

**THOR**  
offshore engineering

handbook



The image features a dark, atmospheric background of a night landscape with a body of water in the foreground. The water reflects the lights from a distant shore, which are visible as a series of bright points along the horizon. The sky is a deep, dark blue. The logo for Thor Offshore Engineering is centered in the upper half of the image. The word "THOR" is written in a large, bold, blue, sans-serif font with a stylized, blocky appearance. Below it, the words "offshore engineering" are written in a smaller, lighter blue, lowercase sans-serif font.

THOR  
offshore engineering

bright. reliable.  
lightweight.  
the light at your side.



Congratulations!

We are pleased to present your new Thor Rev 2.0 primary light.

**THOR**  
offshore engineering

LÜDENSCHIED  
1.10.2015

You have made an excellent choice! This is not just an ordinary diving lamp, but the result of the long and intense collaboration of the technical divers of the Cavebase and us.

It has been developed to withstand the rigorous demands of exploration diving in all situations. Our diving lamp reliably delivers the highest performance at any time.

We feel connected to the genius of the pioneers of the WKPP and the test tube design of the HID. There is no better way to facilitate the replacement of the lamp under water.

Our concern and aim was to further develop and improve this design. The time of the HID lamps is over. LEDs are sturdier, more reliable, more energy-efficient and thus safer.

Each component was subjected to stresses during the tests. The test conditions were far more extreme than the conditions of the most difficult dives. All used materials are of the highest quality.

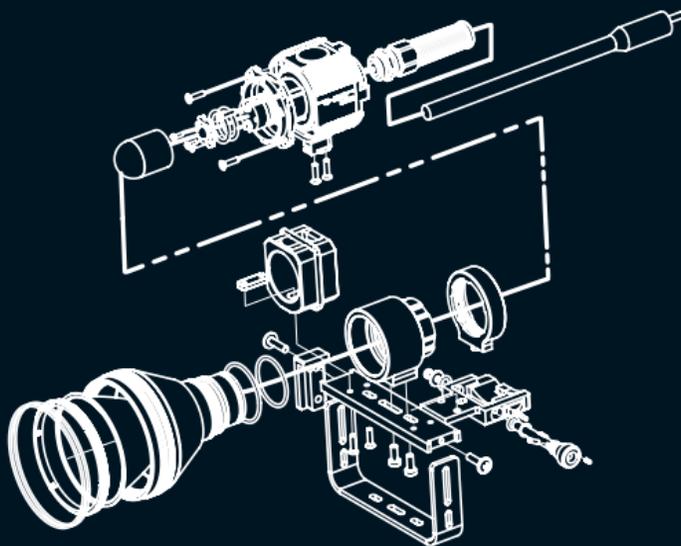
**Together, they are the perfect symbiosis of passion, reliability and performance – the Thor Rev 2.0!**

Your dealer will gladly answer all questions regarding your new primary light.



## Technical data

Permissible battery voltage:	9V bis 22 V
Allowable current strength:	no limit
Maximum diving depth:	to 220m
Permissible ambient temperature:	water -5 up to 35°C (95°F)
Permissible environment:	water



## Warning!

**Please observe the following warning notes.**

The symbol ...



indicates immediate danger to life in case of non-observance.



means that close attention is required and that non-observance may lead to the destruction of product.

As a general rule:



- When diving, stay always within your comfort zone and dive in accordance to your experience and skills.
  - Do not dive alone.
  - Do always expect that the lamp, like any other piece of equipment, may fail. Ensure redundancy. Always have at least two back-up lamps. Practice the replacement of the back-up lamp.
  - Do not exceed your limits without an experienced diving instructor.
- Ensure proper diver training. Scuba diving is nothing you can learn quickly during a few dives.
  - Practise the handling of the lamp.
  - Do not direct the light beam at the eyes of your dive buddy or other people/animals. There is a risk of blindness or of the temporary loss of vision, buoyancy control and orientation!
  - Do not open the electronics compartment! The coolant in the lamp evaporates immediately. Above that, it is skin-irritant! The warranty will expire!



You should always take care to comply with the permissible technical parameters. Failure to observe this may lead to the destruction of the product. The product is compatible with almost any kind of battery canister equipped with an E/O cord. Make sure that the polarity is correct. Usually, + is grey and – is black on the battery canister. Always make use of a voltmeter for verification.

