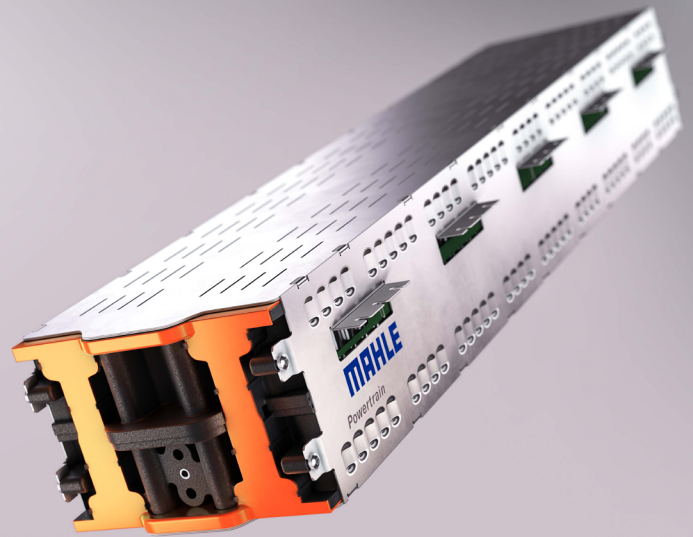
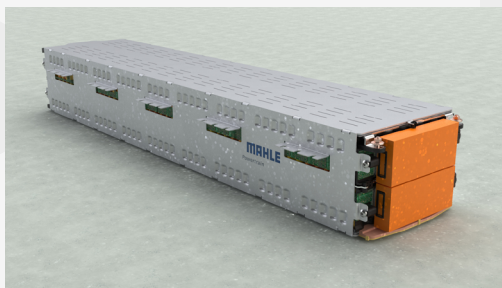


MAHLE Powertrain M3x Battery Module

- > Module for high-performance EVs
- Highly efficient cooling features
- Modular design for pack flexibility



>> Battery Development Centre (BDC)



>> Battery module

High Performance Battery Module (M3x)

- MPT developed battery module concept with advanced thermal management technology for sustained high performance
- Module designed for continuous high output in performance EVs without de-rating
- Based on industry standard 21700 lithium-ion cells for:
 - › design packaging flexibility
 - › thermal performance
 - › safety, reliability & durability
 - › scalability
 - › market acceptance
- Novel cooling features to maintain thermal stability
- Modules easily tailored to suit energy requirements and package shapes
- Multiple modules arranged in battery packs to suit different vehicle applications

MAHLE Powertrain Ltd
Costin House
St James Mill Road
Northampton
NN5 5TZ
Tel: +44 (0)1604 738 000

MAHLE Powertrain LLC
14900 Galleon Court
Plymouth
Michigan 48170
USA
Tel: 001 734 738-52 01

MAHLE Powertrain GmbH
Wamslerstrasse 5
81829
Munich
Germany
Tel: +49 89 96 29 15-0

Cooling Concept

MPT has developed a modular concept that allows various configurations of cylindrical cells to be arranged horizontally or vertically in single or double rows to suit different voltages & capacities, as well as providing packaging versatility.

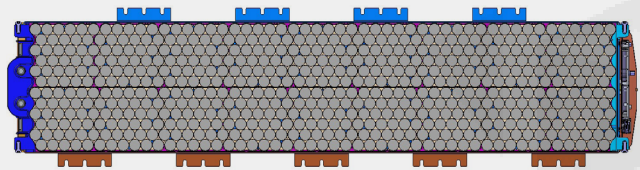
- Upper and lower cooling plates
- Both positive and negative current collectors arranged at the same ("top") end of the cell
- Novel features conduct heat away from the cells
- Advantages of this concept are:
 - › Improved thermal performance
 - › Reduced complexity of assembly



>> Battery pack test facility

Capabilities

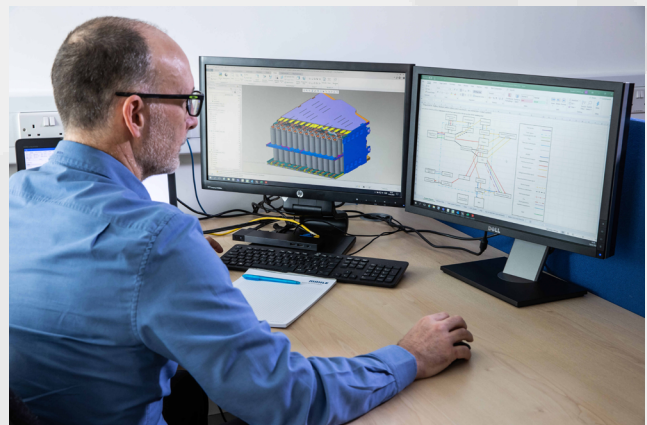
- Cell selection
- Concept development
- Detailed design
- Thermal / structural analysis
- Prototype procurement & build
- Development testing



>> Internal detail of battery module



>> Battery cell test facility



>> Battery module designer

MAHLE ZG Transmissions
Georg-Kollmannsberger-Str. 3
85386
Eching
Germany
Tel. +49 89 18 94 169-0

MAHLE Automotive Technologies
No. 1299 Huan Cheng Bei Road
Fengpu Industrial Park 201 401
Shanghai, Fengxian District
China
Tel. +86 21 5136-0595

MAHLE product information 07/2022

www.mahle-powertrain.com