# SEABOB F5 S

## User manual

English



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# Introduction

Congratulations on the purchase of your new SEABOB! The SEABOB is an innovative water-sports craft that allows you to move through water virtually silently and ecologically friendly without producing emissions. In developing the SEABOB, special attention has been given to hydrodynamics and ergonomic handling. The SEABOB impresses with its exclusive design coupled with high performance and advanced technology.

Like all watercraft, the SEABOB requires that operators take specific precautions when using it. For this reason, we urge you to read through the Operation Manual carefully – in particular, the safety information and the instructions on proper use – before operating the SEABOB.

So get ready to dive into a fascinating new world!  We wish you many hours of fun with your SEABOB!

The following symbols are used in this Operation Manual to bring your attention to important information:

⚠ Caution! Danger of injury and / or death. This symbol indicates that operating the SEABOB involves the risk of injury to, or death of the operator or other persons.

STOP Not heeding this information may result in damage to or destruction of the SEABOB or other property.

**Note:** Notes provide you with important operating information or other information that can help you to understand the operation of the SEABOB better.

CAYAGO AG constantly works to optimise its products to keep pace with the advance of technology. As a result, CAYAGO AG reserves the right to change or modify the product characteristics specified in this Operation Manual at any time without prior notice. Characteristics and functions described and illustrated in this Operation Manual may differ from the actual characteristics and functions of the product.

SEABOB is a registered trademark.

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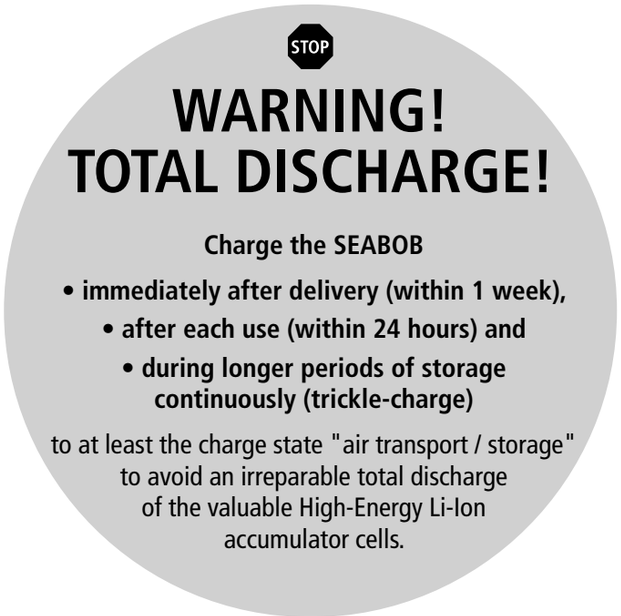
# ⚠ Caution! Please read the following information!

## 1. Safety information

The SEABOB is a state-of-the-art device. It conforms to current standards and is safe to operate. Nevertheless, using the device in an unintended fashion or not heeding the safety information may cause injury to, or death of the operator and / or other persons. In addition, the SEABOB and other property of the operator or other persons may be damaged or destroyed.

For this reason, we urge you to read the Operation Manual and the safety information contained in the Manual carefully before you operate your SEABOB for the first time. The information contained in the Operation Manual will help you to operate the SEABOB safely, protect yourself and others from hazards, and prevent damage to the device and other property.

Keep this Operation Manual in a safe and easily accessible place for reference whenever needed. Please do not throw away the packaging. It can be used later to provide optimum protection for the device (for example, when sending the device in for service).










### 1.1 Special safety information

**Please pay particular attention to the very important safety information below!**

#### ⚠ Special safety information for the SEABOB

- Important! Observe Operation Manual!
- Suitable only for swimmers aged 16 or older!
- Do not use as swimming aid!
- Wear life jacket when away from shore or boat!
- Wear body-hugging clothing (without loose straps or bands)!
- Wear bathing cap or hair net if hair is shoulder length or longer!
- Do not reach into openings (jet channel)! Rotating parts!
- Use only in sheltered waters!
- Do not use in strong currents, heavy swell or impaired visibility!
- Do not use in areas occupied by swimmers or divers!
- Maintain distance (minimum 5 m) to other persons and objects!
- Do not use at a depth of less than 1 m!
- Always observe accumulator charge state and return to shore in time!
- Do not store in sunlight or closed motor vehicle!

#### ⚠ Special safety information for the accumulators

- Important! Observe Operation Manual!
- Do not heat beyond 60 °C / 140 °F!
- Do not store in sunlight or closed motor vehicle!
- Do not short circuit!
- Do not open!
- Do not puncture!
- Do not knock!
- Do not burn!
- Use only chargers supplied by CAYAGO AG and for each respective specific SEABOB model!
- Charge only in dry locations!
- Never transport fully charged SEABOB by aircraft or over long distances!

- Observe instructions on charging, discharging, storage and transport!
- If instructions are ignored, flammable gases can be discharged causing serious injury!

### Special safety information for the charger

- Important! Observe Operation Manual!
- Do not expose to direct sunlight! Do not open!
- Use only with clean and dry plug connections!
- Never use if cables or plugs are damaged!
- Charge only in dry, cool and well ventilated locations!
- Do not cover! Ensure free air circulation!
- Heats up during charging process! Allow to cool before handling!

Never expose the SEABOB and charger to high temperatures (max. 60 °C / 140 °F) caused e.g. by open fire, direct sunlight or by storage inside a closed motor vehicle or boot. If exposed to heat, flammable gases can be discharged causing serious injury. In addition, the TFT display may become irreparably damaged if exposed to heat.

Never transport a fully charged SEABOB by aircraft or over long distances. The SEABOB should only be partially charged during transport (charge state "air transport / storage"). Only switch off the SEABOB for transport when the aircraft symbol is displayed. If instructions are disregarded, flammable gases can be discharged causing serious injury!







## 1.2 General safety information

### General safety information concerning the user

- Only skilled and experienced swimmers aged 16 and older are allowed to use the SEABOB.
- Due to the high power output of the device, children and young people under 16 years of age should not be permitted to operate the SEABOB. As with all motor vehicles, persons operating the device must do so responsibly and with proper foresight.
- Minors 16 and over may only operate the SEABOB under the supervision and responsibility of an adult.
- The SEABOB is not designed for use as a swimming aid. Users may lose the craft in the water. The SEABOB is not a substitute for a life jacket, air pad or other such device. For this reason, you should wear a life jacket when away from the shore or boat.
- Do not stray too far from the shore or the accompanying boat. Maintain a distance that is short enough, so that you can swim back by yourself in case of emergency. Be aware of any currents in the area that could carry you away.
- Use of the SEABOB by persons with pacemakers is not permitted. The strong magnetic fields created by the motor and current-carrying cables may cause severe damage to pacemakers, resulting in possible death.
- Use of the SEABOB by pregnant women is not permitted. During operation, the SEABOB may press up against the abdomen of pregnant women and / or the jet of water coming out of the device may come into contact with the abdomen.
- Never use the SEABOB while under the influence of alcohol, medication or drugs. Persons using the SEABOB must be able to react quickly. Alcohol, medication and drugs can considerably inhibit the ability of persons using the device to react quickly.
- Use the SEABOB only if you are completely healthy. Diving even if you only have a light head cold may cause problems when you try to equalise the pressure in your ears.
- Only wear body-hugging clothing (without loose straps or bands) when using the device. Wear a bathing cap or hair net if your hair is shoulder length or longer. The device is equipped with the smallest protective lamellas possible. Nevertheless, it is technically impossible to fully prevent objects, in particular pieces of clothing, thin cords or shoulder-length hair, from entering the jet channel and getting wrapped around the drive shaft due to the extremely high suction power of the jet drive. Should this occur, there is a risk of injury.

- For better visibility, wear diving goggles. Attention! Despite every precaution taken, it is still possible for diving goggles to come off during operation of the SEABOB and for contact lenses to be lost.
- Water spraying against and over your body can not only be strenuous, but also takes away body heat. We recommend wearing a diving suit that provides adequate warmth.



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## ⚠ General safety information concerning the SEABOB

- Never reach into the jet channel where the impeller is rotating. The closely fitted protective lamellas with their special, hydrodynamically optimised profile allow water to enter and exit the device without any obstructions. Always keep an eye on persons – especially children and young people – who are close to the SEABOB to ensure that they do not attempt to reach into the jet channel.
- Check that the jet channel is not damaged in any way. Never remove the protective lamellas. Caution! The rotating impeller may cause injury.
- Make sure that no sand, dirt, stones, rope or other foreign objects get into the jet channel. Never remove foreign objects from the jet channel while the SEABOB is in the water and / or switched on. Danger of injury!
- Never place any objects into the jet channel by hand. Doing so can cause injury.
- Never leave the SEABOB unattended to prevent children or other inexperienced persons from using it. Switch off the SEABOB after use (Sleep mode).
- The SEABOB is a heavy device. Ensure that the SEABOB does not fall on you or other persons in the water or on land. Should this occur, there is a risk of injury.
- When cleaning or storing the SEABOB, never stand it upright on the front bumper or on the water outlet of the jet channel. The SEABOB could tip over and be damaged or damage other objects. Furthermore, this could prove to be dangerous for any persons in close proximity.
- Only use the two carrying handles on either side of the craft to carry the SEABOB. Never carry the craft by the Controlgrips, front bumper or display panel.
- Always place the SEABOB and charger in the shade. It is important to remember that the SEABOB and charger will get hot naturally if left in the sun too long. Caution! Touching hot surfaces may cause burns. If exposed to heat, flammable gases can be discharged causing serious injury! In addition, the TFT display may become irreparably damaged if exposed to heat.
- Moor the SEABOB safely if you decide to leave it in the water for a short time. Ensure that the SEABOB cannot become unattached, injure others or obstruct their path.
- Before charging the SEABOB, check that the connection port and connector are perfectly clean and dry. Never open the screw cap on the connection port while the SEABOB is in the water. Wet and / or dirty plug connections may cause a short circuit while the SEABOB is being charged or even before this process is begun. If a short circuit occurs, it can cause irreparable damage to the charging contacts of the SEABOB. Caution! Short circuits can cause fires.

- Always ensure that the Trigger is functioning properly. When you release the Trigger, the SEABOB should immediately switch off. The Trigger should be able to move freely in all positions. When released, it should always return unobstructed to the Off position. A damaged or sticking Trigger should be repaired or replaced immediately. If the Trigger is not functioning properly, you can stop the motor by tapping the red button repeatedly until the power is displayed as "0 %".
- Never run the motor out of the water for longer than approx. 10 seconds. The seals of the motor and the hard-coated motor shaft are designed exclusively for use in the water. Operation out of the water can cause overheating due to the lack of water to cool the device, thereby causing irreparable damage to the seals and motor shaft. Danger of short circuit!
- The securing device below the display is used exclusively for the attachment of the optionally available pilot belt system. It is not suitable for the lifting of the SEABOB. Therefore, under no circumstances use this securing device for lifting the SEABOB using a crane or any other lifting device. The securing device could be pulled out of the SEABOB housing during lifting. In this case, the SEABOB could drop off and be damaged or damage other objects. Furthermore, this could prove to be dangerous for any persons in close proximity. Risk of injury!
- Use the securing device only for the pilot belt system developed by CAYAGO AG. Under no circumstances attach other objects or fixtures, such as ropes or belts, to the securing device. Risk of injury!
- Never open the SEABOB yourself. Repairs and maintenance work on the SEABOB that go beyond the procedures described in Chapter 6 "Care" and Chapter 7 "Troubleshooting" may only be carried out by an authorised technician. Work of this type is dangerous and may result in severe injury or cause damage to the SEABOB if not carried out by an authorised technician.
- Never alter or modify any part of the SEABOB or charger. Doing so may result in serious injury or death.
- If you detect any damage to the SEABOB, in particular to the connection port and screw cap, immediately stop operating the device and remove the vehicle from the water to prevent further damage. Contact the manufacturer or your specialist dealer without delay.
- Only use replacement parts and accessories supplied by CAYAGO AG.







## ⚠ General safety information concerning operation

- SEABOB operators are not afforded any special rights with regard to operation of the craft. Operators must act responsible and prudently, taking all precautions that may be necessary.
- Take your time to learn how to use the SEABOB properly. Only attempt difficult manoeuvres like full-speed operation and diving after you have mastered basic manoeuvres such as braking / stopping in the water and steering by shifting your weight / legs. Limit your speed so that you are in complete control of the SEABOB at all times. Use the SEABOB responsibly, showing consideration for people, animals, plants and the environment.
- Only use the SEABOB in sheltered waters and when accompanied by others or under the constant supervision of another person who can provide immediate assistance in case of emergency. Arrange to have a boat accompany you if you wish to operate the craft farther away from shore.
- Do not operate the SEABOB in strong currents, strong wind (maximum wind force 4), bad weather or impaired visibility. By doing so, you put yourself and others in danger. Never use the SEABOB during a thunderstorm! Get out of the water as quickly as possible before the storm begins. Not doing so may result in serious injury or death. Always be prepared for a sudden change in the weather. Always check the weather forecast before you set out, and pay close attention to local weather conditions.
- Do not use the SEABOB in a heavy swell (significant wave heights up to 0.3 m maximum and occasional waves of 0.5 m maximum height). The SEABOB may seriously injure you or other persons. You can become separated from the SEABOB, and / or it may be thrown with great force onto you or other persons by a wave, particularly when in the surf.
- Always start in the lowest gear and move off from a stationary position with a maximum power of Power Level 1. Gradually increase the power while operating the craft so that you can familiarise yourself with the handling of the SEABOB. It is vital that you are in control of the SEABOB at all times. Risk of collision and injury!
- Hold on to the two Controlgrips on the SEABOB securely. The force of acceleration can be very high, especially when starting. In order to fully utilise the performance potential of the SEABOB, the use of the optionally available pilot belt system is recommended. This ensures comfortable driving, even at high power. Before using the pilot belt system, it is important that you read the "Information Sheet for Pilot Belt System".

