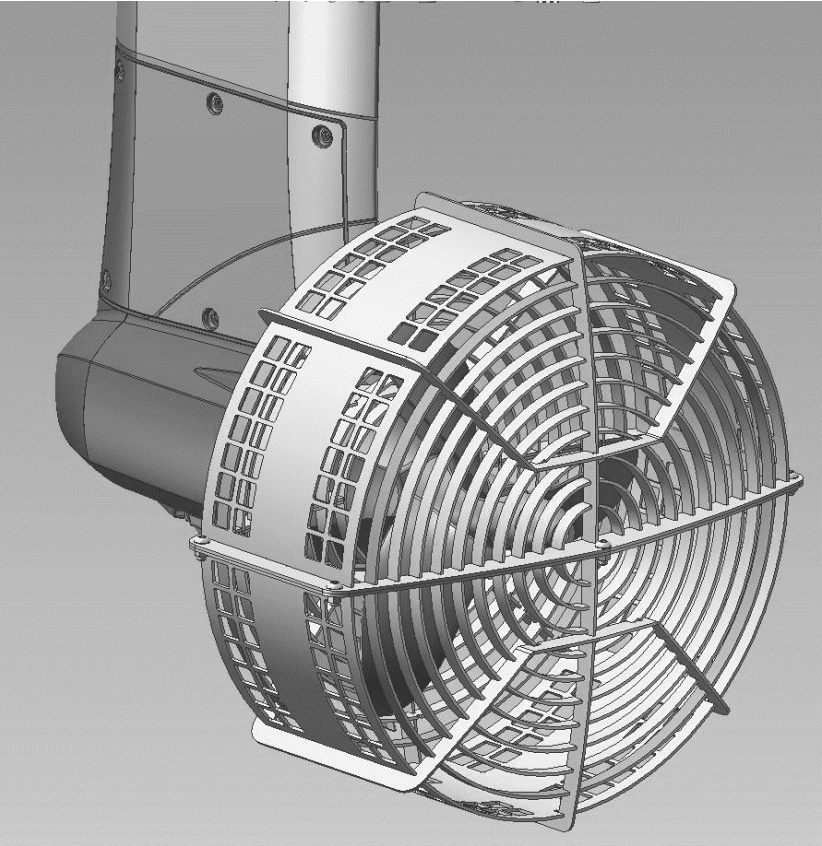
9.8 Sacrificial anode

The zinc sacrificial anode is inserted on the fixing nut of the propulsion unit propeller. The anode must be regularly checked and replaced if necessary.



9.9 Propeller safeguard

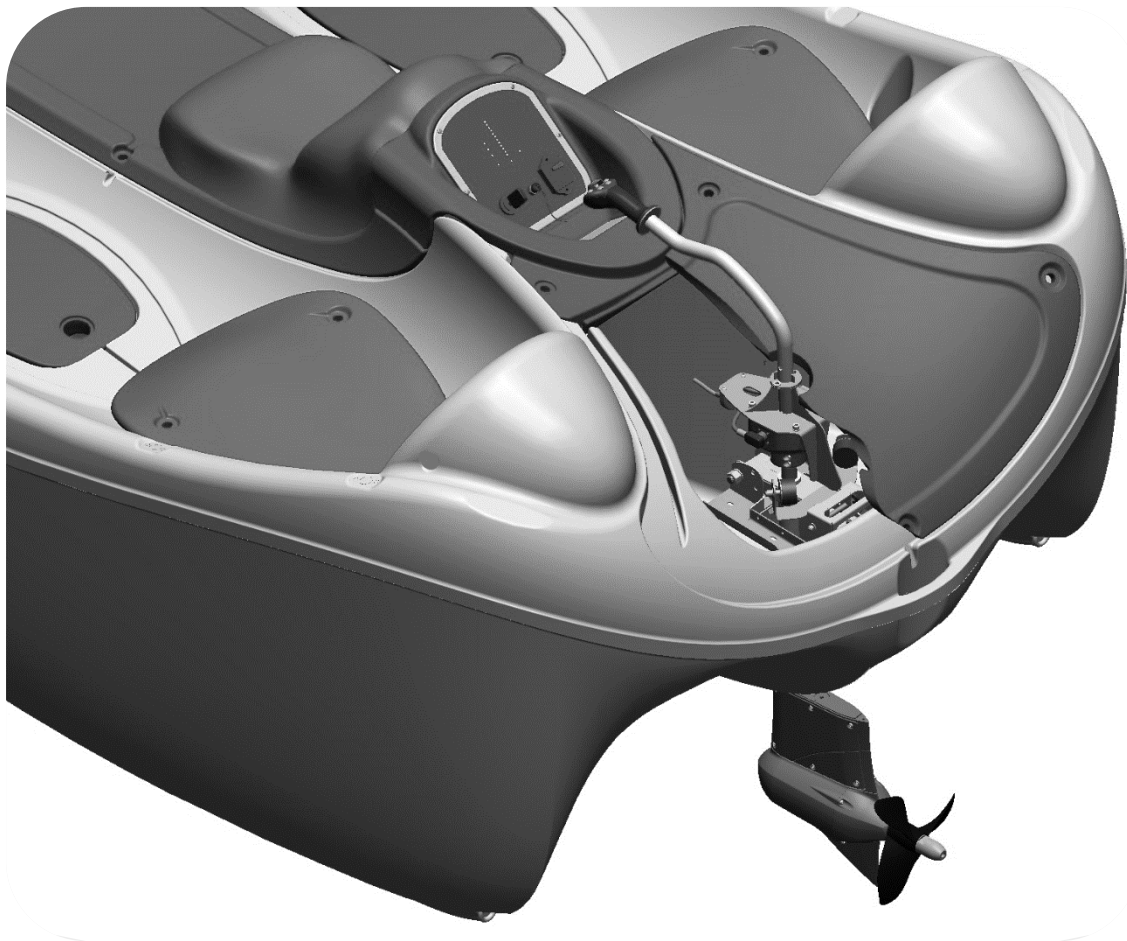
This device prevents any contact between the body and the propeller.



10 STEERING SYSTEM

The boat steering system, as well as using the propeller thrust, exploits the propulsion unit as a real rudder. The joystick controls a mechanic remote control directly coupled to the propulsion unit.

10.1 Tiller steering system



10.1.1 How to steer with a tiller steering system

10.1.1.1 STRAIGHT POSITION



If You keep the tiller steering bar straight the boat will maintain the straight direction forward or reverse according.

