

# Metallbau Kuhn GmbH

# How HiCAD makes daily work much easier

Founded in 2008, Metallbau Kuhn GmbH manufactures balconies, stairs, railings, canopies and welded structures - especially for public developers and clients. Since March 2021, the specialist company has been using HiCAD for its portfolio. In fact, the fully associative 2-D/3-D CAD solution of the ISD Group should have been implemented much earlier, as both companies had already met in 2018 - at the "Metallbaukongress" event in Würzburg.

Over coffee, cake and constructive discussions, the foundation was laid for a successful collaboration that has been growing steadily since Sandra Polzin was hired. "We always update to the latest version," explains the technical system planner. She currently works with the HiCAD Steel Engineering suite premium and also uses the extension module HiCAD Point Cloud.



REFERENCE REPORT





### A successful change from 2-D to 3-D

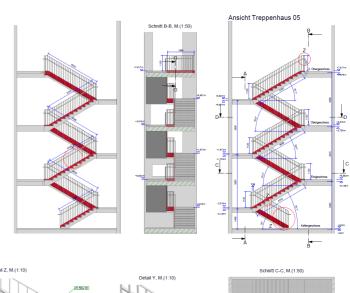
Before the young woman came on board the Metallbau Kuhn GmbH, designing took place in 2-D. To create a sketch and thus make proportions visible, two-dimensional space is quite sufficient. However, the representation of purely graphic outlines harbours an enormous potential for error, since one hundred percent reliable dimensions can only be calculated with the help of 3-D design software. Furthermore, the automation possibilities of a 3-D CAD enable the precise evaluation of the components and operations associated with them such as bending sheet metal, cutting profiles and drilling pipes. Sandra Polzin praises the lower error rate, easier handling, better visualisation and faster processing of larger and more complicated projects that she can handle with HiCAD. "In addition, I can now also use a 3-D laser scanner for measuring on the construction site," she explains enthusiastically.

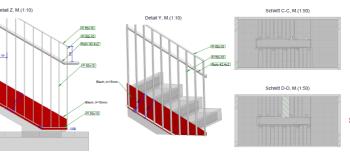
### Precise measurement with HiCAD Point Cloud

Dimensional errors, which can occur with manual measurement, are virtually eliminated with 3-D scanning. The 3-D laser scanner detects even the smallest unevenness on the construction site, and the resulting distance points can then be used to reconstruct the scanned object in HiCAD and make it visible to the customer, true to proportion. Even in colour, if desired. In this way, Sandra Polzin measures balconies, staircases and railings quickly and saves herself work steps that are usually unavoidable when measuring manually. These, in turn, also harbour an enormous potential for error. "If you transfer installation dimensions to templates and the accuracy of fit later proves to be faulty on the construction site, further construction site appointments may be required until the staircase is built," she explains. "However, this is not necessary and can be avoided."

# A special challenge: measuring 6 staircases with pinpoint accuracy

Load-bearing treads that are slip-resistant - at even distances that correspond to the step size - are essential prerequisites for a safe staircase. All the more so in public buildings with a high turnover - schools, for example. A look at the state building codes shows how important it is to measure the stair eye precisely. At the end of 2022, the Metallbau Kuhn GmbH was faced with the challenge of measuring six staircases of a Düsseldorf secondary school with the 3-D scanner and generating a dimensionally accurate image of the installation situation and its surroundings from the data stock - several million measuring points.





### Excellent service, great software, good value for money

Grateful for the ease of work that Sandra Polzin gains from HiCAD, she looks back fondly on the cooperation with the ISD Group so far: "The training courses of the ISD are target-oriented, so that the change from 2-D to 3-D was easier than expected. We bought another licence last year, added the HiCAD Steel Engineering suite to the HiCAD Steel Engineering Package and took another step forward with the HiCAD Point Cloud module."

Would Sandra Polzin recommend the CAD software from Dortmund-based ISD Group to other customers?

"Learning to operate the software was easy. Also, the programme is very intuitive and user-friendly. Moreover, it runs stably and the price-performance ratio is good. If the company has the same products as we do, we recommend HiCAD 100%."

# mages: Metallbau Kuhn GmbH

## Brief company profile:

- Metalibau Kuhn GmbH
- Industry: Metal engineering, metalworking
- >// Software: HiCAD
- Services: Stairs, railings, balconies, canopies
- www.metallbau-kuhn.de

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