- To brake, hold on to both SEABOB Controlgrips securely, and release the Trigger in your right hand. The motor will stop, and the resistance of the water will slow you down. Be aware that it can take around 2-3 m for you to come to a complete stop if you are travelling at full speed. You can reduce the distance it takes you to come to a complete stop by turning the SEABOB sharply to the side and straightening up without letting go of the craft. This helps you to maintain control of the SEABOB and increases the water resistance considerably, so that you can come to a complete stop as quickly as possible.
- If the SEABOB is released while travelling at full speed, the craft may continue moving up to approx. 3 m and may briefly dive under the water to a depth of up to approx. 2 m. When this occurs, there is the risk that persons may be injured and foreign objects may be damaged. Also the SEABOB may be damaged, particularly if the water is too shallow and the craft hits the bottom.
- Do not use the SEABOB in areas occupied by swimmers or divers. Danger of collision and injury! If crossing such areas is absolutely unavoidable, do so on the water surface at a maximum power of Power Level 1.
- To prevent collisions, always maintain a safe distance (minimum 5 m) to other swimmers, watercraft or any objects that may be in the water. A collision may result in serious injury to you and other people. In particular, long hair or pieces of clothing of other people can get sucked into the jet channel. Should this occur, there is a risk of injury. In addition, the SEABOB may also be damaged considerably.
- Always avoid routes travelled by watercraft. The SEABOB housing is made of plastic and, for physical reasons, is unable to reflect radar waves adequately. Take into account the speed at which other watercraft are approaching. Another SEABOB may also approach quickly or appear suddenly. Keep an eye on what is happening farther up ahead. Beware of collisions!
- The SEABOB is not equipped with lights and, for this reason, is not suitable for operation at night. Do not operate the craft after sunset or before sunrise. Doing so can lead to collisions with other watercraft or obstacles.
- Do not operate the craft in water that is less than 1 m deep. Doing so can cause injury to you or damage to the SEABOB as a result of hitting underwater objects. Be very careful of rocky bottoms, reefs and stones. Stay away from the immediate shore, and never attempt to steer the SEABOB onto the beach, shore or onto land of any kind. If the SEABOB comes into contact with the sea bed, it may, as a result of the very high suction power of the jet drive, become attached to the ground and jerk to a halt. Risk of collision and injury!







- Stay away from aquatic plants and floating objects such as pieces of string, rope, plastic or wood to prevent the motor, impeller, stator and jet channel from being damaged or their function inhibited. Prevent sand or stones from getting into the jet channel. Sand or stones in the jet channel may damage the device.
- The operating time of the SEABOB is limited. Return to the shore or accompanying boat in time.
- When the accumulator is discharged to approx. one third of its charge state, the motor's electronic control system reduces the maximum power incrementally (Power Level 5, Power Level 4 etc.). This is done to prolong accumulator cell life as the voltage decreases, while ensuring that there is sufficient reserve capacity for emergency mode. The two red bars on the accumulator symbol indicate the start of the emergeny reserve for the SEABOB. In emergency mode, the power is gradually reduced automatically until the motor comes to a complete stop. Always take into account the limited power when timing your return to the shore or boat.
- You must always be able to return to the shore or boat unassisted and without the aid of the SEABOB.
- In most instances, the general personal liability insurance of the user does not cover property damage caused by the use of SEABOB. Before using the SEABOB you are encouraged to contact your insurance provider for information on a suitable insurance policy for coverage in cases involving damage.

## ⚠ General safety instructions for transport

- Road transport (ADR): The built-in rechargeable accumulators correspond to paragraph 2.2.9.1.7 ADR.
- Maritime transport (IMDG Code): The built-in rechargeable accumulators correspond to paragraph 2.9.4 IMDG Code.
- Air transport (IATA DGR): The built-in rechargeable accumulators correspond to the subsection 3.9.3.6 IATA DGR.

## 1.3 Safety information for diving to a depth of up to 2.5 m

**In addition to the safety information provided above, be sure to observe the following information when diving to a depth of up to 2.5 m:**

- Only skilled and experienced swimmers and snorkelers should be allowed to use the SEABOB for diving to a depth of up to 2.5 m.
- Only use the SEABOB for diving if you are completely healthy. Consult a doctor if you are in doubt.
- Never dive alone.
- Be aware that it is very difficult to judge the distance of objects under water. For better visibility, wear diving goggles.
- Before diving, always check to make sure that the depth sensor is working properly. If the depth sensor is faulty, the motor's safety cut-off will not function at the set maximum diving depth (default setting 2.5 m). When the SEABOB is switched on, the depth sensor is automatically reset to "0.0 m". For this reason, you should switch on the SEABOB only when the craft is close to or at the same level of the surface of the water.
- Maintain a safe distance (minimum 5 m) to other persons and objects. Never attempt to dive under other swimmers, watercraft or through underwater objects. Before resurfacing, ensure that there are no swimmers, watercraft or objects above you or approaching you. Danger of collision!
- Do not operate the craft in water that is less than 1 m deep. Doing so can cause injury to you or damage to the SEABOB as a result of hitting underwater objects. Be very careful of rocky bottoms, reefs and stones. Stay away from the immediate shore, and never attempt to steer the SEABOB onto the beach, shore or onto land of any kind. If the SEABOB comes into contact with the sea bed, it may, as a result of the very high suction power of the jet drive, become attached to the ground and jerk to a halt. Risk of collision and injury!
- Respect the environment. Maintain a safe distance to the bottom of the sea or lake, so that sediment or aquatic plants are not kicked up and damaged by the jet of water coming from the craft or get into the jet channel. Steer clear of rocky bottoms, reefs and stones, which can lead to injury.
- Make sure you resurface in time. Leave enough operating time so that you can get back, and make sure that you start making your way back to the accompanying boat or shore in time.
- When calculating the time it will take you to return, be sure to take into account the limited power of the craft in emergency mode.







## 1.4 Safety information for diving to a depth of more than 2.5 m

**In addition to the safety information provided above, be sure to observe the following information when diving to a depth of more than 2.5 m:**

- Only divers with a valid diving licence or accompanied by a certified diving instructor are allowed to use SEABOB for diving to a depth of more than 2.5 m.
- Only use the SEABOB for diving if you are completely healthy. Consult a doctor if you are in doubt.
- Never dive alone. Especially when scuba diving in caves, make sure that you are accompanied by another person with a second craft. It is important to ensure that there are always multiple alternatives for exiting the cave should one alternative fail.
- Use only complete and fully functional diving equipment when diving. Ensure that no air apparatus components or hoses are hanging free in the water where they might get into the jet channel.
- Only dive when the visibility under water is good. Never dive without diving goggles. Only with diving goggles will you be able to detect underwater hazards in time.
- Before diving, always check to make sure that the depth sensor is working properly. If the depth sensor is faulty, the motor's safety cut-off will not function at the set maximum diving depth (default setting 2.5 m). The depth sensor reading in the display should be approx. "0.0 m" when the craft is on the water surface. You can double-check the reading by briefly submerging the SEABOB without activating the motor.
- The motor cuts off automatically if the set maximum diving depth (depth limit) is exceeded and can only be switched back on when the craft has returned to a diving depth that is above the depth limit.
- The maximum diving depth (depth limit) is factory set to 2.5 m. Users can increase the depth limit to a maximum diving depth of 40 m (see Chapter 5.7.1 "Setting the maximum diving depth").
- For safety reasons, the factory-set depth limit of 2.5 m can only be changed by first entering your Owner-PIN. This is done to prevent the setting of the maximum diving depth from being changed by unauthorised persons. After you have finished scuba diving to a depth of more than 2.5 m, reset the maximum diving depth immediately to the default safety setting of 2.5 m to prevent the risk of injury to others.
- For safety reasons, the depth limit is automatically reset to the default setting of 2.5 m each time the SEABOB is switched on.

- Keep in mind that the SEABOB switches off automatically (Sleep mode) if inactive for an extended period of more than 10 minutes (Time-off). After switching the SEABOB back on, you will need to re-enter your Owner-PIN if you want to start the motor at a diving depth of more than approx. 2.5 m. After entering your Owner-PIN, you can increase the depth limit again so that the set maximum diving depth is greater than the one currently shown.
- When scuba diving, never rely completely on the depth sensor reading. The depth sensor is provided for information purposes only. The depth sensor is not a calibrated gauge and should not be used to perform tasks such as calculating decompression times.
- When the accumulator is discharged to approx. one third of its charge state, the motor's electronic control system reduces the maximum power incrementally (Power Level 5, Power Level 4 etc.). This is done to prolong accumulator cell life as the voltage decreases, while ensuring that there is sufficient reserve capacity for emergency mode. The two red bars on the accumulator symbol indicate the start of the emergeny reserve for the SEABOB. In emergency mode, the power is gradually reduced automatically until the motor comes to a complete stop. Always take into account the limited power when timing your ascent to the surface and your return to the shore or boat.
- You must always ensure that you are able to resurface and return to the shore or boat by yourself without the assistance of the SEABOB.
- Regardless of whether you are using the SEABOB while scuba diving, you should always adhere to the recommended descent and ascent rates and maximum diving duration in line with applicable diving association guidelines. For your own safety, however, we urge you to avoid relying solely on the craft's equipment. Never use the depth sensor to calculate descent or ascent rates. For the most part, crucial safety functions of the craft have been integrated in such a way that they are redundant. Even so, unexpected failure of these functions is still possible.







## 1.5 Safety information concerning the accumulators

**In addition to the special safety information for the accumulators given in Chapter 1.1, be sure to observe the following safety information:**



- Never expose the SEABOB to high temperatures (max. 60 °C / 140 °F) caused e.g. by open fire, direct sunlight or by storage inside a closed motor vehicle or boot. If exposed to heat, flammable gases can be discharged causing serious injury.
- Never transport a fully charged SEABOB by aircraft or over long distances. The SEABOB should only be partially charged during transport (charge state "air transport / storage"). Only switch off the SEABOB for transport when the aircraft symbol is displayed (see Chapter 5.11 "Air transport / transport of the SEABOB"). If instructions are disregarded, flammable gases can be discharged causing serious injury!
- For use under normal conditions, the chemicals contained in each High-Energy Li-Ion accumulator cell are encased in a sealed case for safe storage in any position. In addition, the individual cells are enclosed in the watertight aluminium profile of the accumulators, which can withstand pressures up to 12 bar and helps to dissipate heat. Due to this protection, there is a risk of flammable gases being discharged only if the accumulator cells have been subjected to excessive mechanical stresses or heat.
- When charging the SEABOB, always follow the instructions contained in this Operation Manual (see Chapter 5.2 "Charging the SEABOB").
- Only use chargers supplied by CAYAGO AG and for each respective specific SEABOB model. Chargers supplied by other manufacturers are not equipped with the special microprocessor-controlled charge management system for protection of the High-Energy Li-Ion accumulator cells. As a result, flammable gases may be discharged when charging the accumulator cells with other chargers, causing serious injury.
- Beware of the strong line currents that are present when charging, in particular on the optional quick charger. Never use the charger if the mains cable is damaged or does not have a sufficient current rating (the cable must be approved for currents of at least 10 A). Doing so can cause the cable to catch fire and may lead to electric shock resulting in severe injury or death.
- Ensure that there are no dried salt deposits on the contacts of the connection port or connector (see Chapter 6 "Care"). Salt deposits can inhibit the flow of electricity during charging and cause electrical contacts to overheat, resulting in irreparable damage to the contacts or even fires affecting the contacts or cable.
- While charging, do not place any objects on the SEABOB or charger to ensure that heat created during the charging process is dissipated properly. Ensure that air can circulate freely.

- Carry out charging in a place in the shade that is dry, cool and well ventilated. Ensure that the device is sufficiently protected from the sun. If the SEABOB is hot, let it cool down before charging.
- Caution! The charger and connector can get hot while charging. Let the charger and connector cool down before you attempt to touch them.
- Electrical outlets in some countries may not be equipped with a ground wire connection or, if they are, it may provide only insufficient protection. If this is the case, you will feel the presence of a leaking current (sometimes more, sometimes less) when you touch the charger and / or the connector, especially if you are wet and barefoot. For this reason, you should always disconnect the mains plug from the mains before you touch the charger or connector after charging.
- Before storing the device, be sure to read the safety information provided in this Operation Manual on temporary and long-term storage, especially over the winter (see Chapter 5.10 "Storing the SEABOB"). Store the SEABOB in a place that is cool, dry, well ventilated and frostproof, and ensure that the accumulator cells are protected from irreparable total discharge.
- Before transporting the device, in particular before transporting by aircraft, be sure to read the safety information on the transport of the Lithium-Ion accumulator cells used in the SEABOB (see Chapter 5.11 "Air transport / transport of the SEABOB").
- When transporting Li-Ion accumulators, always observe the applicable safety regulations and the specific regulations of the carrier. Be aware that safety regulations can change from time to time. For up-to-date information, please contact the manufacturer or your specialist dealer.
- Never open the accumulators. Never attempt to alter or modify the accumulators in any way. Doing so may cause flammable gases to be discharged causing serious injury.
- Repairs and maintenance work on the SEABOB and charger that go beyond the procedures described in Chapter 6 "Care" and Chapter 7 "Troubleshooting" may only be carried out by an authorised technician. Work of this type is dangerous and may result in severe injury or cause damage to the SEABOB and charger if not carried out by an authorised technician. Take precautions to avoid electric shock, and beware of flammable gases that may be discharged.
- Never discard the accumulators or accumulator cells as household waste or into a fire or water. Please follow the instructions for correct disposal (see Chapter 9 "Disposal").







## 2. Proper use

⚠ When using the SEABOB, it is imperative that you follow the comprehensive safety information provided in this Operation Manual. In addition, always carry out your own risk assessment and do not expose yourself to any unnecessary risks. In particular, only use the device when the surrounding conditions and weather conditions are sufficiently good and adjust your speed to suit visibility.

