

Kurt.energy enters new markets with safe Sodium-ion cells and Energy Storage solutions



At Kurt.energy, a division of Altreonic, **safety** has always been one of our main concerns when it comes to selecting battery cells. It is a pleasure to announce we can now offer leading edge sodium-ion cells and energy storage solutions in an exclusive agreement with the manufacturer.

Sodium-ion battery cells are a novel alternative for Lithium-ion battery cells. Rather than being based on Lithium (Li), they use Sodium (Na) as the active metal compound. Sodium (or Natrium) is a base element. It is abundant and found in table salt and the salt in the sea (NaCl or Sodium Chloride).

The Sodium-ion chemistry has **many benefits**:

- No Lithium (Li) or other problematic materials like Nickel (Ni) and Cobalt (Co) are used
- Sodium is much more abundant and doesn't require problematic mining
- Can operate from -40 to +60 up to +80°C (cell dependent)
- Charging from -10 to +60°C
- 3000 to 6000 charge/discharge cycles (cell dependent)
- Power can reach 3C up to 20C (cell dependent)
- Energy densities up to 130 Wh/kg (cell dependent)
- Ultra-safe: no risk of fire (yes, we did hard short-circuit and overcharging tests)
- Compatible with existing battery assembly methods
- Easy recycling
- More cost-efficient than Lithium-ion cells.

Sodium-ion cells have very few drawbacks. Currently, they have a slightly lower energy density than LFP cells, but they have a wider temperature range, and can provide more power. The DoD is higher and they can even discharge to 0V. They need an adapted charger when operating at extreme temperatures, but can charge from any standard charger when used at typical moderate temperatures.

All in all, Sodium-ion batteries are a significant step forward towards **sustainable** electric energy. While the primary use is for Energy Storage, they offer a safe and sustainable alternative for light electric vehicles as well.

Below, some of the cells and battery systems available for the market. This range consists of small cylindrical cells (1.3Ah), high-capacity/high-power prismatic cells, portable powerstations, low voltage stackable battery/inverters from 3.5 kWh and battery/inverter systems up to 300 kWh.

Note, Kurt.energy only sells B2B. Wholesale partners and value-adding system suppliers / installers are welcome (Europe and Africa).



160 Ah /2C Sodium-ion Prismatic cell
6000 cycles



1.3 Ah / 5C 18650 cylindrical cell
3000 cycles



Portable Sodium-ion 48V Hybrid Solar
Power Station 630 Wh



Stackable Sodium-ion 48V Hybrid Solar Energy
Storage Battery 3.78 kWh to 17.8 kWh



Sodium-ion 48V 7.68 kWh battery module



Sodium-ion 48V 7.68 - 300 kWh Hybrid Solar
Energy Storage battery.