OceanMotion user manual

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Content

The OceanMotion is delivered as an assembly kit. This user manual helps you assemble the unit and put it into service. Please read the manual carefully before activation of the device – for your safety, the safety of others and your animals. Keep this user manual for future reference. A digital version of the manual can be downloaded here:
https://www.seawatersolutions.de/pages/ocean-motion-anleitung

01 Delivery contents

1x OceanMotion rotary unit
1x Tank mount
2x plastic hex bolt M8x30

Obligatory equipment:
1. OceanMotion controller, incl. power supply
2. Pump holder, incl.:
    - 1x PVC pipe Ø16mm x 20cm long
    - 1x PVC double socket with one-sided bore
    - 1x plastic hex bolt M6x30
    - 1x plastic nut M6
    - 1x small can of PVC glue + brush
    - 1x 30cm cable protector
    - 3x cable tie

02 General description

The OceanMotion is a rotary unit which rotates your flow pump. As a result, the water flow in your aquarium is rich in variety and turbulent. This kind of flow cannot be reproduced with a fixed pump. The OceanMotion can be used in smaller tanks to simulate high and low tide with just one flow pump. In bigger tanks two units can be used to generate a very natural flow.

03 Safety notes

Please observe the following notes before installation and operation of the unit:

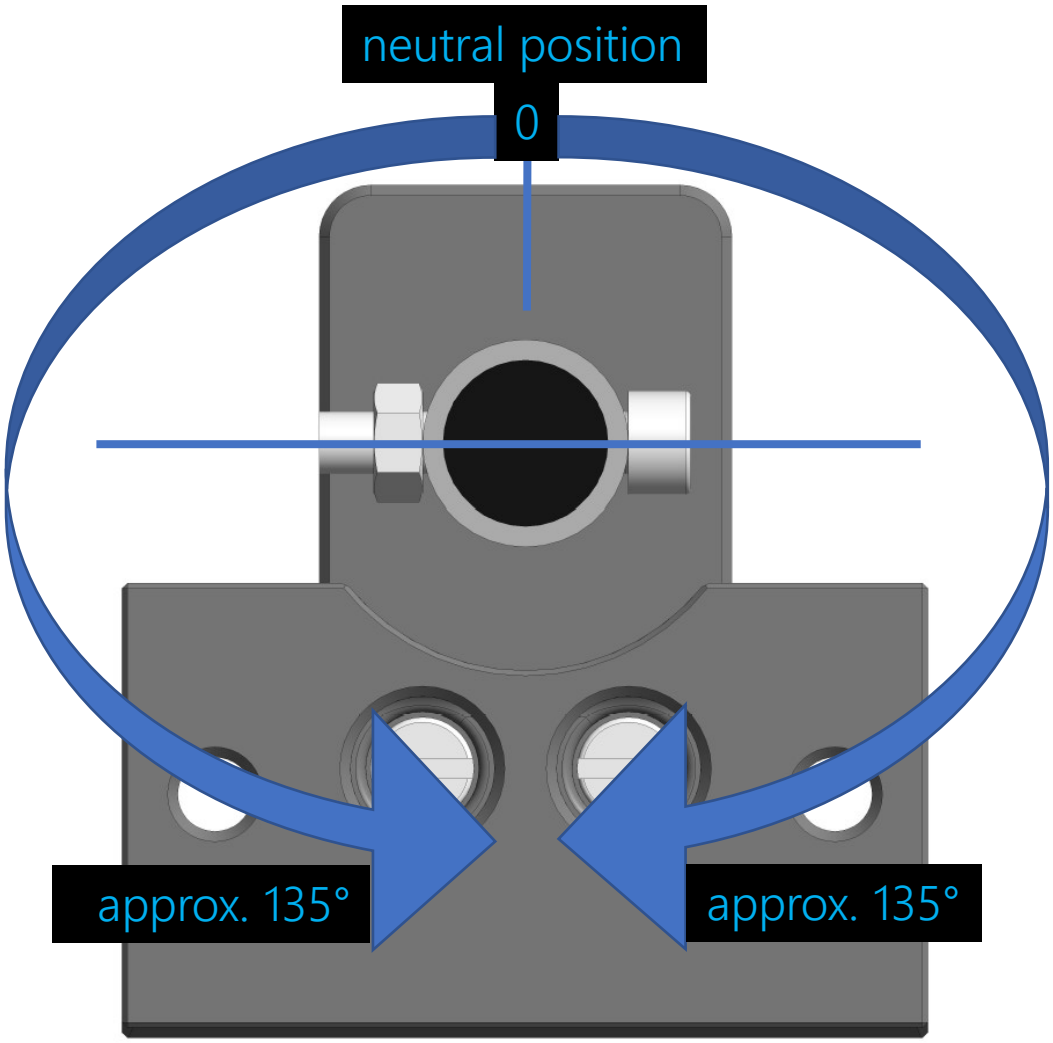
- Plug the device into a safety socket outlet with a supply voltage of 100-240 V~ 50/60 Hz.
- Operate only with a RCCB (residual current operated circuit breaker), max. 30 mA.
- Use indoors and for aquaristic purposes only.
- Operate the unit with the original OceanMotion controller exclusively.
- The controller may only be operated with the included 5V power adaptor (ampere depending on version).
- The controller and the power adaptor may not come in contact with moisture or water.
- Do not operate the OceanMotion with damaged cables. Do not try to fix broken cables yourself.
- Do not pull on the unit's cable, do not carry the unit by holding cable, do not use the cable for mounting the device on your tank.
- Operate the device outside of water only. The unit is not waterproof – the casing protects the engine from splash water only. Disregarding leads to a termination of the warranty and liability claims. Please pay also attention on the note to the water level on page 15.

- You may not use your flow pumps in pulse mode or similar modes since this stresses the material of the OceanMotion and could result in the whole unit being detached from the tank rim and fall into the water. Please note that pulse mode is not necessary in combination with the OceanMotion as the varied flow is accomplished by the device itself.
- The controller may only be mounted and operated in a dry area of the cabinet base.
- This device may not be used by any person (including children) with either limited physical, sensorical or mental capabilities unless they are supervised by another capable person who is responsible for their safety.
- The user is responsible for complying with local safety regulations.
- Do not work with a damaged, incomplete or modified device. Ask a professional to make sure all electrical safety precautions have been met before operating the unit.
- Do not open or modify the unit under any circumstances. For more information on maintenance and cleaning refer to this manual. Disregarding leads to a termination of the warranty and liability claims. Always contact the manufacturer in case the unit is in need of repair.

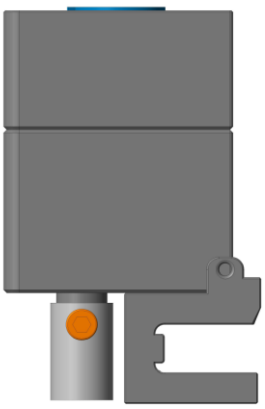
04 The neutral position

You can find a picture for ease of reference of the following explanation on the next page.

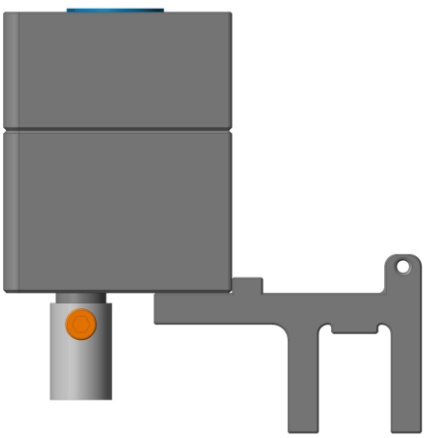
The neutral position of the unit is always 90° perpendicular to the tank mount (tolerance due to technical reasons: +/- 10°). The flow pump should be mounted in that direction with the water flow. The drive shaft is already delivered in the neutral position. Attention: the drive shaft can also be moved by hand – please check the correct position before assembly. Should the drive shaft be twisted, connect the OceanMotion with the controller and use the software (Neutral position) to put it back into the neutral position. The electromotors recognize their position. For further information refer to chapter 12 The OceanMotion Control (software) of this manual. The pumps can be rotated by approx. 135° in both directions.



View from below



View from the side with a tank mount for glass bridge



View from the side with a tank mount for pool tanks

05 Assembly of the unit

Step 1 – Shortening the PVC pipe

Shorten the PVC pipe to the desired length. To find out what the appropriate length is, you can just slot the pieces together without gluing.

Step 2 – Bonding the PVC Pipe

Bond one side of the PVC pipe with the PVC double socket using the included PVC glue. Do not glue the side with the hole of the double socket (see step 4).
Make sure to bond the PVC pipe and the double socket before further assembly of the OceanMotion, otherwise there could be a conjunction with the drive shaft which will make it impossible to remove the pipe for maintenance and cleaning purposes. Also see chapter 09 "Maintenance and cleaning" / page 19 for further information.

Step 3 – Connect the flow pump and the pump holder

The assembly depends on your flow pump model.
If you want to find out more about the installation of the different pump holders, just type in "OceanMotion pump holders" in YouTube's search bar for how-to-videos.

Below you can see the assembly process for the Jebao SLW30:

a) Mount the flow pump on the pump holder.

b) Mount the 4 rubber bumpers on the pump holder.

c) Mount the upper part of the pump holder on the flow pump unit.