The SEABOB is a water-sports craft powered by an electric jet drive. The craft is not equipped with navigational lights and is designed to carry one person both on and below the surface of the water. The craft is intended for use in water that is at least 1 m deep. The SEABOB is highly resistant to seawater and suitable for use in both fresh water and salt water. The device is constructed solely of materials that are non-rusting and highly resistant to corrosion.

The following regulations apply to operation of the SEABOB:

- Users of the craft must be at least 16 years old and good swimmers. People who cannot swim are not allowed to use the SEABOB.
- Minors 16 and over may only operate the SEABOB under the supervision and responsibility of an adult.

⚠ Only let other people use your SEABOB if they are aged 16 or over and have shown you adequate proof of age (such as a valid ID) and after you have given them complete and full instructions on how to operate the SEABOB.

## 2.1 Registration papers / driving licence

The present law in some countries does not require registration papers or a driving licence for operation of watercraft. Some countries, however, may have different licence regulations, age limits or operating restrictions. Before operating the craft, always inquire about the local regulations which may be in force in the area where you wish to operate the SEABOB. We urge all SEABOB operators to inform themselves about the situation in the country in which they will be using the SEABOB. The manufacturer does not assume any responsibility for obtaining such information.

## 2.2 Operation area

The SEABOB should only be used in sheltered waters. Sheltered waters are defined as sheltered coastal waters, small bays, small lakes, rivers and canals when conditions up to, and including, wind force 4 and significant wave heights up to, and including, 0,3 m may be experienced, with occasional waves of 0,5 m maximum height, for example from passing vessels.

Generally, the SEABOB can be operated in areas where the use of watercraft powered by combustion engines is not permitted. Use of the SEABOB is not permitted wherever the use of watercraft or electric-powered watercraft is prohibited by local laws, community regulations, nature conservation laws or other provisions. You are urged to observe all local laws and regulations. For more information, you should inquire at the appropriate local offices.







# 3. Included in delivery

**The following standard equipment is included in delivery of the SEABOB:**

1. SEABOB F5 S
2. A charger for charging the device for operation and air transport / storage (in particular storage over the winter)

**Note:** A special microprocessor-controlled quick charger is available as an optional accessory. The quick charger can be used to charge the SEABOB more quickly (high charging rate for shorter charging times).

3. Operation Manual, including:
   - "Quick Reference for SEABOB F5 S"
   - "Data Sheet for Charger"
4. SEABOB certificate with serial numbers and Owner-PIN

**Check to make sure that all components have been included in delivery. Should this not be the case, please contact CAYAGO AG immediately.**

Also, please check that the serial numbers on the SEABOB and accumulators match the numbers shown on your SEABOB certificate. To view the serial numbers, use the menu provided on the display (see Chapter 5.3.9 "Displaying serial numbers").

STOP The SEABOB is delivered in a partially charged state. To avoid total discharge, you should charge the SEABOB immediately after delivery (within 1 week) to at least the charge state "air transport / storage". Use only the charger supplied by CAYAGO AG or the optionally available quick charger to charge the SEABOB.

STOP Charge the SEABOB after each use (within 24 hours) and during longer periods of storage continuously (trickle-charge) to at least the charge state "air transport / storage" to avoid irreparable total discharge of the valuable High-Energy Li-Ion accumulator cells. Be sure to read the information provided in this Operation Manual on charging the SEABOB.

# 4. Description of the device

## 4.1 SEABOB housing







1. SEABOB housing
2. SEABOB bow
3. Jet channel (water intake)
4. Jet channel (water discharge)
5. Right Controlgrip
6. Left Controlgrip
7. Trigger
8. Display
9. Carrying handles
10. Connection port
11. Screw cap
12. Front bumper
13. Side bumper
14. Rear bumper
15. Securing device for pilot belt system

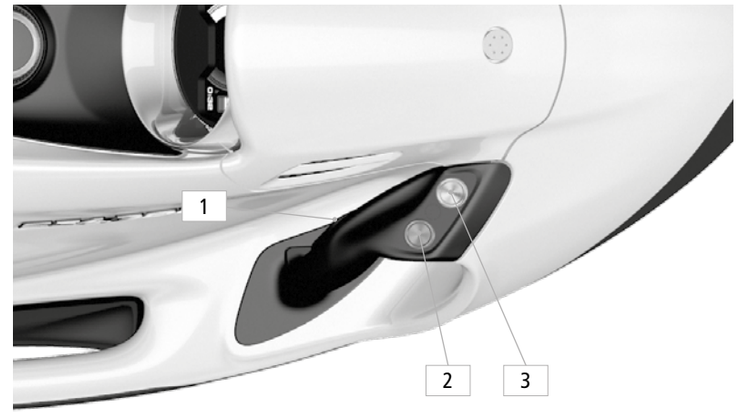






## 4.2 Right Controlgrip

1. Trigger
2. Green button
3. Silver button




## 4.3 Left Controlgrip

1. Red button
2. Blue button



# 5. Operation

## 5.1 Start-up

⚠ **Before using the SEABOB for the first time, read through this Operation Manual carefully, including the safety information and the instructions on proper use.**

⚠ Only use the SEABOB as intended (see Chapter 2 "Proper use").

Take the SEABOB and the charger out of the packaging, and place them on a dry and sturdy surface that will not damage the components.

Do not throw away the packaging. It can be used later (for example, when sending the device in for service).

STOP The SEABOB is delivered in a partially charged state. To avoid total discharge, you should charge the SEABOB immediately after delivery (within 1 week) to at least the charge state "air transport / storage". Use only the charger supplied by CAYAGO AG or the optionally available quick charger to charge the SEABOB.

STOP Charge the SEABOB after each use (within 24 hours) and during longer periods of storage continuously (trickle-charge) to at least the charge state "air transport / storage" to avoid irreparable total discharge of the valuable High-Energy Li-Ion accumulator cells. Be sure to read the information provided in this Operation Manual on charging the SEABOB.

## 5.2 Charging the SEABOB

⚠ Never expose the SEABOB and charger to high temperatures (max. 60 °C / 140 °F) caused e.g. by open fire, direct sunlight or by storage inside a closed motor vehicle or boot. If exposed to heat, flammable gases can be discharged causing serious injury. In addition, the TFT display may become irreparably damaged if exposed to heat.

⚠ Protect the charger, in particular the connector and mains plug as well as the connection port of the SEABOB from damage, dirt, dust, moisture and heat. Beware! Danger of electric shock!

⚠ Charge only in dry, cool and well ventilated locations. Never use the charger if any cables or plugs are damaged. Doing so can cause electric shock, resulting in severe injury or death.

⚠ Only use chargers supplied by CAYAGO AG and for each respective specific SEABOB model.

During the charging process, do not place any objects on the SEABOB or charger to ensure that heat produced during charging is dissipated properly (convection cooling). Ensure that air can circulate freely, and position the optionally available quick charger on the provided positioning legs. Should the charger (or quick charger) overheat, it automatically reduces the output current to prevent thermal overload. If this happens, the charging process is prolonged accordingly. If the SEABOB is hot, let it cool down before charging.

**To charge the SEABOB, proceed as follows:**

1. Place the SEABOB on a sturdy and dry surface that will not damage the components.
2. Dry the area around the connection port using a soft, clean cloth.
3. Twist the screw cap from the connection port anticlockwise against a slight resistance and remove the screw cap from the connection port. Check that the inside of the connection port is perfectly clean and dry.
4. Check that the connector is clean and dry.







5. Ensure that the connector of the charger is positioned correctly before plugging it into the connection port of the SEABOB (the cable of the connector should be pointing to the rear of the SEABOB).





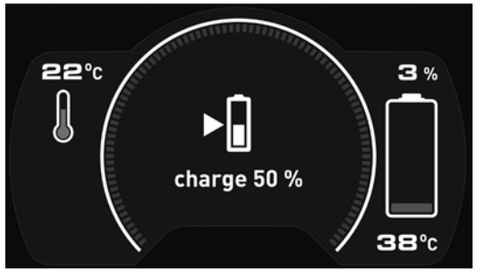
6. Only after this has been done should you plug the mains plug of the charger into the mains socket.

STOP Follow the technical specifications of the charger, particularly with regards to the correct input voltage (see "Data Sheet for Charger" and "Instructions for Use of the Quick Charger").

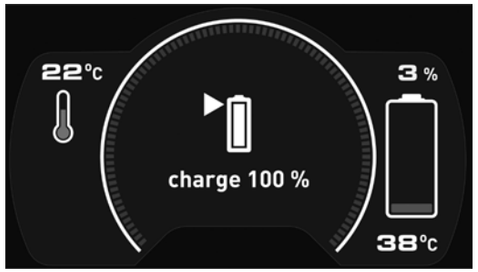
⚠ If using the charger in other countries only use travel plugs which are approved for currents of at least 10 A.

7. The charge display will appear in the SEABOB's display after a brief system check. The device is now in Charge mode. Select the desired charging process. For partial charging (for air transport / storage), tap the green button on the right Controlgrip. A partially filled charge symbol will appear in the centre of the display with an arrow to indicate partial charging ("charge 50 %"). For full charging (for operation), tap the red button on the left Controlgrip. A completely filled charge symbol will appear with an arrow to indicate full charging ("charge 100 %").

**Note:** When an active charger is connected, programming is preset to full charging (for operation).




*Starting partial charging for air transport / storage*




*Starting full charging for operation of the craft*

8. Charging is performed automatically. The charging process of the SEABOB is shown by the accumulator symbol on the right side of the SEABOB display. As the charging process increases, more bars appear in the accumulator symbol. The numerical display of the charge state is shown above the accumulator symbol. The accumulator temperature is displayed under the accumulator symbol in °C.

**Note:** An increase in the accumulator temperature (shown on the right-hand side of the display) during charging is normal. The temperature is monitored electronically. If the accumulator overheats, the accumulator management system temporarily stops the charging process.

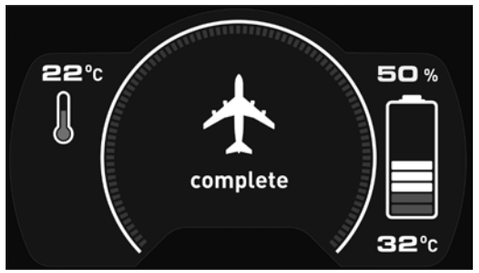
Charging of the SEABOB is automatically controlled by the electronic system of the charger and the microprocessor-controlled accumulator management system. The nature of the electronics makes it impossible to overcharge the SEABOB. The Li-Ion accumulator cells of

the SEABOB do not have a memory effect. This makes it possible to charge the SEABOB regardless of its charge state and without having to discharge it beforehand. The internal voltage level of each Li-Ion accumulator cell is monitored electronically. Differences between the cells are compensated for and balanced (Cell-Balancing).

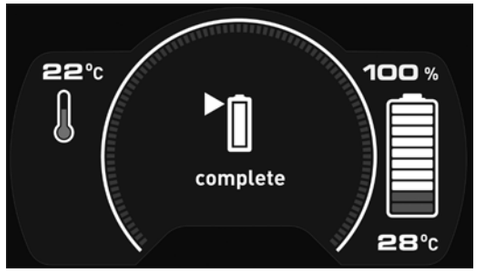
STOP Charge a SEABOB which is discharged / run to empty immediately after use (within 24 hours) and during longer periods of storage continuously (trickle-charge) to avoid total discharge, which may cause irreparable chemical damage to the valuable High-Energy Li-Ion accumulator cells. Charge to at least the charge state "air transport / storage". Do not interrupt charging before this charge state has been reached.

**Note:** You can interrupt charging while fully charging the SEABOB, as long as the minimum charge state "air transport / storage" has been reached. When this is done, however, the power of the craft is reduced due to the lower accumulator charge state.

9. An aircraft symbol will appear in the centre of the display when either the correct charge state for air transport or the minimum charge state for storage has been reached. When all bars are present in the accumulator symbol, the SEABOB is fully charged for operation.
10. To save energy and to reduce maintenance charging, the display turns itself off automatically 10 minutes after charging is completed ("complete"). By pressing any button, the display can be switched on again (for another 10 minutes).




*Partial charging for air transport / storage complete*




*Full charging for operation of the craft complete*

11. To complete the charging process, first pull the mains plug from the mains socket. Never attempt to remove the mains plug by twisting or pulling on the mains cable. Always hold on to the mains plug.
12. Only after this has been done should you disconnect the connector (which is no longer carrying electricity) from the connection port of the SEABOB. Never attempt to remove the connector by twisting or pulling on the cable of the connector. Always hold on to the adapter of the connector.

STOP To complete the charging process, first pull the mains plug from the mains socket. Only then should you disconnect the connector from the connection port. Danger of short circuit!

STOP Never twist the connector to disconnect it from the connection port of the SEABOB. This could result in the connector and the connection port being damaged or bent.

⚠ Caution! The charger and connector can get hot while charging. After you have finished charging, let the charger and connector cool down before you touch them.

13. Turn the dry and clean screw cap clockwise into the connection port of the SEABOB, until you feel a slight resistance.

Always ensure that the screw cap has been placed securely on the connection port.









14. After the charger has been disconnected, the SEABOB performs a 5-second system check and then switches off to Off mode if programmed to partial charging (see Chapter 5.3.5 "Off mode") or to Sleep mode if programmed to full charging (see Chapter 5.3.6 "Sleep mode / On mode").

**Note:** If the temperature of the accumulators exceeds 45 °C / 113 °F, the accumulator management system temporarily stops the charging process of the SEABOB. The charging process will continue as soon as the temperature of the accumulators falls below 40 °C / 104 °F.

STOP Never plug the connector into a moist or wet connection port for charging.

The connection port is hermetically sealed to prevent water from leaking into the SEABOB. Water, in particular salt water, on the contacts of the connection port or connector may result in chemical reactions while charging, causing irreparable damage to the connection port contacts and the connector.

