

Press Release

Hannover Messe 2025

Schaeffler presents innovative technologies for the production of green hydrogen

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- Schaeffler's hydrogen electrolyzer makes industrial production more sustainable
- Expanded hydrogen portfolio covers the entire hydrogen value chain
- Schaeffler bipolar plates with Enertect coating make hydrogen applications even more powerful

The Motion Technology Company Schaeffler is showcasing innovative technologies for the future field of hydrogen at the Hannover Messe. The company takes a holistic view of the hydrogen value chain and, with its decades of product expertise, offers solutions for both the production and use of this sustainable energy carrier. At the Hannover Messe, Schaeffler will present electrolyzers with outputs of up to 1 megawatt, as well as fuel cell stacks and bipolar plates featuring the innovative Enertect coating. This multi-award-winning coating is free of precious metals and excels in hydrogen applications due to its exceptional electrical conductivity and corrosion resistance.

"Schaeffler's goal is to drive the energy transition and thus the decarbonization of various industrial sectors," says Florian Windisch, head of the Hydrogen business unit at Schaeffler. "To achieve this, industrial-scale production of green hydrogen is crucial. At Schaeffler, we focus on the entire hydrogen value chain – from production via electrolysis to the use of hydrogen in fuel cells."

Electrolyzers for industrial applications

At the Hannover Messe, Schaeffler will demonstrate how the use of green hydrogen in production can contribute to the energy transition in the industrial sector. At the heart of the display is a 1-megawatt electrolyzer capable of producing around 450 kilograms of hydrogen per day. Schaeffler's product range includes Proton Exchange Membrane (PEM) electrolyzer stacks with scalable outputs ranging from 50 kW to 1 MW. Smaller electrolyzers are also available without membranes, making them ideal for research and development projects.

A key advantage of Schaeffler's electrolyzer is its robust design, which enables a high power density due to a large active cell area. These characteristics make PEM electrolyzers highly versatile and particularly suitable for demanding applications where efficiency and reliability are essential. They can be integrated into hydrogen production systems on a small, medium, or large industrial scale – from decentralized commercial applications to hydrogen production linked directly to renewable energy sources, as well as hydrogen supply and refueling systems.

Innovative fuel cell stacks and bipolar plates

Another element of the hydrogen value chain is the use of hydrogen. Schaeffler is presenting an innovative fuel cell stack that, despite its low weight of less than 0.5 kg/kW, offers a particularly high power density for e-mobility applications. The fuel cell stack features an advanced bipolar plate coating system that can be customized to meet specific customer requirements. The company has also developed the Enertect coating family, which can be used in both electrolyzers and fuel cell systems. Enertect is free of precious metals and offers extremely high corrosion resistance. The coating reduces the CO₂ footprint of the bipolar plate by more than 75 percent and significantly increases the efficiency of both fuel cells and electrolyzers. The entire manufacturing process for the metallic bipolar plates takes place in-house at Schaeffler.

Schaeffler at the Hannover Messe

Schaeffler's innovative hydrogen technologies will be on display at the Hannover Messe from March 31 to April 4, 2025, in Hall 5, at Booth D18. Additionally, Schaeffler will have a dedicated hydrogen booth located in Hall 13, at Booth E41/1. As part of the Schaeffler program, a presentation titled "Metallic Bipolar Plate Production: Challenges & Mitigation Strategies" will take place on April 2, 2025, at 1:45 p.m. This event is part of the "Hydrogen + Fuel Cells Europe" program in Hall 13, Booth A30.

Learn more about Schaeffler's participation in Hannover Messe 2025: [Schaeffler at the Hannover Messe 2025 | Schaeffler Group](#)

Schaeffler Group – We pioneer motion: The Schaeffler Group has been driving forward groundbreaking inventions and developments in the field of motion technology for 80 years. With innovative technologies, products, and services for electric mobility, CO₂-efficient drives, chassis solutions and renewable energies, the company is a reliable partner for making motion more efficient, intelligent, and sustainable – over the entire life cycle. Schaeffler describes its comprehensive range of products and services by means of eight product families: From bearing solutions and all types of linear guidance systems through to repair and monitoring services. Schaeffler is with around 110,000 employees and more than 250 locations in 55 countries, one of the world's largest family-owned companies and one of Germany's most innovative companies.

Schaeffler's 1-megawatt electrolyzer can produce around 450 kilograms of green hydrogen per day. Picture: Schaeffler AG

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The entire manufacturing process for the metallic bipolar plates takes place in-house at Schaeffler. Picture: Schaeffler AG

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