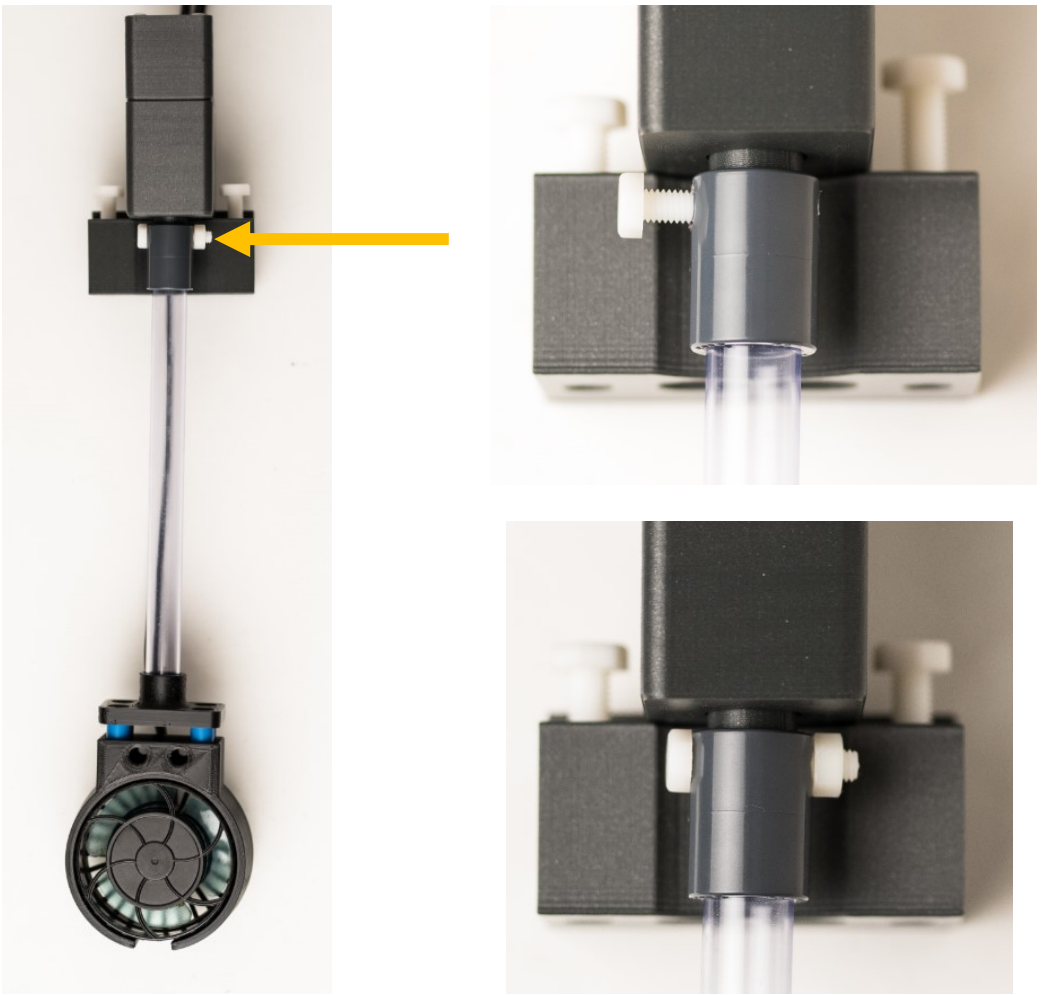
Do not hesitate to contact us if you have questions on the connection and assembly of other types of flow pumps.

Step 4 – Bond the pump holder with the PVC pipe

Make sure the pump is properly aligned (perpendicular to the hole of the PVC double socket). See pictures below and chapter "04 The neutral position" / page 7+8 for reference.

Step 5 – Connect the assembled flow pump with the OceanMotion

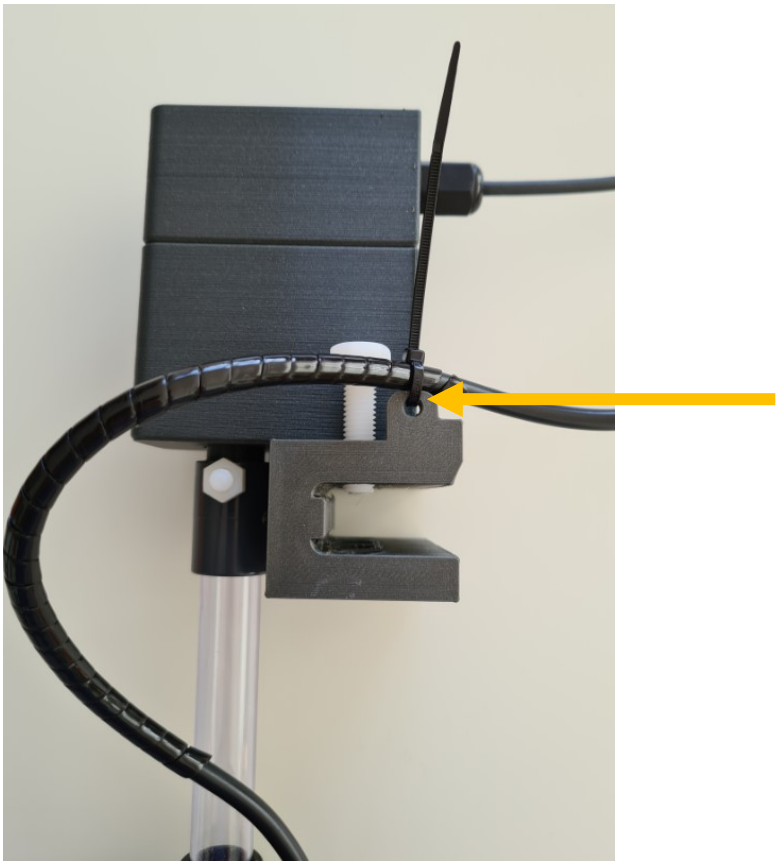
Press the PVC double socket over the drive shaft and secure the connection by using the plastic bolt (M6x30) and the nut. You may need some force to mount the clamp holder on the drive shaft since it has been purposely engineered that way to ensure a firm connection.



If you now rotate the assembled unit, it's no problem. The servomotors automatically go to the neutral position when you restart the software.

Step 6 – Fasten the cable of the pump on the OceanMotion

Wrap the included cable protector around the pump cable. Due to the rotation of the device, the cable is also moved along with it. It is crucial to run the cable correctly to avoid damage on the cable of your flow pump.
To do this, lay the cable up in a light loop and fix it at the attachment point of the mounting bracket using one of the included a cable ties.
Check for any abrasions on the cable (protector) a couple of days after use and readjust if needed.

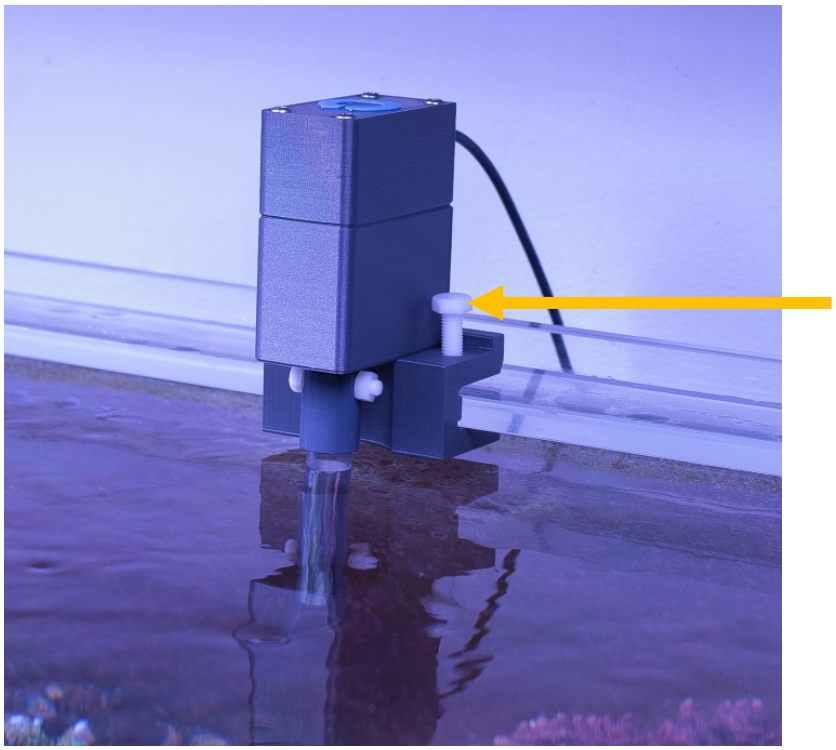


Cable with the cable protector mounted on the tank mount

Step 7 – Mounting the OceanMotion on your tank

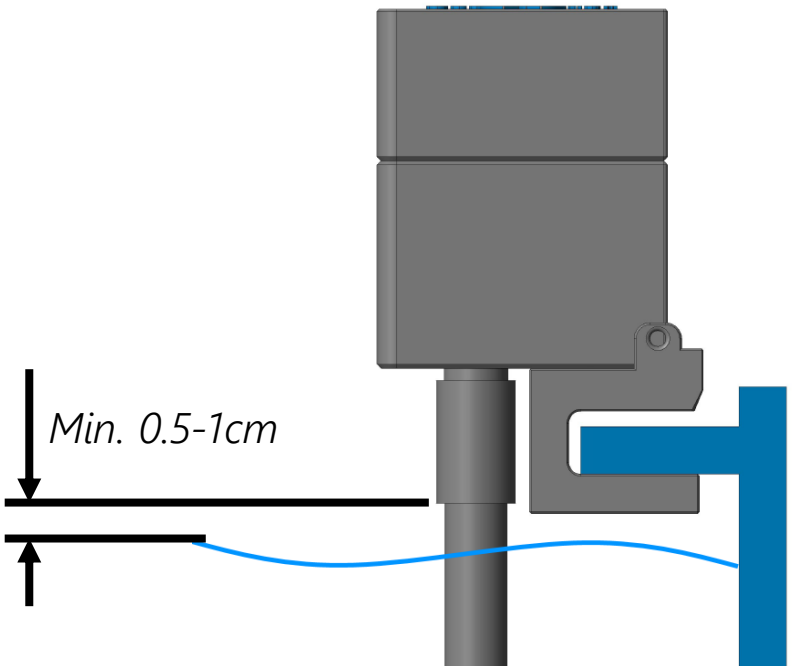
Place your individual mount at the desired location of your tank outside the water and tighten the two screws (finger tight).

