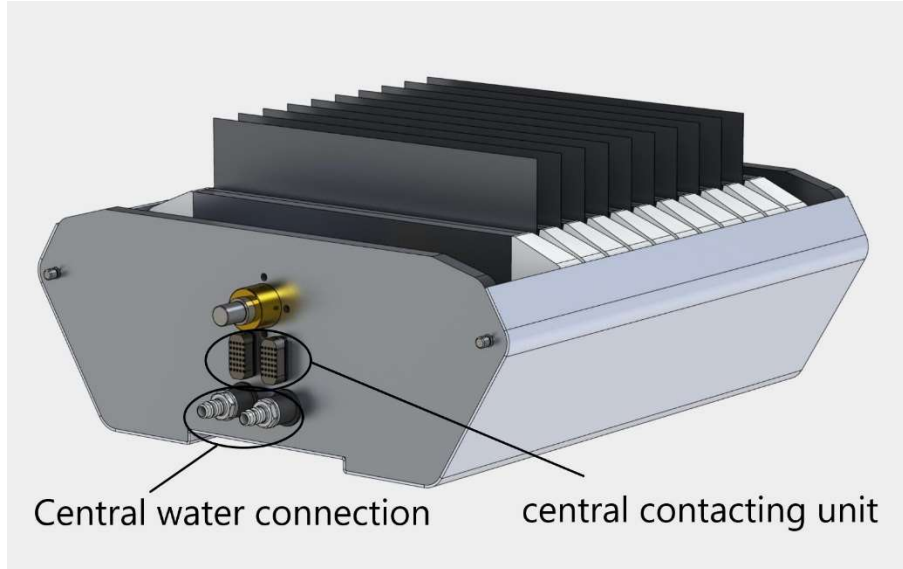


RWTH Technology

Function-integrated Lithium-ion battery load carrier



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#2208

Fields of application

Production of lithium-ion battery cells

Keywords

#Lithium-ion battery load carrier;
#lithium-ion battery formation equipment, #battery cell production

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Challenge

There are three common cell geometries of lithium-ion batteries on the market: Pouch cells, cylindrical cells and prismatic cells. The manufacturing process for all cell geometries is done in several steps. Whereas the first steps of the production do not require major adjustments, the later steps of cell assembly and cell conditioning require own goods carriers and own production lines depending on the cell geometry resulting in high investment and space costs.

Solution

The invention is a novel load carrier for the formation of battery cells featuring an integrated thermal management and contacting system. It is meant to be used in the cell conditioning (cell finishing) of lithium-ion battery cells. The battery cells are located in the carrier throughout the manufacturing process. In contrast to conventional product carriers, the novel load carrier enables the formation of different cell geometries and formats on one manufacturing plant. This results in considerable savings in terms of investment, operating and space costs.

Advantages

- One formation production line can be used for all cell geometries
- Cost savings in the range of several hundred thousand euros

Status

- European patent application pending and German patent application pending
- Development status: Fully functional prototype

RWTH Aachen University is looking for partners for patent exploitation, for research partners for joint development and/or for contract research.