

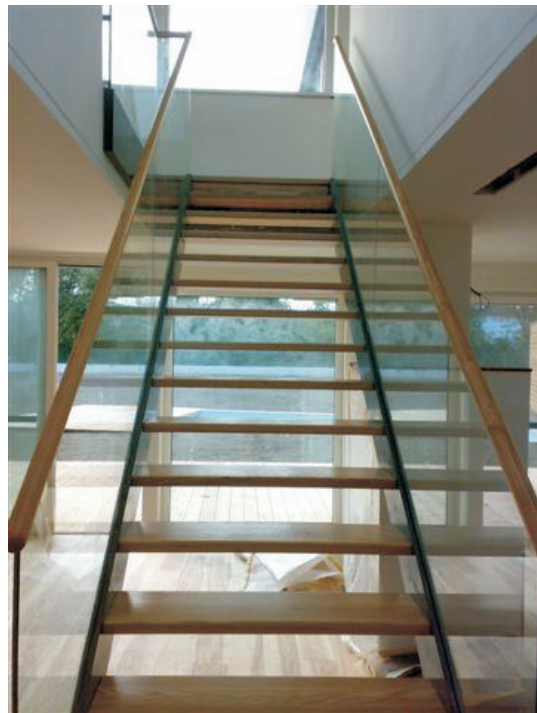


How visions become reality

Metal Engineering with HiCAD

With the switch to HiCAD the Raiffeisen Lagerhaus Zwettl reg. Gen.m.b.H. entered the third dimension with its division „locksmithing & portal design“. Since then the company could not only reduce its design time about 40%, it could also realize projects that would have been hardly possible before.

The first activities of the Raiffeisen Lagerhaus Zwettl, which was founded in 1918, consisted in the purchase of turnips, hay and straw. Because of the proceeding mechanization the company started to establish workshops at several locations in the 1920ies, before it expanded further into the service sector in 1968. Today the Raiffeisen Lagerhaus Zwettl represents a modern and high-performance trading and service enterprise. This can also be seen at its MeisterCenter where the construction and construction-related industries were united in 2000. The collaboration of all trades makes it a competent partner in the matter of construction and leads the MeisterCenter to require a CAD system which allows for cross-sectoral modeling. Therefore its division “locksmithing & portal design”, which is responsible for metal engineering, decided in 2009 to rely on the 2-D/3-D associative CAD system HiCAD of the ISD Group.



Interior staircase with glass

» IN BRIEF

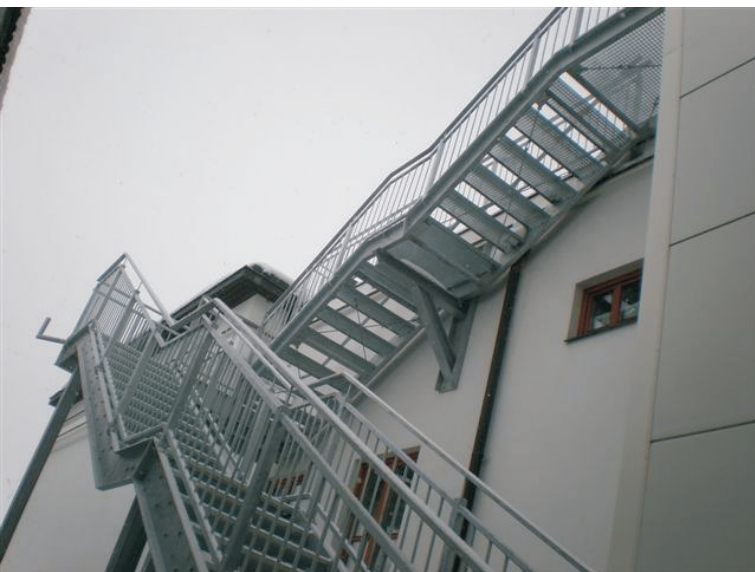
Raiffeisen Lagerhaus Zwettl reg. Gen.m.b.H.

