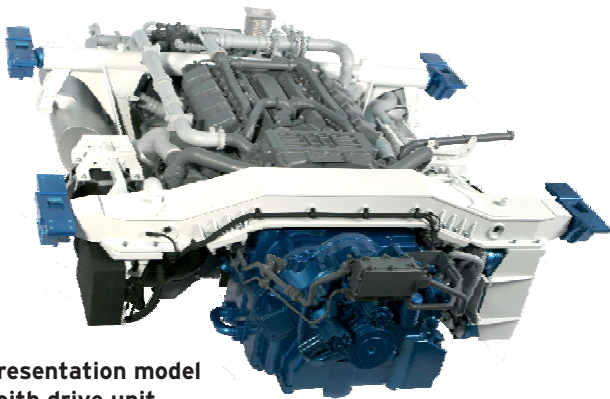


4D Concepts - your partner for rapid prototyping and model making

Design - 3D printing - Stereolithography - Polyjet - Laser sintering - Milling - Vacuum casting

As a full service partner in the product development from first brush stroke to small-scale series, we offer services for everything about rapid prototyping, conventional model making as well as architectural and trade fair model making.



**Presentation model
Voith drive unit**

Product development

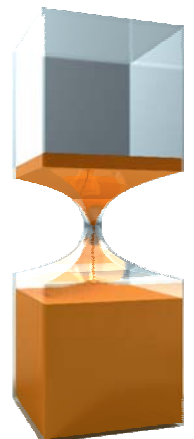
Our design department works with the CAD systems SolidWorks and Catia. Communication with other CAD systems is ensured with comprehensive interface packages.

Our design department additionally uses the touch-sensitive CAD program FreeForm® Modeling Plus™ which enables optimal realisation of your individual ideas.

During the implementation of your concepts or the integration of design data, our main focus is already on a manufacturing-ready layout that complies with aesthetic aspects. The challenge here is the symbiosis of functionality, aesthetics and efficient manufacturing of series items. A direct link to our 3D printer centre enables our 3D print service department to offer first models for communication, design and version testing already during the concept phase.

Rapid prototyping - TIME - the 4th dimension

By using precise initial sample procedures from 3D printing to stereolithography, polyjet and laser sintering all the way to vacuum casting, as well as RIM engineering, we offer our customers an optimal technology selection - application-oriented and process-independent. In combination with our model making and the affiliated milling centre, rapid prototyping methods for utmost efficiency are used in a targeted way and combined in order to achieve the best possible results in the shortest of time. Our customers, which include companies like Daimler, Adam Opel, Siemens, Ferrero, Adidas, Wacker Chemie and Procter & Gamble, have known about this crucial time advantage for many years.





Stereolithography

For master model creation, we rely in particular on stereolithography because of its high accuracy, easy to process surfaces and the best detail resolution. Large components are manufactured with maximum production speeds on our SLA 7000.

Selective laser sintering

Laser sintering is used for models with increased strength requirements, e.g. for installation and functional tests. In addition to polyamide materials (PA), we also process glass-reinforced polyamide for extreme strength requirements. The use of several systems allows us to meet your requirements quickly and flexibly and also using laser sintering.



functional model USB stick



Polyjet

Polyjet models stand out due to their fine details, optimal surfaces and close tolerances. With a coating thickness of 0.016 mm, the PolyJet method delivers models with surfaces with almost no steps. Applications range from prototypes to master models for duplication processes all the way to high-quality design models. In our PolyJet systems, we process various materials with which you can achieve rubbery-elastic, opaque/solid or transparent/solid material properties and also offer our customers "state-of-the-art" here when it comes to layered manufacturing methods.

figure models
designed with Freeform

Vacuum casting / RIM

For fast realisation of low-volume production with series-like PU materials, vacuum casting is part of our range of services. We manufacture prototypes with close-to-production characteristics for all kinds of applications on different vacuum casting systems with a maximum mould size of 900 x 900 x 600 mm as well as a RIM system with a shot weight of up to 10 kg. From design models for trade fair presentations all the way to functional prototypes with the corresponding characteristics, such as e.g. an EMC shield for monitor casing - vacuum casting is the suitable technology for the production of small quantities of series-like parts. Our special know-how is in the production of 2K prototypes, e.g. components with hard-soft components or metal inserts.

We will be happy to advise you on your development project and look forward to hearing from you.