10.1.1.2 RIGHT POSITION



FORWARD: If You keep the tiller steering bar to **RIGHT** position boat will steer to **LEFT** direction

REVERSE If You keep the tiller steering bar to **RIGHT** position boat will reverse to **LEFT** direction

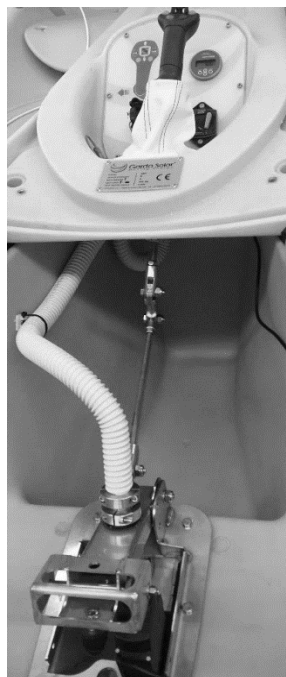
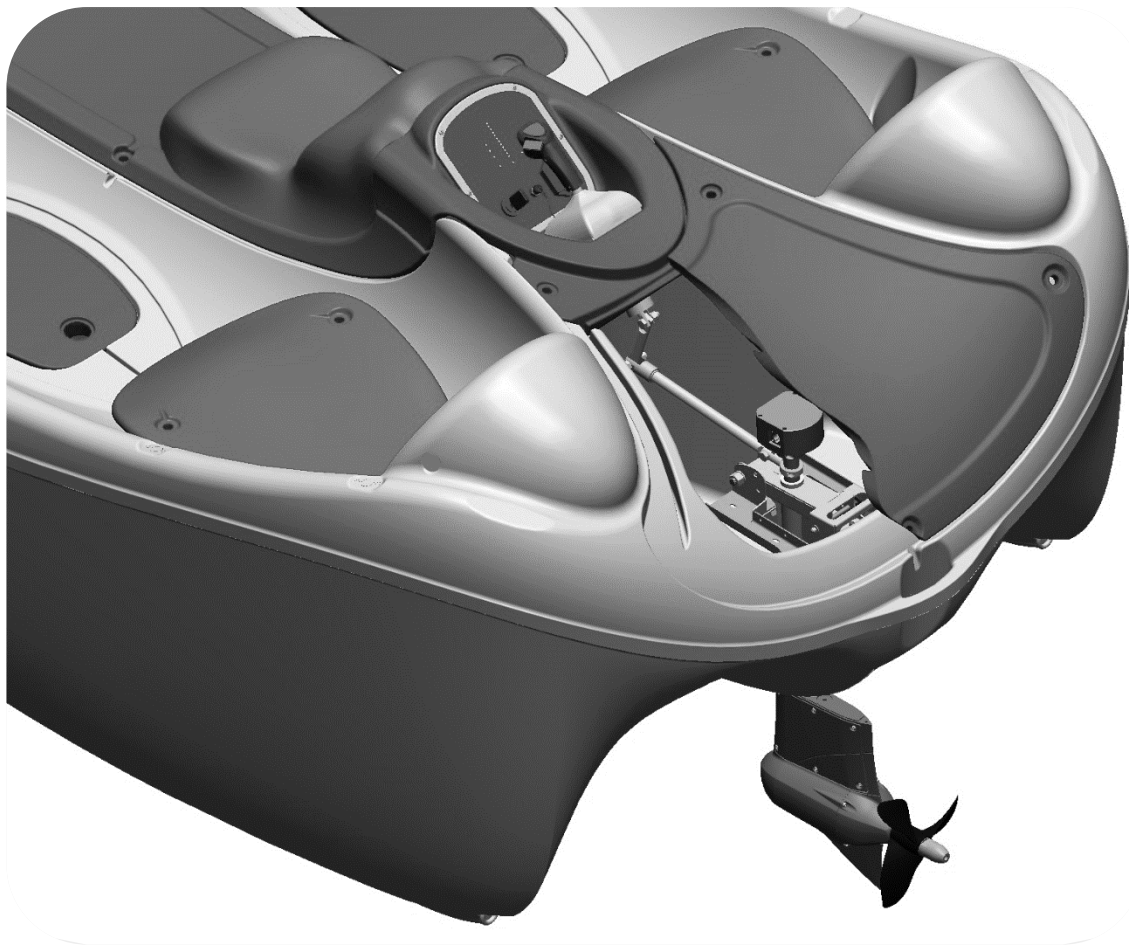
10.1.1.3 LEFT POSITION



FORWARD If You keep the tiller steering bar to LEFT position boat will steer to RIGHT direction

REVERSE If You keep the tiller steering bar to LEFT position boat will reverse to RIGHT direction

10.2 Remote steering with tilt system



Only in the event of emergency or system breakdown the rudder may be controlled manually.

Procedure

- ✓ Remove the outside cover of propulsion unit compartment.
- ✓ Disconnect the manual control lever from motor shaft to joystick lever.
- ✓ Move manually the motor lever.

10.2.1 How to steer with a remote steering system

10.2.1.1 STRAIGHT POSITION



If You keep the joystick straight the boat will maintain the straight direction forward or reverse according.

10.2.1.2 RIGHT POSITION



FORWARD: If You keep the joystick to RIGHT position boat will steer to RIGHT direction

REVERSE If You keep the joystick to RIGHT position boat will reverse to RIGHT direction

10.2.1.3 LEFT POSITION

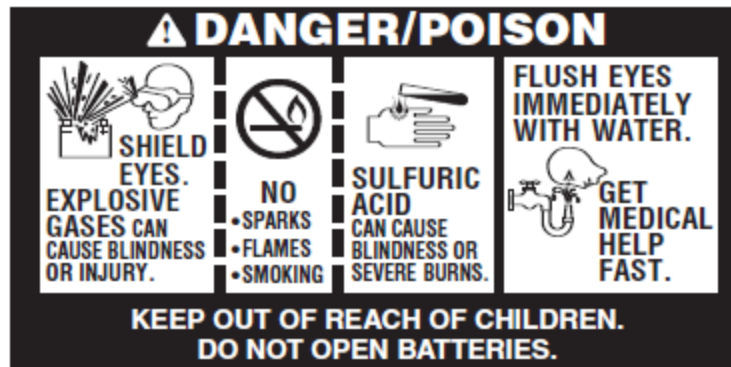


FORWARD If You keep the joystick to LEFT position boat will steer to LEFT direction

REVERSE If You keep the joystick to LEFT position boat will reverse to LEFT direction

11 BATTERIES

11.1 Warnings



BEFORE DOING ANYTHING TO A BATTERY, ALWAYS WEAR SAFETY GOGGLES AND PROTECT YOUR FACE.

Any battery (electric accumulator) generates gas (hydrogen) during discharge and during charging. It is therefore necessary always to keep at a distance any source of sparks or flames (for example, cigarettes or lighters). To avoid dangerous sparks do not connect or disconnect circuits while they are still powered. This applies also when you connect or disconnect charging or testing appliances.

