HiCAD

UNLIMITED CAD PERFORMANCE **DEVELOPED BY ISD**

Complex folded and transition sheets

Automatic connections

Direct data transfer to production

SHEET METAL

isdgroup.com

I·S·D

Speed up the handling of your projects!

*HiCAD provides you with a comprehensive solution
for the entire process chain in sheet metal processing.*

The stability and formability of sheet metal in conjunction with modern production technologies allows the shaping of complex bent sheet components from one single piece. Such components can today be found in almost all fields of the manufacturing industry. HiCAD offers you a truly comprehensive, universal solution for sheet metal processing: From the concept and the creation of precise 3-D sheet metal models through to the finished sheet metal part. In this way, high-quality sheet metal elements can be produced in a much faster and cost-saving manner.

Sheet metal-specific functions, numerous automatisms such as bending simulation, sheet development, and production document generation, as well as the taking into account of various processing technologies enable you to launch your products on the market significantly faster and in top quality – whether semi-finished products, thinner sheets or plates with a thickness of 40 mm and more.

Bar at Eventlager
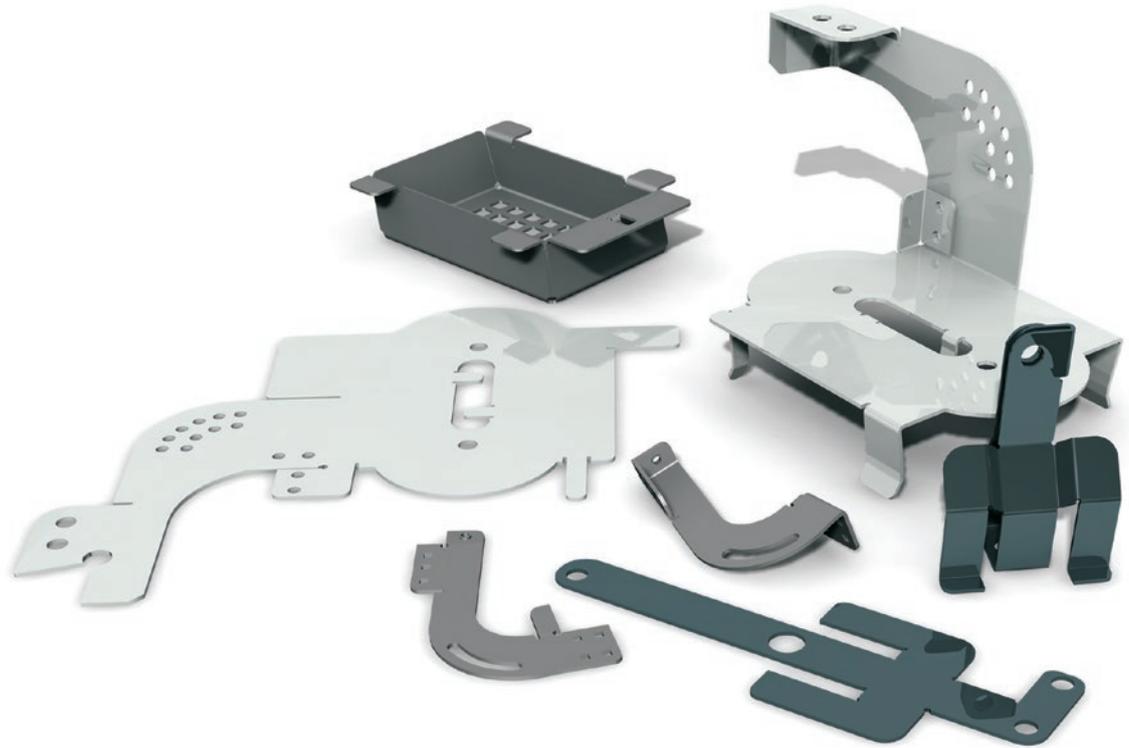(Image: ASEN Stahlbau u. Metalltechnik GmbH)

»The well-known, red noise protection wall of the Dutch shopping centre „The Wall" has been designed with HiCAD. Without HiCAD and the competence of ISD's experts, we would not have been able to realize this demanding project.«

