

Press release

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MAHLE develops new battery cooling system for faster charging of electric cars

- Immersion cooling significantly shortens charging time for electric car batteries
- Batteries can be more compact, making electric cars cheaper and more resource-efficient
- Solution contributes to faster market penetration and greater acceptance of e-mobility by consumers

MAHLE, the specialist for thermal management, i.e., the heating and cooling of the vehicle interior and components, has developed a completely new cooling system for batteries. Cooling is a major challenge, especially when it comes to fast charging battery-powered electric vehicles. The Stuttgart-based automotive supplier relies on immersion cooling as a key technology. An electrically nonconductive coolant flows around the cells, thereby ensuring that the maximum temperature of the battery drops markedly during charging and that the overall temperature is distributed much more homogeneously. Immersion cooling shortens the charging times in electric cars considerably. The batteries can thus be smaller, making electric cars cheaper and more resource-efficient. With this technology, MAHLE is making a further contribution to faster market penetration and broader acceptance of battery-powered e-mobility by consumers.



Ideal temperature and homogeneous distribution: MAHLE's immersion cooling concept can be used to shorten charging times and decrease battery size.

“Immersion cooling paves the way for a whole new generation of battery systems,” says Martin Berger, Vice President Corporate Research and Advanced Engineering at MAHLE.

MAHLE is transferring its expertise in plastics, thermal management, and power electronics into new integrated solutions. The technology group is thus focusing on the areas where e-mobility still needs a boost—charging speed, range, resource conservation, and price.

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About MAHLE

MAHLE is a leading international development partner and supplier to the automotive industry. The technology group is now broadly positioned in the areas of powertrain technology and thermal management with a clear focus on future topics relating to mobility. As part of its dual strategy, MAHLE is working both on the intelligent combustion engine for the use of hydrogen and other nonfossil fuels and on technologies that will help the fuel cell and e-mobility achieve broad acceptance in the markets. The product portfolio of the company, which was founded in 1920, addresses all the crucial aspects of the powertrain and air conditioning technology. Half of all vehicles in the world now contain MAHLE components. #weshapefuturemobility

In 2020, MAHLE generated sales of approximately EUR 9.8 billion and is represented in over 30 countries with more than 72,000 employees in 160 production locations and 12 major research and development centers. (Last revised: 2020-12-31)