Do not tighten the screws too firmly, since the pressure on the tank mount can lead to damage. Please check the position of the mount after a few hours and readjust and tighten the screws if the OceanMotion has moved slightly. Repeat this process in the first days of use.



Note about water level

The water level should be at least 0,5 – 1 cm underneath the PVC double socket, since moisture could get into the device and damage it. Should you not be able to accomplish that distance with our standard holders contact us. To find out more about the dimensions of the holders, see pages 20 and 21.



06 Assembly of the controller

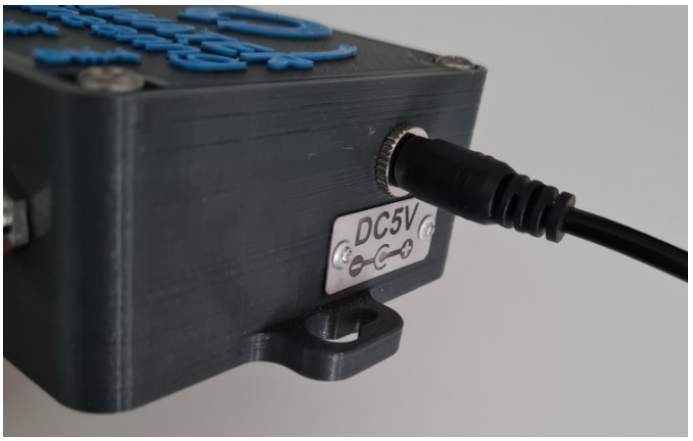
1x Velcro® tape and 2x 4x16 SPAX-screws made of V4 stainless steel are included in the delivery contents.
Mount the controller on your cabinet base using either the Velcro or the screws.
Make sure to keep at least 10 cm of free space between the controller's vent holes and another object/device.

07 Connecting the cables

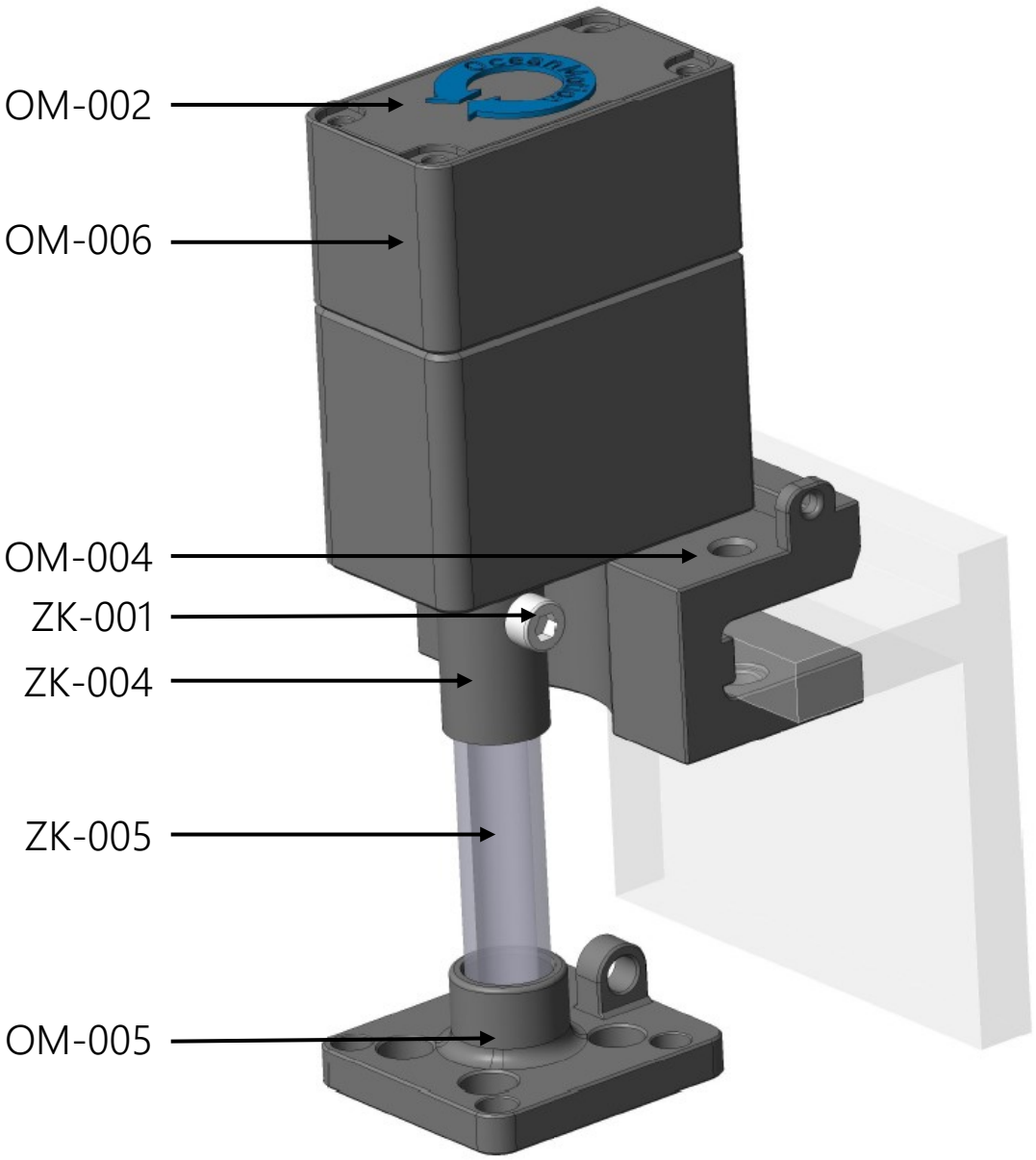
Step 1 – Connect the OceanMotion's control cable with the controller

Step 2 – Connect the controller with the power supply

Attention: the controller may only be operated with the included 5V power adaptor! Using a wrong power adaptor will lead to a short circuit.



08 Replacement parts

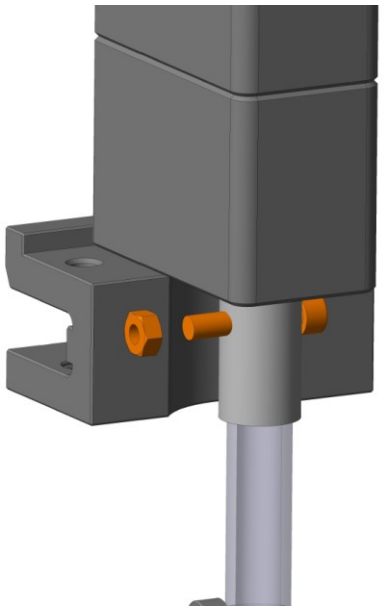


- OM-002 = lid/cap
- OM-006 = middle part of the chassis
- OM-004 = tank mount
  There are all kinds of mounting options available, e.g. for pool tanks, standard tanks with glass bridges etc. We will also design an individual mounting solution for your tank if needed!
- OM-005 = pump holder
  There are all kinds of pump holders available, depending on your prefered flow pumps. Contact us if there is no holder available for your flow pump– we will design the compatible holder for you!
- ZK-001 = Screw M6x30 + nut
- ZK-004 = PVC double socket with drilling
- ZK-005 = 16 mm PVC pipe / 20cm long
- ZK-006 = Screw M8x30 for the tank mount
- ZK-007 = electromotor / servo (watertight according to supplier)

You can reorder any component of the OceanMotion. If you have questions about the installation of individual parts, contact us!

09 Maintenance and cleaning

The OceanMotion is mostly maintenance-free. However, it has to be partly disassembled for cleaning the flow pump. Please undo the M6 nut and bolt at the double socket for disassembly.

