

New Mobility guiding principles in focus at MÜHLBEYER GmbH

The automotive industry is changing - new mobility concepts are required. Whether with e-mobility, hydrogen or synthetic fuels. MÜHLBEYER can offer solutions for all these new requirements.

Electrically neutral material – plastic

The automotive of tomorrow will continue to face increasing demands for electrically neutral materials. Digitally networked infrastructures are emerging both in vehicles and in the traffic environment. Internet-based services and extended infotainment will also be developed. The number of **connectors, sensors, cables, electric motors (stators, rotors and plain bearings)** on board the vehicle is increasing exponentially. This multitude of electrical/electronic components and other mechatronic components must function trouble-free.

Charging connector Inlet Type



CONTACT Face



COVER



ADAP TER-FLANGE



FLANGE



PLAIN BEARING E-Bike



CONNECTORS



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**YOU THINK ABOUT SHAPES
AND COMPONENTS
WE ABOUT YOUR PROCESSES**

In addition, the powerful "battery" brings the topic of **automatic battery fluid venting** into focus in fast-charging situations and when high charging currents are called up.



AUTOMATIC BATTERY FLUID VENTING

Weight savings by thin-walled injection-moulded parts / lightweight construction

For years, the automotive industry has been inconceivable without this long-running issue. Thanks to new drive concepts, which are usually combined with additional weights, e.g. the battery, lightweight construction is more topical than ever. High-strength/rigid engineering thermoplastics, metal-plastic hybrid solutions and low-density materials are in demand here. Take advantage of the competence of MÜHLBEYER GmbH.

Other weight savings can be achieved by reducing wall thicknesses. First and foremost, the design of the components must be optimized or an optimal design of the components must be developed. Success can only be achieved by pulling out all the stops in component development and the design of plastic components.

MÜHLBEYER offers especially under this aspect holistic product development including FEM simulation.

Your challenges are:

- Media tightness of plastic-metal joints
- Connectors and charging systems for charging stations
- Connectors in cars (board chargers, controls, etc.)
- stators in the field of electronic cooling, heat flows in electric cars etc.)
- Sealing with plastic solutions (interface battery, copper tracks etc.)

We analyze:

- the injection moulding material (strength, temperature, media, tribology, material price)
- the injection-moulded construction (draft angles, sink marks, ribbing, tolerance evaluation, cutting burr, position of the injection point, wall thicknesses, weld lines)
- tool technology (technology 1K, 2K, tool life, short cycle time)
- the injection process (technology 1K, 2K, specifications such as machine capabilities, process capability)
- the assembly processes