For this reason, you should always check to make sure that the connection port and connector are perfectly clean and dry before plugging the connector into the connection port of the SEABOB. Always put the screw cap back on the connection port immediately after charging is completed. Only open the connection port for the charging process.

Before charging, always dry the connection port and connector using a soft, clean cloth and / or cotton swab, and blow the water out of the contacts (see Chapter 6.1 "Cleaning the SEABOB").

⚠ Before rinsing off components, ensure that the mains plug has been disconnected from the mains socket. Not doing so may result in electric shock!

**SEABOB cannot be charged:**

See Chapter 7.7 "SEABOB cannot be charged".

**Using auxiliary power units / electric generators:**

⚠ Only electric generators with precise closed-loop control suitable for connection to electronic devices are permissible. Asynchronous generators are not suitable and can result in destruction of the chargers. Furthermore, there is danger of injury in the event of destruction. Use of electric generators with inverter technology is preferred. The continuous power of the generator must be greater than the input power of the charger (see rating plate).

## 5.3 Operating the SEABOB

STOP Never run the motor out of the water for longer than approx. 10 seconds. The seals of the motor and the hard-coated motor shaft are designed exclusively for use in the water. Operation out of the water can lead to overheating due to the lack of water to cool the device, thereby causing irreparable damage to the seals and motor shaft. Danger of short circuit!

### 5.3.1 Controls and display panel

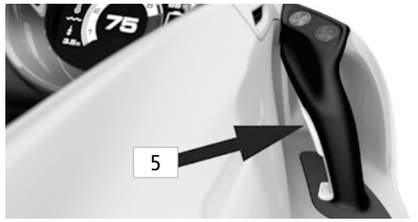
1. Green button = plus button or scroll up
2. Red button = minus button or scroll down
3. Silver button = select button or move the cursor to the right
4. Blue button = select button or move the cursor to the left
5. Trigger = motor enable (on / off), power control, confirm button
6. Multi-colour, graphic TFT display with adjustable background brightness and contrast setting





### 5.3.2 Arrangement of the controls




1. The green button is located on the outer side of the right Controlgrip.
2. The red button is located on the outer side of the left Controlgrip.
3. The silver button is located on the inner side of the right Controlgrip.
4. The blue button is located on the inner side of the left Controlgrip.
5. The Trigger is located on the inner side of the right Controlgrip.

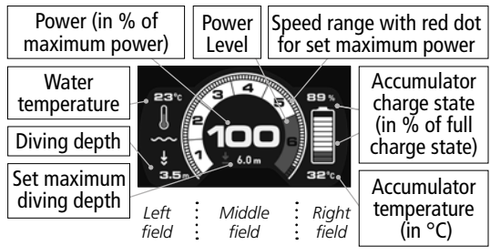
### 5.3.3 Using the controls

The buttons used on the SEABOB are high-quality, watertight piezo-actuated electronic buttons that do not have mechanical parts and, for this reason, are not subject to wear (button life: over 20 million operations). These buttons are designed to react to sudden changes in pressure. For this reason, you only have to tap them lightly. Regardless of how long or hard you press the buttons, they always react by emitting a single short pulse. A pulse may also be emitted if the SEABOB falls hard to the ground or is struck hard by another object, if the SEABOB is hit hard or the buttons are inadvertently touched. For safety reasons, you have to tap the blue button and push the Trigger within a fixed time period to activate the switch-on function. This is done to prevent the SEABOB from being switched on inadvertently.

The Trigger is made of high-grade plastics and seawater-resistant spring steel. It can be in a released position or pushed position. The Trigger is used as a confirm button and for enabling the motor (on / off). By pushing the Trigger against the Controlgrip, you can activate the motor (the motor runs with a minimum power of Power Level 1). When you release the Trigger, the motor stops immediately.

## 5.3.4 Information display

The graphic display is divided into three fields. During operation of the craft, the following information is shown in the information display:




**Left field:**

The current water temperature (in °C) is shown at the top left of the display. Below, the current diving depth (in m) is displayed.

**Middle field:**

The power display is located in the middle field. The current motor speed is depicted graphically in the speed range on the outer circle. The red dot in the speed range shows the maximum power (Power Level) set in the menu. The current power (Power Level) is shown numerically and graphically in six successive segments on the inner circle. The sixth segment (Power Level 6) is shown in red, all of the preceding segments are shown in white. The numerical display of the current power in % of maximum power is displayed in the centre of the power display.

The current Power Level and the current power in % of maximum power are set parallel to each other. The power is set in increments of 15 % and 25 % (6 Power Level). Power is increased by one Power Level by tapping the green button (+ 15% or + 25 %) and decreased by one Power Level by tapping the red button (- 15 % or - 25 %).

**Note:** When the SEABOB is switched on, the set maximum diving depth is shown at the bottom of the power display for 10 seconds. This information then disappears again.

In the event of a malfunction, additional symbols may appear in the middle field. Below is a list of these symbols and their descriptions:

**Warning symbol**

- Motor temperature warning ("motor overheated") → Power is limited to Power Level 2
- Accumulator temperature warning ("accumulator overheated") → Power is limited to Power Level 2
- Warning: Accumulator error ("accumulator error") → Emergency operation! Power is limited to Power Level 2

⚠ Should the accumulator error re-occur or become permanent, immediately halt operation and contact the manufacturer or your specialist dealer without delay.

- Warning: Impeller locked ("impeller locked") → Motor stops → see Chapter 7.4 "Impeller does not turn (no thrust)"

**Workshop symbol**

- Warning: Water ingress into accumulators or electronics ("warning water ingress") → Motor stops → SEABOB switches to Off mode after 5 seconds
- Warning: System error ("system error") → Trigger or Controlgrip error / internal communication interrupted → Motor stops

→ Contact manufacturer or specialist dealer!

**Right field:**

In the right-hand field there is an accumulator symbol with individual bars showing the charge state of the SEABOB (1 bar = 10 % charge state). The numerical display of the charge state (in % of full charge state) is located above this symbol. The temperature of the accumulator (in °C) is shown below the accumulator symbol.





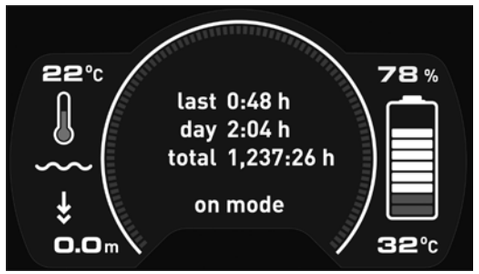


**Time Display:**

Tap the blue button on the right Controlgrip while the power is displayed as "0 %" in the power display. The time display appears.

The operating time of the SEABOB in the On mode ("on mode") is shown in the centre of the display in the following order:

- Operating time during the last operation ("last")
- Operating time during the current day ("day")
- Total operating time ("total")




*Time Display*

**Note:** The operating time during the last operation ("last") shows the operating time of the SEABOB from the last time it was switched on (On mode) until it was last switched off (Sleep mode / Off mode).

**Note:** In order to guarantee the operating time during the current day ("day") is measured accurately, please always ensure that the stored time is adjusted to the current local time. The operating time during the current day ("day") shown in the display is reset daily at midnight.

In order to exit the time display, tap the blue button again. The information display appears in the display of the SEABOB.

**Timer:**

Tap the blue button on the right Controlgrip while the power display is at a minimum power of "15 %" (Power Level 1). The timer appears.

The speed range as well as the set maximum power (Power Level) (marked in red) are shown as before in the middle field of the display on the outer circle. The following information is displayed inside as an alternative to the information display:

- Current power in 6 Power Level ("power level")
- Operating time since it was switched on (in hrs:min'sec)




*Timer*

**Note:** When the timer is activated to limit the operating time, the timer display is always shown in the display. Instead of the operating time since the device was switched on, the remaining operating time is shown here (in hrs:min'sec).

**Note:** The set current mode ("on mode" or "timer") is displayed for 10 seconds after switching to the timer display. After this time, it is replaced by the set maximum diving depth. The information disappears after 30 seconds.

In order to exit the timer display, tap the blue button again. The information display appears in the display of the SEABOB.

### 5.3.5 Off mode (air transport / storage) – switching on / off

Special safety precautions must be taken before transporting the craft, particularly by aircraft. The current flowing to the accumulator must be cut off, and precautions must be taken to ensure that the device cannot be switched on inadvertently or incorrectly. For safety reasons, the SEABOB cannot be switched back on when it is in Off mode by tapping the device's buttons. It can only be switched on using a connected and active charger. When the SEABOB is in Sleep mode, however, it can be switched back on using the device's buttons.

**Switching off to Off mode:**

Switching off to Off mode can only be done using a connected and active charger. To switch off to Off mode, proceed as follows, taking into account the information contained in Chapter 5.2 "Charging the SEABOB":

1. Plug the connector into the connection port on the SEABOB.
2. Plug the mains plug into the mains socket.
3. The charge display will appear in the display after a brief system check.
4. Tap the green button for partial charging of the SEABOB to the charge state "air transport / storage" (a partially filled charge symbol will appear in the display).
5. When the aircraft symbol appears in the display, the charge state for air transport / storage has been reached.
6. To save energy and to reduce maintenance charging, the display turns itself off automatically 10 minutes after charging is completed ("complete"). By pressing any button, the display can be switched on again (for another 10 minutes).
7. If you disconnect the charger from the connection port, the SEABOB will switch off to Off mode after 5 seconds (system check), regardless of the current charge state and even if the correct charge state for air transport / storage has not been reached.

**For this reason, you should follow the instructions given in Chapter 5.10 "Storing the SEABOB" and Chapter 5.11 "Air transport / transport of the SEABOB" on correctly switching off the device to Off mode for air transport and storage.**

**Note:** If the accumulator charge state is too high prior to starting the partial charging process for air transport / transport, you will have to perform an automatic discharge by means of a connected and active charger (may take up to 24 hours) or by running the SEABOB to empty in a controlled fashion as described in Chapter 5.11.

**Switching on from Off mode:**

When the system is in Off mode, it can only be switched back on by initiating the charging process.

1. Plug the connector into the connection port on the SEABOB.
2. Plug the mains plug into the mains socket.
3. Activation of the SEABOB is triggered by the independent electronic control system in the accumulators together with a correctly detected charger (system check).
4. The charge display will appear in the display. The SEABOB is now in Charge mode.
5. Decide how to proceed using the green or red button (see Chapter 5.3.7 "Charge mode" and Chapter 5.3.8 "Charge display").







### 5.3.6 Sleep mode / On mode – switching on / off

In Sleep mode, the display and motor are switched off.

**Switching on from Sleep mode:**

1. Tap the blue button.
2. The display is switched on. The SEABOB logo and the prompt "push trigger" appear.
3. Push the Trigger against the Controlgrip (within 5 seconds). The SEABOB logo disappears again.
4. Release the Trigger completely. The User-PIN or Owner-PIN prompt will appear in the display (if activated). If the PIN prompt has been deactivated, the information display will appear directly.

**Note**: After a prolonged phase of being idle, the system will automatically start the motor initialization. The motor will make two slow turns. The initialization takes about 5 seconds.

5. The motor is switched on by pushing the Trigger (the motor runs with a minimum power of Power Level 1).

**Note:** If the Trigger is not activated within 5 seconds after tapping the blue button during activation, the display will switch off again (device reverts to Sleep mode).

**Note:** If you want to activate the PIN prompt when switching on the device, or if you want to activate and change the User-PIN, proceed as described in Chapter 5.3.11 "Settings".

**Automatic switching off to Sleep mode (Time-off):**

If no actions are performed by the user within 10 minutes (Time-off), the system will switch off automatically to Sleep mode.

**Manual switching off to Sleep mode:**

You can also switch the SEABOB to Sleep mode manually. To do so, proceed as follows:

1. The information display is shown in the display. The power is displayed as "0 %" in the power display.
2. Tap the button combination silver – blue in quick sequence. The prompt "sleep mode - confirm with trigger" appears.
3. If the user activates the Trigger within 5 seconds, the system will switch to Sleep mode and switch off.

**Note:** If the Trigger is not activated within 5 seconds, the system will return to the last selected mode (e.g. information display in the On mode).

## 5.3.7 Charge mode

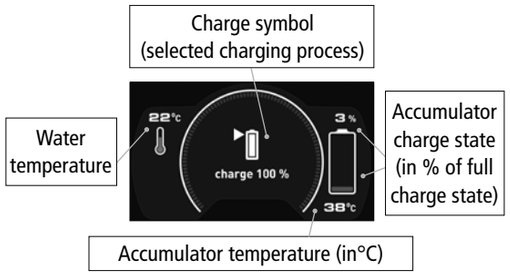
The charger is connected to the device and is supplying the charging voltage. Before charging begins, an accumulator / charge diagnostic check (system check) is performed. Charging is activated once the diagnostic check has been completed successfully. It is not possible to switch on the motor. The charge display showing the accumulator symbol will appear in the display (see Chapter 5.3.8 "Charge display").

The system can only be switched from another mode to Charge mode using a connected and active charger.

**Note:** If the charger is disconnected from the device, thereby interrupting the charging voltage, the SEABOB switches off after 5 seconds (system check) and switches to Off mode (if programmed to partial charging) or to Sleep mode (if programmed to full charging).

## 5.3.8 Charge display

After the charger is connected to the SEABOB and then to a power source, the system first performs a system check and then automatically switches to Charge mode. The charge display appears. It is not possible to switch on the motor.




1. The charge state is shown by individual bars in the accumulator symbol on the right-hand side of the display (1 bar = 10 % charge state). The number of bars indicates the charge state. When all bars are shown in the accumulator symbol, the SEABOB is fully charged.
2. The numerical display of the charge state (in % of full charge state) is shown above the accumulator symbol. The accumulator temperature (in°C) is displayed under the accumulator symbol.
3. The current water temperature (in °C) is shown at the top left of the display.
4. Tap the green button to select partial charging of the SEABOB for air transport / storage. A partially filled charge symbol will appear in the centre of the display with an arrow to indicate partial charging ("charge 50 %").
5. Tap the red button to select full charging of the SEABOB for operation. A completely filled charge symbol will appear in the centre of the display with an arrow to indicate full charging ("charge 100 %").

