



QuantumScape Releases Next-Generation Solid-State Battery Separator Equipment, Cobra

December 5, 2024

Achieving this final key goal of 2024 enables the company's higher-volume sample production in 2025

SAN JOSE, Calif.--(BUSINESS WIRE)-- [QuantumScape Corporation](#) (NYSE: QS), a leader in solid-state lithium-metal battery technology, today announced that next-generation heat treatment equipment for its separator production process, Cobra, has been developed, delivered, installed and released for initial separator processing. Achieving this milestone on schedule puts the company on track to deliver higher-volume samples of its first planned commercial product, QSE-5, in 2025, and is a major step toward the commercialization of solid-state batteries for electric vehicles.

Cobra represents a significant innovation in ceramic solid-state separator production, benefiting both scalability and cost efficiency. This milestone is the culmination of years of advanced R&D on QuantumScape's fast separator production process – the core innovation that will allow its battery technology to be manufactured at gigawatt-hour scale. The company is targeting Cobra integration into its cell production baseline in 2025.

"Cobra is a true breakthrough in ceramics manufacturing, and it will pave the way for the scale up of our battery technology," said Tim Holme, co-founder and CTO of QuantumScape. "I'm delighted with how the team has overcome challenges and kept the process roll-out on track this year."

"We set challenging and ambitious goals at the beginning of the year, and it required a focused team effort to achieve all of them," said Dr. Siva Sivaram, CEO and president of QuantumScape. "There is a lot of work ahead of us, and with our track record of consistent execution and delivery on our milestones, I fully expect the team to continue building momentum toward gigawatt-hour scale up of our technology."

The company established four annual goals at the beginning of 2024, all focused on integrating the improvements demonstrated at the component level in 2023 into the QSE-5. With the achievement of this milestone, the company has now fulfilled all four of its key annual objectives for 2024.

1. **Prepare for Cobra production in 2025** . With today's announcement, QuantumScape has taken delivery, installed and released for initial separator processing key equipment for its advanced separator manufacturing process, Cobra.
2. **Begin low-volume QSE-5 prototype production** . In October, QuantumScape announced it had started producing and shipping the first low-volume B samples battery cells for automotive customer testing. The QSE-5 B sample features energy density of 844 Wh/L and is able to fast charge from 10% to 80% in 12.2 minutes.
3. **Ramp Raptor process** . [Raptor](#), the first stage of QuantumScape's fast separator production process, entered the company's baseline process in the third quarter of 2024. These films are used in the low-volume QSE-5 B samples.
4. **Ship Alpha-2 samples** . Earlier in the year, the [company announced](#) it started shipping Alpha-2 samples to customers. These cells were precursors to the B samples.


About QuantumScape Corporation

QuantumScape is on a mission to revolutionize energy storage to enable a sustainable future. The company's next-generation solid-state lithium-metal battery technology is designed to enable greater energy density, faster charging and enhanced safety to support the transition away from legacy energy sources toward a lower carbon future. For more information, visit www.quantumscape.com.

Forward-Looking Statements

Certain information in this press release may be considered "forward-looking statements," within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including, without limitation, statements regarding QuantumScape's plans and objectives for future operations and growth, including the production and timing of higher-volume battery samples, the performance and integration of the new production equipment, the performance and scale up of its technology and its applications, and the potential impacts of QuantumScape's technology, among others. These forward-looking statements are based on QuantumScape management's current expectations, assumptions, hopes, beliefs, intentions and strategies regarding future events and are based on currently available information as to the outcome and timing of future events. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely upon forward-looking statements as predictions of future events. The events and

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Source: QuantumScape Corporation