



MANUAL and MAINTENANCE DIRECTIONS

# Yellow Diving Heating System

Thank you for your choice of Yellow Diving products.

Please spend a while for reading this manual before you start using Yellow Diving heating system. Frequently asked questions about usage and storage are answered here. This document contains you Warranty Card either.

If you still have questions after reading this manual, please contact  
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## General informations

Yellow Diving heating system is intended to be used exclusively for dry-suit and dry-gloves diving to maximum depth of 150m (450fsw). The system consists of dry suit connector, battery pack canister, with battery capacity depending on chosen model and a thermo-active heating vest and heating gloves.

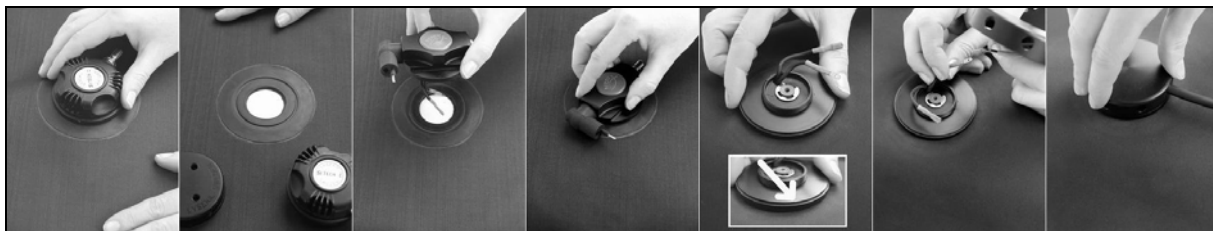
## Dry suit connectors

There are four different configurations of Yellow Diving heating system, depending on dry suit connector used:

- THERMOV PERCH – integrated inlet dry-suit valve and heating connector. Suitable for replacing original Apeks and Si-Tech inlet valves.
- VALVEAP – dry suit connector mounted under original Apeks inlet valve
- VALVESI – dry suit connector mounted under original Si-Tech inlet valve
- THROU – connector mounted in a hole punctured in dry suit layer.

### Connector mount

**THERMOV PERCH** – Follow these steps to mount integrated inlet valve:



1. Unscrew original dry suit inlet valve.
2. Place THERMOV PERCH inside dry suit's sealing for inlet valve.
3. Rotating THERMOV please set the direction of E/O connector.
4. Secure the valve with the enclosed nut, screwing it with a groove upwards. Connect valve connectors to the cable secured inside valve's cap and place connected cables avoiding collision with moving central element of inlet valve.
5. Secure the valve cap by pressing it firmly until clicks into place.

**VALVEAP, VALVESI** - Follow these steps to mount inlet valve connector pad:



1. Unscrew original dry suit inlet valve.
2. Screw removed inlet valve into connector pad, make sure o-ring is in-place
3. Place valve-pad assemble inside dry suit's sealing for inlet valve.
4. Set the desired position of E/O connector by rotating.
5. Secure the assemble by screwing original inlet's valve nut.

6. Place the cable in a desired direction inside the dry-suit.
7. Place internal cap and click it into place.

**THROU** – to mount dry-suit connector please follow:



1. Punch a hole 9 mm in diameter in a chosen place of dry suit.
2. From outside of dry-suit paste a rubber pad, from inside paste connectors container, fit the openings on both parts.
3. Use a glue intended to use with rubber, i.e. TIPTOP CEMENT SC4000 with TIPTOP E-40 hardener. All surfaces should be tarnished and degreased, use only a thin, even layer of glue.
4. Pass connectors through a hole in dry suit, place the pad and secure screwing the nut.
5. Connect cables inside the container.
6. Screw the container cover.
7. Leave the suit for drying according to the directions for a glue used.

## Battery packs canisters

The are two canister series for Yellow Diving heating systems:



H



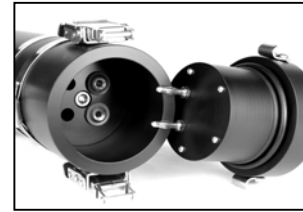
PERCH H

- **H** – Battery canister series with battery packs capacity from 9,2 Ah to 24,8 Ah, with toggle switch shielded with rubber
- **PERCH H** – battery canister series with battery packs capacity from 9,2 Ah to 24,8 Ah with solid metal press switch

Canisters are manufactured from a single Delrin rod, lightweight but resistant material, with great insulation capabilities. This material is perfect for diving in any environment. Watertight E/O cord is disconnectable under water. Battery pack is double sealed to avoid flooding, even when canister lid is not properly closed. Canister latches are stainless steel with secure pads. Possibility of accidental opening is eliminated. Battery packs are delivered fully charged.