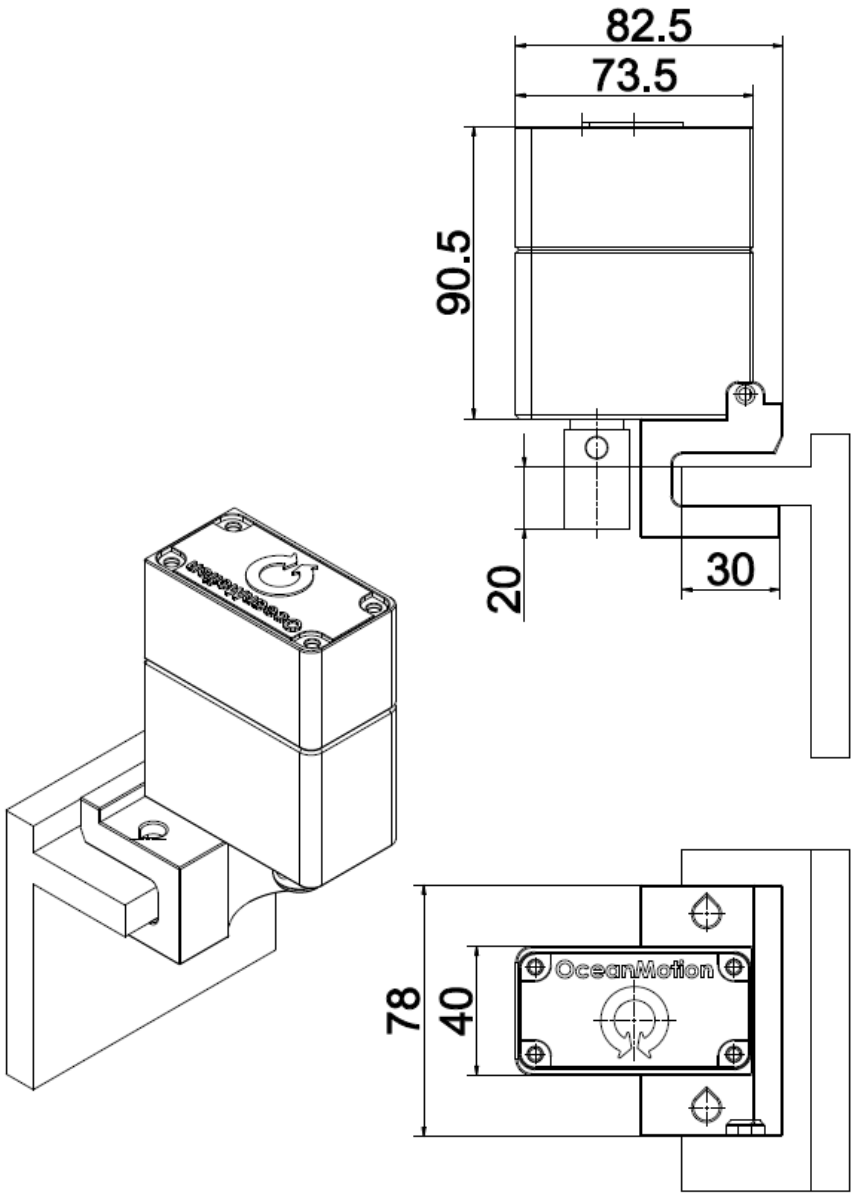


Now you can remove the complete pump unit from the OceanMotion. In order to minimize lateral movement, the PVC double socket sits firmly on the drive shaft. Slightly move the pump unit back and forth for easier detachment.

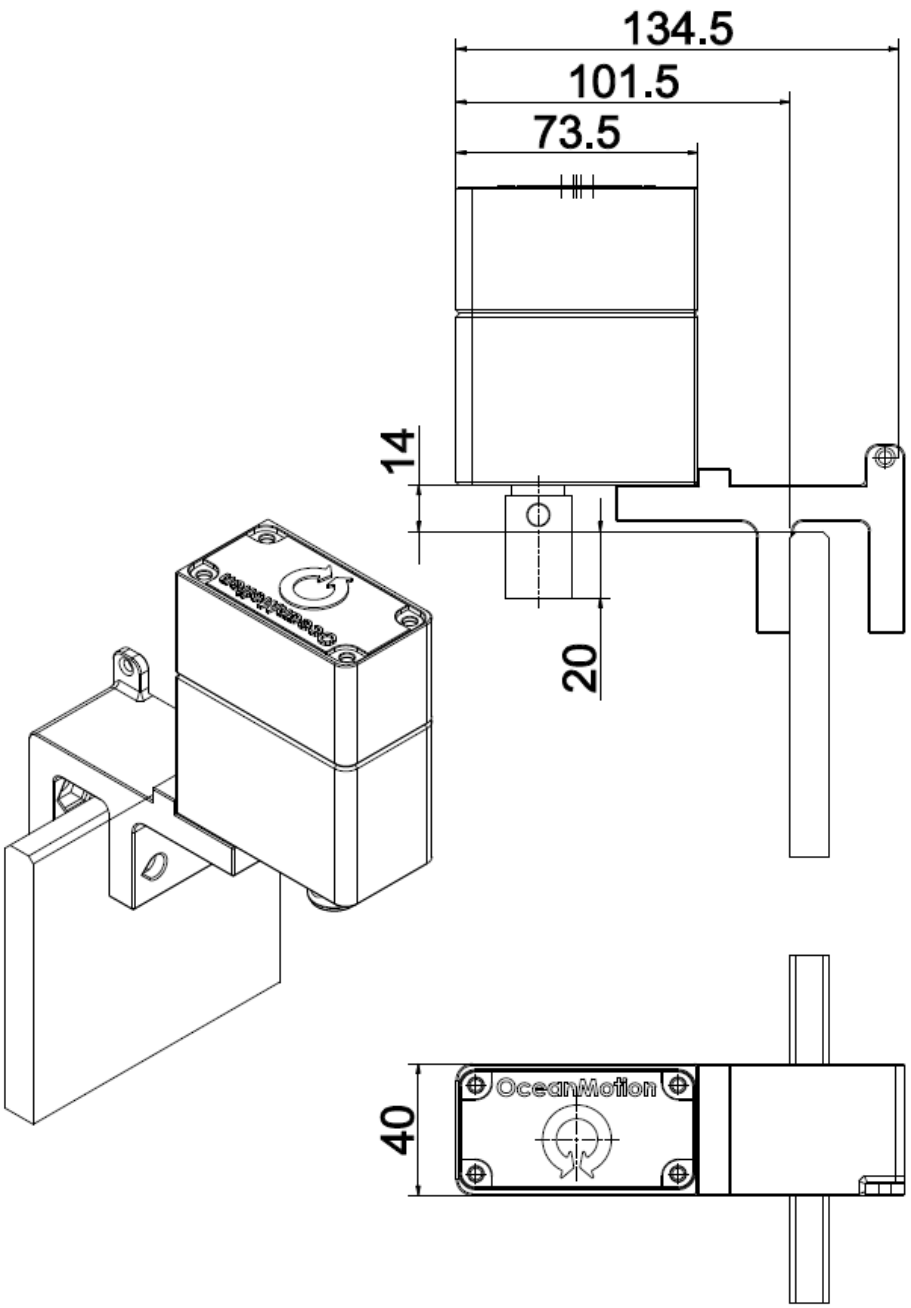
The pump holder can be cleaned with a slightly concentrated citric acid which may not be warmer than 50 °C since the parts could be damaged. Never put the parts in the dish washer!

10 Dimensions

The dimension can differ depending on the tank mount you are using. In the pictures below you can see the dimensions of the tank mount for aquariums with a 15 mm glass bridge as an example.



Here you can see the dimensions of the tank mount for pool tanks up to 23mm glass thickness as an example.



11 Specifications

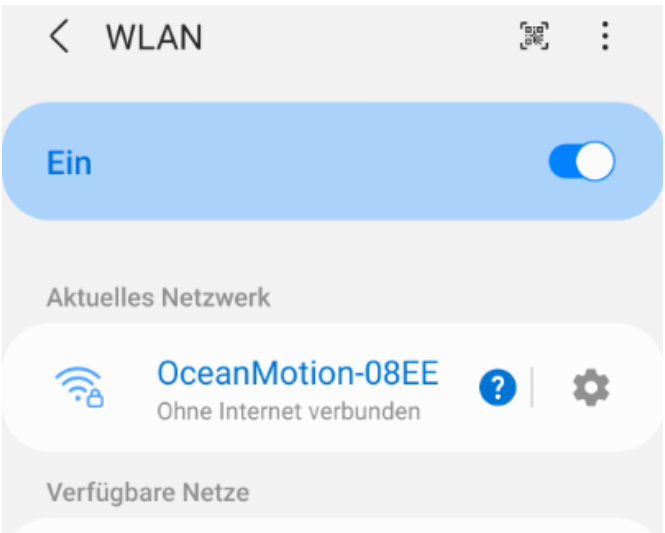
Rotary angle	270° (-135° to +135°)
Speed	0,5 to 100 minutes per 270°
Cable length	2m or 5m to the controller
Controller S	Controls up to 2 OceanMotion units Power supply 5V / 3A Cable length: 1,2 m Dimensions: 95 x 65 x 43 mm
Controller Standard	Controls up to 4 OceanMotion units Table power supply 5V / 6A Cable length including cold appliances cable: 2 m Dimensions: 95 x 90 x 43 mm

12 The OceanMotion Control (software)

The OceanMotion may only be controlled with the included controller.

The control has been individually developed for the OceanMotion. You can use any terminal device which has WiFi capabilities and an internet browser. If you are using older smartphones it may be necessary to install the latest version of an internet browser like e.g. Google Chrome. The software is located directly on the controller so that no further installation of any other software is necessary.

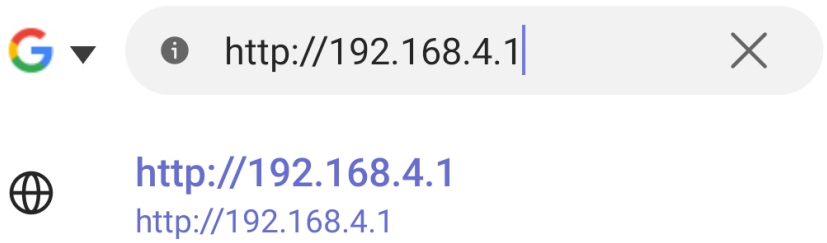
Step 1 – Connect device to WiFi of the OceanMotion



WiFi network: OceanMotion-XXXX
Password: 123456789

Step 2 – Start the software

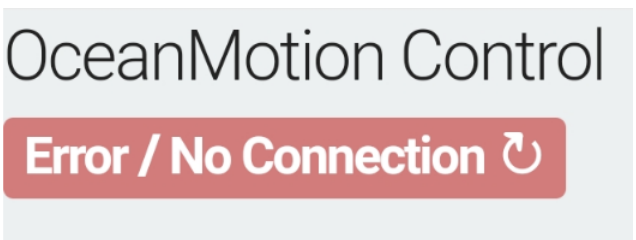
Start your internet browser and type the following address: http://192.168.4.1



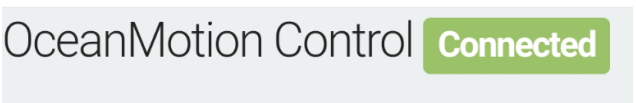
You are now connected with the controller of the OceanMotion and the software OceanMotion Control has been started.

Some terminal devices may require the deactivation of mobile data in ordert o establish a connection.