**Note:** When an active charger is connected, programming is preset to full charging (for operation).







6. If programmed to partial charging for air transport / storage, an aircraft symbol will appear when the correct partial charge state has been reached.
7. If programmed to full charging, all bars are displayed in the accumulator symbol. The SEABOB is fully charged and ready for operation.
8. To save energy and to reduce maintenance charging, the display turns itself off automatically 10 minutes after charging is completed ("complete"). By pressing any button, the display can be switched on again (for another 10 minutes).
9. If, when programmed to partial charging, the charger is disconnected from the device when the aircraft symbol is displayed, the system switches to Off mode and switches off for transport, in particular air transport, or storage.
10. If the charger is disconnected from the device when programmed to full charging and the SEABOB is fully charged, the system switches off to Sleep mode and is ready for operation.




*Starting partial charging for air transport / storage*




*Starting full charging for operation*




*Partial charging for air transport / storage complete*




*Full charging for operation complete*

## 5.3.9 Displaying serial numbers

1. Switch on the SEABOB. The information display appears in the display.
2. Tap the button combination silver – blue – red in quick sequence.
3. Enter your Owner-PIN and confirm your entry by pushing the Trigger (see Chapter 5.3.10 "Entering PIN"). The menu containing various menu items (upper menu level) will appear.
4. Switch between the menu items (upper menu level) with the green or red button until the system data ("system data") are displayed in white. Select it by pushing the Trigger.
5. The serial numbers of the SEABOB (the first letter is an "S") and accumulators (the first letter is an "A") as well as the software versions, can be displayed by scrolling with the red button.
6. Push the Trigger against the Controlgrip to return to the upper menu level.
7. To exit the upper menu level, switch between the menu items with the green or red button until the menu item to exit the menu appears ("exit"). Push the Trigger to return to the information display.




*SEABOB serial numbers*

## 5.3.10 Entering PIN (Owner-PIN / User-PIN)

**Owner-PIN:**

This PIN (Personal Identification Number) of the owner is used to change the settings in the menu or to switch on the device (if PIN prompt has been activated).

**User-PIN:**

This PIN (Personal Identification Number) of the user is used to switch on the device (if PIN prompt has been activated).

**Note:** Please find your Owner-PIN on the supplied certificate.

The PIN prompt when switching on the device is deactivated at the factory. This means that you will be able to switch the SEABOB on without entering a PIN. If you want to activate the PIN prompt when switching on the device, or if you want to activate and change the User-PIN, proceed as described in Chapter 5.3.11 "Settings".




*Entering PIN*

If the PIN prompt has been activated (PIN > "0000"), the user will be required to enter the PIN when switching on the device. To switch on the SEABOB, you can use either the User-PIN or the Owner-PIN. Since you are the SEABOB owner, you can use either PIN, so that you only have to remember one number. The owner of the craft provides the user only with the User-PIN for switching on the SEABOB. The Owner-PIN is the only PIN that can be used for safety settings, in particular the maximum diving depth, maximum power and operating time limit.

**To enter the PIN, you must use the four buttons and confirm your entry with the Trigger:**

1. Tap the red button (repeatedly). The digit under the cursor decreases.
2. Tap the green button (repeatedly). The digit under the cursor increases.
3. Tap the blue button (repeatedly). The cursor moves to the left.
4. Tap the silver button (repeatedly). The cursor moves to the right.
5. Push the Trigger against the Controlgrip. Entry of the PIN is confirmed, and the system checks to make sure the PIN is correct.
6. If the PIN is invalid, the display is reset to "0000" and the PIN must be entered once again ("incorrect PIN").




*Incorrect PIN*

**Note:** If a valid PIN is not entered within 10 seconds, the system reverts to Sleep mode.







## 5.3.11 Settings (menu)

1. The system is in On mode. The information display is shown in the display. The power is displayed as "0 %" in the power display.
2. Tap the button combination silver – blue – red in quick sequence (within 2 seconds). The Owner-PIN prompt will appear.
3. Enter your Owner-PIN and confirm your entry by pushing the Trigger (see Chapter 5.3.10 "Entering PIN"). The menu containing various menu items (upper menu level) will appear.

The following settings can be adjusted individually via the menu:

- Maximum diving depth ("diving depth")
- Maximum power ("max. power level")
- Operating time limit ("timer")
- User PIN ("user PIN")
- Display brightness ("display")
- Date / time ("date / time")
- System data (serial numbers, hardware and software versions ) ("system data")
- Exit ("exit")




*Upper menu level*

4. Switch between the menu items (upper menu level) with the green or red button. The active menu item is shown in white. Select the desired menu item by pushing the Trigger.
5. Depending on the menu item selected, a select list or an entry mask will appear. Select the desired value or enter the desired value.

Use the green or red button to scroll between the individual preset values in the select list (maximum diving depth, maximum power, display brightness).

The value shown under the cursor in the entry mask (operating time limit, User PIN, date / time) can be increased by (repeatedly) tapping the green button, and decreased by (repeatedly) tapping the red button. Move the cursor to the left by tapping the blue button, move the cursor to the right by tapping the silver button.




*Select list*




*Entry mask*

6. Push the Trigger to confirm the new settings and return to the upper menu level.
7. To exit the upper menu level, switch between the menu items with the green or red button until the menu item to exit the menu appears ("exit"). Push the Trigger to return to the information display.




*Exit upper menu level*

⚠ For safety reasons, the depth limit ("diving depth") is automatically reset to the default setting of 2.5 m each time the SEABOB is switched on.

**Note:** With the exception of the maximum diving depth setting, all other settings remain permanently saved (even after being switched off into Sleep mode / Off mode). The settings can only be changed by first entering the Owner PIN via the menu.

**Note:** To protect untrained and inexperienced users from the risk of collision or injury at high power, it is possible to restrict the maximum power in the menu. Consequently, the operator can only switch the power up to the maximum power which has been set. The maximum power is factory set to the highest gear ("max. power level" = "6").

**Note:** If you do not want to limit the operating time, leave the Timer deactivated or deactivate it after usage, by setting back the actual timer value to "0.00 h". If the Timer has been activated, the SEABOB switches to the greatly reduced emergency mode immediately after the operating time has elapsed, regardless of the remaining accumulator charge state.

### 5.3.12 Operation

1. Switch on the SEABOB. The information display appears in the display.

**Note**: After a prolonged phase of being idle, the system will automatically start the motor initialization. The motor will make two slow turns. The initialization takes about 5 seconds.

2. To increase the power, tap the green button (repeatedly). The power display increases by one Power Level with every tap of the green button.
3. To reduce the power, tap the red button (repeatedly). The power display decreases by one Power Level with every tap of the red button.
4. Push the Trigger against the Controlgrip and hold it there. The motor starts, and the SEABOB begins moving. A minimum power of Power Level 1 is required for starting.
5. The power can also be adjusted while operating the craft. Operation can be interrupted by releasing the Trigger temporarily.

**Note:** If the Trigger is not activated within 10 seconds while operation is interrupted, the current Power Level defaults back to Power Level 1 for safety reasons.

6. To stop, hold on to both Controlgrips securely, and release the Trigger in your right hand. The SEABOB stops.

When the accumulator is discharged to approx. one third of its charge state, the motor's electronic control system reduces the maximum power incrementally (Power Level 5, Power Level 4 etc.). This is done to prolong accumulator cell life as the voltage decreases, while ensuring that there is sufficient reserve capacity for emergency mode. The two red bars on the accumulator symbol indicate the start of the emergeny reserve for the SEABOB. In emergency mode, the power is gradually reduced automatically until the motor comes to a complete stop. Always take into account the limited power when timing your return to the shore or boat.







STOP Charge the SEABOB after each use (within 24 hours) to at least the charge state "air transport / storage" to avoid irreparable total discharge of the valuable Li-Ion accumulator cells.

## 5.4 Before starting

**Switch on the SEABOB.**

We recommend that you switch on the SEABOB and perform a brief function check before you place the craft in the water. To do this, proceed as follows:

1. Tap the blue button.
2. The display is switched on. The SEABOB logo and the prompt "push trigger" appear.
3. Push the Trigger against the Controlgrip (within 5 seconds). The SEABOB logo disappears again.

**Note:** If the Trigger is not activated within 5 seconds after tapping the blue button during activation, the display will switch off again (device reverts to Sleep mode).

4. Release the Trigger completely. The User-PIN or Owner-PIN prompt will appear (if activated). If the PIN prompt has been deactivated, the information display will appear directly.

**Note:** If you want to activate the PIN prompt when switching on the device, or if you want to activate and change the User-PIN, proceed as described in Chapter 5.3.11 "Settings".

**Note**: After a prolonged phase of being idle, the system will automatically start the motor initialization. The motor will make two slow turns. The initialization takes about 5 seconds.

5. The power is displayed as "0 %" in the power display. Tap the green button on the right Controlgrip once. When you tap the button, the power shown on the display increases to Power Level 1 (15 % of engine power).
6. Push the Trigger against the Controlgrip and hold it there for a brief function check (less than 1 second). The motor starts.

STOP Never run the motor out of the water for longer than approx. 10 seconds. The seals of the motor and the hard-coated motor shaft are designed exclusively for use in the water. Operation out of the water can lead to overheating due to the lack of water to cool the device, thereby causing irreparable damage to the seals and motor shaft. Danger of short circuit!

7. After a successful function check, tap the red button on the left Controlgrip once, until the power is displayed as "0 %" again.
8. Lift the SEABOB by the carrying handles on each side, and place it in water that is at least 1 m deep.

STOP Only bring the SEABOB into the water when the power is displayed as "0 %" to prevent activation of the motor by pushing the Trigger inadvertently.

STOP Never carry the SEABOB by the Controlgrips, front bumper or display panel but only by the carrying handles on each side.

9. The SEABOB is now ready for operation.

⚠ If you are launching the SEABOB from a boat, always have another person help you put the SEABOB in the water and take it out (in particular, in waves). Ensure that no one is under the SEABOB. Danger of injury!

## 5.5 Operation on the water surface

⚠ **Both before and during operation, observe the safety information given in Chapter 1 as well as those listed below:**

- Only use the SEABOB in sheltered waters and when accompanied by others or under the constant supervision of another person who can provide immediate assistance in case of emergency. Arrange to have a boat accompany you if you wish to operate the craft farther away from shore.
- Do not operate the SEABOB in strong currents, a heavy swell, strong wind or impaired visibility.
- Only operate the craft when it is light out and the weather is good. Always check the weather forecast before you set out, and pay close attention to local weather conditions.
- Maintain a safe distance (minimum 5 m) to other persons, watercrafts and obstacles. Danger of collision and injury!
- The water must be at least 1 m deep. Operating the craft in water that is less than 1 m deep may cause injury to you or damage to the SEABOB as a result of hitting underwater objects (particularly if there are rocky bottoms, reefs and stones). Stay away from the immediate shore, and never attempt to steer the SEABOB onto the beach, shore or onto land of any kind. If the SEABOB comes into contact with the sea bed, it may, as a result of the very high suction power of the jet drive, become attached to the ground and jerk to a halt. Risk of collision and injury!
- Make sure that there are no aquatic plants or floating objects in the water that could get into the jet channel and damage or jam the motor or impeller.





### 5.5.1 How to navigate your SEABOB

⚠ Hold on to the two Controlgrips on the SEABOB securely. The force of acceleration can be very high, especially when starting. In order to fully utilise the performance potential of the SEABOB, the use of the optionally available pilot belt system is recommended. This ensures comfortable driving, even at high power. Before using the pilot belt system, it is important that you read the "Information Sheet for Pilot Belt System".

1. Lie down on the SEABOB facing forward. Stretch your arms out completely, and grab on to the Controlgrips firmly.



2. Use the green and red buttons to select the desired Power Level. To increase the Power Level, tap the green button (repeatedly). To decrease the Power Level, tap the red button (repeatedly).
3. To start, set the power to Power Level 1 (lowest gear). Push the Trigger against the Controlgrip, and hold it there. The motor starts, and the SEABOB begins moving.




*Pushing the Trigger against the Controlgrip*

⚠ Always start in the lowest gear and move off from a stationary position with a maximum power of Power Level 1. Gradually increase the power while operating the craft so that you can familiarise yourself with the handling of the SEABOB. It is vital that you are in control of the SEABOB at all times. Risk of collision and injury!

4. If you want to go faster, use your right thumb to tap the green button on the right Controlgrip. You can also perform this operation while the craft is moving. The power increases by one Power Level with every tap of the button (maximum power: Power Level 6).




5. If you want to go more slowly, use your left thumb to tap the red button on the left Controlgrip. You can also perform this operation while the craft is moving. The power decreases by one Power Level with every tap of the button.

**Note:** A minimum power of Power Level 1 is required to start moving from a complete stop or to keep moving during operation.

6. The power can also be adjusted while operating the craft. Operation can be interrupted by releasing the Trigger temporarily.

**Note:** If the Trigger is not activated within 10 seconds while operation is interrupted, the current Power Level defaults back to Power Level 1 for safety reasons.

7. To turn, shift your weight in the direction you want to go, while pulling the bow of the craft in the same direction. Lean into the curve, just as you would on a bicycle or motorcycle. The lower part of your body, in particular your legs, act as a tail fin. While turning the craft, hold on to the Controlgrips tightly, so that you do not slide off the SEABOB.

⚠ Practise turning the craft at low speeds until you are able to control the SEABOB with ease. Danger of collision and injury!

8. To stop, continue holding on to both Controlgrips securely, and release the Trigger in your right hand. The motor will stop, and the resistance of the water will quickly slow you down. Be aware that it can take around 2-3 m for you to come to a complete stop if you are travelling at full speed, depending on your momentum and speed up to that point. You can reduce the distance it takes you to come to a complete stop by turning the SEABOB sharply to the side and straightening up without letting go of the craft. This helps you to maintain control of the SEABOB and increases the water resistance considerably, so that you can come to a complete stop as quickly as possible.