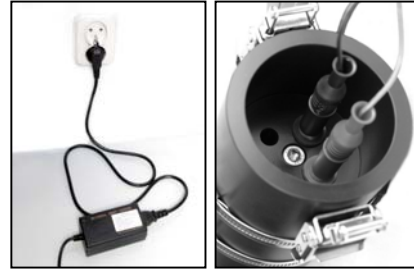


Before every dive battery packs should be checked and charged according to the following instructions. Battery packs are not serviceable.



Charging directions:

1. Connect a charger to the electrical power outlet.
2. Connect charger into battery pack using banana connectors – red connector into the red socket, black connector into black socket.
3. Charger indicator LED lights red, when charging cycle is finished switches to green.



Automatic charger does not need user maintenance. Li-Ion batteries do not suffer memory effect. Could be charged when discharged only partially. Battery cells producer advises to charge pack every three months, when not in use.

## Heating vest

**PERCH HU** – breathable „body“ type with a very flexible heating wire, to be weared directly on naked body. Equipped with heating power regulator, two steps, 50% and 100%. Besides heating function, takes the important role of thermo-active underwear, to keep sweat out of the body.

Thin layer of fabric neither constrains diver body movements, nor creates an air-trap. Contiguous in shape does not need high temperatures to heat diver body, the whole system is energy-saving, what effects in longer burn-times.

Heating vest is manufactured from material limiting formation and retention of unpleasing odours after usage. Hand washing is possible (30° C) with usage of washing agents suitable for thermo-active wear. After washing do not wring, hang loose to drain, dry well. Do not iron, do not dry in automatic dryers.

## Heating gloves

**HOT GLOVES** - gloves manufactured from breathable fabric with a very flexible heating wire, to use directly on bare hands. Besides heating - used fabric helps to keep sweat away from the skin.

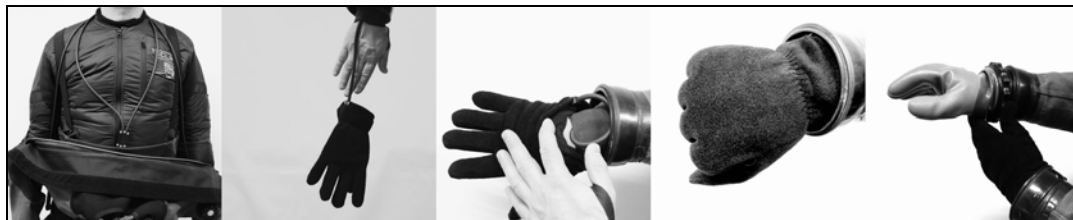
Thin layer of fabric and thin flexible heating wire allow full mobility of diver's hands. Contiguous shape eliminates a need for high temperatures to heat diver's hands, what allows for energy-saving design, what effects in longer burn-time.

Gloves are manufactured from material limiting formation and retention of unpleasing odours after usage.

## How to put-on the gloves



1. Place glove rig over your head.
2. Adjust the length of the wire to reach with the longest finger for the glove connector keeping your arms naturally down.
3. Pass gloves through wrist seals of your dry-suit.
4. Connect glove wire connector to supply socket.



5. Place the wires in front of your body.
6. Pass your hands through wrist seals keeping the wire on the outer side of your wrist.
7. Put on your gloves allowing a wire to form a loop
8. Correct the wrist seals position backwards to allow easy dry-glove connection.
9. Put on your dry gloves and seal the ring system.

You must not wash heating gloves. When wet, do not wring, hang loose and allow to dry. Do not iron, do not use automatic dryers.

## Warnings

1. Not complying to manual directions could cause personal injury and damage of the heating system.
2. Always check heating system before dive.
3. When planning the dive always make assumption, that heating could fail. In any circumstances do not use any other power sources that Yellow Diving battery packs. This can result in burns and damaging the heating system.
4. Do not carry battery pack canister holding by E/O cord. This can cause tearing out from sealing gland or cable break. Do not bend the E/O cord more that 90 degrees, otherwise break may appear.
5. In any reason do not transport battery pack canister when internal connectors under the canister cover are in live position.
6. In a case when water floods the canister or cover do not switch on the system.
7. Take care about canister cover o-ring and sealing surfaces. Make sure that scratches or cracks are absent. This can cause flooding the canister.

