RECKELBERG
ENVIRONMENTAL TECHNOLOGIES

IMPACT REACTOR: FRONT RUNNER IN BATTERY RECYCLING

RET Reckelberg Environmental Technologies
Schleusenstraße 1
D-27568 Bremerhaven
Germany

www.reckelberg.com

THE RET IMPACT REACTOR: YOUR KEY TO EFFICIENCY

Discover the future of material recovery with the RET Impact Reactor. Our cutting-edge technology combines performance with outstanding material quality, developed with the highest quality and sustainability standards in mind. The Impact Reactor, a leader in its class, transforms your recycling processes and enables superior black mass quality. At RET, we understand the needs of the industry and the importance of advanced, environmentally friendly solutions. That's why we set new standards. Find out how our Impact Reactor helps conserve our planet's resources while increasing your productivity.

MECHANICAL SEPARATION: EFFICIENT PATENTED IMPACT REACTOR SYSTEM

We are revolutionizing battery recycling with our patented Impact Reactor system. One of the most innovative technologies in the world for the recovery of black mass in the highest output quality.

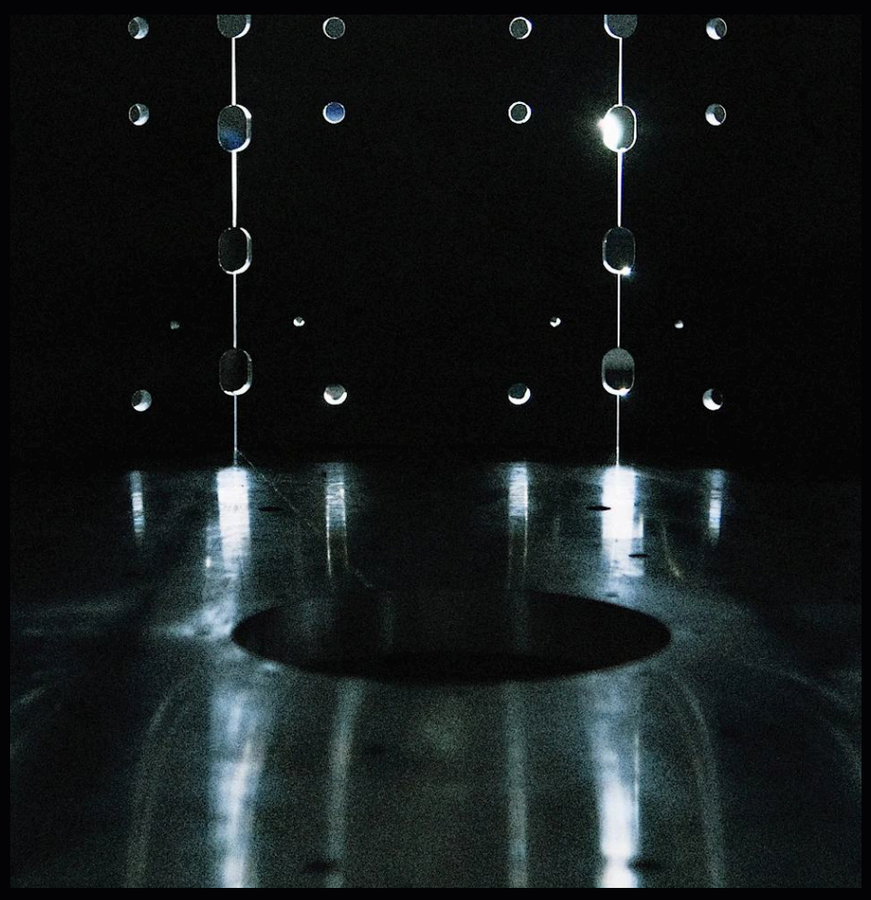
"The Impact Reactor is a crucial element in the battery recycling process and ensures optimum recovery of high-quality materials at all stages. Thanks to its robust design and innovative technology, it helps us to further expand our leading position in the field of sustainable battery recycling."