Rechargeable battery canisters of the brand Halcyon have the correct polarity ex works, as well as the battery packs of the companies Light for Me and Light Monkey.

E/O cords need extensive care. Always (!) rinse the lamp/the battery canister thoroughly with fresh water after the use in seawater. Additionally, use DeoxIT® Gold G Series protective varnish, if needed.

If not rinsed and cleaned with fresh water immediately after the dive, E/O cords corrode already after a few dives. This leads to loose connections and the cable must be replaced by a new one.

Do not kink or compress the cable. Do not carry or pull the lamp or the battery canister with the cable. E/O cords are sensitive. A cable break is not a defect covered by warranty, but natural wear and tear.



## NEVER DISASSEMBLE THE TUBE WITHOUT GOOD REASON!

Due to the sealing between electronic compartment and LED, the field exchange of the tube is not as easy as with the old lamps which provided sufficient space for air compression.

Disconnect every time the lighthouse from the power source when doing maintenance works

The Head and the Tube will be very hot after usage. Be careful !

The light will dim down automatically to avoid overheating to protect the lighthouse. After the LED has cooled down it is possible to dim up the light again

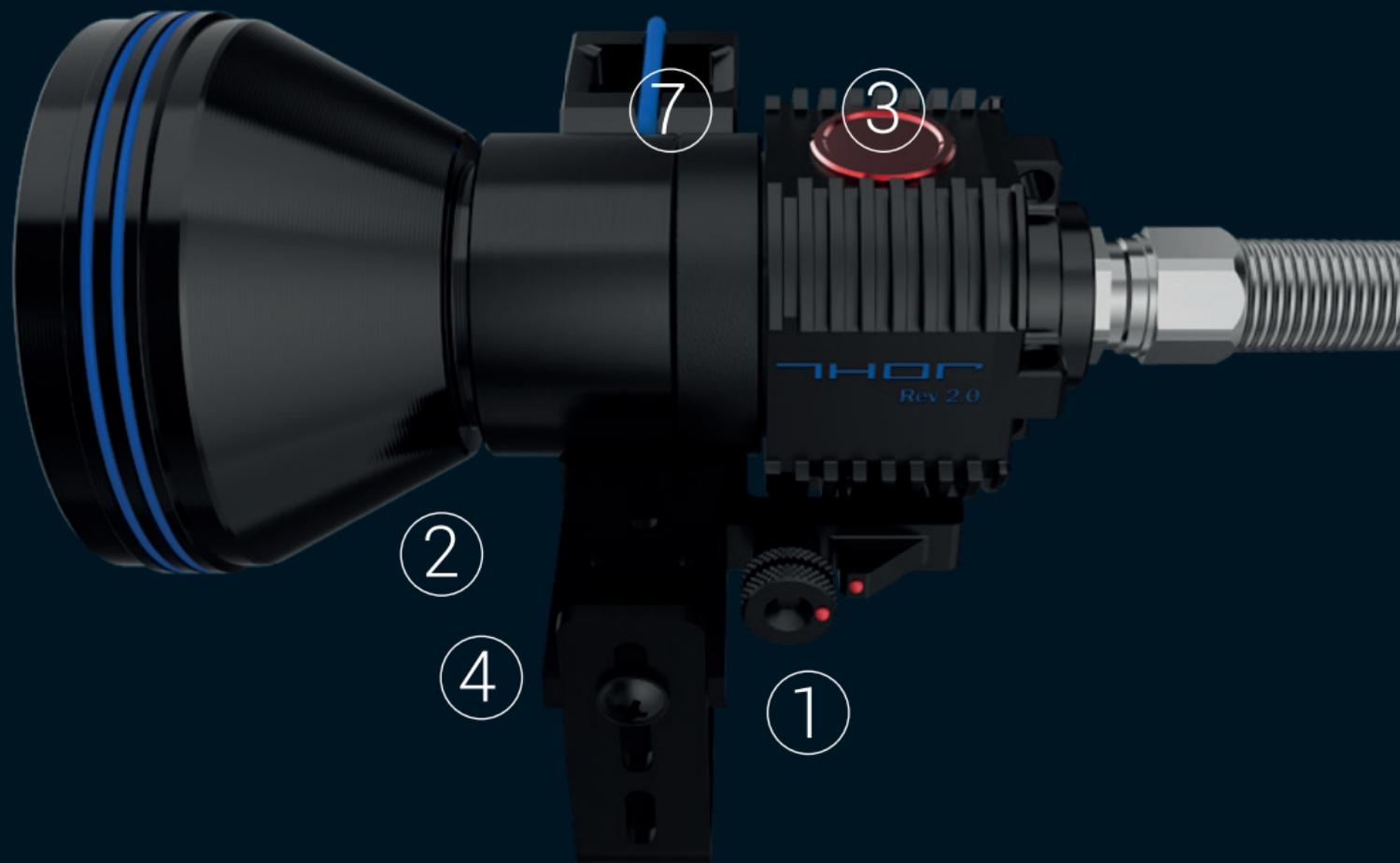
Be careful while handling the light. The light may break if it falls down.