⚠ The SEABOB brakes by cutting off the power and allowing the water resistance to slow the craft. It can take around 2-3 m for you to come to a complete stop, depending on the speed you are travelling. For this reason, always maintain a safe distance (minimum 5 m) to other persons, watercrafts and obstacles. Danger of collision and injury!

⚠ If the SEABOB is released while travelling at full speed, the craft may continue moving up to approx. 3 m and may briefly dive under the water to a depth of up to approx. 2 m. When this occurs, there is the risk that persons may be injured and foreign objects may be damaged. Also the SEABOB may be damaged, particularly if the water is too shallow and the craft hits the bottom.

STOP Charge the SEABOB after each use (within 24 hours) to at least the charge state "air transport / storage" to avoid irreparable total discharge of the valuable Li-Ion accumulator cells.

## 5.5.2 SEABOB charge state and emergency reserve

⚠ Always keep an eye on the charge state of the SEABOB. Always take into account the amount of time required to return to your starting point. Ensure that you start making your way back to the starting point, shore or accompanying boat in time.

The charge state of the SEABOB is constantly shown by the accumulator symbol on the right side of the display. As the charge level decreases, the bars on the accumulator symbol begin to disappear one by one from the top (100 %) to the bottom (0 %). The numerical display of the charge state (in % of full charge state) is located above the accumulator symbol.



*Display during operation (100 % power)*



*Emergency mode*

The accumulator temperature (in °C) is displayed simultaneously under the accumulator symbol.

When the accumulator is discharged to approx. one third of its charge state, the motor's electronic control system reduces the maximum power incrementally (Power Level 5, Power Level 4 etc.). This is done to prolong accumulator cell life as the voltage decreases, while ensuring that there is sufficient reserve capacity for emergency mode. The two red bars on the accumulator symbol indicate the start of the emergeny reserve for the SEABOB. In emergency mode, the power is gradually reduced automatically until the motor comes to a complete stop.

⚠ Always take into account the limited power of the craft when timing your return to the shore or boat.







## 5.6 Diving to a depth of 2.5 m

⚠ **In addition to the safety information and instructions relating to operation on the water surface, be sure to observe the following safety information when diving:**

- Only skilled and experienced swimmers are allowed to use the SEABOB for diving to a depth of up to 2.5 m.
- Only use the SEABOB for diving if you are completely healthy. Consult a doctor if you are in doubt.
- Never dive alone.
- Be aware that it is very difficult to judge the distance of objects under water. For better visibility, wear diving goggles.
- Before diving, always check to make sure that the depth sensor is working properly.
- Maintain a safe distance (minimum 5 m) to other persons and objects. Never dive under other swimmers, watercraft or through underwater objects. Beware of collisions!
- Maintain a safe distance from other objects and the bottom of the sea or lake, particularly if there are rocky bottoms, reefs and stones. If the SEABOB comes into contact with the sea bed, it may, as a result of the very high suction power of the jet drive, become attached to the ground and jerk to a halt. Risk of collision and injury!
- Make sure you resurface in time. When calculating the time it will take you to return, be sure to take into account the limited power of the craft in emergency mode.

## 5.6.1 How to dive with your SEABOB

1. Increase the power to Power Level 2.
2. Bend your arms while pulling yourself closer to the front of the SEABOB.
3. Push the SEABOB down, so that the bow of the craft goes down into the water. The speed of the SEABOB allows the craft to overcome its own buoyancy and dive into the water.
4. After the craft is submerged, you can adjust the power to the level you want.
5. To resurface, straighten out your arms and pull back on the Controlgrips, so that the bow of the SEABOB moves upward. The higher your speed is, the easier it is to turn the craft, since your body acts as a rudder in the water.

⚠ Before resurfacing, ensure that there are no swimmers, watercraft or objects above you. Beware of collisions that may cause injury to you or other people.

If the factory-set maximum diving depth of approx. 2.5 m is exceeded, the motor switches off automatically. The buoyancy of the SEABOB causes the craft to resurface by itself. When the craft has returned to a diving depth that is above the depth limit of approx. 2.5 m, you can resume operating the craft.


*How to dive with your SEABOB*

## 5.7 Diving to a depth of more than 2.5 m

**⚠ Be sure to read the safety information and instructions relating to operation on the water surface and diving to a depth of up to 2.5 m. In addition, observe the following safety information:**

- Only divers with a valid diving licence or accompanied by a certified diving instructor are allowed to use the SEABOB for diving to a depth of more than 2.5 m.
- Only use the SEABOB for diving if you are completely healthy. Consult a doctor if you are in doubt.
- Never dive alone. Especially when scuba diving in caves, make sure that you are accompanied by another person with a second craft.
- Use only complete and fully functional diving equipment, in particular diving goggles, when diving.
- Before diving, always check to make sure that the depth sensor is working properly.
- When scuba diving, never rely completely on the depth sensor reading. The depth sensor is provided for information purposes only. The depth sensor is not a calibrated gauge and should not be used to perform tasks such as calculating decompression times.
- Always adhere to the recommended descent and ascent rates for scuba diving, while observing the decompression times.
- Always keep an eye on the remaining operating time and include reserves in your calculations. Always ensure that you are able to resurface and return to the starting point by yourself without the assistance of the SEABOB.

### 5.7.1 Setting the maximum diving depth

The diving depth limit is factory set to 2.5 m (depth limit with safety cut-off). If you want to dive to greater depths, you can increase the diving depth incrementally up to the maximum diving depth. The maximum possible diving depth is 40 m.

⚠ Only divers with an appropriate diving licence are allowed to increase the maximum diving depth of 2.5 m with the purpose of diving to a greater programmable depth.

**To set the maximum diving depth, proceed as follows:**

1. Switch on the SEABOB (the device should be ready for operation). The information display appears in the display.
2. Tap the button combination silver – blue – red in quick sequence.
3. Enter your Owner-PIN and confirm your entry by pushing the Trigger (see Chapter 5.3.10 "Entering PIN"). The menu containing various menu items (upper menu level) will appear.
4. Switch between the menu items (upper menu level) with the green or red button until the maximum diving depth ("diving depth") is displayed in white. Select it by pushing the Trigger.
5. To increase the maximum diving depth, tap the green button (repeatedly).
6. To decrease the maximum diving depth, tap the red button (repeatedly).
7. Push the Trigger against the Controlgrip to confirm the new setting and return to the upper menu level.
8. To exit the upper menu level, switch between the menu items with the green or red button until the menu item to exit the menu appears ("exit"). Push the Trigger to return to the information display.







⚠ For safety reasons, the factory-set depth limit of 2.5 m can only be changed by first entering your Owner-PIN. This is done to prevent the setting of the maximum diving depth from being changed by unauthorised persons. After you have finished scuba diving to a depth of more than 2.5 m, reset the maximum diving depth immediately to the default safety setting of 2.5 m to prevent the risk of injury to others.

For safety reasons, the depth limit is automatically reset to the default setting of 2.5 m each time the SEABOB is switched on.

Keep in mind that the SEABOB switches off automatically (Sleep mode) if inactive for a period of more than 10 minutes (Time-off). After switching the SEABOB back on, you will need to re-enter your Owner-PIN if you want to start the motor at a diving depth of more than approx. 2.5 m. After entering your Owner-PIN, you can increase the depth limit again so that the set maximum diving depth is greater than the one currently shown. The diving depth display and the warning symbol will start flashing as soon as you exceed the depth limit.

### 5.7.2 Adjusting the buoyancy of the SEABOB

The SEABOB has positive buoyancy (the buoyancy changes with the salt content of the water). The buoyancy of the SEABOB can be adjusted using an optionally available weight.

The benefit of the SEABOB's buoyancy: when the SEABOB is switched off and not fitted with an additional weight, it will always float on the surface of the water or resurface if submerged.

**Note:** Before adjusting the buoyancy, be sure to read the "Information Sheet for Buoyancy Adjustment Weight" supplied with the optionally available weight.

⚠ Be sure to observe the safety information given in the "Information Sheet for Buoyancy Adjustment Weight".

⚠ Only attach the buoyancy adjustment weight for planned dives. Observe the changed driving characteristics which occur through the adjustment of the buoyancy and the associated changes to the craft's own buoyancy force. Before you drive with the buoyant SEABOB in deeper waters, it is essential that you gather sufficient experience with regard to exposure to changed driving characteristics of the SEABOB by means of test drives in shallower waters.

⚠ End the dive with a controlled surfacing and in compliance with the required decompression times. Immediately turn the SEABOB off when a dive has finished (Sleep mode) and release the buoyancy adjustment weight from the craft to ensure a buoyant SEABOB can not be used by inexperienced or unauthorised persons.

## 5.8 After use

1. Together with one other person, hold on to the carrying handles on both sides, and lift the SEABOB out of the water, placing the SEABOB on a dry and sturdy surface that will not damage any components.

STOP Never carry the SEABOB by the Controlgrips, front bumper or display panel but only by the carrying handles on each side.

⚠ Moor the SEABOB safely if you decide leave it in the water for a short time. Ensure that the SEABOB cannot become unattached, injure others or obstruct their path.

2. Switch off the SEABOB to prevent further discharging (switch device to Sleep mode by tapping the button combination silver – blue in quick sequence and confirm with the Trigger within 5 seconds). This also prevents unauthorised persons, inexperienced persons or children from using the SEABOB and injuring themselves.

⚠ Never leave the SEABOB unattended to prevent children or other inexperienced or unauthorised persons from using the device.

3. Do not leave the SEABOB in the sun if it is not being used. Without water to cool the device, the direct sunlight can heat the display to temperatures of around 70 °C / 158 °F. If exposed to such heat, the function can be impaired or irreparable damage may even be caused to the display. For this reason, you should always put the SEABOB in the shade when not in use or, if necessary, cover the display with a wet, light-coloured towel to prevent irreparable damage to the display caused by excessive heat, particularly as a result of being in direct sunlight.

⚠ Never expose the SEABOB and the charger to high temperatures (max. 60 °C / 140 °F) caused e.g. by open fire, direct sunlight or by storage inside a closed motor vehicle or boot. If exposed to heat, flammable gases can be discharged causing serious injury. In addition, the TFT display may become irreparably damaged if exposed to heat.

⚠ When cleaning the SEABOB, never stand it upright on the front bumper or on the water outlet of the jet channel. The SEABOB could tip over and be damaged or damage other objects. Furthermore, this could prove to be dangerous for any persons in close proximity.

4. Slightly tilt the SEABOB to ease the cleaning process. After using the device, first remove salt deposits, dirt or other foreign objects by rinsing the components with fresh water (from a low-pressure source such as a garden hose or watering can) and / or blowing them out with air from a low-pressure hose. Ensure that places which are not easily accessible (e.g. water inlets and outlets) are rinsed thoroughly or blown out with air.
5. Clean the SEABOB using a soft, clean cloth. If necessary, you can also use a mild cleaning agent designed for plastic surfaces that will not damage the finish.

STOP Dirt or salt deposits can corrode the sealing surface of the SEABOB. Even minute damage or dirt on the sealing surfaces can reduce the effectiveness of the seal, resulting in damage to the SEABOB as well as damage to the motor and the motor's electronic system.

STOP Please also ensure that you always follow the further instructions on cleaning the SEABOB in Chapter 6.1 "Cleaning the SEABOB".

6. Charge the SEABOB after each use (within 24 hours) to at least the charge state "air transport / storage" to prevent total discharge of the SEABOB. Be sure to read the information provided in this Operation Manual on charging the SEABOB (see Chapter 5.2 "Charging the SEABOB").







## 5.9 Switching off the SEABOB to Sleep mode

**Manual switching off to Sleep mode:**

1. The information display is shown in the display. The power is displayed as "0 %" in the power display.
2. Tap the button combination silver – blue in quick sequence. The prompt "sleep mode - confirm with trigger" appears.
3. If the user activates the Trigger within 5 seconds, the system will switch to Sleep mode and switch off.

**Note:** If the Trigger is not activated within 5 seconds, the system will return to the last selected mode (e.g. information display in the On mode).

**Automatic switch-off (Time-off):**

If the user does not activate a button or the Trigger within 10 minutes (Time-off),the system switches off automatically to Sleep mode.

To switch the device back on from Sleep mode, see Chapter 5.3.6 "Sleep mode / On mode".

**Note:** When the SEABOB is completely discharged / run to empty, the device and the display switch off completely (Off mode). The SEABOB can only be switched on from Off mode using a connected and active charger.

STOP Charge the SEABOB immediately (within 24 hours) to at least the charge state "air transport / storage" to avoid irreparable total discharge of the valuable Li-Ion accumulator cells.

## 5.10 Storing the SEABOB

If you do not plan to use the SEABOB for an extended period, it must be stored at least in a partial charge state (charge state "air transport / storage"). The minimum charge state during storage is required to prevent irreparable total discharge of the valuable Li-Ion accumulator cells and to ensure that the microprocessor-controlled Cell-Balancing function remains active. You may have to recharge the SEABOB, depending on its charge state. The charging process is controlled automatically by the charger and accumulator management system.

Be sure to read the information contained in Chapter 5.2 "Charging the SEABOB"!

**To prepare the device for storage, proceed as follows:**

1. Place the SEABOB on a dry and sturdy surface that will not damage the components.
2. Ensure that the connector, connection plug and mains plug are perfectly clean and dry. If necessary, dry them using a soft, clean cloth.
3. Plug the connector of the charger into the connection port of the SEABOB. Then plug the mains plug of the charger into the mains socket.
4. The charge display will appear on the SEABOB after a brief system check. The device is now in Charge mode.
5. Tap the green button to select partial charging of the SEABOB to charge state "air transport / storage". A partially filled charge symbol will appear in the centre of the display with an arrow to indicate partial charging ("charge 50 %").
6. When the aircraft symbol appears in the centre of the display, partial charging is complete and the minimum charge state for storage has been reached ("complete").
7. To save energy and to reduce maintenance charging, the display turns itself off automatically 10 minutes after charging is completed ("complete"). By pressing any button, the display can be switched on again (for another 10 minutes).

