

Press Release

FEV presents solutions for the emission-free transportation sector of the future at IAA TRANSPORTATION

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Aachen, September 2024 – FEV, a leading global innovation driver in several sectors, will present its solutions for reducing CO₂ emissions in the transportation of passengers and goods at IAA TRANSPORTATION in Hanover from September 17 - 22 for the first time. The company develops hydrogen combustion engines and fuel cell propulsion systems, which will play a decisive role in the transformation of the mobility sector. Equally important are modern battery electric propulsion solutions. FEV is also making significant developments in this area and will be showcasing them at the leading trade fair for logistics, commercial vehicles and the transportation sector in Hanover.

The mobility sector is responsible for around one fifth of total global carbon emissions. The defossilization of this sector is therefore one of the biggest tasks of the coming years. FEV is committed to help shaping this process successfully with solutions that are innovative and open to various technologies.

“Cutting the CO₂ emissions in the transportation sector can only be achieved through a sensible mix of different technologies. Hydrogen demonstrates its potential for reducing CO₂ emissions in fuel cells and combustion engines for long-distance applications. In urban and regional environments, battery-powered drives are another effective solution for the emission-free mobility of tomorrow,” said Dr. Patrick Hupperich, CEO of the FEV Group. “Synthetic fuels should also not be underestimated when considering the total fleet of over 300 million vehicles in the EU alone. FEV brings a high standard of expertise and experience in all these areas from more than 45 years in the development of innovative engine and propulsion technology and is involved across all technologies.”

At the IAA TRANSPORTATION, the Aachen-based company with locations on six continents will be demonstrating the wide range of its sustainable solutions. These range from long-distance transportation to last-mile delivery. The portfolio on display comprises a battery-powered electric drive for pedelecs and e-bikes, an electric drive unit for commercial vehicles and a hydrogen combustion engine for non-road machinery applications. A fuel cell solution for light trucks up to 7.49 tons rounds off the exhibits and reflects the versatility and scalability of FEV's solutions.

Climate-neutral hydrogen combustion engine

Developed by FEV together with project partner Kohler Engines Co., the 2.5-liter direct injection engine delivers 55 kW of power with a maximum torque of 315 Nm. FEV contributed its expertise in engine development to the design of the unit, which is designed

for hydrogen operation. Extensive simulation and performance tests were also carried out. Emission measurements proved that the unit, originally designed as a diesel engine, no longer produces any relevant pollutant emissions. The simulation tool chain and engine control software specially developed at FEV for hydrogen combustion engines was used for this purpose.

Fuel cell system for light commercial vehicles

Another milestone is the fuel cell concept that FEV has realized for the Italian IVECO Group. FEV is the exclusive development partner responsible for the electrification of the Light Commercial Vehicle (LCV) fleet.

At the IAA TRANSPORTATION, FEV presents a 90 kW fuel cell module that the engineers have tailored for optimized integration into the existing IVECO DAILY model range. In this project, the engineering service provider was responsible for the mechanical, electrical and thermal integration of the fuel cell system and the hydrogen tanks. FEV's experts were also responsible for the gateway development and implementation of the specially developed energy management system for fuel cell powertrains.

The IVECO DAILY, which weighs up to 7.2 tons when fully loaded, has a range of up to 350 km with its 140 kW drive. The 12 kg of hydrogen in the 700 bar tanks can then be refilled in less than 15 minutes. As an energy reserve, the vehicle has a 37 kWh lithium-ion battery that recuperates braking energy and makes it available during peak loads.

Alongside innovative electric propulsion solutions, FEV presents solutions for the holistic development of sustainable commercial vehicles and buses: from the conception and design of individual components and assemblies to the integration and testing of entire vehicles - from mechanical components to complex lighting and sound applications.

Turnkey vehicle development

As a globally leading engineering service provider, FEV has in-depth expertise in all application areas of vehicle development. This includes the design and optimization of vehicle bodies and electronic components as well as the development of sustainable propulsion systems. The range of services also includes software development for driver assistance systems, including autonomous vehicles. The portfolio is complemented by an extensive benchmarking program and a multi-award-winning range of consulting services for strategic topics and management questions in sustainable corporate development.

Visitors to the IAA TRANSPORTATION are cordially invited to convince themselves of FEV's innovative solutions at booth C-14 in hall 24.

Footage



Caption: For the first time, FEV presents its entire portfolio for sustainable propulsion solutions at the IAA TRANSPORTATION in Hanover

Source: FEV

About FEV

FEV has always pushed the limits.

FEV is a globally leading engineering provider in the automotive industry and internationally recognized leader of innovation across different sectors and industries. Professor Franz Pischinger laid the foundations by combining his background in academia and engineering with a great vision for continual progress. The company has supplied solutions and strategy consulting to the world's largest automotive OEMs and has supported customers through the entire transportation and mobility ecosystem.

As the world continues to evolve, so does FEV.

That's why FEV is unleashing its technological and strategic expertise into other areas, applying its forward thinking to the aerospace and energy sectors. Thanks to its software and system expertise, the company also leads the way making intelligent solutions available to everyone. FEV brings together the brightest minds from different backgrounds and specialties to find new solutions for both current and future challenges.

But FEV won't stop there.

Looking ahead, FEV continues to push the limits of innovation. With its highly qualified over 7,100 employees at more than 40 locations globally, FEV imagines solutions that don't just meet today's needs but tomorrow's. Ultimately, FEV keeps evolving – to a better, cleaner future built on sustainable mobility, energy and software that drives everything. For the company's partners, its people and the world. [#FeelEVolution](#)