TO AVOID DANGEROUS SPARKS, ALWAYS DISCONNECT THE NEGATIVE CABLE FIRST AND RECONNECT IT LAST.

When you are working on a set of batteries, do this in a well-ventilated space. Never place yourself over the battery surface.

PROTECT YOUR EYES !

Batteries contain a mixture of sulfuric acid that can spoil clothes and cause slight burns to skin. In the event of contact with your skin, neutralize it using caustic soda and water or rinse with lots of water.

NOTICE

Important! A battery can be seriously damaged if left discharged for more than 7 days. A discharged battery or an incorrectly charged battery can be damaged by the cold.

11.2 General information

Type of battery: lead acid GEL /AGM

Advised storage temperature between -18°C and 32°C .

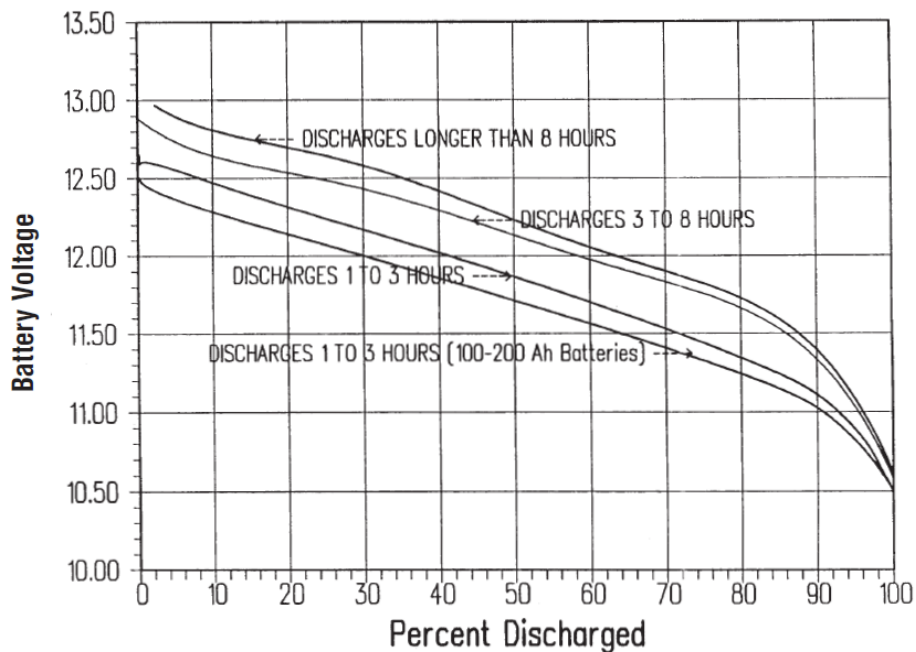
11.3 State of charge when boat is stationary

The check on the state of charge when stationary is done by measuring the voltage (Volt) when the battery is not in use and has not been used for at least 4 hours. If the battery is below 75% of its charge, proceed with charging.

BATTERY STATE OF CHARGE	GEL BATTERY	AGM BATTERY
100%	25,7 V or more	25,6 V or more
75%	25,3 V	25,2 V
50%	24,7 V	24,6 V
25%	24,0 V	24,0 V
0%	23,6 V	23,6 V

11.4 State of charge while in use

The check on the state of charge during use is done by measuring the voltage (Volt) subjected to a constant current discharge. For 24V system the battery voltage should be 2 times as in chart.



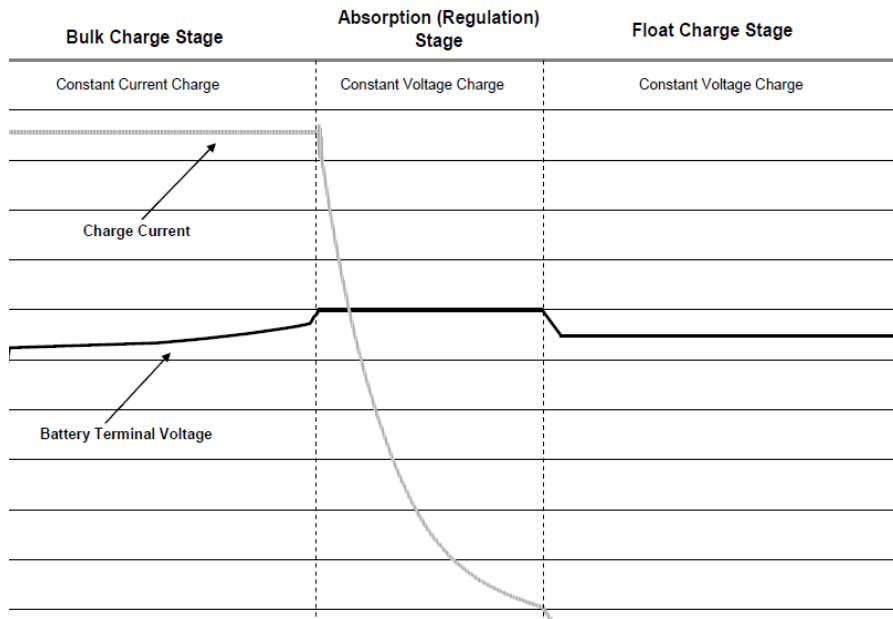
Values shown are for indication only and refer to Lead Acid Gel technology.

11.5 Charge

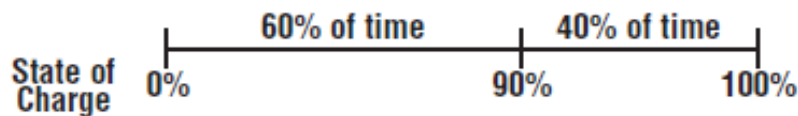
SYSTEM VOLTAGE [V]	MAX CHARGE VOLTAGE [V]	FLOATING VOLTAGE [V]
12	14.4	13.7
24	28.8	27.5
48	57.6	55.0

Values shown are for indication only and refer to a temperature of 25°C.