8. You can now disconnect the charger from the SEABOB (first pull the mains plug from the mains socket, then pull the connector from the connection port of the SEABOB).

⚠ Caution! The charger and connector can get hot while charging. After you have finished charging, let the charger and connector cool down before you touch them.

9. After the charger is disconnected from the SEABOB, the system switches off completely (switches to Off mode) after 5 seconds (system check) if programmed to partial charging. For safety reasons relating to air transport, the system can only be switched back on from Off mode using a connected and active charger.
10. Store the SEABOB on a stable, level surface in a place that is cool, dry, well ventilated and frostproof. The optimum storage temperature is +10 to +25 °C / +50 to +77 °F.

STOP High temperatures may shorten the life of the Li-Ion accumulator cells.

STOP When storing the device for an extended period, you should repeat the charging process after 4 weeks at the latest to maintain the minimum charge state required for storage. If this is not done, total discharge may result, causing irreparable chemical damage to the valuable High-Energy Li-Ion accumulator cells. The internal accumulator management system will not permit further charging of a totally discharged accumulator (under 2.5 V per Li-Ion accumulator cell).

For storage exceeding 4 weeks, in particular storage over the winter, we recommend keeping the activated charger connected continuously to the SEABOB (trickle charge) to maintain the required charge state and prevent total discharge. Before doing this, make sure that you activate charge state "air transport / storage" in the menu (see also Chapter 5.3.8 "Charge display"). The charging process is controlled automatically by the charger and accumulator management system.

STOP Irrespective of the trickle charge, the status of the charging process must be checked at least every four weeks.

**Note:** Ensure that SEABOB and charger are not exposed to too high or too low temperatures during trickle charging. The accumulator management system will temporarily interrupt the charging process at temperatures over 45 °C / 113 °F or below 0 °C / 32 °F. The charging process will continue as soon as the admissible charging temperature of below 40 °C / 104 °F or over 5 °C / 41 °F is reached again. If the charging process is interrupted for a longer period of time due to charging temperatures which are too high or too low, this can result in the irreparable total discharge of the valuable Li-Ion accumulator cells even if they were constantly connected to an active charger.

⚠ Never expose the SEABOB and the charger to high temperatures (max. 60 °C / 140 °F) caused e.g. by open fire, direct sunlight or by storage inside a closed motor vehicle or boot. If exposed to heat, flammable gases can be discharged causing serious injury. In addition, the TFT display may become irreparably damaged if exposed to heat.

⚠ Protect the charger, in particular the connector and mains plug as well as the connection port on the SEABOB from damage, dirt, dust, moisture and heat. Not doing so may result in electric shock!

⚠ When storing the SEABOB, never stand it upright on the front bumper or on the water outlet of the jet channel. The SEABOB could tip over and be damaged or damage other objects. Furthermore, this could prove to be dangerous for any persons in close proximity.







## 5.11 Air transport / transport of the SEABOB

⚠ When transporting Li-Ion accumulators, always observe the applicable safety regulations and the specific regulations of the carrier. Be aware that safety regulations can change from time to time. For up-to-date information, please contact the manufacturer or your specialist dealer.

⚠ Never transport a fully charged SEABOB by aircraft or over long distances. The SEABOB should only be partially charged during transport (charge state "air transport / storage"). Only switch off the SEABOB for transport when the aircraft symbol is displayed. If instructions are disregarded, flammable gases can be discharged causing serious injury.

For safety reasons, you should always charge the Li-Ion accumulator cells to the partial charge state "air transport / storage" before transporting the SEABOB over long distances, particularly by aircraft. Switch off the SEABOB completely (Off mode) (see Chapter 5.12 "Switching off the SEABOB for storage or transport").

Be sure to read the information contained in Chapter 5.2 "Charging the SEABOB".

**To prepare the device for transport, in particular transport by aircraft, proceed as follows:**

1. Place the SEABOB on a dry and sturdy surface that will not damage the components.
2. Ensure that the connector, connection port and mains plug are perfectly clean and dry. If necessary, dry them off using a soft, clean cloth.
3. Plug the connector of the charger into the connection port of the SEABOB. Then plug the mains plug of the charger into the mains socket.
4. The charge display will appear on the SEABOB after a brief system check. The device is now in Charge mode.
5. Tap the green button to select partial charging of the SEABOB for air transport / transport. A partially filled charge symbol will appear in the centre of the display with an arrow to indicate partial charging ("charge 50 %").
6. When the aircraft symbol appears in the centre of the display charging is complete and the correct charge state for air transport / transport has been reached ("complete").
7. To save energy and to reduce maintenance charging, the display turns itself off automatically 10 minutes after charging is completed ("complete"). By pressing any button, the display can be switched on again (for another 10 minutes).
8. Disconnect the charger from the SEABOB (first pull the mains plug from the mains socket, then disconnect the connector from the connection port of the SEABOB).

⚠ Caution! The charger and connector can get hot while charging. After you have finished charging, let the charger and connector cool down before you touch them.

**Accumulator charge state is too high:**

The charging process is controlled automatically by the charger and accumulator management system. If the accumulator voltage is too low, the charger automatically recharges until the correct partial charge state has been reached ("charge 50 %") and then stops the charging process. You will recognise this process in the display by the first bars beginning to appear in the accumulator symbol until the aircraft symbol appears ("complete").

If the accumulator voltage is too high for extended transport / air transport, the charger automatically discharges until the correct partial charge state has been reached ("charge 50 %") and then stops the charging process. You will recognise this process in the display by the bars beginning to disappear in the accumulator symbol until the aircraft symbol appears ("complete").

**Note:** The discharge process can take up to 24 hours.

Alternatively, you can reduce the excessive charge state

for partial charging by running the SEABOB to empty in a controlled fashion. Operate the SEABOB (while in the water) until only 1 bar is left showing in the accumulator symbol in the display. Switch off the motor so that there is no load, and check the display again. After the motor is switched off, the accumulator voltage is regenerated slightly, so you should wait a few minutes before checking the display. If only 1 bar is still displayed, charge the SEABOB as specified to the charge state "air transport / storage" ("charge 50 %"). When the aircraft symbol appears the correct voltage for air transport / transport has been reached ("complete").

STOP Never run the motor out of the water for longer than approx. 10 seconds to discharge the SEABOB. The seals of the motor and the hard-coated motor shaft are designed exclusively for use in the water. Operation out of the water can lead to overheating due to the lack of water to cool the device, thereby causing irreparable damage to the seals and motor shaft. Danger of short circuit!

**Note:** If the charger is disconnected from the device when programmed to partial charging, the SEABOB switches to Off mode after 5 seconds (system check). The SEABOB can only be switched back on from Off mode using a connected and active charger.

After transporting the device, charge the SEABOB immediately (within 1 week) either for operation of the craft or for storage by means of trickle-charge (the charger remains connected; the aircraft symbol appears in the display).

When transporting Li-Ion accumulators, always observe the applicable safety regulations and the specific regulations of the carrier. Be aware that safety regulations can change from time to time. For up-to-date information, please contact the manufacturer or your specialist dealer.

⚠ Never expose the SEABOB and the charger to high temperatures (max. 60 °C / 140 °F) caused e.g. by open fire, direct sunlight or by storage inside a closed motor vehicle or boot. If exposed to heat, flammable gases can be discharged causing serious injury. In addition, the TFT display may become irreparably damaged if exposed to heat.

⚠ Protect the charger, in particular the connector and mains plug as well as the connection port on the SEABOB from damage, dirt, dust, moisture and heat. Not doing so may result in electric shock!







## 5.12 Switching off the SEABOB for storage or transport

Switch on the SEABOB (see Chapter 5.3.6 "Sleep mode / On mode"). Before completely switching off to Off mode, make sure that the correct charge state for transport or the minimum charge state required for storage (charge state "air transport / storage") is reached.

Therefore, proceed as described in Chapter 5.10 "Storing the SEABOB" and Chapter 5.11 "Air transport / transport of the SEABOB".

If you disconnect the charger (after partial charging to the charge state "air transport / storage"), the SEABOB will switch off completely (switch to Off mode) after 5 seconds (system check), regardless of the current charge state. After this occurs, the SEABOB can only be switched back on using a connected and active charger.

**Note:** Always keep in mind, particularly if you plan to operate the craft, that you will need an active charger connected to the mains voltage to switch the SEABOB back on from Off mode.

# 6. Care

⚠ Repairs and maintenance work on the SEABOB and charger that go beyond the procedures described in this chapter may only be carried out by an authorised technician. Work of this type is dangerous and may result in severe injury or cause damage to the SEABOB and charger if not carried out by an authorised technician.

⚠ Never alter or modify any part of the SEABOB or charger. Doing so may result in serious injury or death.

**Note:** Be aware that components such as accumulators, seals, impeller and stator are wearing parts. Signs of wear and use may also appear on the housing, surface finish, display screen, etc.

No special maintenance is required if you adhere to the instructions for care specified below. Aside from regular cleaning and care, you only have to replace wearing parts when necessary. Nevertheless, we recommend that you have the SEABOB checked after approx. 3,000 hours of motor operation to ensure that all parts are working properly (for example, the motor sealing case). To have the SEABOB checked, please contact the manufacturer or your specialist dealer.

**To care for your SEABOB, regularly perform the following:**

## 6.1 Cleaning the SEABOB

⚠ When cleaning the SEABOB, never stand it upright on the front bumper or on the water outlet of the jet channel. The SEABOB could tip over and be damaged or damage other objects. Furthermore, this could prove to be dangerous for any persons in close proximity.

1. Place the SEABOB on a sturdy and dry surface that will not damage the components. Slightly tilt the SEABOB to ease the cleaning process.
2. After using the device, first remove salt deposits, dirt or other foreign objects by rinsing the components with fresh water (from a low-pressure source such as a garden hose or watering can) and / or blowing them out with air from a low-pressure hose. Ensure that places which are not easily accessible (e.g. water inlets and outlets) are rinsed thoroughly or blown out with air.
3. Clean the SEABOB using a soft, clean cloth. If necessary, you can also use a mild cleaning agent designed for plastic surfaces that will not damage the finish.

STOP Dirt or salt deposits can corrode the sealing surface of the SEABOB. Even minute damage or dirt on the sealing surfaces can reduce the effectiveness of the seal, resulting in damage to the SEABOB as well as damage to the motor and the motor's electronic system.

STOP Aggressive cleaning agents such as aerosol sprays, petroleum-based substances, acetone and alcohol as well as sharp objects may damage the SEABOB. Avoid scratching the display screen while cleaning the device. This screen is coated to prevent scratching. Even so, particularly sand or salt deposits may leave permanent scratches on the screen if rubbed against the screen.

4. Check the sealing surfaces of the connection port and screw cap. In particular, look for any sand or salt deposits that may be present. Immediately remove any sand or salt deposits, being particularly careful when doing so. No current is flowing to the connection port. Rinse off the hermetically sealed connection port and the screw cap with fresh water (low pressure, for example, using a garden hose or watering can). Avoid leaving any scratches on the sealing surfaces or contact surfaces. Clean and dry off sealing / contact surfaces by blowing them out or using a soft cloth and / or cotton swab.

⚠ Caution! Dirty and / or damaged seals can reduce the effectiveness of the seal!

⚠ Ensure that there are no dried salt deposits on the connector or the contacts of the connection port. Salt deposits inhibit the flow of electricity during charging and can cause electrical contacts to overheat, resulting in irreparable damage to the contacts or even fires affecting the contacts or cable.

## 6.2 Changing the screw cap

STOP Even minute damage or dirt on the screw cap can reduce the effectiveness of the seal, resulting in damage to the connection port as well as damage to the motor and the motor's electronic system. For this reason, a damaged screw cap should be replaced immediately.

To purchase a screw cap that you can replace yourself, contact the manufacturer or your specialist dealer. This component is sold as replacement part.



Screw cap

# 7. Troubleshooting

⚠ Repairs and maintenance work on the SEABOB and charger that go beyond the procedures described in this chapter may only be carried out by an authorised technician. Work of this type is dangerous and may result in severe injury or cause damage to the SEABOB and charger if not carried out by an authorised technician.

⚠ Never alter or modify any part of the SEABOB or charger. Doing so may result in severe injuries or death.

**Note:** Be aware that components such as accumulators, seals, impeller and stator are wearing parts. Signs of wear and use may also appear on the housing, surface finish, display screen, etc.

## 7.1 SEABOB cannot be switched on

If you cannot switch on the SEABOB, either the SEABOB is completely discharged / run to empty or it has been switched off for air transport / storage. If this is the case, you can only switch on the device using an active and connected charger (see Chapter 5.3.5 "Off mode").







## 7.2 Motor does not run

- Check the charge state of the SEABOB by checking to see if the display functions. The SEABOB is discharged / run to empty when the voltage per Li-Ion accumulator cell is 2.8 V. If this is the case, the display is switched off and no longer illuminated.

  **Remedy: Charge the SEABOB immediately!**
- Ensure that a minimum power of Power Level 1 has been set.
- The set maximum diving depth (depth limit) may have been exceeded. The motor can only be switched back on when the craft has returned to a diving depth that is above the depth limit.
- The workshop symbol is displayed: motor, accumulator or system defect. Contact the manufacturer or your specialist dealer.

## 7.3 Warning and error message of the electronics

Your SEABOB is equipped with cutting-edge electronic technology to monitor the functions of the watercraft. These smart and software-controlled electronics are set at a high level of sensitivity for safety reasons. In the event of an error message appearing in the information display due to this sensitive control technology, you are advised to carry out a reset on the SEABOB in order to assess the message.

