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## Press Release

**Coperion and Coperion K-Tron at the Battery Show Europe 2023**

# Pioneering Technologies for Continuous Manufacturing of Battery Compounds

*Stuttgart, May 2023* – At this year's Battery Show Europe (23-25 May, Messe Stuttgart/Germany), Coperion and Coperion K-Tron will present their effective total solutions for continuous manufacturing of battery materials. At Booth 10-C45 in Hall 10, visitors can learn about the advantages of this efficient manufacturing process using twin screw extrusion. Solutions from Coperion and Coperion K-Tron span the entire process of anode and cathode slurry production, from intake, conveying and preparation of the active materials, to feeding and mixing in the extruder, to material handling of the finished masses to further processing. Every step in Coperion's entire system is synchronized with every other one. Plant design, development and realization of the entire system with a complete containment concept come from a single source.

The focus of this year's appearance at the Battery Show is manufacturing of active materials, and cathode and anode masses using continuous extrusion. Compared to conventional production, the continuous process is markedly more efficient. Along with increased profitability from reduced space, personnel and cleaning needs, the system also offers great flexibility with regard to different formulations and changes to the process. Moreover, battery compound production can be accomplished using either semi-dry or dry process when using an extruder.

## **Safe conveying and feeding for processing active material and black mass recycling**

Proper processing of the active material plays an important role in battery compound manufacturing. Since the active material is fundamentally responsible for energy storage in the

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battery, precise manufacturing of this material is essential for high-end product quality. Active material is manufactured in a multi-step process that relies upon both safe handling and accurate feeding of bulk materials and additives. Coperion's conveying systems, as well as Coperion K-Tron's feeders, are used for the safe transport and high accuracy in feeding ingredients. The same holds true for black mass recycling. Due to the use of hazardous materials in active cathode material manufacturing, as well as in black mass recycling, secure containment is essential. Here, Coperion conveying components, with their dustproof design and gentle handling of abrasive bulk materials, are among the most impressive features for manufacturers. Coperion K-Tron high-accuracy, reliable feeders are suitable for accurate, safe feeding into the process, thanks to state-of-the-art weighing and control technology which ensures that the active material is manufactured under protected conditions at a high level of quality.

### **Semi-Dry or Dry Process: Future-Proof Continuous Manufacturing of Battery Compounds**

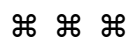
Using twin screw extruders as an essential component in continuous processes provides battery manufacturers with a highly efficient method of production. With the ZSK Mc<sup>18</sup> twin screw extruder, Coperion presents the ideal solution for high reliability, profitability and meeting the highest demands for quality and throughput in battery compound production. Due to the extruder's high torque, both semi-dry and dry processes can be realized using this manufacturing process. The individual process sections within the extruder allow for mixing of dry masses, thus smoothing the path toward future forms of processing. In comprehensive tests, battery compounds have already been successfully manufactured on Coperion extruders in both semi-dry and dry processes.

For recipe development, Coperion is presenting efficient solutions using the ZSK 18 MEGAlab and the ZSK 26 Mc<sup>18</sup> twin screw extruders. These laboratory and small-series extruders are designed for the demands of research and recipe development, and are thus ideally suited for testing new, expanded or modified recipes as well as for validating them. These extruders provide high performance even at the smallest batch sizes, making short, quick experiments possible. Both models have been developed on the basis of proven ZSK technology, ensuring reliable production-level scale up. The system is constructed as a space-saving unit — the feeders are mounted on a rack above the extruder, allowing the laboratory machine to be installed even in the smallest space.

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### **About Coperion**

Coperion ([www.coperion.com](http://www.coperion.com)) is a global industry and technology leader in compounding and extrusion systems, sorting, size reduction and washing systems, feeding systems, bulk material handling and services. Coperion develops, produces, and services plants, machinery, and components for the plastics and plastics recycling industry as well as the chemical, batteries, food, pharmaceutical and minerals industries. Coperion employs 4,000 people in its three divisions, Polymer, Food, Health & Nutrition, and Aftermarket Sales & Service, and in its 40 sales and service companies worldwide. Coperion is an Operating Company of Hillenbrand (NYSE: HI), a global industrial company that provides highly-engineered, mission-critical processing equipment and solutions to customers serving a wide variety of industries around the world. [www.hillenbrand.com](http://www.hillenbrand.com)



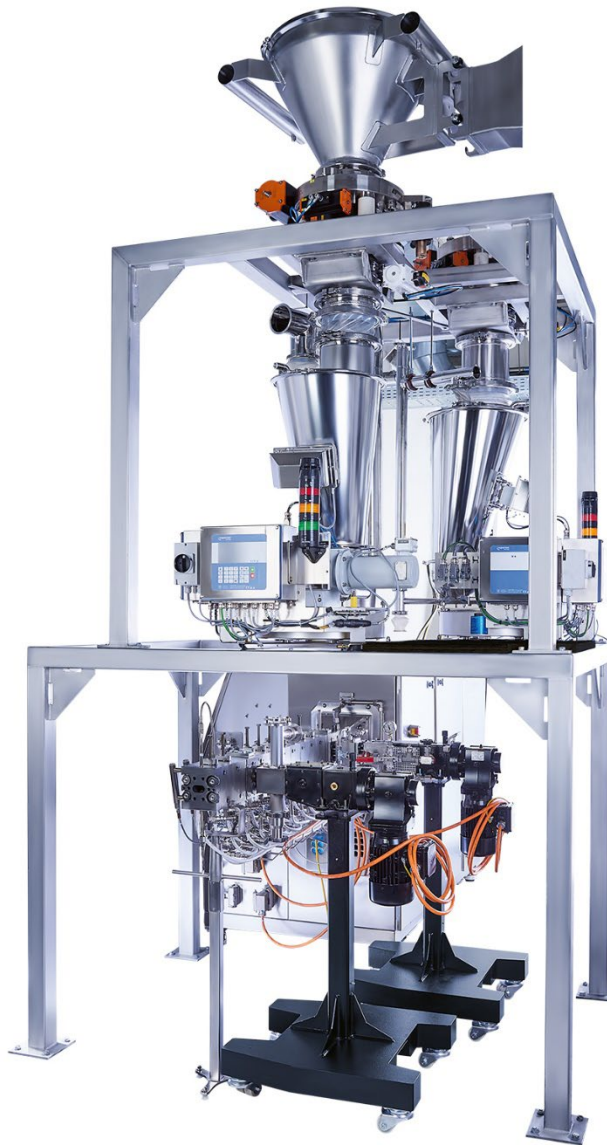
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*Compact size is one feature of the Coperion ZSK 26 Mc<sup>18</sup> laboratory extruder with Coperion K-Tron feeders for recipe development and validation.*

*Photo: Coperion, Stuttgart Germany*

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*Reliable Coperion K-Tron high-accuracy feeders are suitable for accurate, safe feeding into the process, thanks to state-of-the-art weighing and control technology.*

*Photo: Coperion K-Tron, Niederlenz, Switzerland*