Typical charge cycle



Typical charge time



To calculate approximately charge time up to 90%, multiply the consumed current by factor 1.2 and divide the result by the current delivered by the battery charger

$$\text{TIME [90\%]} = \text{CONSUMED CURRENT} \times 1.2 / \text{BATTERY CHARGER CURRENT}$$

11.6 Maintenance

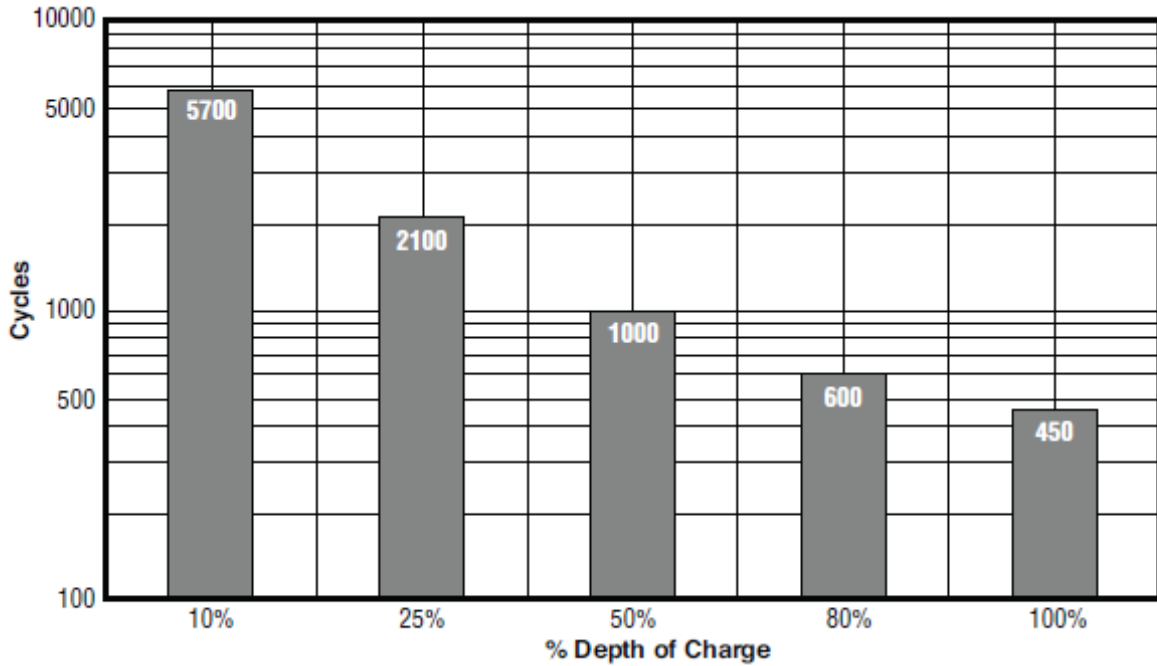
In periods of long stoppage, always disconnect the battery from the appliance. Just disconnect the terminal of the negative pole and this will protect against discharging due to “parasite” currents/ loads. Keep the battery surface clean and dry.

When in use, check that the outside container of the battery is intact with no signs of mechanical damage. It must be clean, with no signs of oxide or liquid leakage. Also the cable area must be clean and dry with no corrosion.

For battery sets composed of a elements connected in parallel, check that the voltage reading (Volt) of each element is compatible with the reading measured on the other elements. For example: if there are two 12 Volt batteries connected in series to form overall 24 Volts, it is important to check that the individual voltage reading on each of the two has a similar value. If there is a reading difference of over **0.3 Volts** an equalizing procedure must be carried out. Contact your dealer for instructions.

11.7 Lifetime

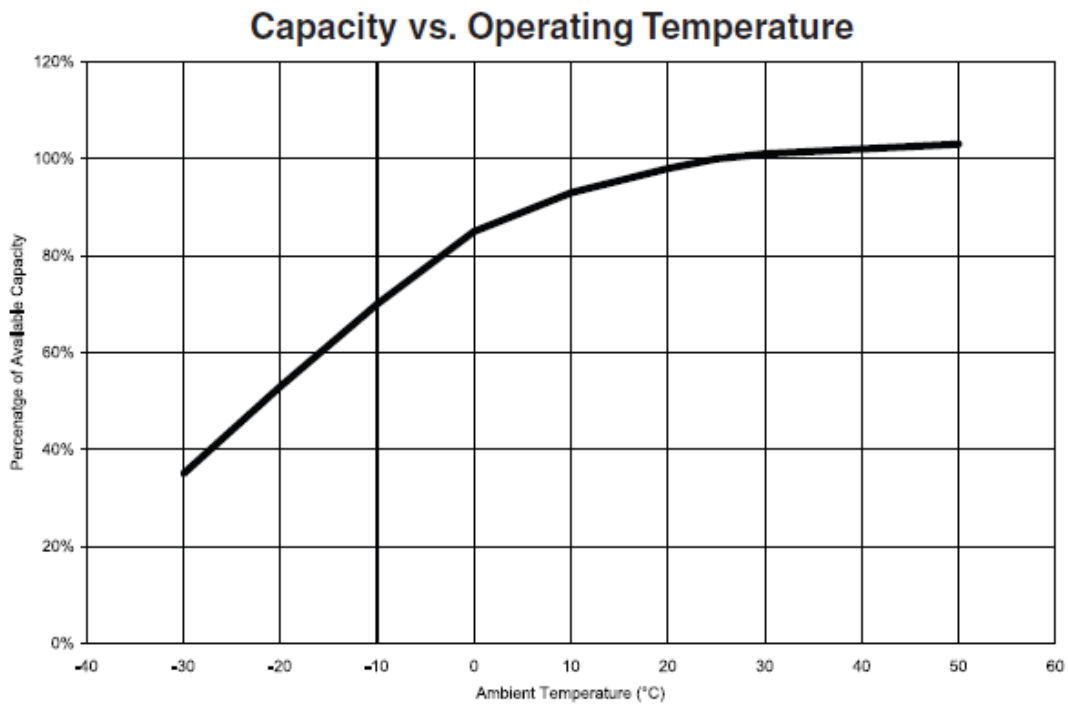
The more deeply a battery is discharged, the shorter will be its lifetime in terms of charge cycles.



Values shown are for indication only and refer to Lead Acid Gel technology

11.8 Temperature influence

The temperature to which the battery is exposed influences its available capacity. At 0°C the capacity is reduced to 80%.



12 MAINTENANCE

12.1 Hull

Check for damage or cracks in the hull.

For thorough cleaning use a hot pressured water-cleaner having approx. 80 bar pressure.



12.2 Electrical system

Check condition of electric wiring connections.

12.3 Motor

Check the overall condition of the motor, especially the motor shaft, which must rotate freely and without significant mechanical friction.

12.4 Sacrificial anode

The condition of the anode can be simply checked by visual inspection or alternatively by weighing it and comparing its weight with a new one. If its weight is reduced by 50% it is time to change the anode.

12.5 Batteries

REPLACEMENT

Follow safety precautions carefully and always wear safety goggles.