Make sure that the canister and the battery is suitable for the use with the Thor lighthouse. No guarantee or warranty will be promised or given for damages on the battery while using the Thor lighthouse.

Choose at every time the right light power by using the Dimmer which suits well to the surrounding dive conditions.

1. Lock for the attachment of the lamp head\*\*
2. Focus adjustment of the lamp
3. Dim button
4. Bar with option for changing the position of the lamp head\*\*
5. Ring for fixation of the reflector
6. Reflector screen
7. Thumb loop
8. Mounting for attachment to a SUEX scooter\*\*

\*\* = Optional accessory



## Operation of the lamp

Switch on the lamp at the battery canister after having connected the E/O cords. You can only regulate the dimming level with the lamp head. The reason therefore is to prevent the accidental switch off of the lamp while adjusting the dimmer. This way, the diver does not risk being in total darkness all of a sudden.

The dimmer is regulated by pressing the dimmer switch shortly and firmly. The lamp has a Piezo switch. Piezo switches operate via pressure difference. This means, long-lasting pressure does not cause a switching operation.

The dimming levels are 100%, 75%, 50% and 25%. For individual dimming levels, please ask your dealer.

**The lamp is mounted in assemblies.**



**For further instructions how to use the cookie holder, please refer to the instructions given in the video on our homepage.**

## Operation of the exchange system (optional accessory)

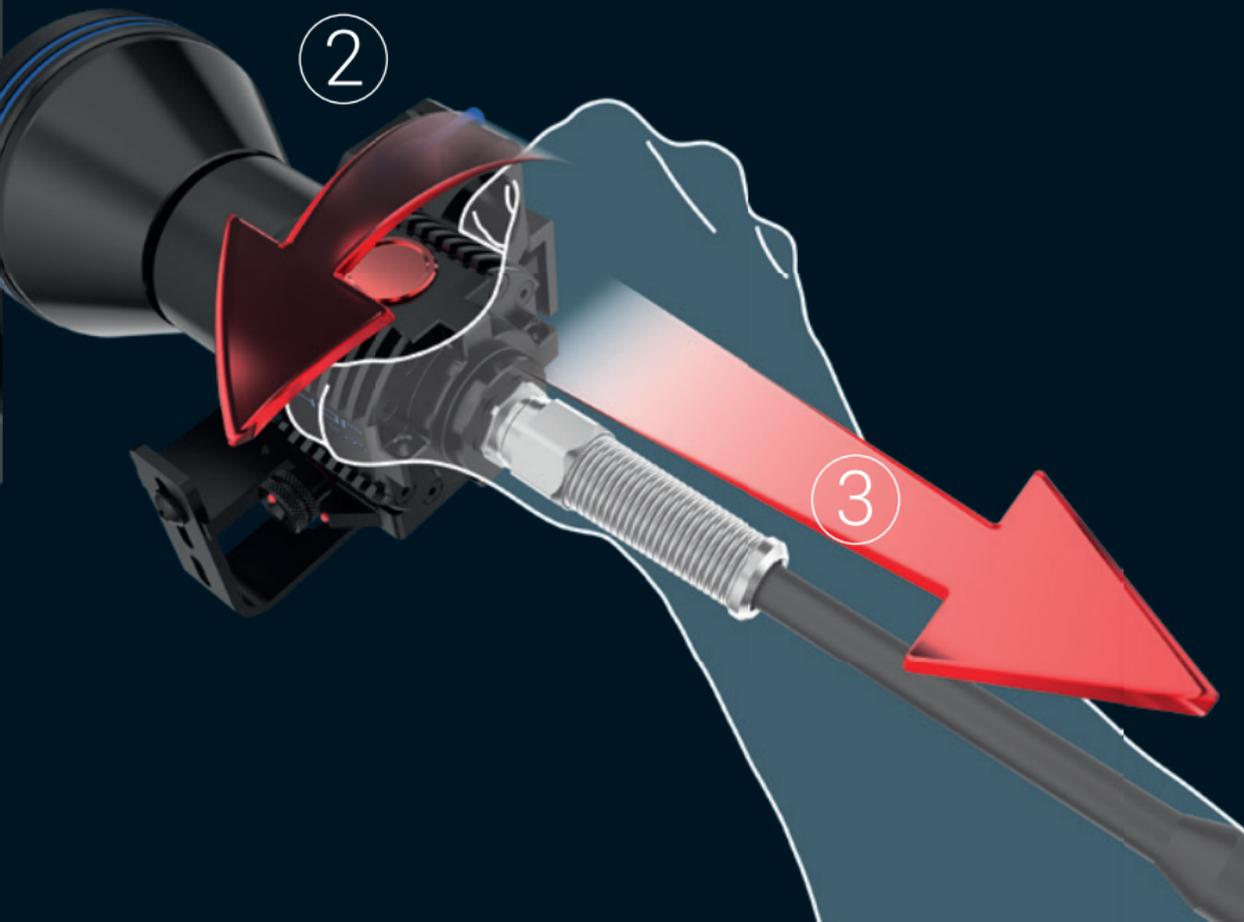
If the lamp is equipped with an exchange system, the lamp head can be replaced under water as follows:

① In order to unlock the lamp head, turn the screw counter-clockwise (see arrow) up to the stop first.

For this purpose, the lamp has to be removed from the wrist, because the locking pin blocks at the back of the hand.

② + ③ After this Unlock in a second action the lamp head with a quarter turn anticlockwise and pull it after this out towards back. The locking works exactly the other way round.





Always make sure that the parts of the lamps are secured. Otherwise it can happen that a part slips from the hand and vanishes forever in the depths of the sea.



Practice regularly the exchange of the lamp head and the exchange of the back-up lamp. You must be able to master your equipment and your skills "blind-fold". A lack of practice can be fatal.



It is recommended to regularly check the functionality of the interchangeable unit. Press the button from time to time.

## Focusing

The lamp features a factory-installed focal system. The focusing is activated by turning the lamp head. The ideal spot is situated in the centre of the focus adjustment.

Unscrew the lamp head up to the removal position and then pull it out carefully.

The O-rings serve to protect your lamp. Use O-ring grease when the focus adjustment becomes difficult to operate.



**The threads, the O-rings as well as the shaft must be cleaned in regular intervals and must be flushed with fresh water. It is essential to check the focusing for foreign objects after each dive.**



## Adjustment of the lamp position

The position of the lamp can be adjusted by loosening the screws of the cross member of the Goodman handle. To do so, you must use an Allen key size 3M. It can be inserted through the lower holes of the handle.

Please only tighten the screws hand-tight. Otherwise you will not be able to loosen them afterwards without destroying the screw head.