If no input is possible inside the software anymore, the connection has been lost. Check your WiFi connection and press the button „Error / No Connection".



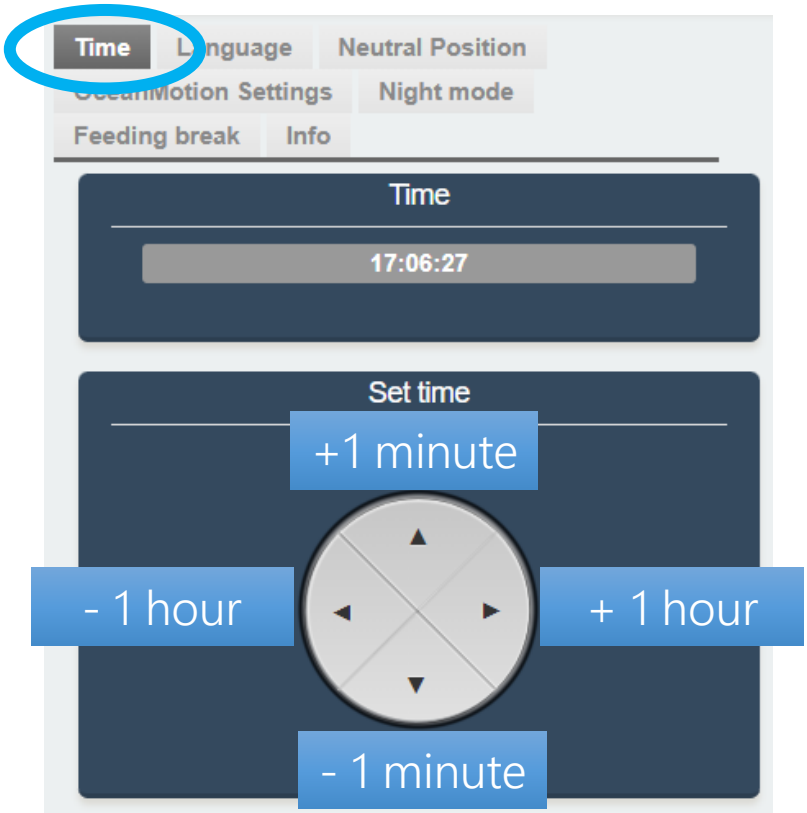
The connection has been reestablished if you see the green "connected" box.



Step 3 - Set the time

If you want

Switch to the menu item "Time" and set the time.



The time will be saved automatically after your input. If the controller is disconnected from electricity, the time is automatically set to 3 PM and you have to set the correct time again after reconnection.

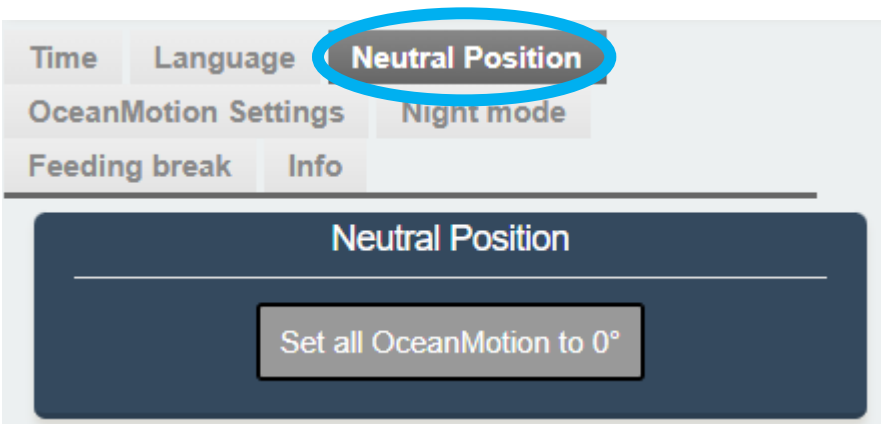
All other settings always stay saved.

Step 4 – Language

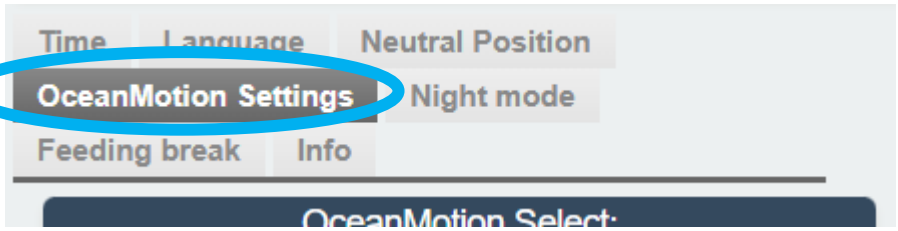
You can choose between English and German in the "Language / Sprache" menu. After you have changed the language setting tap on "save / speichern" and the "restart". The controller will restart and you may have to log in in your WiFi and refresh your browser. The time will be reset to 3 PM while all other settings will be kept.

Step 5 – Neutral position

Should you have to set your unit to the neutral position during assembly, use the menu item "Neutral position". The OceanMotion's electromotors are automatically brought into the neutral position after pressing "All OceanMotion to 0°".



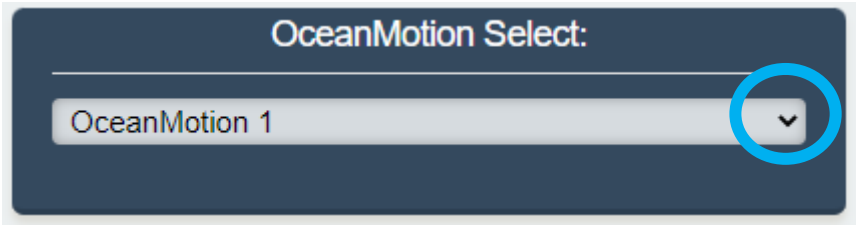
Step 6 – OceanMotion Settings



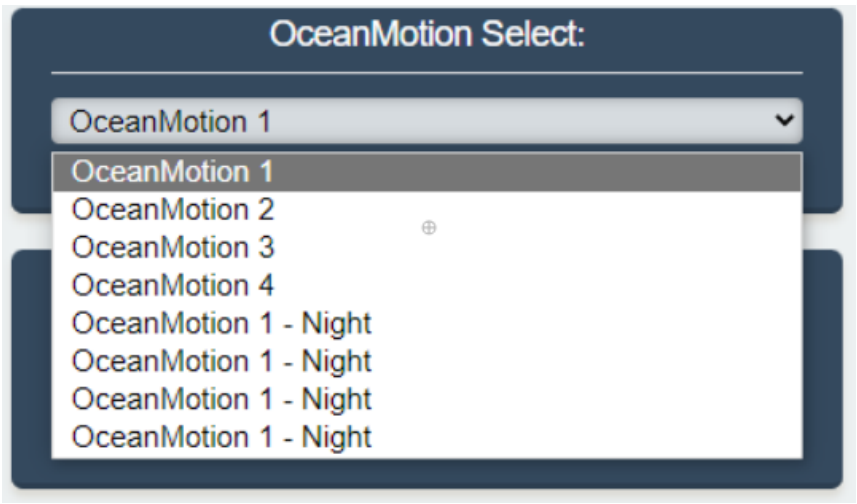
You can individually switch each OceanMotion ON or OFF. Press the according slider.

The slider turns green if the OceanMotion is active.

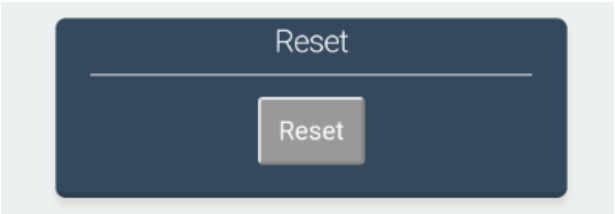
We recommend to switch OFF the OceanMotion for configuration. If you switch ON the unit, the program will be immediately started, which makes the configuration process harder. The OceanMotion rotates to your programmed positions even if switched OFF.
The flow pump should be active during configuration so that you can directly see the impact of the flow in your tank.



Select the desired OceanMotion from the drop down menu.



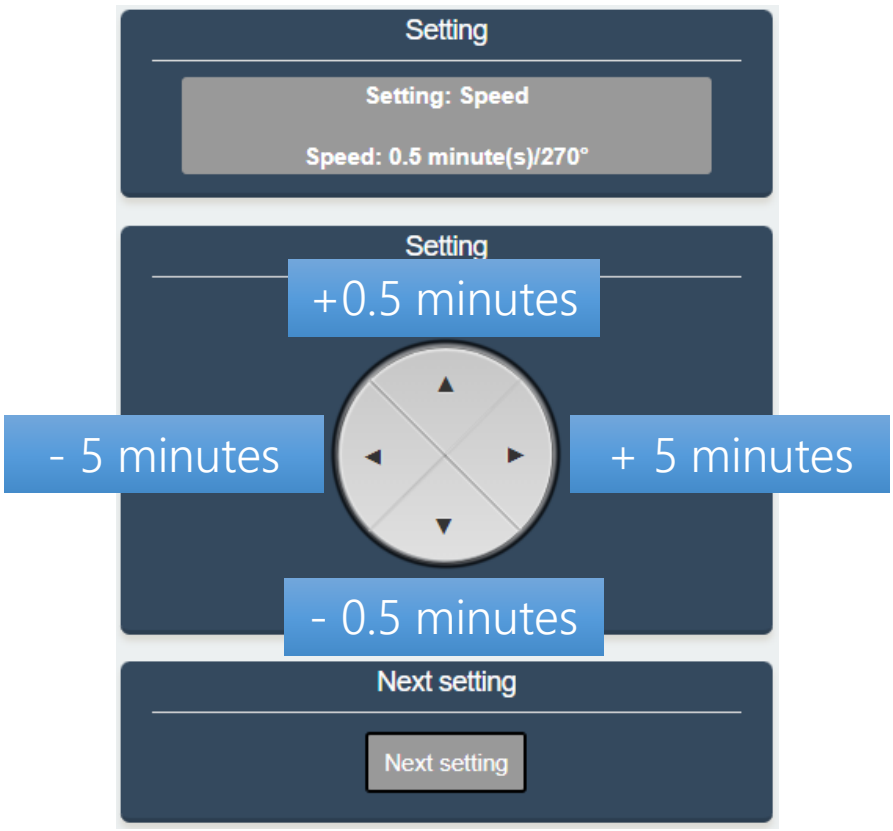
Pressing the button "Reset" resets all settings of the selected OceanMotion.