Benita Reichel I Project Engineer

HIGHLIGHTS

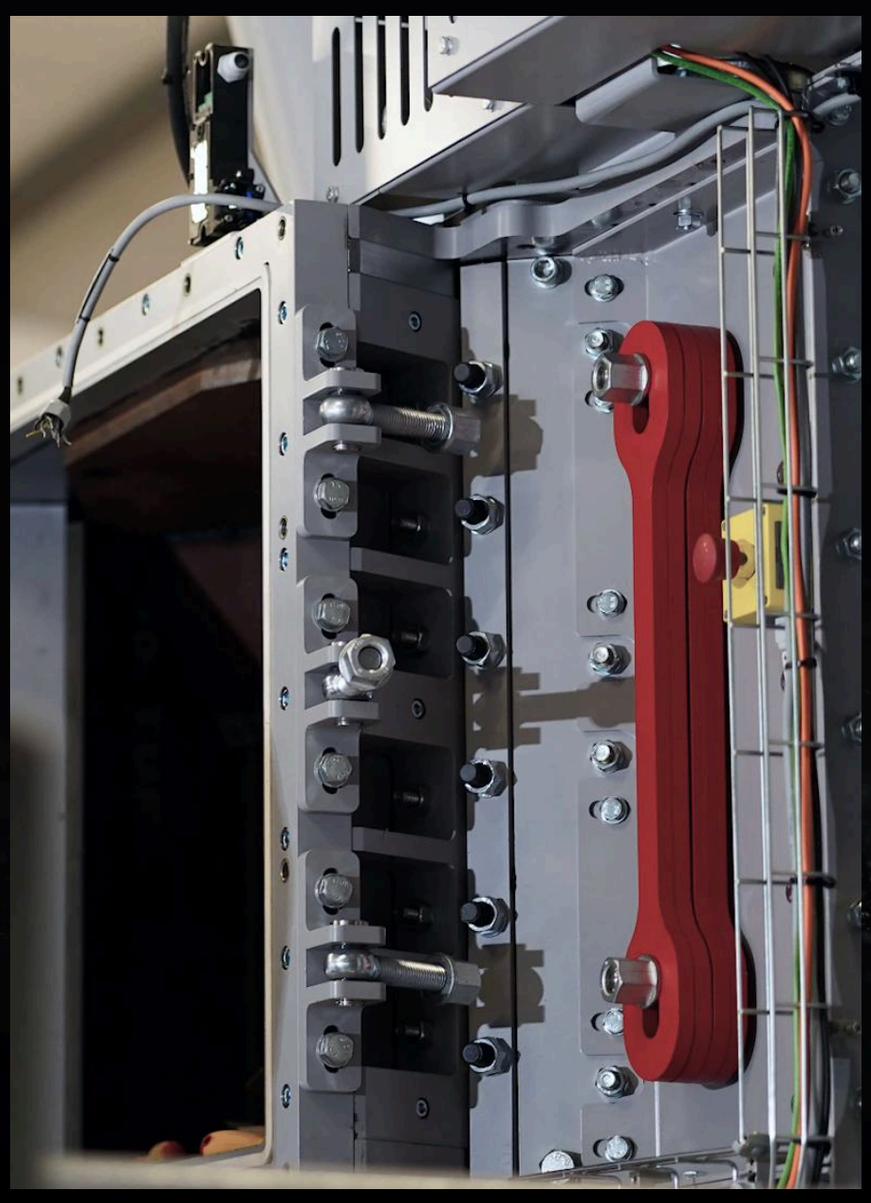
- **Quality**: Highest purity and quality of the recovered black mass
- **Recovery**: Highest yield and recovery of valuable metal fractions
- **Safety**: Integrated separation of hazardous substances in powder form and robust design
- **Insensitivity**: The geometry of the Impact Reactor makes it particularly insensitive to impurities

PRECISE MECHANICS IN THE IMPACT CHAMBER



Our Impact Reactor uses advanced mechanical process technology - specially developed for battery recycling. The effective separation of metals and black mass in the impact chamber is a key advantage of this technology. Specifically, a special rotor throws the material against the walls, which leads to decomposition by utilizing the impact energy of the material against each other and against the highly wear-resistant lining of the impact chamber. This frees heavy housing parts (steel and aluminum) and electrode material (aluminum and copper) from the black mass and largely ensures that they are encapsulated.

OPTIMIZED AIR FLOW FOR MAXIMUM SEPARATION



An innovative air flow system in the Impact Reactor contributes to the precise separation of materials. On the one hand, this air flow is generated by the movement of the rotor, and on the other hand, we have developed a purge air and suction system to transport the black mass upwards. Due to its low weight, it also captures separator foils and smaller aluminum and copper particles. To remove these foils and metals from the black mass, the Impact Reactor has deflector wheels. The appropriate geometry and rotational speed of these deflector wheels ensure precise separation between the black mass and the "impurities". This guarantees the high purity and quality of the recovered black mass.

FOCUS ON EFFICIENCY AND SUSTAINABILITY

The entire process takes place in batches. At the end of a cycle, the remaining coarse material that has been cleaned of black mass is ejected via the discharge flap and can then be further separated. Batch processing in the Impact Reactor enables continuous and efficient material separation. With its patented system and above-average performance, the Impact Reactor guarantees efficiency in the recycling process. In addition to the recycling of batteries, it is also suitable for CFRP processing (separation of carbon fibers from the matrix), circuit boards (assembled and unassembled), fractions from cable recycling (liberation and concentration of copper) and many other composite materials.

DO YOU HAVE ANY QUESTIONS OR WOULD YOU LIKE TO FIND OUT MORE?

MORE DETAILS & INFORMATION
ABOUT DISCHARGE

MORE DETAILS & INFORMATION
ABOUT DRYING

MORE DETAILS & INFORMATION
ABOUT SEPARATION

CONTACT

RET Reckelberg Environmental Technologies
Schleusenstraße 1
D-27568 Bremerhaven
Germany

office@reckelberg.com | +49 471 941 85 900