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Press Release

High-Performance Battery Cells for Specialized Automotive Applications

Cellforce Group Selects Coperion Extruder for Continuous Battery Compound Processing

Stuttgart, September 2022 – Two Coperion ZSK Mc¹⁸ twin screw extruders are part of the high-performance battery cell production facility planned by Cellforce Group GmbH – a joint venture between Porsche AG and CUSTOMCELLS Holding GmbH. Beginning in 2024, this new European production site will be a major force in Cellforce Group's ability to serve the high-performance battery market segment for specialized automotive applications. The demanding manufacturing process will feature both state-of-the-art extruders and highly accurate Coperion K-Tron feeders for the continuous production of battery compounds. With their high degree of flexibility, the two extrusion lines will be able to produce a variety of formulations. The continuous process structure ensures they are reproducible at consistently high product quality.

Quality and Cost Efficiency

The outstanding mixing properties of the ZSK twin screw extruders was a key feature in their selection for this process. Their throughput can be precisely controlled to achieve an optimal overall process. The high degree of automation reduces operating costs in comparison to labor- and personnel-intensive discontinuous processes and results in reproducible, continuously high product quality.

Said Markus Fiedler, Process Technology, Team Leader of Chemical Applications at Coperion, "The excellent mixing behavior of the ZSK twin screw extruders makes it possible to achieve the especially high homogeneity required for the formulation of these high-performance batteries, which contains a high percentage of silicon. Their modular construction also facilitates

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adaptation to new recipes. Thus, future optimizations, such as the elimination of toxic solvents, can be implemented quickly and without impacting quality.”

One important aspect in the design of the process in general as well as the individual components is the safe isolation of the manufacturing process. Painstaking containment designs prevent impurities and contamination from toxic materials in the workplace and the environment. For this reason, the extruder and the high-accuracy Coperion K-Tron feeders are designed to be dust-tight, fulfilling the highest requirements for maintaining purity of the product and safety of the work environment.

“We are pleased that Coperion has been given the opportunity to contribute to this project with our twin screw extruders, feeders and material handling systems, thereby doing our part to move the energy revolution forward a bit. The Cellforce Group production facility will be the cornerstone for further projects of this kind in Europe,” Martin Doll, Business Segment Manager for Chemical Applications and Batteries at Coperion, added confidently.

“We’ve reached a milestone here with an innovative process in cell production that allows us to launch a cutting-edge technology in Europe, in terms of both quality and capacity,” added Dr. Markus Gräf, Managing Director of the Cellforce Group.

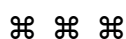
About Coperion

Coperion (www.coperion.com) is the global market and technology leader in compounding systems, feed systems, bulk goods systems, and services. Coperion develops, produces, and services plants, machinery, and components for the plastics, chemical, pharmaceutical, food, and minerals industries. Coperion employs 2,500 people worldwide in its two divisions: Polymer and Strategic Markets and Aftermarket Sales and Service, as well as its 30 sales and service companies. Coperion K-Tron is a Coperion brand.

About the Cellforce Group:

Cellforce Group GmbH (CFG) plans to develop and produce high-performance lithium-ion pouch cells for special automotive applications starting in 2024. Cellforce is a joint venture in which Porsche AG holds a 72.7 percent stake, with the remaining shares held by CUSTOMCELLS Holding GmbH. The managing directors are Markus Gräf as Chief Operating Officer (COO), Wolfgang Hüsken as Chief Financial Officer (CFO). The workforce is expected to grow to up to 100 people by 2025.

More information: <https://www.cellforcegroup.com>



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<https://www.coperion.com/en/news-media/newsroom>

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Continuous extrusion of battery compounds using the ZSK twin screw extruder offers numerous advantages, including consistently high battery compound quality.

Photo: Coperion, Stuttgart Germany

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Peter von Hoffmann, General Manager, Business Unit Compounding Machines Engineering Plastics and Special Applications at Coperion, Dr. Markus Gräf, Managing Director Cellforce Group and Martin Doll, Business Segment Manager for Chemical Applications and Batteries at Coperion (f.l.t.r.).

Photo: Coperion, Stuttgart Germany