Scroll down to reach the settings.

a) Menu item Speed

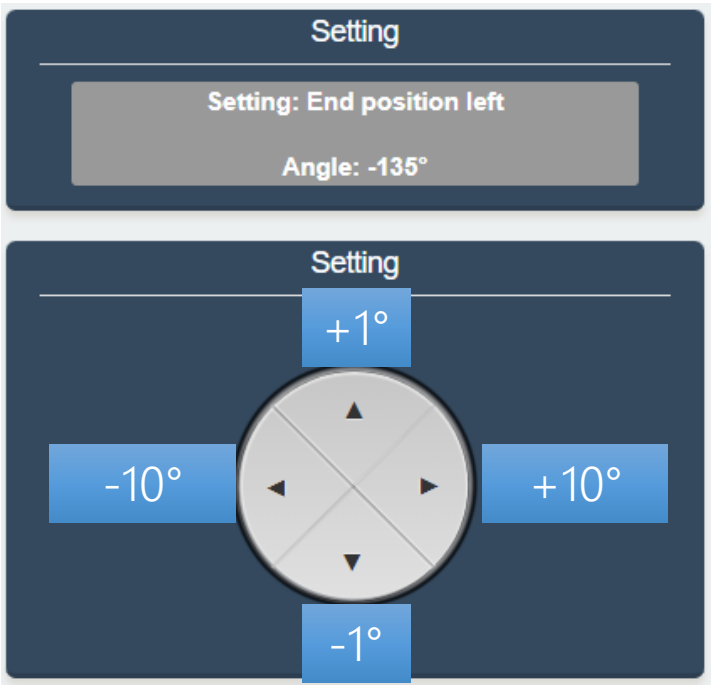
Here you can freely set the speed from 0,5 to 100 minutes per 270°. We recommend to select a speed of at least 3 minutes, since the electromotors will otherwise produce audible sounds.



When you are done, press NEXT. This will bring you to the next menu item End position left.

b) Menu item End position left

Set the left position here. The adjustable spectrum is between -135° and +135°. Press NEXT.



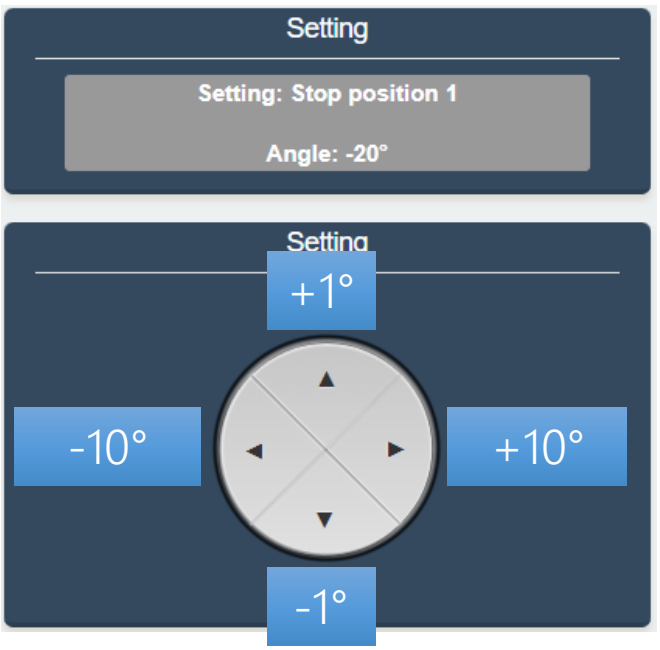
The programming always has to progress from the lowest to the highest angle.
Should you choose a positive value for the End position left, you must also set the Stop positions (see page 32) at least at this angle.

c) Menu item Idle time left

Here you can set how long the OceanMotion stays idle at the left position. You can set a value between 0 and 600 minutes.

d) Menu item Stop position 1 to 4

There are 4 stop positions available for configuration. Choose an angle between -135° and +135°.



This comes in handy if you want the flow directed at specific parts of your reef for a longer period of time.

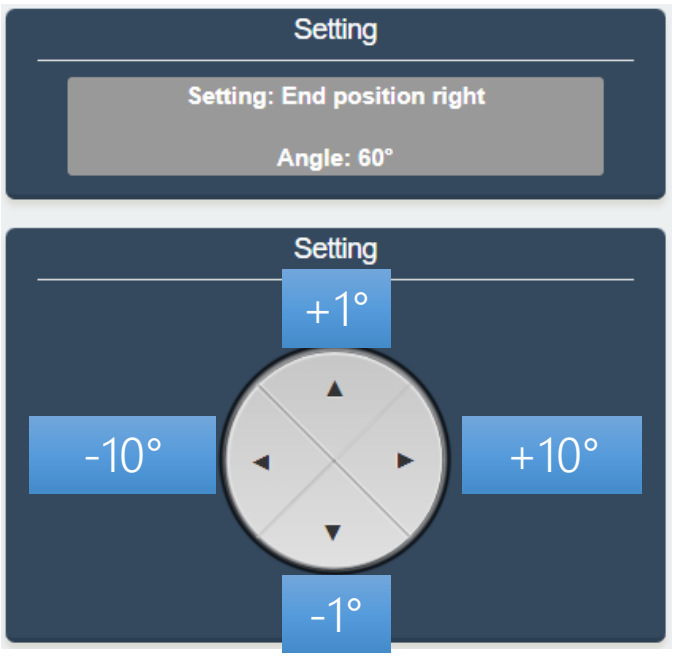
Press NEXT to set the Idle time stop 1.

If you don't want any stopovers, leave the idle time at "0".

Press through the menu until you arrive at the menu item End position right.

e) Menu item End position right

Here you can configure the right hand position. You can set an angle between -135° and +135°. This value has to be higher than the End position left.

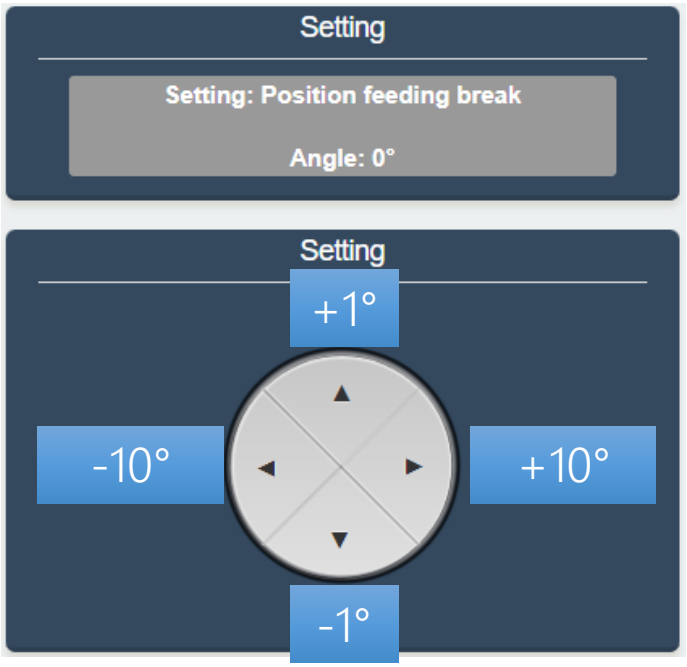


By pressing NEXT you will arrive at the menu item Idle time right. Set a time period between 0 and 600 minutes if desired.

Then press NEXT.

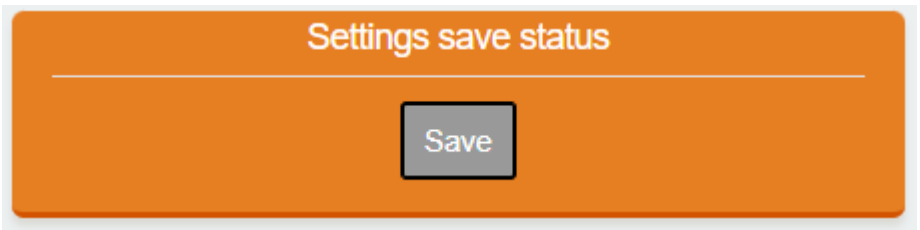
f) Menu item Position feeding break

You can set an angle between -135° and +135° which will be the position of the OceanMotion for the feeding break.

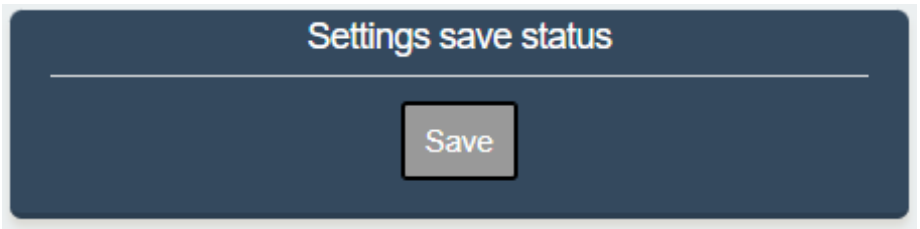


You can find more info on the feeding break on the pages 38 – 40.

