



pepper at IAA Transportation 2022: Innovative electrification solutions for used and new commercial vehicles - the modular pepper drive system

Hanover, 09/19/2022 – pepper motion GmbH will be presenting its innovative, modular drive system for the cost-efficient electrification of commercially relevant vehicle models (buses, trucks, used and new vehicles) at this year's IAA Transportation. The award-winningetrofit electrification kit permits used diesel vehicles to be converted quickly and flexibly into zero-emission e-commercial vehicles in series production quality. The drive system is also now available to OEMs and special vehicle builders as a general-purpose Tier 1 solution. This is a huge advantage for manufacturers, as they can now offer their customers emission-free, state-of-the-art new vehicles in larger numbers without having to undertake time-consuming development work themselves.

Time-to-market: Outsourcing as the key to success

With its Tier 1 electrification kit, pepper is offering OEMs and special vehicle manufacturers a zero-emissions drive system that can be flexibly integrated into vehicle development or into existing series. Here, manufacturers benefit from the pepper's innovative, state-of-the-art technology. This dramatically shortens development times, and electric vehicles produced in-house can be brought to market and sold quickly and cost-effectively.

"The timely, cost-effective decarbonization of commercial vehicle fleets is essential. However, this presents major challenges for fleet operators as well as OEMs. The market is calling for flexible and technology-neutral electrification solutions for the short term. The latest market studies forecast a share of approx. 30% of electrically powered commercial vehicles, buses, and trucks in Europe by 2030. At pepper, we see in Europe a potential of around 30,000 vehicles by 2030," says Andreas Hager of pepper. "We are very excited to be able to present our innovative, modular drive system for used and new vehicles to our customers – fleet operators and OEMs – at IAA Transportation. We have only recently signed a memorandum of understanding with the Škoda Group for the conversion of buses. Other manufacturers have already recognized the benefits for themselves and are engaged in detailed discussions with us (in our role) as a Tier 1 supplier."

Short term retrofitting solution

At present, new electrified vehicles can only be purchased on the market with significant delays in delivery. pepper offers a short-term, cost-effective alternative: its award-winningetrofit electrification kit in series production quality enables used diesel commercial vehicles to be converted in OEM quality within approximately four to six weeks – without long delivery times and in significant volumes.

At the same time, pepper's drive system is completely open to new technology: the battery-electric variant is available in series quality for vehicles such as the Mercedes-Benz Actros MP5 and MP3. A highly efficient, next-generation fuel cell powertrain – of particular



interest for range improvement – is currently under development as part of an H2 research and development project. The first vehicles (Mercedes-Benz Atego truck and Mercedes-Benz Citaro C2 bus) will enter customer trials before the end of 2022 and are scheduled to hit the road in series production quality in the short term, by 2024 at the latest.

Accelerated decarbonization of commercial vehicle fleets

The reduction of CO2 emissions required by the European Union and the German government and the associated need to decarbonize truck and bus fleets call for fast, cost-effective electrification solutions for fleet operators and OEMs. Only an individual combination of retrofitting existing vehicles and purchasing new vehicles will enable the successful, timely realization of environmental goals and meet the resulting high demand for affordable e-commercial vehicles. The universal, modular drive system designed specifically for the electrification of used and new vehicles is pepper's market-driven response – featuring state-of-the-art technology in all individual components.

Elements of the pepper drive system

Modular and fully validated packages are available; they include the battery, the electric motor, ancillary components, the control unit with system software developed in accordance with ISO 26262 for functional safety, and the interface to the (existing) vehicle. The technological heart of the drive systems is the company's proprietary VCU (vehicle control unit) system architecture software. The battery capacity of the electric drive system can currently scale from the smallest version with 120 kWh to 240 or over 360 kWh net, depending on the application scenario.

Retrofit instructions and documentation in combination with partner training allow retrofitting and maintenance by certified conversion partners at the customer's site – and consequently also increased local added value.

pepper motion GmbH will be presenting its solutions for mobility of the future at **IAA Transportation 2022** in Hanover in **Hall 20, Booth A21**.



About pepper motion GmbH

pepper – electrifying transportation! The German privately financed company with headquarters in Denkendorf and offices in Paderborn, Vienna and Garching near Munich employs more than 100 people.

As the first digital OEM worldwide (without its own warehousing and manufacturing), pepper offers innovative solutions for the electrification (retrofitting) of used and new commercial vehicles such as trucks in distribution transport, buses in local public transport (LPT), and municipal vehicles. pepper is ISO 9001 certified and is the only supplier of conversion solutions to ensure operational safety according to international automotive industry standards such as ISO 26262 for functional safety. A network of international partners guarantees service and availability across Europe.

With its holistic approach to telematics, charging infrastructure, fleet management and autonomous driving, the company designs quickly implementable and cost-efficient solution packages for sustainable mobility transformation and a "second life" for existing commercial vehicles. It effectively supports the implementation of the CO2 reduction targets in accordance with the European Green Deal Agreement and the Clean Vehicles Directive, which came into force in 2021.

pepper was awarded the German Mobility Prize (2018) and the Austrian VCÖ Mobility Prize (2019), as well as being voted one of the top 50 start-ups in Europe in the field of mobility (2020, EUSP).

The subsidiary pepper motion Austria GmbH, based in Vienna, is the pepper Group's software development center. pepper is represented with further sales locations in France, Italy and Poland.

More information: www.peppermotion.com

Press contact:

360°communications GmbH

E-mail: peppermotion@360communications.de

Tel: +49 89 5436994 00