

FACT SHEET

# Metal forming hybrid – Cockpit cross-car beam

SUITABLE FOR E-MOBILITY APPLICATIONS



Maximum functionality – minimum weight  
Cockpit cross-car beam made by ElringKlinger

ElringKlinger's cockpit cross-car beams combine maximum functionality with minimum weight. They accommodate instrument panel, steering column, heating and ventilation modules, airbags, glove box, center console and other fittings and connect them securely to the car bodywork.

## Technology

Metal forming hybrid cross-car beams are made of thermoplastic injection molding with local metal re-enforcement out of steel, aluminum or casting structures. Hydroforming hybrid technology as part of our metal forming hybrids in particular combine an upstream hydroforming process of metallic hollow structures/ pipe profiles with injection molding. ElringKlinger substitutes steel/aluminum welded or aluminum/magnesium-die-cast constructions through hybrid arts, which combine aluminum or steel tubes with thermoplastic materials.

### + EXCELLENT WEIGHT-PERFORMANCE RATIO

Compared to existing technologies like welded metallic structures, metal forming hybrid parts give excellent crash performance and structural part stiffness on a lightweight level.

### + LOAD PATH BASED DESIGN

Metal structures, e.g. magnesium-, aluminum- or steel sheet-components can be attached in addition to stiffen areas with highest load requirements.

### + FUNCTIONAL INTEGRATION

The plastic injection process allows very easy further functional integration such as local fixation points, guiding features, support features, mounts, etc.

# Benefits

## PRODUCT BENEFITS

- + High weight reduction potential
- + Load path oriented design
- + Further functional integration easily possible
- + Various material combinations possible
- + High dimensional accuracy

## MANUFACTURING PROCESS

- + Short cycle times / high automation
- + No rework on structures necessary
- + High process stability and repeatability
- + Long production history with HFH / global standards on production processes



## ELRINGKLINGER – YOUR PARTNER FOR METAL FORMING HYBRID COMPONENTS

Product Development (Design, Engineering and Simulation) – Process Development – Tool Shop – Tool Sampling/Prototyping – Testing – Change-Management – Series Production – Part Measurement



## YOUR CONTACT

ElringKlinger AG

Phone +49 7123 724-0

E-mail [info@elringklinger.com](mailto:info@elringklinger.com)

ElringKlinger AG | Max-Eyth-Straße 2 | 72581 Dettingen/Erms | Germany

[www.elringklinger.com](http://www.elringklinger.com)

The information provided in this document is the result of technological analyses and may be subject to changes depending on the design of the system. We reserve the right to make technical changes and improvements. The information is not binding and does not represent warranted characteristics. We do not recognize any claims for compensation based on this information. We accept no liability for printing errors.



08/23