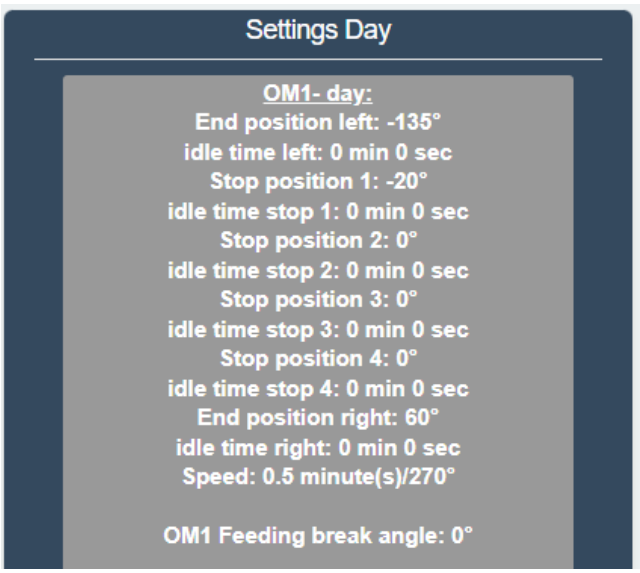
Attention: Your settings have not been saved yet. You can do a test run by switching ON the OceanMotion. If everything works as desired, press Save Settings.



The button turns blue when the settings are saved.



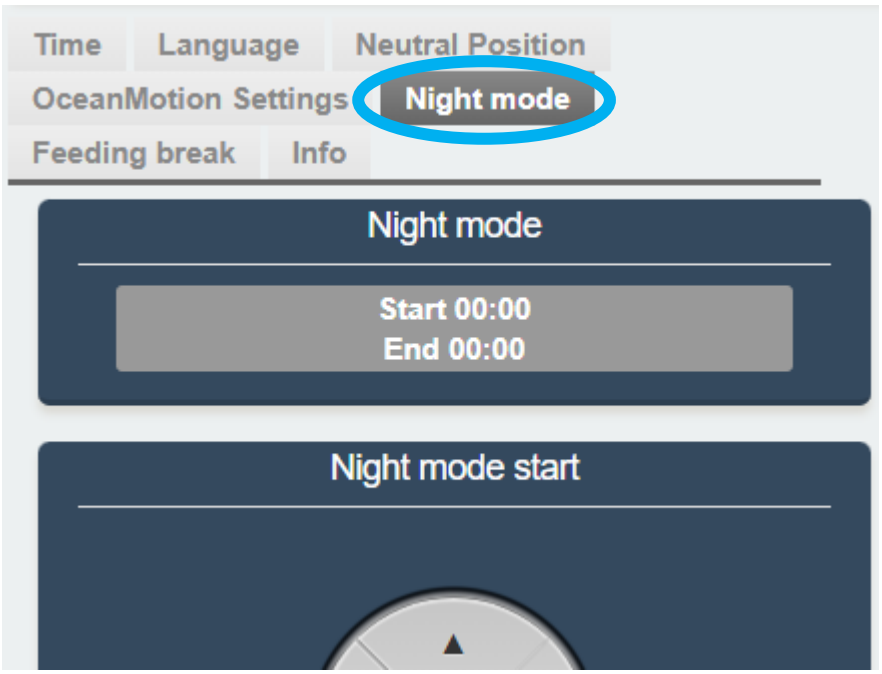
You can see all your settings in an overview again.



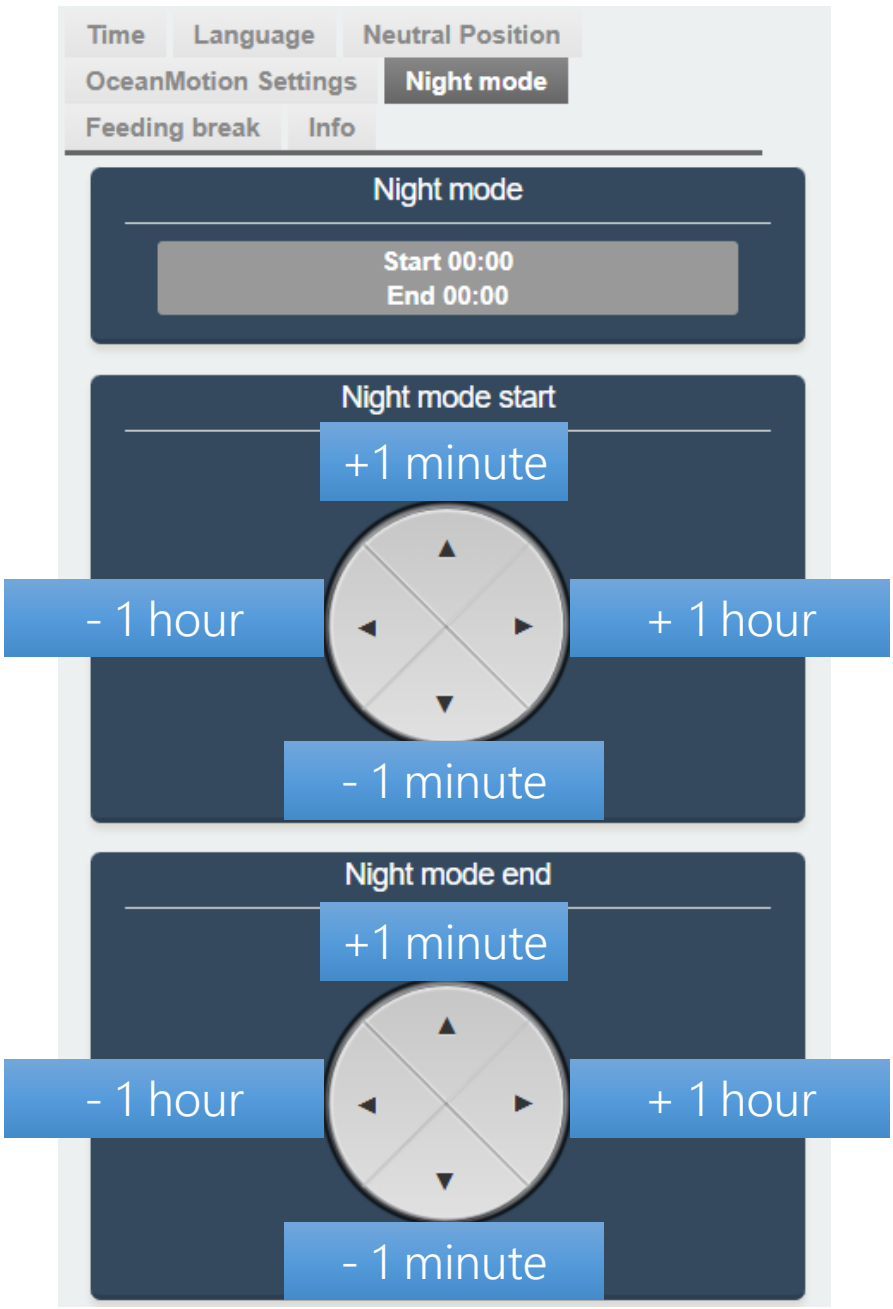
Step 7 – Night mode

If you wish, you can configure a specific night program for each OceanMotion which is independent of the regular (day) configuration.

The configuration for the night mode works exactly as in Step 5. You can find it under OceanMotion Settings. Select the desired OceanMotion X – Night from the drop down menu.



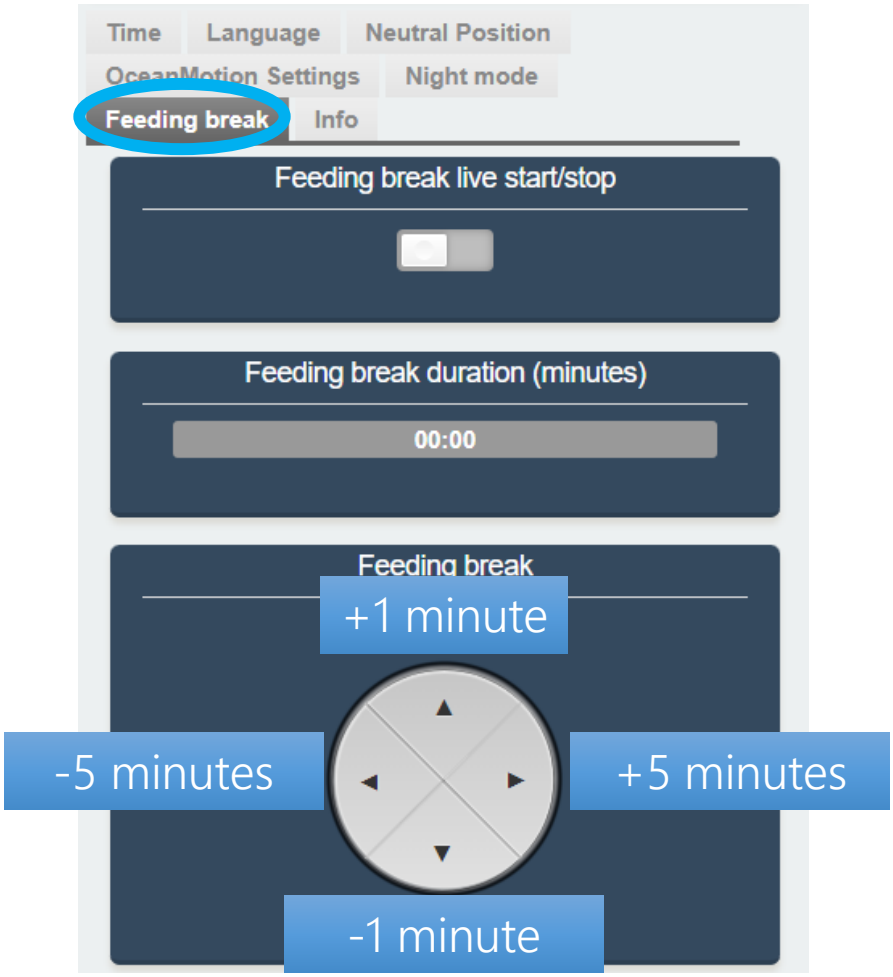
Set start and end in the menu Night Mode.



