**Thermal Management And Range: Fluid Connectors Optimize E-Mobility**

**Freudenberg Sealing Technologies presents pioneering materials for high-performance e-drives at the Battery Show Europe.**

**Weinheim, May 20, 2025. The materials experts at Freudenberg Sealing Technologies are setting new benchmarks in thermal management for e-mobility. From June 3–5, 2025 at the Battery Show Europe in Stuttgart, the company will present its latest materials developed to provide rapid charging and higher battery capacity. It will also demonstrate the high level of design flexibility these materials offer for their integration into customer-specific production processes.**

**Charging times and heat balance: Where is the market heading?**

Across much of Europe, battery cells are still being charged overnight, while so-called “range anxiety” is keeping many electric vehicle drivers from planning long-distance trips. This is about to change. The global automotive industry is rapidly advancing technologies that enable fast and safe battery charging. Progress has been substantial – and Freudenberg Sealing Technologies is playing a key role: Its leading-edge product lines make it easy to install vibration-resistant connectors with high offset tolerances. At the same time, newly developed materials can both electrically insulate and dissipate heat. With these products, the company is solving several fundamental challenges in e-mobility: increased driving ranges, including higher battery capacities, longer battery life, ultra-fast charging, and precise thermal management.

**Expanding the portfolio: Material expertise for the automotive industry**

In the highly dynamic electric vehicle market, a key factor is the rapidly advancing battery technology. Leading automakers expect their suppliers to develop and test high-performance materials and products with short delivery times. Freudenberg Sealing Technologies has significantly expanded its portfolio of battery components. Specific products such as prismatic battery cell caps, busbar seals and components for pressure regulation or emergency degassing enhance the efficiency and safety of modern battery systems. With its high level of materials expertise in elastomers and plastics, the company can develop precisely tailored solutions to meet the strict requirements of the automotive sector. One example: fluid connectors for thermal management, which help bridge the gap between larger battery capacities and faster charging cycles.

**Optimizing the charging capacity: fluid connectors as drivers of innovation**

As conventional cooling systems no longer have the capacity to keep up with ultra-fast charging, thermal management of battery cells becomes increasingly important. Freudenberg Sealing Technologies offers a key component for high-performance electric drive systems in the form of its fluid connectors. They accommodate the thermodynamics of different cooling fluids under high load and ensure cooling between the battery cells. These materials, perfectly tailored to their operating environments, also extend the battery life. The modular designs of the drive systems require a wide variety of connectors and sealing elements – all of which Freudenberg Sealing Technologies can provide. With its product lines, the company can respond quickly to individual material and design requirements.

**Smart connection: Supporting development programs and ramping up production**

Jürgen Mall, Head of Product Management, Special Sealings Automotive lead center at Freudenberg Sealing Technologies, emphasizes how important it is for the components to interact perfectly with each other in order to control heat development during charging. He says: “In the field of e-mobility, we offer our customers industry-leading design and manufacturing expertise, supported by a global network of production sites. On this basis, we have our sights set on the future and look forward to presenting and advancing our latest developments with industry professionals at the Battery Show Europe.”

Freudenberg Sealing Technologies will be presenting these and other product innovations at the Battery Show Europe: Hall 10, Stand D-26

More information at <https://www.fst.com/products/special-sealing-products/fluid-connectors-for-thermal-management>

*Photo:* *FST\_img\_connector in snake pin cooling concept.jpg / © Freudenberg Sealing Technologies 2025*

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**About Freudenberg Sealing Technologies**

Freudenberg Sealing Technologies is a long-standing technology expert and global market leader for sophisticated and innovative applications in sealing technology and electromobility. With its unique materials and technology expertise, the company is a proven supplier of sophisticated products and applications as well as a development and service partner for customers in the automotive industry and general industry. In the 2024 financial year, Freudenberg Sealing Technologies generated sales of around €2.5 billion and employed around 13,000 people. Further information at [www.fst.com](http://www.fst.com)..

The company is part of the global Freudenberg Group, which generated sales of almost 12 billion euros in the 2024 financial year with its Seals and Vibration Control Technology, Nonwovens and Filtration, Household Products and Specialties divisions and employed around 52,000 people in some 60 countries. Further information at [www.freudenberg.com](http://www.freudenberg.com).

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