Press release

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Step out. Park. Charge. MAHLE Develops Automated Charging for Electric Vehicles

- MAHLE Autonomous Park & Charge combines autonomous parking with automatic wireless charging
- The ideal solution for private and commercial users
- New MAHLE system test bench in Stuttgart supports series development of future wireless charging systems
- Joint evaluation of wireless charging technology with the BMW Group

Anyone who wants to avoid searching for an EV charging space in parking garages and handling a charging cable will find the right technology at MAHLE today. The Stuttgart-based automotive supplier has further advanced its wireless charging technology for electric vehicles and is now offering automobile manufacturers a new Park & Charge pilot that combines autonomous parking with automatic charging. Private users could benefit from this convenient solution in the future if they use the corresponding charging technology. At the same time, the technology opens new opportunities for fleet operators, such as car rental companies, logistics companies, and delivery services, to automate the charging processes of their electric vehicles. For testing and validation purposes, MAHLE has established a state-of-the-art wireless charging system test bench in Stuttgart that already meets the requirements of future generations of inductive charging systems. To further evaluate the wireless charging technology, the automotive supplier is collaborating with the BMW Group.

“Wireless charging has the potential to make electric mobility much easier in everyday life. Key to acceptance is high efficiency, maximum ease of use, the ability to automate the process, and seamless integration into existing vehicle and infrastructure concepts,” said Dr. Marco Warth, Vice President of Corporate Research and Advanced Engineering at MAHLE. “With our Park & Charge pilot, we are taking the next step by laying the foundation for an automated charging process that not only enhances convenience for users but also opens up new application opportunities for fleet operators.”

The new MAHLE system uses the vehicle´s camera and AI-based algorithms to identify suitable parking spaces with integrated charging infrastructure, without requiring additional sensors. It also supports precise vehicle positioning over the charging pad installed in the ground using the Differential Inductive Positioning System (DIPS). Once the vehicle is parked, energy transfer starts automatically and completely contact-free.

DIPS provides the technological foundation for the positioning accuracy of the Park & Charge pilot. Two years ago, SAE International declared it as a global industry standard. The Park & Charge system enables contactless charging up to 11 kW and achieves an efficiency of more than 92 percent under real-world vehicle conditions. This makes the wireless technology of MAHLE nearly as efficient as conventional wired charging. MAHLE is currently validating its core technology against real vehicle requirements together with the BMW Group in a BMW iX3.

To further develop and validate its wireless charging technology, MAHLE has converted a former test facility for internal combustion engine development in Stuttgart for high-voltage and e-mobility applications. “By setting up this state-of-the-art system test bench in a former combustion-engine test cell, we are making transformation tangible. Through the close integration of development, software engineering, validation, and maintenance, we bring together our full expertise within a single team and deliver end-to-end solutions, from system know-how to the final product,” said Dr. Marco Warth.

The modern facility tests realistic use cases for contactless energy transfer under controlled environmental conditions. It also enables validation of the charging system’s safety functions, including the detection of foreign objects in the air gap between the vehicle and the ground pad, as well as measurement of the system’s stray magnetic field.

By flexibly replicating different vehicle architectures, including the BMW Neue Klasse platform, MAHLE can validate the integration of the vehicle coil into the front end, as well as shielding and safety concepts, at an early stage of development. To support future technology advancements, the facility is designed for charging capacities up to 30 kW.

Another advantage of the MAHLE technology is that it already supports bidirectional charging. This means that electric vehicles will not only be able to draw energy from the power grid, but can also return stored electricity when needed, helping to stabilize future energy systems.

The development of intelligent charging solutions, alongside electric motors, is one of the key focus areas of the electrification strategy of MAHLE. By expanding its development and validation capabilities for e-mobility applications, MAHLE is

underscoring its transformation from a traditional powertrain specialist into a technology partner for sustainable mobility solutions of the future.

Note for editors: This press release and the accompanying photo material can be found at https://newsroom.mahle.com/press/en/.

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The MAHLE Positioning System is an SAE international industry standard.



The Park & Charge pilot is activated at the touch of a button.



Automated parking enhances convenience for users.



The entire wireless charging system is tested and validated on the MAHLE test bench for inductive charging in Stuttgart.



Hand-shaped dummy used to simulate a foreign object: The MAHLE test bench is used to test the charging system safety functions.



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About MAHLE

MAHLE is a leading international development partner and supplier to the automotive industry with customers in both passenger car and commercial vehicle sectors. Founded in 1920, the technology group is working to shape the climate-friendly mobility of tomorrow, with a focus on the strategic fields of electrification and thermal management as well as further technologies to reduce carbon emissions, such as fuel cells and highly efficient internal combustion engines that can also run on biofuels, hydrogen or synthetic fuels.

MAHLE generated sales of €11.3 billion in 2025. Employing some 64,000 people at 127 production locations and 11 technology centers, the company is represented in 28 countries. (as at: 12/31/2025)

#weshapefuturemobility