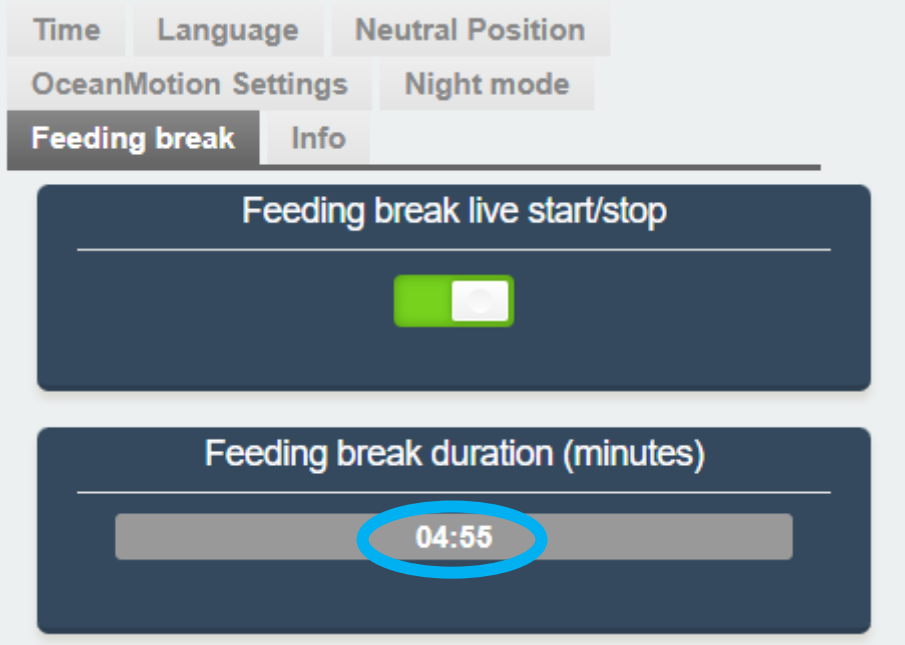
Step 8 – Feeding break

If desired, you can set a feeding break.

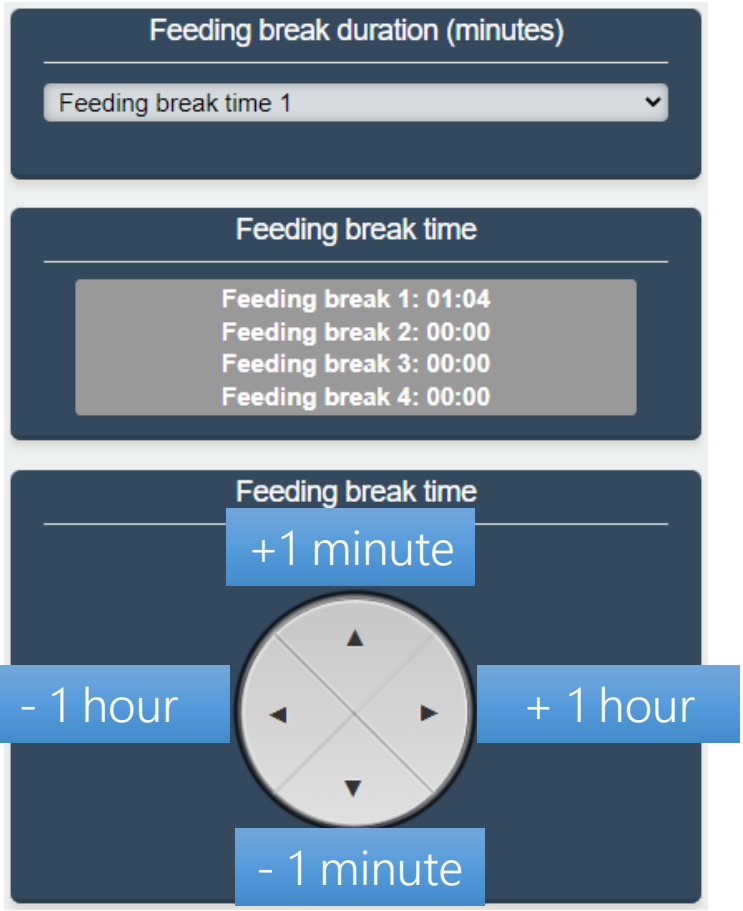
First, set the duration of the feeding break.

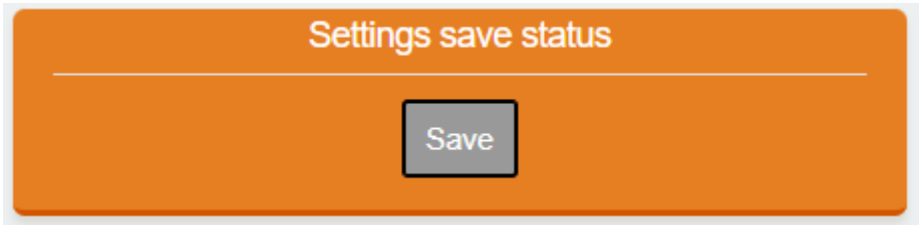


It is now possible to start the feeding break live. After the break has been started, the OceanMotion goes to the position you had previously set in the menu OceanMotion Settings and the set duration is counted down. After the time is up, the OceanMotion starts the set program beginning at the set Start position.



Furthermore, you can program 4 fixed feeding break times. This is especially useful if you are using an automatic feeder. The feeding breaks prevent food from being transported into your overflow / sump.

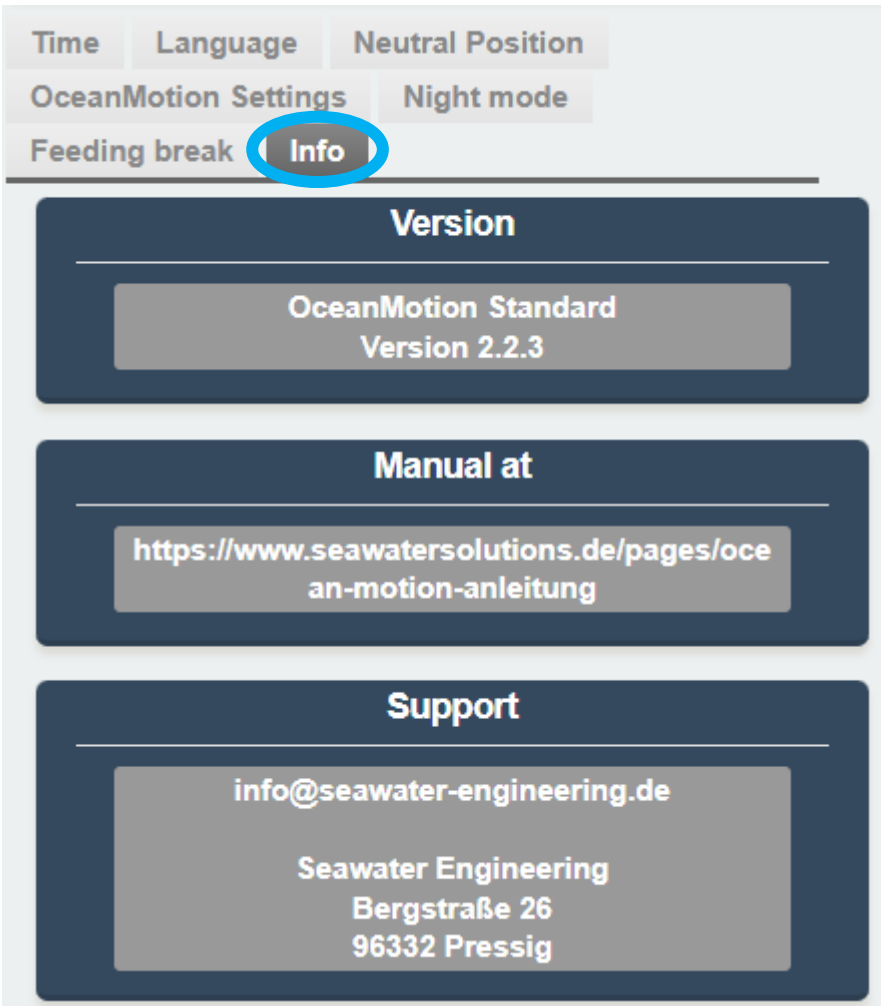




Don't forget to save your settings!

Step 9 - Info

Here you can find contact data and the website for further information and links to videos.



13 Warranty

You are granted a limited warranty for the OceanMotion for the period of 12 months from the date of purchase that relates to material and manufacturing defects / flaws. In case of violation of the warranty obligation, your remedies under the relevant laws are limited to the return of the Seawater Engineering manufactured device for repair or replacement at the discretion of the manufacturer. As part of the corresponding laws, these are the only legal remedies. Consequential damages and other damages are explicitly excluded from it. Defective devices must be sent back to the dealer or manufacturer in the original packaging along with the invoice in a prepaid shipment. Not prepaid shipments will not be accepted by the manufacturer. The warranty does not cover damage caused by improper handling (e.g. water damage), technical modifications by the buyer or by connecting the device to non-original / non-recommended devices. Technical changes, especially those that affect security and serve technical progress, are reserved by the manufacturer.

14 Disposal

(according to RL2002/96/EG)
The device and the battery must not be disposed of in the regular household waste but have to be disposed of properly.
Important for Europe: dispose of the device through your communal disposal site.

OceanMotion

A product by

info@seawater-engineering.de