



**YOUR INTELLIGENT AND ADAPTABLE
INSTRUMENT FOR IDENTIFYING
TRUE CHEMISTRY OF BATTERIES**

SYSTEM OVERVIEW

Our multi-sensor AI platform enables high-purity sorting of portable batteries through X-ray imaging and machine learning. By analyzing internal structures, it accurately classifies chemistries—even without external markings — boosting safety and efficiency.

Built on BATTERY's foundation, it could extend functionality with precision Ni-Cd/Ni-MH sorting and optional Li-ion classification.

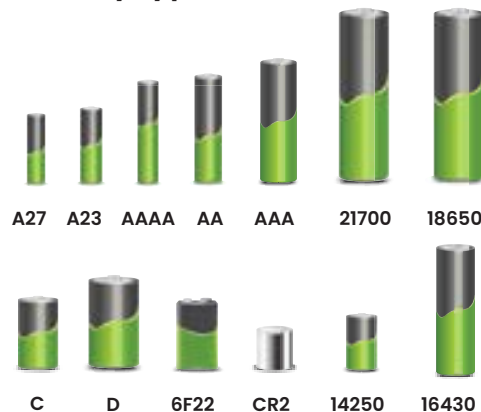
KEY FEATURES

- High purity and productivity of sorting
- Automated separation without need for external marking or labeling
- Artificial intelligence and machine-learning algorithms
- Compliant with EU 2023/1542
- Modular architecture with optional upgrade
- Wide map of sorted types and sizes of batteries
- Customized sorting programs
- Patented technology

SPECIFICATION

- 99.5% sorting accuracy for alkaline and zinc-carbon and > 98 % for other groups
- Throughput capacity up to 430 kg/hour (up to 18 000 batteries/hour)
- Capable of sorting damaged, corroded, unrecognized and counterfeit batteries
- Up to 6 sorting groups per session
- Customized sorting programs
- Operator-friendly with minimal maintenance by one operator
- Volume of the loading hopper up to 250 L / 350 kg
- Detachable loading hopper conveyor with IP66 and cleaning system
- Power supply 220-240V, 50/60Hz, 4kVa
- Dimensions 9 x 2,7 x 2,4 m, weight 2500 kg

System supports popular battery types like



LINEV SYSTEMS®

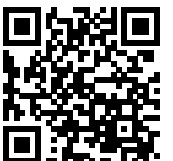
**FIND
HIDDEN
TREASURE**

AI-powered battery
classification by
chemical structure



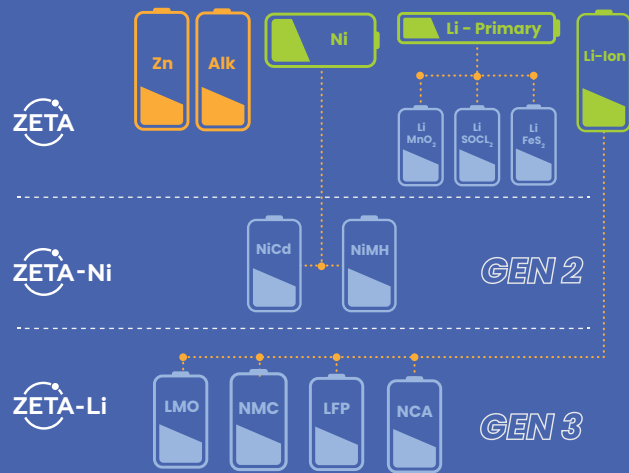
**Multi-sensor classification system
combining X-ray, Z-analysis and optics**

BATTERY ZETA™ platform — the next generation of battery sorting solutions. Designed for industrial recyclers, it enables the recovery of valuable resources by revealing the true chemistry inside each battery.



batterysorting.com

BATTERY ZETA SYSTEMS SORT BATTERIES INTO THE GROUPS



OPERATION

Step 1

On filling the loading hopper, the batteries are moved to the conveyor to separate small garbage, electrolyte dust, small miniature batteries and battery parts.

The batteries are then moved along the conveyor, passing through the detection system, the batteries located on the conveyor belt are analyzed by AI-driven X-ray system, after which battery is assigned to certain group.

The identified batteries are dumped from the conveyor into the appropriate container using pneumatic injectors.

Step 2

Any batteries that cannot be sorted for any reason are directed to a separate container for re-sorting

Step 3

Step 4

Generation 2. BATTERY ZETA-Ni

- Delivers higher purity fractions for Ni-Cd and Ni-MH (over 98% accuracy)
- Ensures compliance with EU Regulation 2023/1542 by to avoid penalties and reputational risks
- AI-driven chemical classification aimed to reduce labor and improve throughput (up to 430 kg/h).
- BATTERY ZETA-Ni can be added as an upgrade to existing BATTERY setups



BATTERY



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Generation 3. BATTERY ZETA-Li

Advanced Lithium Sorting, Ready When You Are

- Solution for precision lithium battery sorting by internal chemistry (NMC, LFP, LCO, and NCA) developed to meet the rising demand for lithium battery recycling:
- Sorting with high-purity lithium fractions (over 95%) even from damaged and unmarked cells.
- Sharing the architectural DNA of BATTERY ZETA but is uniquely designed for lithium-focused applications and can be installed additionally.