

Emission-free on the construction site: Webasto and E.C.E electrify construction machinery

Webasto supports the Dutch start-up E.C.E with its battery technology and corresponding thermal management in the conversion of excavators.

Gilching – February 24, 2022 – Following battery-powered solutions in grounds support, municipal vehicles and local public transport, Webasto, system partner for electromobility, is now driving forward the electrification of construction machinery with the Dutch start-up [Electric Construction Equipment \(E.C.E\)](#). To this end, Webasto is supporting E.C.E in the conversion of two types of excavators.

Using E.C.E's detailed specifications, the company supplies an swappable PowerBox for the two models Doosan DX165W Electric and Doosan DX300LC Electric. The excavators are each equipped with four standard battery systems in a separate and swappable box. In total, this battery pack has a capacity of 140 kWh. The packs each form a self-contained system and have been fully developed by E.C.E using Webasto components. Each package has a self-contained climate control system. As the PowerBox in the system provide a total voltage of 800 volts, the power loss on the transport route is also reduced and transmission losses are minimised.

Conversion from a single source

The Vehicle Interface Box (VIB) from Webasto acts as an efficient interface between multiple batteries and the vehicle, combining the functions of a power distributor, battery management system (BMS) and fuses in one robust housing. The BMS is responsible for monitoring and controlling the entire battery system and communicating with the vehicle's other components. Webasto also helped to design the climate control system. It ensures that the battery does not overheat during the charging process and always maintains an optimum temperature. This creates a comprehensive, modular battery system for use in commercial vehicles.

Power for the entire working day

"The excavators are available for the whole working day, just like before, for a total of eight hours. At the same time, we made sure that they can perform the same tasks and do so perfectly at -10 to 35 degrees Celsius," explains Sebastian Fuchs, Product Manager Batteries at Webasto. "The swappable PowerBoxes can also be taken to a charging point and recharged there. This is of value in case there is no charging station on a construction site or in a natural area." The vehicle components also meet the requirements of the UN/ECE-R100 standard. This European directive defines safety requirements for electric vehicles, such as the minimum insulation resistance of HV components and cables, as well as thermal, mechanical and electrical battery testing.

Further projects are planned

The two partners also have joint plans for the future: in the long term, E.C.E aims to electrify all its vehicles that are used on a construction site. The PowerBoxes can then also serve as a substitute for generators and supply power to tools.

About Webasto

The Webasto Group is a global innovative systems partner to the mobility industry and one of the 100 largest suppliers to the automotive sector worldwide. The company's offering includes in-house developed roof, heating and cooling systems for various types of vehicles, batteries and charging solutions for hybrid and electric vehicles, and additional services related to thermal management and electromobility. Among the customers of Webasto are manufacturers of passenger cars, commercial vehicles and boats, as well as dealers and end customers. In 2020, the Group generated sales of around 3.3 billion euros and employed more than 14,000 people at over 50 locations. The headquarters of the company, which was founded in 1901, is located in Stockdorf near Munich (Germany). For more information please visit www.webasto-group.com

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