8. Remember – after one year from purchase claim for manufacturer's service. Toggle switch rubber hood should be exchanged every year (this is paid service).

## Pre-dive procedure

1. Check if battery is charged.
2. Check to make sure, that E/O cord or toggle switch (H series only) rubber hood do not suffer from cuts or other damages.
3. Make sure, that canister cover o-ring is present and in-place. There are no reasons to remove the o-ring when store. Check the canister cover and o-ring and remove dirt and sand. Do not grease the o-ring, dirt and sand stick to greased surfaces.
4. Place the cover over the canister to insert banana connectors into the sockets. Slide the cover down, until o-ring reaches the canister. Never latch the cover using excessive force.
5. Check the function of the latches.
6. When closing the latches, make it lock evenly and simultaneously. Check if securing pads are locked.
7. Put on the heating vest and heating gloves.
8. Connect battery pack into dry-suit connector, and connect the heating vest and heating gloves to dry-suit cable.
9. After switching on a beeping sound from the power regulator should be heard (one or three beeps).
10. Take care to identify the beeping sounds.
11. There are two steps of power regulation. Single beep means full power, three beeps mean half-power. Only heating vest is designed for power regulation. Heating gloves are always full power when on, regarding current vest heating power. Switching off and again on makes power regulation change from half to full power in a flip-flop sequence.
12. Switch the power regulator into half-power (three beeps) and keep heating for at least one minute (heating test). Temperature increase during the test should not rise above thermal comfort. If does not, heating is ready for a dive.
13. If temperature increases above your acceptable comfort level during one minute heating test, switch off heating and do not use on the dive. If beeping sound could not be heard after switch-on, check the connections.
14. After heating test switch off the heating, but remember, the nearest switch-on is full-power.

## When diving

1. At the very beginning (first minute) switch on the heating. According to the pre-dive procedure, it should be full-power. If you feel temperature increase, it means that all connections are working good. You can switch off the heating.
2. Next switch on results in half-power mode. Every switch off and then switch on sequence changes the power mode.
3. Switching on the heating is advised before first symptoms of hypothermia occur.
4. Adjust the heating power to your needs – achieve thermal comfort.
5. Remember, thermal comfort under water is different experience than on the surface. Work load has a large influence on thermal comfort.

6. Do not overheat. It can result in increased risk of decompression sickness.

## After dive

1. Switch off the heating before you put off diving equipment, disconnect E/O cord.
2. After unzipping your dry suit, disconnect the cable from heating vest and heating gloves before you put off the dry suit.
3. Rinse battery pack canister and E/O connectors with fresh clear water.
4. Before opening canister cover make sure it is dry.
5. Disconnect power supply removing canister cover. Check if o-ring, E/O cord, toggle switch rubber hood (H series only) are not damaged.
6. Check flood symptoms by shaking the canister cover and listening for squelch sound. In case of cover flooding, unscrew the cable sealing gland, remove the cable with care and spill out the water.
7. Wipe to dry the o-ring and surface of the canister edge, removing sand and dirt. Do not grease the o-ring.
8. Do not transport the battery pack canister when its cover remains in connected position. When not in use, the cover should be replaced in half-turn, with banana connectors in blind plugs. Using of transport cases and E/O protective caps (TERM) is advised to avoid damages during transport.

## Warranty

1. Two years warranty from a day of purchase is given for all products of Yellow Diving. The warranty on Light and Heating modules relates to their performance with the exception of the battery packages, cables, connectors E/O, light bulbs, electronics.
2. Floods, leaks, punctures, and broken bulbs, etc., are not covered by the warranty unless they are the direct result of a material or workmanship defect.
3. Warranty does not cover damages caused by improper use, mechanical damages, wrong maintenance, repairs and modifications performed outside Yellow Diving service department. Natural process of wearing-out of the elements of the system is not covered either.
4. Normal evidences of usage, small scratches, scrapes, are not warranty covered.
5. Warranty claims are accepted and free-of-charge service is performed only if original proof of purchase and signed and stamped warranty card is presented with matching serial number.

We are real fans of diving and we dive ourselves as well. Therefore you can count on us in case of any tiny repairs, not necessary from manufacturer fault.

This kind of service we provide for life.

If any problems, questions or doubts please contact local dealer or directly the producer.

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## Warranty Card

	Serial number:	
	Serial number:	
	Serial number:	
<b>Date of purchase:</b>	<b>Stamp and signature of the producer:</b>	<b>Stamp and signature of the dealer:</b>

## Warranty and after-warranty service record

Date	Description	Signature