

Continental is Jointly Developing Fully Automatic Charging Robots for Electric Vehicles with Volterio

- **Innovative technology for automatic charging is simple and convenient**
- **First near-production charging robot systems planned for 2022**
- **Charging robots initially for use in private garages – later also in public areas**

Frankfurt, Germany, January 26, 2022. Continental is revolutionizing the charging of electric vehicles. Together with startup Volterio, Continental's development and production service provider Continental Engineering Services (CES) is developing an intelligent charging robot that will make filling up with electricity much easier and more convenient in the future. To this end, CES and Volterio have now officially entered into a partnership that will see the latter develop the first near-production systems for the jointly designed charging robot by mid-2022. With CES meeting all necessary certification criteria of the automotive industry, it will then also develop the system to production maturity and ultimately take over the production of the charging robot. Volume production of the system is planned for 2024 and will take place in Germany. The innovative development once again underscores Continental Engineering Services' strategic focus on sustainable technology and service solutions. Intelligent charging solutions for electric vehicles in particular are key milestones on the road to comprehensive, environmentally-compatible, sustainable mobility.

The fully automatic charging solution comprises two components: one unit in the underbody of the vehicle and another on the garage floor. As soon as the car is parked, the two components connect automatically via a smart system, which among other options is controlled via ultra-broadband – a radio-based communication technology for short-range data transmission. A practical advantage of this is that the car does not have to be parked accurately. The charging robot corrects for deviation of up to 30 centimeters from the ideal parking position. In addition, it is irrelevant what angle a vehicle is positioned in relation to the floor unit. The conical design of the physical connector between the floor and vehicle unit permits any alignment and orientation between the units.

“Our charging robot is a real step in the evolution of making electric mobility more convenient and suitable for everyday use,” explains Dr. Christoph Falk-Gierlinger, managing director of CES. “With Volterio, we have the ideal partner for developing an efficient and simple solution for charging electric vehicles. Through this cooperation, we are combining the creativity and flexibility of a young start-up with the development experience and automotive expertise of Continental Engineering Services.”

“With Continental, we have the perfect partner at our side to industrialize our automated charging technology and achieve success in a growing market,” explains Christian Flechl, managing director at Volterio. “Continental has the necessary production capacity and scaling capabilities.”

Both companies had previously researched similar charging robot solutions at the same time and independently. In the new cooperation, both partners are complementing each other, so that a solution that is suitable for everyday electric mobility can be quickly developed and made available to customers who are already specifically interested.

Key advantages of the innovative charging robot

The new technology offers many benefits. For one, the energy flows through a physical connection, just as it does in conventional charging stations. This means that – unlike wireless inductive charging via a magnetic field – hardly any energy is lost when filling up with the charging robot. This makes this solution particularly sustainable and efficient. In addition, charging is very convenient thanks to the robot technology. Unlike charging stations, users no longer have to worry about any aspect of charging, such as handling heavy, potentially contaminated or rain-soaked charging cables in confined garages. The charging process runs completely automatically. Furthermore, communication between the ground and vehicle units via ultra-broadband ensures that the vehicle and charging robot are aligned prior to charging with centimeter precision – the user can park relatively casually, the technology does not require accurate parking. The system is also straightforward and quick to install. For example, the floor unit can simply be placed on the garage floor or bolted down. The technology already offers what will be essential in the future: if vehicles drive fully automatically and also park themselves in parking garages, automated charging solutions will be part of everyday automotive life.

The innovative charging solution is initially provided for use in private households with a suitable rating of 22 kW alternating current. The solution is a retrofit, so it can be retrofitted in existing model variants of vehicles. In a second step, a fast charging solution for public areas that can be retracted into the ground will be developed, for example for parking garages, filling stations or factory areas with a charging capacity of more than 50 kW direct current. This also includes corresponding variants, for example for fleet management of commercial vehicles.

Continental develops pioneering technologies and services for sustainable and connected mobility of people and their goods. Founded in 1871, the technology company offers safe, efficient, intelligent and affordable solutions for vehicles, machines, traffic and transportation. In 2020, Continental generated sales of €37.7 billion and currently employs more than 192,000 people in 58 countries and markets. On October 8, 2021, the company celebrated its 150th anniversary.

Continental Engineering Services (CES) was founded in 2006, and as an agile and flexible engineering and production partner develops tailor-made, technologically sophisticated solutions for a wide range of applications, including automotive, railway engineering, aviation, shipping, mining and smart cities. 2,000 employees worldwide contribute their expertise and experience in the key technologies for automated driving, information management & connectivity, electrification and services in the field of multimodal mobility. This makes possible a new level of individual, safe and sustainable mobility.

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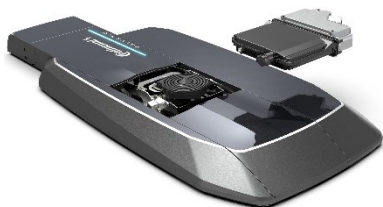
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Ground unit of charging robot, placeable anywhere in the garage.

Continental_PP_Ground Unit Ioniq5



Vehicle and ground unit permit fully automated charging.

Continental_PP_Ground Unit



Vehicle unit enables secure connection to the charging robot.

Continental_PP_Vehicle Unit