**To prevent corrosion due to seawater, lubricate the screws with O-ring grease before screwing in.**

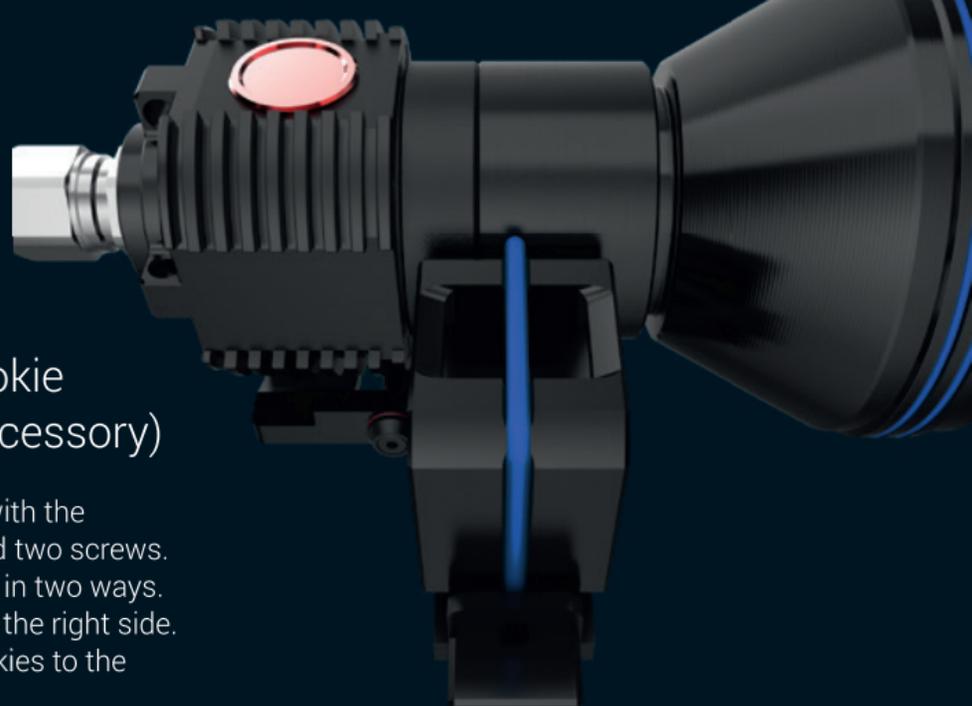
## Thumb-loop with cookie fastener (optional accessory)

The thumb loop is connected with the Goodman handle by a plate and two screws. Optionally, it can be assembled in two ways. The standard DIR position is at the right side. You can attach up to three cookies to the thumb loop.

The lamp can be attached to the handle of the Suex scooter. For this purpose, use the screws included in the scooter package. The Suex attachment must be installed as follows (see picture above).



**Always tighten the screws only hand-tight. Over-tightening the screws will damage the threads.**



## Attachment of the Shock Loops

Whilst performing tasks under water (such as gas exchange), it is recommended not to hook the lamp into the karabiner at the right side. This brings the lamp in an upright position and the light shines in the eyes and becomes a source of glare.

It is better to put the lamp in a downward position. This way, your work area is illuminated without dazzling effects. The lamp cable should be worn under the long hose and the abdominal belt..

Use a double karabiner for the attachment to the D-ring. During the dive, it can be carried at the D-ring at the right shoulder or (even better) in the leg pocket. When you need the karabiner, attach it with the shock loop. We suggest fastening the lamp with the karabiner at the right D-ring.

A shock loop can be made from a massive O-ring or from a strong cave rope.

The other holes are intended for the attachment of a reserve shock loop.

## Exchange of the reflector

The reflector is exchangeable. An exchange is advisable when the surface of the reflector becomes dull, due to mechanical damage or in the course of time.

Use the special tool included in the reflector set to loosen the fixing ring.

Tighten the ring only hand-tight. At first, make sure that the reflector is positioned centrally.



**Position the ring in a straight manner. It will damage the thread, if screwed in crookedly. Previously, lightly grease the ring with O-ring grease.**

## Exchange of the tube



**Never pull off the tube without reason. Do not touch the LED with your fingers. It must not be soiled.**

Do only use the separately available field repair kit to exchange the tube. Do not expose the tube to moderate or heavy pressure – it will break.

Before you start attaching the tube, grease the O-rings with O-ring grease. The next step is to place an approximately 1mm thick plastic hose or a greased cave rope over the O-rings. Pull the tube smoothly over the first O-ring with a slight rotation movement. Now, the air must escape audibly.

Then, push up the tube almost up to the second O-ring with a slight turning motion. Now, pull out the hose or the cave line slowly and carefully. Then, push the tube slowly over the second O-ring.

A light fogging on the inside of the tube is nothing to worry about, but normal. It does not compromise the functionality of the lamp.

## Care instructions

The lamp must be cleaned with clear fresh water after each dive. Use a cleaning cloth for glasses to dry the reflector. Do not apply excess pressure while cleaning the reflector. This may cause scratches.

In order to prevent corrosion, slightly grease the E/O cords with O-ring grease before diving.

Do not bend the E/O cords and do not expose them to any additional load. Do not carry the lamp at the E/O cord.

Use the product only for lighting. It is not suitable for other purposes. Do not expose the lamp to shear or leverage forces as well as physical strain.



We wish you a lot of  
amazing and safe dives with  
your lamp.

made in germany  
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