- Before removing the battery to be changed, always mark the position of the positive (+) and negative cables so that these can be correctly positioned when installing the new battery.
- Always disconnect the negative cable first. Always reconnect the negative cable last. This avoids the formation of dangerous sparks.
- Then carefully remove the old battery, making sure that there is no leakage of liquid.
- Thoroughly clean and inspect the battery compartment.
- Carefully inspect the wiring for any anomalies (breakages, frayed cable, loose terminal board). The cable terminals (clamps) must be cleaned and replaced if they show signs of corrosion. The electric wiring connections must be suitably sized and correctly done in order to guarantee full system efficiency.
- Install the new battery correctly, in the same position as the previous one, or if it's position is changed, check the installation/wiring diagram.
- To avoid danger of short-circuit, make sure that the surface of the installed battery does not come into contact with any top part of the compartment (the poles must not touch surfaces above them).
- Fix the battery firmly to its compartment to avoid accidental movement.
- Tighten the terminal/pole connection but without exaggerating. The connection must be tight but not forced.
- Finally spray anti-corrosion protection on the pole and terminal.

CHARGE

The charging cycle and method must be suitable for the type of battery (GEL/AGM) and the application.

An insufficient charge will not allow you to make the most of the battery and in the long term will cause irreversible battery damage. Overcharging the battery will cause overheating, dangerous formation of gas mixtures and rapid irreversible damage to the inside elements.

For periodically used batteries an automatic multi-stage charger should be used, loading voltage to be adjusted depending on the type of battery to be charged.

VRLA (GEL/AGM) batteries are particularly sensitive to charging temperature and voltage. Therefore it is recommended that you use suitable devices and check with GardaSolar that the battery charger is compatible with the battery you have bought. Correct charging is the deciding factor for efficiency and duration of any battery.

To avoid explosion never charge a frozen/iced battery.

Let it heat up at room temperature before charging.

Important: GEL and AGM models require a device with limited voltage (Volts).

Even just one “wrong” charge can cause irreversible damage to the inside elements.

Never charge excessively or overcharge the battery : this can cause irreversible damage to the inside elements.

Always read the instruction of your battery charger before starting charging procedures.

If violent gasification occurs or the battery heats up too much during charging, interrupt the process, let it cool down and try again when the container has cooled down.

USE AND MAINTENANCE

The batteries must be kept charged, clean. Check the state of charge: do this by measuring the volts when the battery is on open circuit, disconnected from its user or has not been used for at least 4 hours.

Always charge the batteries before a period of disuse and store them fully charged.

During periods of stop or storage, check state of charge every 30 days for GEL and AGM batteries.

If the battery is below 75% of its charge capacity, recharge it.

In periods of long stoppage, always disconnect the battery from the appliance. Just disconnect the terminal of the negative pole and this will protect against discharging due to “parasite” currents/ loads.

Keep the battery surface clean and dry.

When in use, check that the outside container of the battery is intact with no signs of mechanical damage. It must be clean, with no signs of oxide or liquid leakage. Also the cable area must be clean and dry with no corrosion.

In the case of battery sets composed of a elements connected in parallel, check that the voltage reading (Volt) of each element is compatible with the reading measured on the other elements. For example: if there are two 12 Volt batteries connected in series to form overall 24 Volts, it is important to check that the voltage reading on each of the two has a similar value. If there is a reading difference of over 0.3 Volts, an equalizing procedure must be carried out. Contact the dealer for instructions.

MAINTENANCE PROCEDURE

Remove the cables from the battery.

Clean and dry dirty and wet cables.




Dismantle and/or clean each oxidized electric contact point.

Charge the batteries. The batteries discharge if they are not used so it is advisable to recharge them once a month.

13USE

13.1 Use of the boat

To steer the boat follow these instructions:

CONTROL	CONSEQUENCE	NOTES
<p>FRONT LEVER</p> <p>Moved FOWARD</p>	<p>FORWARD drive</p>	
<p>FRONT LEVER</p> <p>Stand by position</p>	<p>STAND BY</p>	
<p>FRONT LEVER</p> <p>moved REVERSE</p>	<p>REVERSE drive</p>	
<p>Joystick moved to the RIGHT</p>		<p>SEE STEERING SYSTEM CHAPTER</p>
<p>Joystick moved to the LEFT</p>		<p>SEE STEERING SYSTEM CHAPTER</p>
<p>UPPER left/right button pressed and released</p>	<p>Second speed command</p>	<p>Option present and/or configured according to model</p>

The route or course of the boat is influenced by the motor, the propeller torque, waves, currents and the speed of the boat. The route is not self-centering and slight corrections will be needed in order to keep to it.

The route of the boat may be less precise when reversing.

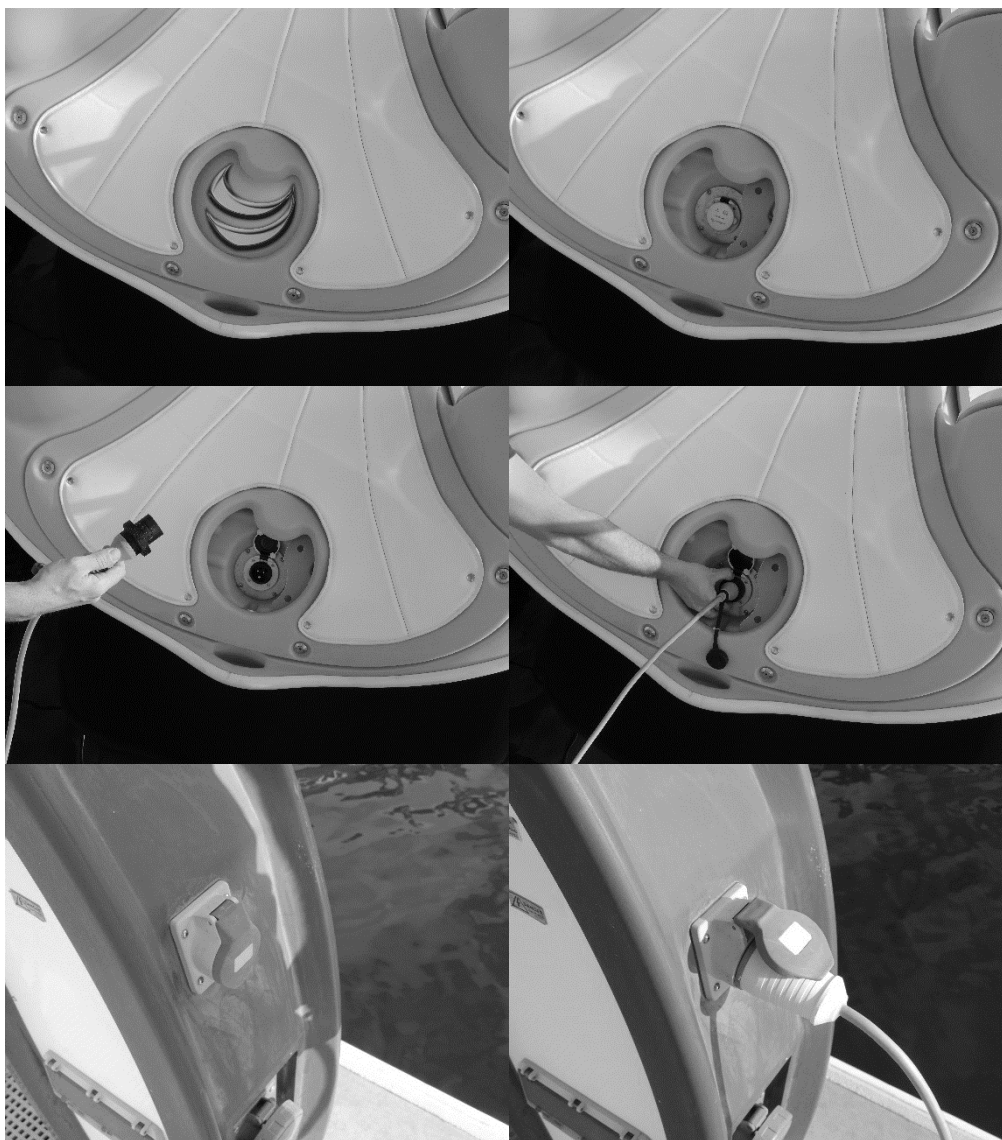
To obtain best results when reversing it is advised to start from stationary with the rudder already position.