- Industry: Metal and Steel Engineering
- Software: HiCAD
- Products: Staircases and railings
- Location: Schweigggers, Austria
- www.lagerhaus-zwettl.at

3-D reduces the amount of work

While in the past the division was working solely in 2-D, it committed itself almost totally to the third dimension with the switch to HiCAD. “Designing in 3-D holds many advantages for us”, explains Robert Klein, locksmith and engineer at the MeisterCenter. “One of these is, for example, to work in only one view while creating a design. The remaining views, such as the sections as well as the single part and workshop drawings, are either obtained automatically or can be created with very little effort.” According to the engineer, a further advantage of the 3-D is that it enables the customer to visualize the later staircases

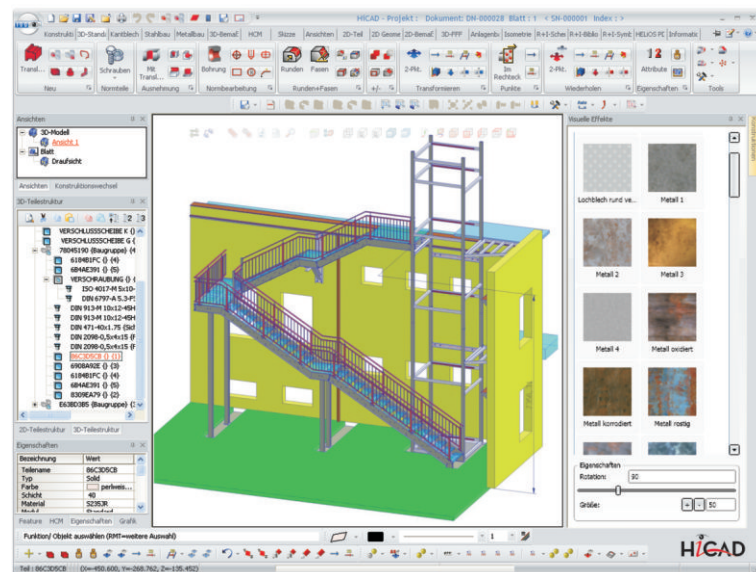
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and railings considerably better by means of the model. This is especially important while dealing with private persons or public institutions that are, in contrast to the architects, in a greater need of consulting. However, all customers have in common that they reach a decision far more quickly on the basis of the model. Although the Raiffeisen Lagerhaus Zwettl committed itself to the 3-D in the field of metal engineering, a huge advantage of its CAD system consists in its 2-D/3-D associativity. "This enables us to design our beams in 2-D before inserting them easily into the 3-D model", states Robert Klein and describes further: "Because numerous standard beams are already available in HiCAD, they do not have to be created anew each time. This means a huge time saving to us regarding our railings which are primarily made of stainless steel beams and tubes."

Increase in efficiency by integrated industry solutions

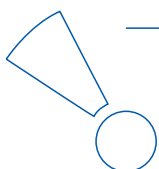
Therefore the integrated standard parts catalogue as well as the screw connections and the automatic generation of workshop drawings and bills of materials are of great importance to the company in the



field of steel engineering. While dealing with sheet metal, however, Klein also highlights the sheet metal blank and its dimensioning. All this leads him to remember: "We were not able to realize many projects in the field of sheet metal before. But this changed fundamentally with the Sheet Metal module of HiCAD." Today the MeisterCenter of the Raiffeisen Lagerhaus Zwettl observes a considerable rise in incoming orders in this industry which is why its engineers are certain: "The switch to HiCAD was the best we could do; there were no surprises."

Acid test for HiCAD

The first project of the new CAD system can also be described as its acid test: "In 2009 HiCAD was definitely introduced at the right moment. We had to create a great staircase whose design would, retrospectively, not have been possible with our former CAD system", remembers Klein. With a rise of 7400 mm the staircase should be connected to a lift tower and was part of a large project in which the city hall of Schweigggers was being refurbished. This also involved the installation of a library in the upper floor. Although it was made easily accessible via the lift



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tower, the safety of the visitors, for example in a case of fire, had to be ensured. Therefore an emergency staircase had to be installed – a task the Raiffeisen Lagerhaus was charged with. “The difficulties in the design of such a high staircase consisted not merely in the securing of the statics, but rather in its integration into an existing building”, explains the engineer. Therefore particular attention had to be paid to the design of the flight of stairs so that the windows were not being obstructed. This is why the first step consisted in measuring the city hall of Schweiggen and to insert these data into a freehand sketch. By means of the real measurements the construction was reproduced in the CAD system which not merely renders possible the design of the flight of stairs, but rather enables the engineer to plan the fixing and the foundation.

Design time reduced about 40%

But also legal requirements had to be adhered to which is why two resting places were integrated into the staircase and the passage width was restricted to one meter. The lift tower itself was clad with panels and the exits to the main building were furnished with aluminium portals. That the realization of this con-



struction, which was under serious time pressure, would have been more troublesome for the Raiffeisen Lagerhaus without their new CAD system is therefore easily comprehensible. Thus, Robert Klein concludes: “With HiCAD we were able to reduce the design time about 40% and the production time about 30%. The switch to HiCAD also enabled us to undertake projects we would otherwise not have realized.” Consequently there are no obstacles for a further successful cooperation.



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