seac sub

advanced diving technology

searay 20 W

searay 50 W

NI-MH BATTERIES PACK

Seac Diving Pro s.r.l.
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This family of torches endeavours to combine high performance battery life, reliability and excellent light quality at a reasonable cost.
The heart of the torch is its next generation electronic circuitry, designed with very low consumption miniature electronics and a new sealed magnetic switch which operates an internal reed-switch.
This prevents the power absorption typical of mechanical switches; ensuring absence of wear in time, increased battery burn time and a brighter whiter light. In addition, as the switch is not the feedthrough type, possible water leakage is prevented, considerably decreasing the likelihood of flooding.
Added features of the electronics are that when the voltage at the battery pack terminals drop below a specified level, the light automatically switches to a blinking mode, enabling the diver to abort the dive with the remaining available light. This feature also prevents polarity inversion of one or more elements of the battery pack and consequent gas formation.
To increase the simplicity of use and reliability, the electronic system automatically turns off the light in case of recharging jack insertion, preventing any damage to the charger and batteries.
An overpressure valve calibrated to 1 bar is also provided to prevent possible burst of the bulb in case of accidental formation of gas. The main body is in anticorodal anodised aluminium while the parabolas used are in aluminium with a new satin finish providing a light beam with the following characteristics: strongly focused in the center but with a large beam width.
The Xenophot bulb used works at a temperature of 3200° K ensuring a very white light beam.
The portlight is in 6mm tempered glass to prevent any possible light distortion.

TECHNICAL SPECIFICATIONS

- Body and metal parts made in anticorodal anodised aluminium with numerical control technology.
- Nickel-Metal hydrate(Ni-Mh) rechargeable Battery Pack.
- Intermediate-beam optics.
- Aluminium shaped handle with lanyard hole.
- Three-position (lock, off, and on) rotating magnetic-type switch.
  As it is not the feedthrough type, possible water leakage is prevented;
  it has very low dispersion as compared with mechanical switches and maximizes burn time and actual voltage to bulb.
- Halogen Xenon bulb.
- Mechanical safety catch against accidental switch-on.
- Anti-burst valve calibrated to 1 bar.
- Multifunction electronic circuit: it prevents battery over discharge,
  and light switch-on when charging jack is plugged in.
- 15-minute safety blinking in case of low batteries.
- Plastic safety slider for switch-on lock.

Specifications	SEARAY 20	SEARAY 50
Case material	Anticorodal aluminium	Anticorodal aluminium
Parabola material	Aluminium	Aluminium
Portlight	6mm Tempered Glass	6mm Tempered Glass
O-Ring	NBR	NBR
Weight in air	673 gr.	1.000 gr.
Weight in water	385 gr.	592 gr.
Length	181mm	257mm
Diameter	55mm	55mm
Switch	Magnetic	Magnetic
Standard bulb	20W Xenophot	50W Xenophot
Color temperature	3200°K	3200°K
Light beam	Intermediate	Intermediate
Batteries	Ni-Mh 6V / 2.7 Ah	Ni-Mh 12V / 2.7 Ah
Safety blinking (low battery)	Yes (15 minutes)	Yes (15 minutes)
Charging outlet	Internal	Internal
Battery charger	Model 0826 - Automatic	Model 08710 - Automatic
Charging time	4h 30'	4h 30'
Burn time in minutes	With 20W - bulb up to 45 min. With 10W - bulb up to 90 min.	With 50W - bulb up to 39 min. With 35W - bulb up to 50 min. With 20W - bulb up to 100 min.
Maximum depth	100 m.	100 m.

BATTERY CHARGING

Battery Charger Model Delta 0826 supplied with SEARAY 20 W Torch.
Battery Charger Model Delta 08710 supplied with SEARAY 50 W Torch.
The model number is on the label placed on the battery charger.
Before charging your Torch, please check the correspondence between battery charger and Torch.

CAUTION

NON observance of these instructions may cause irreparable damage to the battery pack.

- Unscrew the Torch bottom whilst holding on the handle and extract it from the lamp body while holding the latter vertical with the optics downward.
- Connect the charger to mains and connect it through the appropriate jack to the outlet located beside the lamp holder.
- Check that the green led lights up when the charger is connected to mains.
- The charging time from flat is shown in the table.
- As soon as the needed voltage has been reached, the automatic charger cuts off the supply and remains in standby mode until disconnected from mains (see paragraph “Technical Specifications of the Battery Charger”).
- When the Torch has been recharged, close it after previously cleaning and lubricating the O-Rings and relevant seats.
- In case of prolonged non-use, carry out a complete discharging-charging cycle every three months (discharge with submerged Torch).
- All Torches are equipped with a battery protection electronic circuit, which disconnects the feed current when the voltage drops under a specified threshold and prevents possible polarity inversion, which would cause irreparable damage to the batteries.
- However, avoid leaving the torch under charge for long periods of time.

WARNING

- Never switch on the torch outside the water.
- Never unscrew the torch head or bottom during diving or if wet.

CHECKS BEFORE DIVING

- Check for perfect seal of the body.
- When in water, check, by immersing the torch, that there is no continuous discharge of air bubbles from the case.

FLOODING

In case of flooding, open the torch and immediately rinse inner parts in fresh water, then wipe with a cloth and with an air source paying particular care to the electronic circuit.
Remove the oxide, if any, formed on metal parts and immediately proceed to recharge.
If the quantity of water leaked inside the torch is considerable and if it has remained there for a long time, it is recommended to cut and remove the plastic protection film and then proceed as described above.

LIMITS OF USE

- The maximum operating depth is 100 m.
- Owing to the high temperatures reached by the lamp, it is recommended to use the torch ONLY underwater.

BULB REPLACEMENT

- Unscrew the torch and extract the inner battery pack.
- Extract the bulb and insert the new one (avoid touching it with your hands by using a cloth).
- Reinsert the whole making sure that the bulb fits in the hole of the parabola.
- Close the torch.

MAINTENANCE

It is essential to follow the following instructions: always carry the torch inside a bag protecting it or in the hard case supplied. Prevent shocks. Prevent prolonged exposure to sunrays. At the end of each dive (sea, lake, or swimming pool) always rinse in fresh water and wipe. Check the state of the O-ring every time the body is opened. Clean and lubricate it with silicone grease.
We recommend to have the product inspected every year by an authorized SEAC SUB center.

OPTIONALS

- 10 and 20W / 6V Bulbs, G4 mount, for SEARAY 20 torch.
- 20, 35 and 50W / 12V Bulbs, G6 mount, for SEARAY 50 torch.

TECHNICAL SPECIFICATIONS OF AUTOMATIC BATTERY CHARGER FOR Ni-Cd / Ni-Mh BATTERIES

Model Delta 0826 supplied with SEARAY 20 W Torch.
Model Delta 08710 supplied with SEARAY 50 W Torch.
The model number is on the label placed on the battery charger. Before recharging your torch, please check the correspondence between battery charger and torch.

CAUTION

NON observance of these instructions may cause irreparable damage to the battery pack.

USE

Check that the torch switch is in OFF position.
Feed the battery charger with 220 V power supply. The green led shall light up. When connecting the jack with the illuminator battery, the yellow led shall light up to indicate that recharging is under way; when charging is completed, the yellow led will go out and only a low standby current will flow in the battery.
In case of over-discharged battery (voltage lower than 0.4V / element), the battery charger will automatically supply at start a low smoothing charge; when the voltage of 0.6v / element has been reached, the actual recharging will start.

The time needed to reach full charge will be more or less long as a function both of the battery rated capacity and of the charge quantity still present in it. PLEASE OBSERVE THE MIN. AND MAX. CAPACITIES SPECIFIED.

Power supply	230 V ac +/- 10% 5 50 H
Output voltage	2 V dc / element
Charging current	700 mA
Standby current	70 mA
Minimum capacity	700 mAh
Max capacity	3 Ah
Max charging time	264 minutes
Complying with	CE

WARNINGS

- Observe polarity: + positive, - negative.
- Observe the minimum and maximum capacities specified on the battery charger and in the instructions.
- No previous battery discharge is required.
- Do not charge batteries in parallel.
- Do not charge batteries in sealed containers.
- Do not charge lead-acid batteries, alkali, zinc-carbon, mercury, lithium batteries. EXPLOSION HAZARD.
- Do not charge LITHIUM-ION batteries. EXPLOSION HAZARD.
- Do not charge immediately batteries overheated by heavy discharges or short circuits.
- Do not charge batteries showing case buckling or fluid leakage.
- USE THE BATTERY CHARGE ONLY IN SHELTERED PLACES.

WARRANTY CONDITIONS

SEAC DIVING PRO srl guarantees the product for a period of one year from date of purchase. You are strongly advised to keep the fiscal slip supplying evidence of the date of purchase. The warranty does not include standard consumption parts such as: O-Rings, batteries, bulbs, glass, etc.
This warranty does not cover damage resulting from: mechanical shocks, prolonged use in chlorinated or polluted water, prolonged exposure to strong heat sources exceeding 70°C. The warranty is cancelled if: the equipment has been improperly used, not following the instructions for use. The owner has made modifications or tampered and has personally carried out repairs, or if such interventions have been carried out by non-authorized personnel SEAC will not be liable under this guarantee for damage caused to the user through improper use of the equipment. The same is valid for direct or indirect damage of any nature caused to persons or things, due to any periods of non-use of the product.