In general, boats with easily manageable steering give way to boats that are not so easy to steer.

13.2 Recharging at the pier

TO START RECHARGING

1. Attach the socket to the boat.
2. Attach the plug to the pier.
3. Only now give electric power by closing the safety switch.
4. Check on the battery state of charge indicator that the boat is actually charging.



TO CONCLUDE RECHARGING

1. **Cut off electric power** by opening the safety switch.
2. Remove the plug at the pier.
3. Remove the socket from the boat.

13.2.1 CHARGING CABLE EMBEDDED VERSION

For boat version with charging cable pre-wired to the boat it is enough to connect the boat charging cable to the shore power pier and switch on the shore power to charge the boat.

TO CONCLUDE RECHARGING

1. **Cut off electric power** by opening the safety switch.
2. Remove the plug at the pier.
3. Fix again the boat charging cable inside the boat.



13.3 Solar charging

The solar recharge occurs automatically and nothing needs to be done to activate or deactivate the charging system.

Solar charging can work in parallel with on shore charging and time to charge battery is reduced proportional to sun radiation contribute.

13.4 On board

Passengers must remain seated when the boat is moving.

If the boat is stationary and the passengers are standing, watch out for slipping hazards. Use extreme caution on wet surfaces.

Children and non-swimmers must always wear personal flotation devices.

13.5 Handling

The owner is responsible for passengers' actions.

Instruct at least one passenger on the correct operation of your boat in case of unexpected circumstances.

Instruct passengers and local crew on the use of safety equipment and procedures in case of emergency.

Always stay within manageable speed limits.

Pay constant attention to the direction of the boat when navigating.

The use of drugs, alcohol or other substances that alter judgement is a serious threat to yourself and others. The boat operator is responsible for the passengers' behaviour.

Reduce speed in overcrowded waters.

Switch on navigation lights at night and in other circumstances with reduced visibility.

Watch out for underwater activity and the depth of the sea bed.

13.5.1 Leaving a port

Start the motor before releasing the mooring lines.

Put suitable space between the boat and the quay before trying to drive off, using the mooring lines if necessary.

Use the wind and current to move the boat, so far as possible.

Check for lines in the water that might twist around the propeller.

Bring in fender buoys on board.

Drive away from the port.

13.5.2 Arriving at a port

Put out the fender buoys.

Make your approach, taking advantage of wind and current where possible.

Tie the boat to the pier using mooring lines in at least 2 points, taking care that the fender buoys are correctly positioned.

13.6 Mooring

Moor only in designated areas. Never moor at a navigation buoy.

13.7 Anchoring

- ✓ Tie the anchor line to a cleat.
- ✓ Check that the anchor line is long enough to reach the sea bed.
- ✓ Throw/drop the anchor taking care not to hit passengers or bathers.
- ✓ Check carefully that the anchor has actually gripped the sea bed.

13.8 Visibility

Keep clear visibility. Move passengers if they obstruct your view.

13.9 Shallow waters

Take special care in shallow water or where there may be sunken objects.

Other hazards in shallow waters may be mud, sand, seaweed and debris which can block the boat or the propeller.

13.10 Swimming

Stay away from areas designated only for swimmers and scuba divers. Be able to recognize the indicators used for these areas.

Never swim when there is a storm with lightning in the area.

Switch off the motor before approaching a person in the water.

Do not swim/dive from a moving boat or hold on to a moving boat when you are in the water.

13.11 Towing

The installed power and the type of boat do not allow towing persons or objects for fun.

14 TRANSPORT

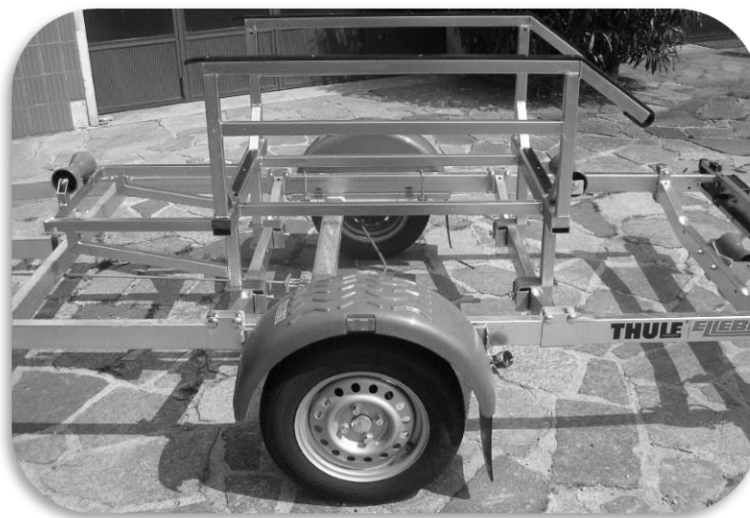
14.1 Transport

By transport we mean moving your boat by means of a trailer suitable for road traffic.

14.2 Trailer

The ideal trailer for transporting the boat is fitted with 2 central slides for easy loading and unloading of the boat during launching and landing. The slides prevent the boat from sliding sideways during transport as they are inside the tunnel of the hull.

The trailer must be suitable for the weight of the boat and the type of vehicle/driving licence held by the driver.



14.3 Checks

- ✓ Check conditions for brakes, lights, emergency pull system.
- ✓ Make sure that the trailer will be towed by a suitably powerful vehicle.
- ✓ Secure the propulsion unit during transport of the boat as road humps or brusque movements could damage it.
- ✓ Secure the propeller so that it cannot be turned by wind during transport.
- ✓ Secure the boat to trailer with second safety line that can link the boat to the trailer in case of winch failure.



