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Electrifying World Premiere: **Volkswagen offers First Glimpse of Mobile Charging Station**

- Flexible charging station can support the stationary development of a charging infrastructure for electric vehicles and serve temporary needs
 - CEO of Volkswagen Group Components, Thomas Schmall: “Completely new approach for the construction and expansion of the charging network”
 - Head of Technology at Group Components, Mark Möller: “Sustainable power can simply be stored temporarily until use”
 - MEB battery pack forms the energetic core of the charging station
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Wolfsburg – At the turn of the year, Volkswagen is offering a glimpse of the company’s future mobile quick charging station. It can be set up flexibly and independent of the power supply wherever it is needed: for example, in public parking lots in the city, on company premises, or as a temporary charging point at large-scale events. The mobile charging station works according to the principle of a power bank – which is familiar to many people with smartphones – but for electric vehicles instead. The charging capacity of up to 360 kWh enables up to 15 e-vehicles, including members of Volkswagen’s new ID. family,¹ to be charged



Power bank for electric cars – the mobile quick charging station by Volkswagen Group Components

in stand-alone operation. Thanks to quick charging technology, the charging process² only takes 17 minutes on average. If the energy content of the integrated battery set is less than 20 percent, the depleted charging station is simply exchanged for a charged one. If, however, it is permanently attached to the power supply with up to 30 kW via alternating current, the battery pack perpetually recharges itself. In case the charging process is based on renewable power supply, the charging station furthermore allows the temporary storage of sustainably generated power, such as solar or wind energy – and therefore CO₂-neutral mobility.

The first mobile quick charging stations will be set up as early as the first half of 2019 in Volkswagen’s hometown as part of a pilot project, and will support the expansion of a charging

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infrastructure in the urban area. As of 2020, the charging station will also be implemented in other cities and communities.

Thomas Schmall, Chairman of the Board of Management of Volkswagen Group Components, says: “The mobile charging stations are a decisive step toward an efficient network of charging points. They can be set up anywhere as required – with or without connection to the power supply. This flexibility enables a completely new approach for the rapid expansion of the charging infrastructure. Cities can, for example, find out the most suitable places for a permanent charging point before making major investments in developing the network. In addition, it will be possible to set up a large number of charging stations temporarily – exactly when and where they are needed.”

The mobile charging stations can be set up at defined points, for example, spread out across a city. The flexible locations can be easily found via the Internet or apps. Each charging station enables DC quick charging with up to 100 kW. In addition to electric cars, e-bikes can also be charged. Up to four vehicles can be charged simultaneously: two with DC and two with AC connections. The total battery storage capacity of up to 360 kWh is sufficient for up to 15 e-vehicles. There is also the possibility of connecting to the power supply directly, allowing the station to be charged with up to 30 kW via alternating current by means of a permanent standard grid connection. This enables charging points for electric vehicles to be set up quickly and simply, without any structural changes or major financial outlay. The battery pack in the charging station can be recharged around the clock thanks to the direct power connection. This time-independent recharging, and therefore buffering of power, also considerably reduces the strain on the power supply at peak periods.

“Our mobile charging stations offer a further crucial advantage,” says Mark Möller, Head of Technical Development at Volkswagen Group Components. “It is only when an electric car is charged with sustainably generated power that it can claim CO₂-neutral mobility. Our charging station is the first to offer the possibility of temporarily storing sustainably generated power.” For example, the charging station can be charged specifically with solar or wind energy, which is then transmitted to the electric vehicles during charging. Technically, the mobile charging column is based on the battery pack of the Volkswagen Group’s Modular Electric Toolkit (MEB). On the one hand, this offers the advantage of quick scalability and, on the other hand, the charging station allows batteries from electric vehicles to have a second life. This is because a battery loses charging capacity over time. If a vehicle battery has a defined, reduced residual capacity, it is exchanged. If this battery subsequently passes a thorough analysis, it can be reused in a mobile charging station.

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An efficient network of charging points is regarded as one of the basic infrastructural prerequisites for convincing customers to buy electric vehicles such as the Volkswagen brand's future I.D. family.¹ Accomplishing this is one of the major challenges Volkswagen Group Components and others must tackle to ensure the breakthrough of e-mobility. As of January 1, 2019, the Components division is an independent business unit within the Volkswagen Group. The mobile charging station is an in-house development with the goal of developing a closed life cycle for the battery. The start of production is planned for 2020.

- 1) The concept car is not available for purchase and is therefore not subject to EC Directive 1999/94.*
- 2) When charging to approx. 28 kWh. This corresponds to approx. 80 percent of the charging capacity of the current e-Golf [e-Golf: Power consumption in kWh/100 km: 14.1 to 13.2 (combined), CO₂ emissions in g/km: 0 (combined), efficiency class: A+].*

About Volkswagen Group Components.

As of January 1, 2019, Volkswagen Group Components is an independent business unit under the umbrella of Volkswagen AG responsible for the development and manufacture of strategic components for the vehicle-producing brands of the Group. In five business areas – engine and foundry, gearbox and electric drive, chassis, seats and e-mobility – 80,000 employees work in 61 plants worldwide at 47 production sites. They develop and manufacture vehicle components, shape future topics such as charging infrastructure or battery recycling, and thus make a crucial and valuable contribution to the Volkswagen Group, its brands and products. The Chairman of the Board of Management of Group Components is Thomas Schmall.

Press contact – Volkswagen Group Components Communication

Enrico Beltz, Head of Media Relations, Tel: +49 5361-9-48590, enrico.beltz@volkswagen.de