Peter Moser, Commercial Manager, VPT VerstEEG

„The Wall" in Leidsche Rijn, Utrecht (The Netherlands) is a futuristic combination of a multifunctional building, shopping centre and noise protection wall - with a length of approx. 800 m and an area of 50,000 square metres. It has attracted wide attention due to its extraordinary form and detailing. (Image: VPT VerstEEG)
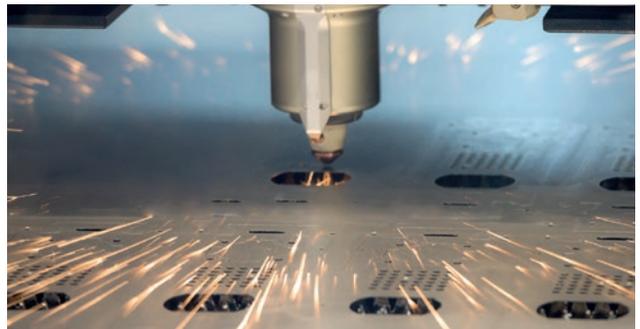
This is how it's done

HiCAD enables flexible working in any situation, whether you work in 3-D, or on the basis of third-party 2-D/3-D data.

Create the base sheet.

HiCAD provides you with maximum flexibility right from the start. You can decide for yourself whether you want to create your sheet model directly in 3-D or prefer to derive it from existing 2-D data or 3-D solids. Closed contours, for instance, can be used as an optimal basis for housings or facade sheets, as HiCAD derives the sheets, complete with flanges and bend zones, from the contours. You also have a maximum freedom of choice concerning the working technique: You can design in a free, i.e. non-parametric manner, and use parametric design only if it seems reasonable and preferable to you. You alone decide, and not the program. Even if third party systems are involved, no problems will occur, because HiCAD allows a lossless transfer of data from other CAD systems, their subsequent conversion to 3-D models and a further processing of these models. HiCAD supports all common standard formats and 2-D/3-D interfaces to market-relevant systems.

Add further elements to your sheet metal model.

HiCAD provides you with numerous sheet metal-specific functions for a further processing of the sheet metal model, or the adding of further elements. You can, for instance, add or bend flanges, insert bores, rework corners, and much more. Furthermore, punch-outs, plastic deformations such as beadings or embossings are available via individually extendable catalogues. Even when working with very complex models, HiCAD will provide you with a maximum of clarity – with its bending simulation option you can automatically unfold the complete model to facilitate its processing. All changes made to already developed sheets will mark the corresponding developments as "invalid", and geometries, dimensions and annotations can be updated on the spot.

With HiCAD you can face tight deadlines with composure. You will have more time for your customers' wishes and use your machines to full capacity.

Prepare your sheet metal model for production.

You can assign the required technology and production parameters to your sheet metal models already during the design stage, thus setting the course for an error- free and successful production. Examples of such parameters include sheet thickness, bend radiuses or allowance methods from semi-finished products in catalogues. The marking of neighbouring parts by powder marking lines or coating information complete the production-related information. In this way you accelerate your production processes and reduce your costs. As soon as you have pre-defined your sheet metal model for production, the automatic development calculation and drawing creation, with completely dimensioned blank, either according to DIN or user-specific, can be performed at the push of a button - even for very large assemblies. Other production documents, such as workshop drawings with developments, sheet sections, 3-D views, bills of materials or overbend tables are also generated automatically.

Forward the data to the production.