14.4 Safety

- ✓ Use belts suitable for loading conditions and distance of the tow.
- ✓ The winch cable must be taught, but don't use only the winch as a means of securing the boat to the trailer.
- ✓ Secure the bow of the boat to the trailer by means of a safety belt.
- ✓ Use a securing system on the side of the boat if required by loading and road conditions.
- ✓ The side securing system must hold the board at the sides and also prevent the boat from sliding forwards.
- ✓ The winch cable and the front safety belts stop the boat from sliding backwards.

14.5 Checks before setting out

- ✓ Wheel bearings: do the trailer wheels turn freely?
- ✓ Trailer and towing vehicle tires: is the pressure correct and are the tires in suitable condition for the trip?
- ✓ Brakes: does the trailer brake and if so, does it brake in a well-balanced way?
- ✓ Lights: have you attached all the electric sockets for the lights? Are all the prescribed lights for road circulation present and do they light up when switched on?
- ✓ Spare wheel, jack, tools, spare parts: are they all usable?
- ✓ Belts: are the belts taut and secured both to the trailer and the boat?
- ✓ Safety hook: is it in position?
- ✓ Trailer coupling: is it oiled so that it won't get damaged?
- ✓ Trailer safety cable: is it connected to the towing vehicle?
- ✓ Propulsion unit: has it been blocked so that it can't move?
- ✓ Boat cover: if present, has it been secured so that it cannot be blown away by wind during transport?
- ✓ Trailer road circulation documents: are they present?

14.6 Checks before putting the boat into water

- ✓ Drain caps: are they in position?
- ✓ Cover: has it been removed?
- ✓ Belts: have they been disconnected?
- ✓ Propulsion unit: is it in the right position so that it cannot be damaged when the boat is put into water?
- ✓ Launching/landing slipway: are distance/depth suitable for launching/landing the boat?

14.7 Launch

- ✓ Check that the drain caps are in position.
- ✓ Let the trailer wheel bearings cool down before going under water.
- ✓ Put wedges behind the trailer wheels.
- ✓ Depending on the type of winch, use the hand lever or the electric control to release the winch cable and lower the boat slowly.
- ✓ Never disconnect the winch cable from the boat until the boat is safely in the water.
- ✓ **WARNING! HAZARD OF PERSONAL INJURY** – this is possible if the winch breaks or due to system malfunctioning.
- ✓ Do not let anyone stand near the winch or the cable.
- ✓ Let the boat slide from the trailer.
- ✓ Once the boat is in the water, unhook the bow winch and rewind it to the trailer.

- ✓ Use gloves to handle the cable.
- ✓ Pull the bow of the boat to the dock and secure it with mooring lines.
- ✓ Remove the wedges and move the trailer off the slipway.

14.8 Landing

- ✓ Get ready before approaching.
- ✓ Pull up the propulsion unit.
- ✓ Prepare the trailer on the slipway.
- ✓ Place the wedges behind the trailer wheels.
- ✓ Guide the boat on to the trailer. Use the fore and aft lines to help.
- ✓ Hook the winch cable to the boat. Use gloves to handle the cable.
- ✓ **WARNING! HAZARD OF PERSONAL INJURY** – this is possible if the winch breaks or due to system malfunctioning.
- ✓ Do not let anyone stand near the winch or the cable
- ✓ Depending on the type of winch, use the hand lever or the electric control to pull the winch cable and pull the boat slowly on to the trailer.
- ✓ Secure the boat temporarily to the trailer so that it can be safely moved off the slipway..
- ✓ Remove the wedges and drive the towing vehicle and trailer off the slipway.
- ✓ In the event of further transport make all necessary checks and procedures.

14.9 Steering the trailer

- ✓ Practice with an empty trailer in an empty car park.
- ✓ Start with basics:- accelerating, slowing down, smooth and even stopping.
- ✓ If you don't feel sure, increase the safety distance from the vehicle in front of you.
- ✓ Do not overtake other vehicles until you feel at ease towing the trailer or if the traffic rules do not allow trailers to overtake.
- ✓ Take extra care if you are in the slipstream of heavy vehicles, overtaking them or being overtaken by them.
- ✓ Do any reversing slowly.

15 TECHNICAL INSPECTIONS

15.1 Before launching

Before starting a boat trip, check:

- ✓ Weather conditions.
- ✓ Documents on board.
- ✓ Passengers are informed about safety on board.

Boat checks:

- ✓ Boat buoyancy waterline.
- ✓ Batteries state of charge.
- ✓ Correct operation of propulsion unit and state of the propeller.
- ✓ Correct operation of steering control.
- ✓ Correct operation of bilge pump, if present.
- ✓ Correct operation of navigation lights, if present.
- ✓ Presence on board of safety equipment.

16 THE ENVIRONMENT

16.1 General

Thanks to the features of this boat you can have access to locations surrounded by unspoilt nature.

Help to save this natural beauty by leaving the environment just as you found it.

