

3D design / 3D data

Digital 3D data form the basis of our services and 3D printer solutions. We use different software solutions and interfaces to transfer your 3D data, or for new designs according to your specifications.

From SolidWorks as the central 3D CAD system for mechanical design, to the touch-sensitive force-feedback system Freeform Modeling Plus for creative freeform tasks, all the way to 3D scanning to reproduce a prototype - we use the respective matching system on the basis of an idea, a sketch, a dimensioned drawing or your 3D CAD data.

Besides an appealing design, we naturally also focus on the manufacturing-ready dimensioning of your component, assembly or product. The comprehensive 3D CAD solution SolidWorks helps us convert your requirements into a parametric 3D model.

Advantages

- Manufacturing-ready 3D design or modification of existing 3D data
- 3D design with suitable tools
 - ⇒ SolidWorks
 - ⇒ Freeform
- 3D data transfer for all known 3D formats
 - ⇒ Magics
 - ⇒ Viewstation
 - ⇒ SolidView



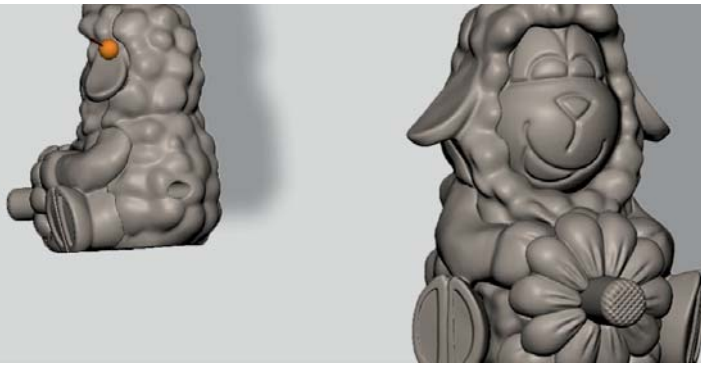
SolidWorks workstation

Options



Modelling System Freeform Plus

- Design on the basis of an idea, sketch or 2D drawings
- Data formats
 - ⇒ Directly for 3D printing: STL, VRML, CTL, OBJ, PLY, ZPR, etc.
 - ⇒ Standard exchange formats such as e.g. STEP, IGES, Parasolid and many more
 - ⇒ Native CAD formats from e.g. Catia, Pro E, NX, AutoCad, Inventor and many more
- Data transmission via RDT
 - ⇒ Secure data transmission via Odette/OFTP
 - ⇒ Upload/download server, web transfer services, e-mail



Application example product development

The realisation of the product concept of a start-up company - a mobile rechargeable battery pack casing for electrical garden devices - was implemented with SolidWorks by our design department from the first ideas to the series product. From a project initially planned as a two-part casing, it turned into a seven-part product already during the form finding phase - with a considerably extended range of functions and services with, among others, the inclusion of control electronics, the adaption of the carrier system as well as an increase of the output. This complete product development from the mere idea to the number of batteries to be housed in the casing all the way to the production tools was done with SolidWorks. During the engineering phase, different versions were produced again and again through functional prototypes via laser sintering and vacuum casting. This made it possible to realise the project with first production parts within twelve months.



Calmdura rechargeable battery pack casing

Application example toy figures

With the Freeform Modeling Plus system, you can effectively create a digital model directly on the screen via a force feedback system. This enables fast and efficient realisation of freeform shapes and irregular geometries in line with the aesthetic aspects, but also manufacturing adaptations, for example the determination of mould separation. Details for example, surface textures can also be included directly and perfectly into the digital model. The advantage of digital modelling is the immediately available 3D data model which can then for instance be transferred directly to a 3D printer.



Functional toy figure models

Application example item design

A pressure cooker was designed from idea to series production with SolidWorks. The functional requirements of the product were especially important for this project and they were checked again and again using functional prototypes during the engineering phase. A parametric design of the assembly was imperative in order to make the necessary adjustments and iterations, so that adjustments and modifications had a direct impact on all assembly components.



Pressure cooker project