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## VDMA Guide: Technologies in Hybrid Lightweight Construction

### Working Group Hybrid Lightweight Technologies presents technology profiles on production and joining processes

Frankfurt, 6. February 2018 – VDMA's Working Group Hybrid Lightweight Technologies deals with production processes of hybrid lightweight components by using fibre-reinforced composites and metals. In 25 technology profiles, members of the working group have summarised the current status of production and joining processes in hybrid lightweight construction.

The guide gives a quick overview of the established processes. Every technology is summarised in a short profile and explained via a schematic diagram with the processes' basic conditions and parameters as well as their limitations of use. They are supplemented by specifications on possible material combinations, recyclability and application examples. The application potential of every material combination has been evaluated and assigned to the suitable production and joining processes.

The aim of multi-material design is to create economic construction components and end products with improved function. The big challenge is to optimally combine the different lightweight materials, but also to advance the automation of the production processes. This can be achieved either by production-integrated hybridisation or by subsequent joining of individual components to a hybrid complete system. – The guide emphasises the potential of hybrid lightweight technologies.

The collection does not claim to be complete and will be updated when necessary. All users may make comments and additions. Interested companies and research institutes are welcome to join and contribute to the working group.

At the end of the guide you can find a bibliography as well as the contact details of the authors. Technology providers from mechanical engineering may be researched via the proof of origin section on [www.composite-arena.com](http://www.composite-arena.com). The homepage <http://lightweight.vdma.org> gives general information about the working group.

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#### **VDMA Working Group Hybrid Lightweight Technologies**

The VDMA represents more than 3,200 member companies of the small business mechanical engineering sector. With 1.36 million domestic staff members and a turnover of 212 billion euros (2017), it is the biggest industrial employer and one of the leading German industry sectors overall. The VDMA Working Group Hybrid Lightweight Technologies has 205 active members from mechanical engineering, user and supplier industries as well as research.