

SANTI 24Ah battery



Product specification

SANTI 24Ah battery is based on modern Li-Ion cells, with high discharge current. The battery is designed to supply power to SANTI heated apparel (undersuit, vest, gloves). It may also be used as power source for flashlights.

Total power of connected devices cannot exceed 200W. Those devices must be designed to be powered with 10.8-12V input.

Estimated operating time for power supply of individual components:

- heated undersuit (110W): 2h30min ~ 3h
- heated vest (55W): 5h ~ 6h
- heated gloves (36W): 9h ~ 10h
- undersuit with gloves: 2h ~ 2h15min
- vest with gloves: 3h15min ~ 3h45min

The battery is equipped with a number of safety features to protect against overdischarge, overcharge, overload and short circuit. On the enclosure there is E/O cord connector, piezo switch and overpressure valve. There is also a belt loop (no need for clamps) on the side of the housing.

One touch is enough to turn the battery on, which is indicated by built-in blue LED on the E/O cord connector. After each switch-on power status is presented.

Maintenance-free battery, do not open. Opening the housing results in loss of warranty.

Battery charge indicator:

Number of flashes emitted by blue LED indicates the battery charge level.

- 3 LED flashes stand for 60%-100%
- 2 LED flashes stand for 30-60%
- 1 LED flash stands for < 30%
- No LED light - fully discharged

After power level check the battery resumes standard mode, what is indicated by constant LED light.

Technical parameters:

- capacity: 24 Ah,
- operating voltage: 11,1 V,
- cells type: Li-Ion,
- height: 270 mm,
- diameter: 74 mm,
- milled space for silicone band placement,
- E/O cord length: 60cm,
- housing material: polyacetal / POM / Delrin®,
- charging time: 14h,
- max depth of use: 100m,
- weight: 1,8kg.

NOTE!

Works only with SANTI thermovalve and SANTI connector.

Operating recommendations:

The battery should be connected to heated apparel with use of SANTI connector or SANTI thermovalve by the E/O cord connector. If the battery is not in use, it should be switched off and dummy placed (delivered) put on E/O cord.

The chipset controlling the the status of the battery draws a small amount of energy; therefore, after a long break, connect the battery to the charger to check the charge level and, if necessary, recharge the battery. It is also recommended not to leave the battery discharged for more than 6 months.

Due to electrolysis process, it is suggested that battery should not remain in the water when no power consuming equipment is connected.

Transport:

This battery is UN Test 38.3 certified to meet transport safety standards for Lithium Battery. The certificate can be downloaded from SANTI website www.SANTIdiving.com. Despite this certification, the battery may be considered as a dangerous item, that is why airline may refuse it to be carried in the aircraft.

SANTI DIVING is not responsible for these instances. Always check all applicable local, national, and international regulations before transporting a Lithium-Ion battery. Transporting an end-of-life, damaged, or recalled battery may, in certain cases, be specifically limited or prohibited.

During transportation it must be switched off and dummy plug must be on E/O cord connector.

Charging:

Charge the battery with the supplied battery charger using E/O cord connection cable. Plug the charger to a power source 100-240V. LCD screen lights up blue showing 12,6V as the value of the charging voltage. Next, connect the battery to the charger, through the connector E/O cord. Display at the charger turns red showing the percentage of the battery charge. When the battery is fully charged, the LCD backlight will change to blue indicating 100%.

When the charging process is finished, disconnect the battery and power source. The charger has also a USB output for charging other portable devices such as a cellphone or tablet (1A).

Charger parameters:

- charger is designed for Li-Ion 10,8 - 11,1V batteries charging,
- after full charge, the battery is disconnected automatically by the charger,
- supply voltage range: 100-265V AC 50-60Hz,
- input current: 1,8A,
- output voltage: 12,6VDC,
- output current: 3A,
- USB output: 5VDC 1A,
- maximum output power: 90W,
- dimensions: 132mm x 58mm x 30mm,
- weight: 365g.

Safety measures for battery and charger operation:

The battery has a range of protections against damage, however, you should take the following precautions:

- never allow the battery to be discharged below 8V,
- do not open the battery or charger or modify their design,
- do not short-circuit the external contacts of the battery or charger,
- do not connect the battery with the batteries of other manufacturers or with different capacities,
- do not throw the battery or charger,
- do not put the battery or the charger to the fire,
- indoor charging is recommended while protecting from unexpected weather conditions,
- use this charger only with the Li-Ion battery packs. Never use with NiMH batteries, NiCd or lead-acid, as it may lead to damage or even injury to any person directly exposed,
- provide adequate ventilation during the charging process and avoid using any heat emitting or interfering devices nearby,
- disconnect the battery charger and contact SANTI Service Department whenever there is a damaged power cord or plug, liquid enters inside, the housing is destroyed or any other than described in the manual incorrect operation of the unit is noticed,
- the battery should be stored in a dry place only when charged to minimum of 70%,
- store the battery at temperatures between 2 °C and 40 °C (36 °F and 104 °F),
- never charge frozen battery or at freezing temperature. It may become a cause of damages. If the battery has been at a low temperature for a long time, it should be left at a warm temperature for several hours before use or charging,
- check the battery level every six months, never store the battery fully discharged,
- keep the battery away from children,
- using the battery or charger for purposes after then those intended may result in damage to either the battery or the charger or devices connected to them, and cause loss of life or health,
- SANTI DIVING is not liable for any damage or loss which is the result of inappropriate use of the battery or charger, especially against above recommendations.