This is done by switching off the SEABOB. The SEABOB can be switched back on again after leaving it turned off for a short time. The error message shown previously will now no longer appear.

Should the error message reappear after carrying out the reset, the device must be tested for any malfunctions.

STOP This system reset should not be carried out in the event of alerts concerning the ingress of water or damage to the SEABOB. In such cases, operation of the SEABOB must not be continued, and it is essential that the device is checked without delay by an authorised service engineer.

## 7.4 Impeller does not turn (no thrust)

Check whether any foreign objects such as aquatic plants, pieces of rope or plastic wrappers have entered the jet channel of the SEABOB and jammed the impeller or stator. If this is the case, proceed as follows:

1. Switch off the SEABOB, take it out of the water and place it on a dry and sturdy surface that will not damage any components.

⚠ Never attempt to remove foreign objects while the SEABOB is in the water and / or switched on. Never reach in between the protective lamellas of the jet channel. Caution! Rotating parts may cause injury.

2. Always ensure that the SEABOB has been switched off completely (Off mode) to prevent inadvertent activation of the motor, causing injury.

**Note:** An active and connected charger is required to switch the device to Off mode.

3. Remove foreign objects from the jet channel, stator and impeller by rinsing the components with fresh water (from a low-pressure source such as a garden hose or watering can) and / or blowing them out with air from a low-pressure hose.
4. Switch on the SEABOB with the charger (see Chapter 5.3.5 "Off mode") and check that the motor and impeller can move freely.

STOP Never run the motor out of the water for longer than approx. 10 seconds. The seals of the motor and the hard-coated motor shaft are designed exclusively for use in the water. Operation out of the water can cause overheating due to the lack of water to cool the device, thereby causing irreparable damage to the seals and motor shaft. Danger of short circuit!

⚠ Should the impeller still fail to turn, contact the manufacturer or your specialist dealer.

## 7.5 Trigger does not function properly

1. Remove dirt or foreign objects from the Trigger by rinsing it off with fresh water and / or blowing it out with air from a low-pressure hose.

2. The Trigger may freeze in frosty weather, causing it to stick. Place the SEABOB in the water so that frozen components can thaw off.

⚠ A damaged or sticking Trigger should be repaired or replaced immediately. Contact the manufacturer or your specialist dealer.





## 7.6 Moisture present in connection port

STOP If moisture or wetness appears inside the sealed area of the connection port, the seals are defective or the screw cap was not put on or has been put on incorrectly. Charge the SEABOB only if the connection port and connector are completely clean and dry (see Chapter 5.2 "Charging the SEABOB").

Check the sealing surfaces of the connection port and screw cap thoroughly for damage or dirt. Replace the screw cap if necessary.

⚠ If you detect defective sealing surfaces on the connection port or any visible damage on the SEABOB, immediately halt operation and contact the manufacturer or your specialist dealer without delay.

⚠ Never use a damaged connector or connection port, in particular if the high-current contacts inside the sealed area of the device are damaged. Doing so may cause the contacts and cables to overheat during charging. Water may leak into the accumulators or may have already done so. Danger of short circuit! There is the danger of flammable gases being discharged causing serious injury.

⚠ Never open the accumulators. Danger of short circuit! Beware of flammable gases that may be discharged causing injury!

## 7.7 SEABOB cannot be charged

If the charge indicator does not appear in the display and the SEABOB does not switch to charge mode despite being connected to the charger, this could be due to the fact that the connection port and / or connector are not absolutely clean and dry. The connection port and the connector must always be absolutely clean and dry when charging.

Check the connection port and, if necessary, thoroughly clean and dry it (see Chapter 6.1 "Cleaning the SEABOB"). Check the connector of the charger for moisture, dirt and salt deposits, too. Clean and dry it using a cotton bud, if necessary.

⚠ Ensure that there are no dried salt deposits on the contacts of the connection port or connector. Salt deposits inhibit electrical current flow when charging and lead to the destruction of electrical contacts due to overheating and could also result in a possible contact fire and / or cable fire.

# 8. Technical specifications

All specifications are only intended for use in describing the product. They are not to be construed as guaranteed properties. The specifications provided here do not represent absolute values, since certain deviations may occur as a result of manufacturing-related tolerances. Specifications may be changed without notice to take into account new technical advances. As a result, actual product properties may differ from the ones described here.

**Housing**

- Fibreglass-reinforced hard integral polyurethane plastic technology with polyurethane foam core
- Fibreglass-reinforced epoxy composite materials

**Motor / electronics**

- Long-lasting and reliable high-performance electric motor
- Direct drive (without gearbox)
- Electronically commutated (brushless)
- Extremely low wear and highly durable components
- Extremely rugged mechanical and thermal characteristics; electronic temperature monitoring
- Direct water cooling for continuous output
- Highly resistant to seawater and watertight; able to withstand pressure (diving depth 40 m)
- Shaft output up to 4.0 kW at 2,450 rpm
- High torque up to 13 Nm
- High overall efficiency including power electronics (more than 90 %)
- Electronic speed control (6 Power Level in 15 % and 25 % increments)

**Special motor sealing case**

- Multiple-stage sealing rings for redundant seal effect throughout the sealing system
- Special rotary shaft seals are mounted in multiple stages on a special hard-coated stainless steel drive shaft for lasting and reliable protection against water ingress
- Long-term testing has shown that the use of optimally matched materials both on the drive shaft and in the sealing case provides a reliable means of overcoming the high temperatures created by friction during operation as well as the strong chemical reactions of the water in the sealing system occurring when the water is heated to temperatures of up to 150 °C / 302 °F. This, in turn, ensures the extremely long operating life of the device
- Additional preliminary-stage felt rings designed to protect the sealing rings from contamination
- Replaceable sealing case for service

**Drive**

Electric jet impeller; low-wear direct drive with guide vanes stator and diffuser system

**Thrust / tractive force:**

4.0 kW: up to 680 N

**Accumulators**

- Aluminium accumulators are highly resistant to seawater for direct water cooling; encased in watertight shell constructed of fibreglass-reinforced high-grade epoxy composite materials; can withstand pressures of up to 12 bar
- Integrated microprocessor-controlled accumulator management system for controlled charging / discharging and easy operation







**Accumulators**

High-Energy Lithium-Ion accumulator cells; approx. 1.8 kWh; 43 V; 40 Ah

- No memory effect; long life, high performance and high energy density
- Temperature range for transport / storage:
  1 year: -20 to +25 °C / -4 to +77 °F
  3 months: -20 to +45 °C / -4 to +113 °F
  1 month: -20 to +60 °C / -4 to +140 °F
- Operating temperature range:
  -10 to +65 °C / +14 to +149 °F

**Threshold values for Li-Ion accumulator cells monitored by the accumulator management system**

- 4.2 V: maximum charging voltage (charging is stopped)
- 3.0 V: minimum discharging voltage under load (motor stops)
- 2.8 V: minimum discharging voltage without load (SEABOB turns itself off in the Deep-Sleep mode)
- 2.5 V: minimum cell voltage for charging (Falling below this limit results in irreparable total discharge: Charging is no longer possible!)
- 65 °C / 149 °F: maximum discharging temperature (motor stops)
- 60 °C / 140 °F: discharging temperature warning (power limited to Power Level 2)
- 45 °C / 113 °F: maximum charging temperature (charging is stopped)
- 140 A: maximum permissible momentary discharging current (motor stops)
- 30 A: maximum charging current

**Charging time**

Approx. 8 hours

Using the optionally available quick charger reduces the charging time to only approx. 1.5 hours (charging time may be longer if mains voltage is under 230 V)

**Dimensions**

L x W x H: 1,152 mm x 507 mm x 372 mm

**Weight**

Approx. 35 kg

**Buoyancy in fresh water**

Approx. 10 kg

**Motor control**

Electronic power control using piezo-actuated buttons to adjust power in increments of 15 % and 25 % (6 Power Level)

**Steering**

By shifting weight and legs

**Stopping / braking**

Motor stops when Trigger on right Controlgrip is released. Water resistance halts the craft

**Speed**

Depends on the water resistance of the SEABOB user and the set power

- Over water: up to 20 km/h
- Under water: up to 15 km/h

**Operating time**

Average 60 minutes

**Maximum diving depth**

40 m (see Chapter 5.7.1 "Setting the maximum diving depth")

**Depth gauge**

- Built-in diving gauge with integrated, seawater-resistant ceramic sensor
- Temperature compensated
- Compares zero point and final value
- Air pressure is equalised before scuba diving (re-set when switching on the SEABOB)

**Care**

No special maintenance is required if the instructions for care are adhered to (cleaning of the device and possible replacement of wearing parts)

Recommended: Have the SEABOB (for example, the motor sealing case) checked by the manufacturer or specialist dealer after approx. 3,000 hours of motor operation

**Impact on the environment**

Emission-free and quiet operation



CE

## EG-Konformitätserklärung / **EC-Declaration of Conformity**

| | |
|---|---|
| Nr. / **No.:** | 002/08 |
| Wir / **We:** | CAYAGO AG<br>Name des Anbieters / **supplier's name** |
| Anschrift / **Address:** | Flachter Str. 32, 70499 Stuttgart, GERMANY |

erklären in alleiniger Verantwortung, dass das Produkt / **declare under our sole responsibility that the product:**

Wassersportfahrzeug / **water-sports craft**

Bezeichnung, Typ oder Modell, Los- oder Seriennummer / **Name, type or model, batch or serial number:**

SEABOB F5 S

mit den Vorschriften folgender Europäischer Richtlinie(n) übereinstimmt / **complies with the requirements of the following European directive(s):**

| | |
|---|---|
| EMV-Richtlinie Nr.: | 2004/108/EG |
| **EMC Directive No.:** | **2004/108/EG** |

Die Übereinstimmung des bezeichneten Produkts mit den Anforderungen dieser Richtlinie(n) wurde geprüft durch Anwendung folgender Normen / **The compliance of the above product with the requirements of this directive(s) was proved by the application of the following standards:**

| | |
|---|---|
| EN 61000-6-1:2007 | Elektromagnetische Verträglichkeit – Teil 6-1:<br>Fachgrundnorm – Störfestigkeit für Wohnbereich, Geschäfts- und Gewerbebereiche sowie Kleinbetriebe<br>**Electromagnetic compatibility – Part 6-1:**<br>**Generic Standards – Immunity for residental, commercial and light-industrial enviroments** |
| EN 61000-6-3:2007<br>+ A11:2011 | Elektromagnetische Verträglichkeit – Teil 6-3:<br>Fachgrundnorm – Störaussendung für Wohnbereich, Geschäfts- und Gewerbebereiche sowie Kleinbetriebe<br>**Electromagnetic compatibility – Part 6-3:**<br>**Generic Standards – Emission standard for residental, commercial and light-industrial enviroments** |

Das Produkt ist mit dem CE-Zeichen ausgezeichnet. Jegliche nicht autorisierte Modifikation des Produktes hebt diese Erklärung auf.
**The product is labelled with the European Approvals Marking CE. Any unauthorized modification of the product voids this declaration.**

Hinweise zur Betriebsumgebung der Erzeugnisse:
Die zur Beurteilung des Produktes herangezogenen Normen legen Grenzwerte für den Einsatz im Wohnbereich, Geschäfts- und Gewerbebereich sowie in Kleinbetrieben fest. Bei dem Einsatz in einer elektromagnetisch stärker gestörten Umgebung, wie z.B. der typischen Industrieumgebung, können insbesondere Probleme mit einer nicht ausreichenden Störfestigkeit der Erzeugnisse auftreten.

**Information regarding the operating environment of the products:**
**The standards used in evaluating the product specify limits for operation in residential, commercial and light industrial environments. Using the product in an environment where there is a higher level of electromagnetic radiation such as a normal industrial environment may cause problems due to the insufficient immunity of the products.**

Der oben genannte Hersteller hält die erforderliche Dokumentation zur Einsicht bereit. / **The required documentation is kept by the manufacturer specified above for inspection.**

Stuttgart, 01.07.2014
Ort und Datum der Ausstellung
**Place and date of issue**

Vorstand
**Board (CEO)**

## 9. Disposal

⚠ Never separate the accumulators from the device. They are firmly integrated in the SEABOB. Doing so may cause flammable gases to be discharged causing serious injury.

Used batteries (accumulators which are faulty or no longer provide adequate power) are to be disposed of in accordance with statutory regulations in order to protect the environment and health.

Used batteries may only be disposed of and recycled properly. In particular, they may not be disposed of together with household waste, and are, therefore, marked with the crossed-out dustbin symbol.

End users are obliged by law to return used batteries. Devices with accumulators which are faulty or no longer provide adequate power may be returned free of charge to CAYAGO AG for proper disposal and recycling.

Please send returns to:

CAYAGO AG Produktion
Leibnizstr. 4
32108 Bad Salzuflen
GERMANY





## 10. Replacement parts

- Screw cap (for connection port)

## 11. Accessories

- Quick charger
  (wide range input 100-240 V; 51 V; 28 A)
- SEABOB Bag
- SEABOB Rack
- SEABOB Weight (buoyancy adjustment weight)
- Pilot belt system



| Online Version |

## 12. Service

**For service or repairs, please contact CAYAGO AG:**

- by e-mail at service@seabob.com
- by phone at +49 (0)52 22- 8 03 50-11 / -41
  (Mon-Fri, 9:00 a.m. to 6:00 p.m. CET, except on public holidays)

or your specialist dealer.

**Please have the following information ready:**

- Model name
- SEABOB serial number
- Accumulators serial numbers
- Service / error messages appearing on the display
- Exact description of the malfunction or damage

A specialist will assist you in identifying the cause of the error and take further action if necessary.

# 13. Imprint

CAYAGO AG
Flachter Str. 32
D-70499 Stuttgart
GERMANY

Phone +49 (0)7 11 - 99 33 97 - 0
Fax +49 (0)7 11 - 99 33 97 - 33

info@seabob.com
www.seabob.com

As of 07/2014

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