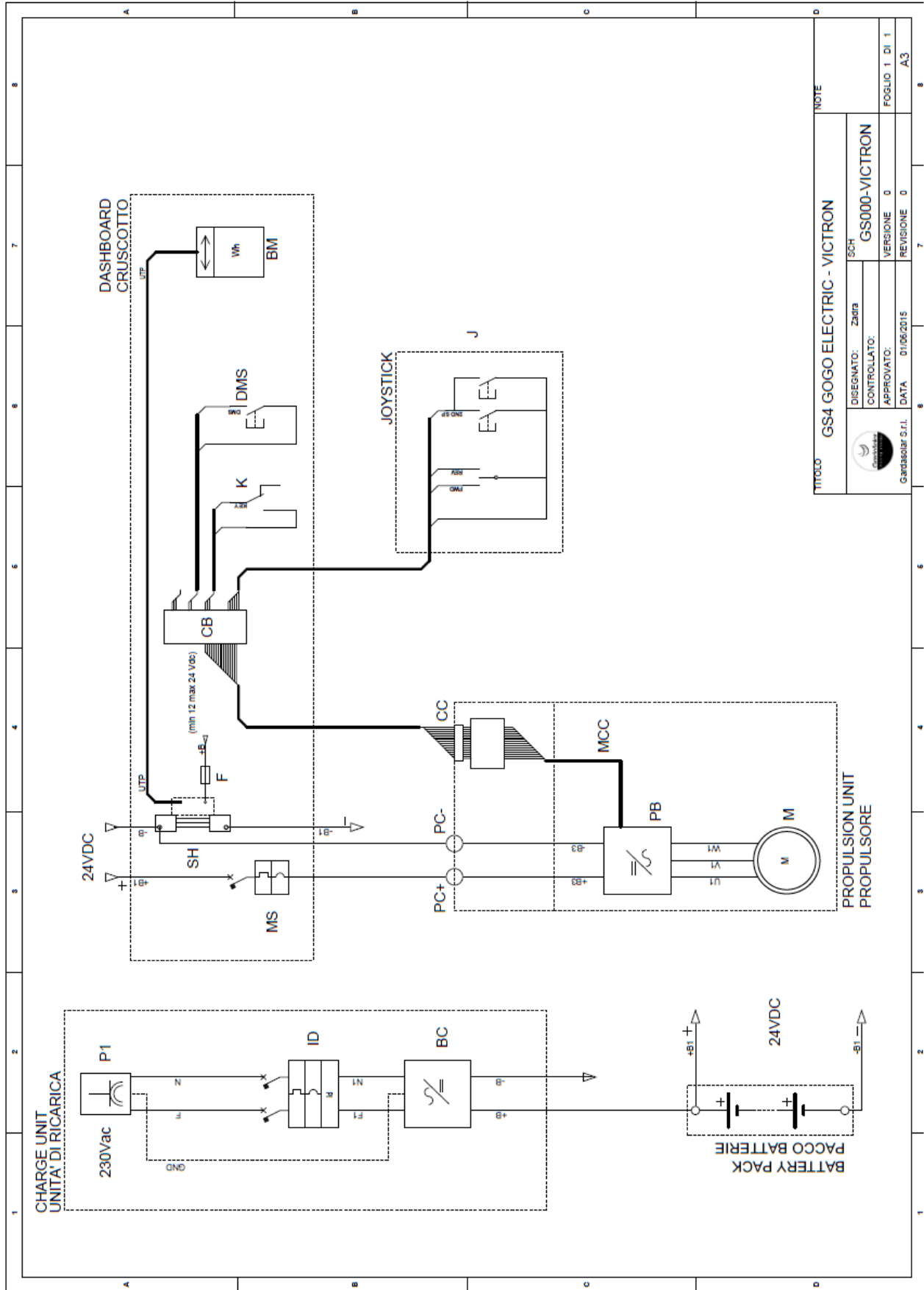
Respecting our environment means:

- ✓ Respecting flora and fauna when boating. Keep a safety distance from animals and plants.
- ✓ Not disturbing animals.
- ✓ Using only eco-friendly detergents.
- ✓ Not leaving any kind of waste in the water.

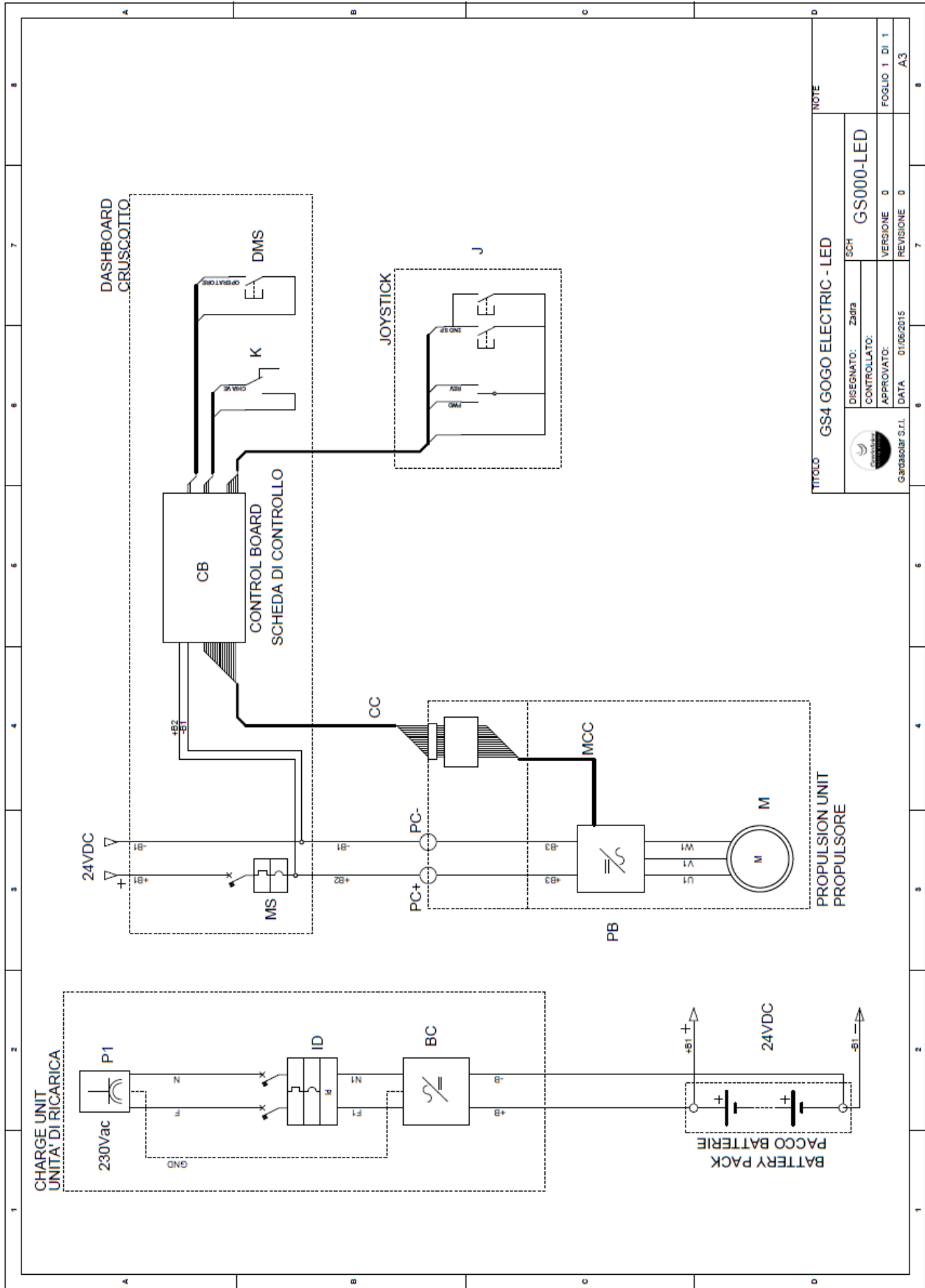
Contact GardaSolar when it's time to change your boat, for further information about disposal of all the boat components at the end of their life, for example the hull can be recycled.

17ELECTRIC SCHEMATIC

17.1 VICTRON version



17.2 LED version



TITOLO		NOTE	
GS4 GOGO ELECTRIC - LED			
DISEGNATO: Zadra	SCH	GS000-LED	
CONTROLLATO:		VERSIONE	0
APPROVATO:		REVISIONE	0
Gardasolar S.r.l.	DATA 01/06/2015	FOGLIO 1 DI 1	
		A3	