SANTI 6Ah battery



Product specification

SANTI 6Ah battery is based on modern Li-Ion cells with high discharge current, so that it is possible to connect elements with a total power of up to 100W. The battery is enclosed in an ergonomic case, with the E/O cord connection cable and piezo switch fitted through the upper lid of the container. The battery is switched on by touching the flat switch on the lid and the operation is signaled by a blue backlight placed on the E/O cord connector. The container is equipped with a special opening, designed to secure the battery pack on the belt.

The battery is intended to work with a heated vest and gloves from the SANTI Heating System. There is also the possibility to use the battery with any torch if its power does not exceed 100W.

Estimated operating time for power supply of individual components:

heated gloves:	1h45min ~ 2h,
heated vest:	1h15min ~ 1h30min,
vest with gloves:	30 ~ 45min.

The battery should be connected with the chosen heating element through the SANTI connector or SANTI Thermovalve by using the E/O cord connector. When storing, the battery should remain turned off. It is recommended not to leave the battery discharged for more than 6 months.

To avoid the electrolysis process, the battery should not be switched on in the water while the E/O cord is not connected to any receiving device.

Details:

- light, small and ergonomic container,
- E/O cord connector with unique LED signalling,
- trouble-free piezoelectric switch,
- belt loop (no need for clamps),
- charging via E/O cord connector,
- the possibility of using for both the SANTI Heating System and flashlights.

Technical parameters:

- capacity: 6Ah,
- operating voltage 11,1V,
- cells type: Li-Ion,
- height: 115mm,
- diameter: 74mm,
- special groove for silicone band placement,
- E/O cord length: 60cm,
- material: Poliacetal / POM / Delrin@,
- charging time: 4-5h,
- operation depth: 100m,
- weight: 0,68kg.

NOTE!

Works only with SANTI Thermovalve and SANTI Connector.

Transport:

The battery should remain switched off while transported. The E/O cord should be covered with the dummy plug attached. The battery is certified according with the UN Test 38.3 - it meets transport safety standards.

Charging:

Charge the battery using the supplied battery charger and the E/O cord plug. We recommend charging in dry conditions. The battery should not be switched on during the charging process. Connecting the charger to fully or partially discharged battery is indicated by a red LED light on the charger. When the battery is fully charged, the LED light on the charger will change to green. During the whole charging process the E/O cord blue backlight will be flashing. After charging, unplug the charger from the power source.

The battery is half charged for transportation. After unpacking the new battery, connect it to the charger.

Charger specification:

- input voltage rating: 100-240 VAC 50/60Hz,
- input current rating: 0,3A,
- maximum input power: 40W,
- output voltage: 12,6VDC,
- output current: 1,8A,
- maximum output power: 30W,
- intended for: Li-Ion 11,1V,
- the efficiency of the device: >80%,
- operating temperature: -10°C to +40°C,
- weight: 310g,
- dimensions: 118mm x 60mm x 37mm.

Charger instructions (for use):

WARNINGS

- The charger should only be used for Li-ion battery packs, working with voltage 11.1 - 12.6V. If the charger is connected to other types of batteries with different nominal voltage, it can be damaged.
- Never use with NiMH, NiCd or lead - acid batteries as this can result in damage or even injury of the people nearby.
- The charger is designed for operation in enclosed space.
- Do not open the charger due to the high voltage supply.
- In case of damage to the power cord or plug, any liquid entering the housing, damage to the housing, or incorrect operation of the unit other than described in the manual; disconnect the charger from the power supply and contact the SANTI Service Department for advice.
- During the charging process make sure that the charger and battery have proper ventilation and avoid placement near other devices generating heat. Failure to do so may result in damage to the battery or charger.

Safety measures for battery and charger operation:

The battery has a range of protections against damage, however, you should take the following precautions:

- never allow the battery to be discharged below 8V,
- do not open the battery or charger or modify their design,
- do not short-circuit the external contacts of the battery or charger,
- do not connect the battery with the batteries of other manufacturers or with different capacities,
- do not throw the battery or charger,
- do not put the battery or the charger to the fire,
- indoor charging is recommended while protecting from unexpected weather conditions,
- use this charger only with the Li-Ion battery packs. Never use with NiMH batteries, NiCd or lead-acid, as it may lead to damage or even injury to any person directly exposed,
- provide adequate ventilation during the charging process and avoid using any heat emitting or interfering devices nearby,
- disconnect the battery charger and contact SANTI Service Department whenever there is a damaged power cord or plug, liquid enters inside, the housing is destroyed or any other than described in the manual incorrect operation of the unit is noticed,
- the battery should be stored in a dry place only when charged to minimum of 70%,
- store the battery at temperatures between 2 °C and 40 °C (36 °F and 104 °F),
- never charge frozen battery or at freezing temperature. It may become a cause of damages. If the battery has been at a low temperature for a long time, it should be left at a warm temperature for several hours before use or charging,
- check the battery level every six months, never store the battery fully discharged,
- keep the battery away from children,
- using the battery or charger for purposes after then those intended may result in damage to either the battery or the charger or devices connected to them, and cause loss of life or health,
- SANTI DIVING is not liable for any damage or loss which is the result of inappropriate use of the battery or charger, especially against above recommendations.