You can create a direct link between HiCAD and the production with the help of interfaces to various CAM systems. In the production department, your design data will be used for the generation of the corresponding NC machine data. As HiCAD transfers both geometric information and production-relevant data, you can, for instance, directly link punchings, mouldings or embossings to the corresponding processing features in the CNC programming. Such direct links result in enormous rationalisation effects for a wide range of production technologies, especially for sheet metal processing with the help of common machines and control devices. A secure, lossless data transfer is realized by our PDM system HELiOS.
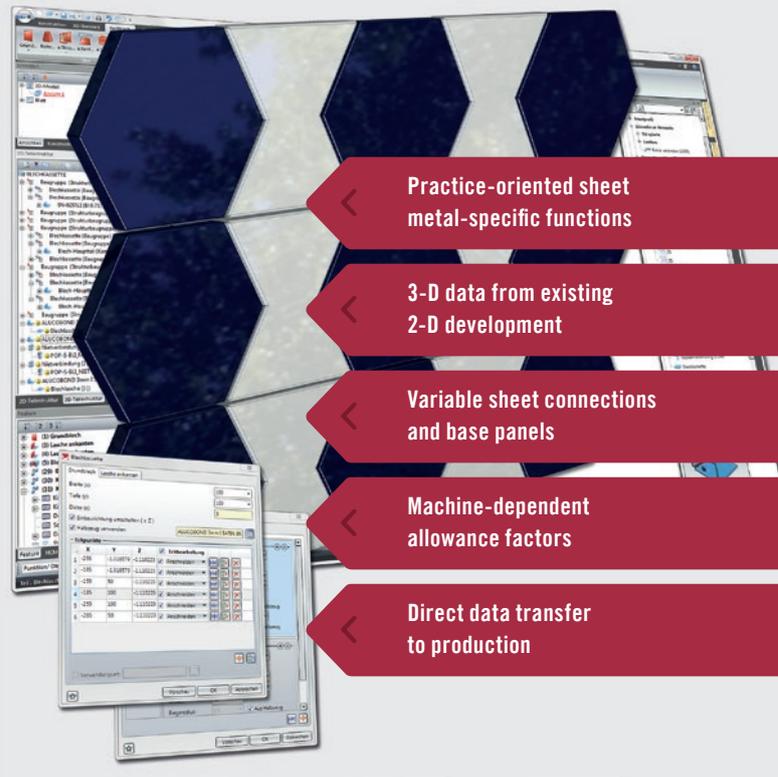
Design of a switchboard
(Images: Feag Sangerhausen GmbH)

At a glance!

Thanks to its modular structure, HiCAD can be individually extended and adjusted to your company-specific needs at any time. For sheet metal processing tasks, HiCAD is available to you in two configuration levels (see table below). If you are frequently dealing with cross-sectoral projects, you should also take a look at our solutions for mechanical engineering, plant construction, steel engineering, glass/metal/facade engineering and metal working shops. Just contact us and request further information.

Sheet Metal panel designed in HiCAD, with different program windows (Image: ISD Software und Systeme GmbH)

> Practice-oriented sheet metal-specific functions

> 3-D data from existing 2-D development

> Variable sheet connections and base panels

> Machine-dependent allowance factors

> Direct data transfer to production

HiCAD Sheet Metal

	Suite	Suite premium
Basic functions For a rapid familiarisation, e.g. GUI with Ribbons, Help, Sketch Technology, Text Editor, Browser, etc.	✓	✓
2-D drawing functions State-of-the-art 2-D drawing functions, all CAD-features required for 2-D drawing		✓
3-D modelling Innovative functions and tools for photo-realistic product models	✓	✓
3-D fasteners Mechanical Engineering standard parts for bolts, pins, washers, nuts	✓	✓
Simulations Motion simulations based on motors, physical simulations taking gravity effects into account, collision checks, video creation		✓
Plotmanager Printing/plotting of several or all drawings in a directory		✓
Sheet Metal basic Basic functions for sheet metal processing, with automatic development and blank calculation	✓	✓
Sheet Metal professional Production-oriented creation of complex sheet metal products, with special functions such as automatic development, user-specific blanks, bending simulation etc.	✓	✓
Report Manager Professional Deriving of quantity or structure BOMs from the CAD structure, adjusting to company-specific standards, export as HTML, Excel or txt file, sorting by various criteria, individual filter criteria for columns, calculation operations for columns, identical part search by user-defined criteria	✓	✓
Automatic drawing derivation Itemisation, production drawings, mounting drawings, bills of materials	✓	✓

Version: HiCAD 2019. All suites are individually extendable, e.g. by additional standard part packages, interfaces, extension modules or HELiOS PDM modules.

HiCAD

UNLIMITED CAD PERFORMANCE **DEVELOPED BY ISD**

Much more than just CAD - all from one source!

The ISD Group, one of the worldwide leading providers of CAD and PDM/PLM solutions, develops innovative software for entire process chains. Our software products HiCAD and HELiOS help our customers realize the most demanding design tasks throughout all fields of industry. Besides developing and selling our software products we offer a wide range of services and have experienced specialists for consulting, installation, training, maintenance, and a hotline in place. This enables us to provide you with a truly comprehensive service package from one source. Short ways of communication and customer proximity are a matter of course for us.

Further Information: