Hydroforming hybrid – Cockpit cross-car beam

**GENERAL FUNCTION**

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.

- Suitable for e-mobility applications

**TECHNOLOGY**

Hydroforming hybrid (HFH) is a combination of thermoplastic injection moulding with a upstream hydroforming process of metallic hollow structures/pipe profiles. ElringKlinger substitutes steel/aluminium welded or aluminium/magnesium-die-cast constructions through hybrid arts, which combine aluminium or steel tubes with thermoplastic materials.

- **EXCELLENT WEIGHT-PERFORMANCE RATIO**
  Compared to existing technologies like welded metallic structures, HFH parts give excellent crash performance and structural part stiffness combined with low weight.

- **LOAD PATH BASED DESIGN**
  Metal structures, e.g. magnesium-, aluminium- 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 automatisation
- No rework on structures necessary
- High process stability and repeatability
- Long production history with HFH / global standards on production processes

**ELRINGKLINGER – YOUR PARTNER FOR HFH COMPONENTS**


**YOUR CONTACT**

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