

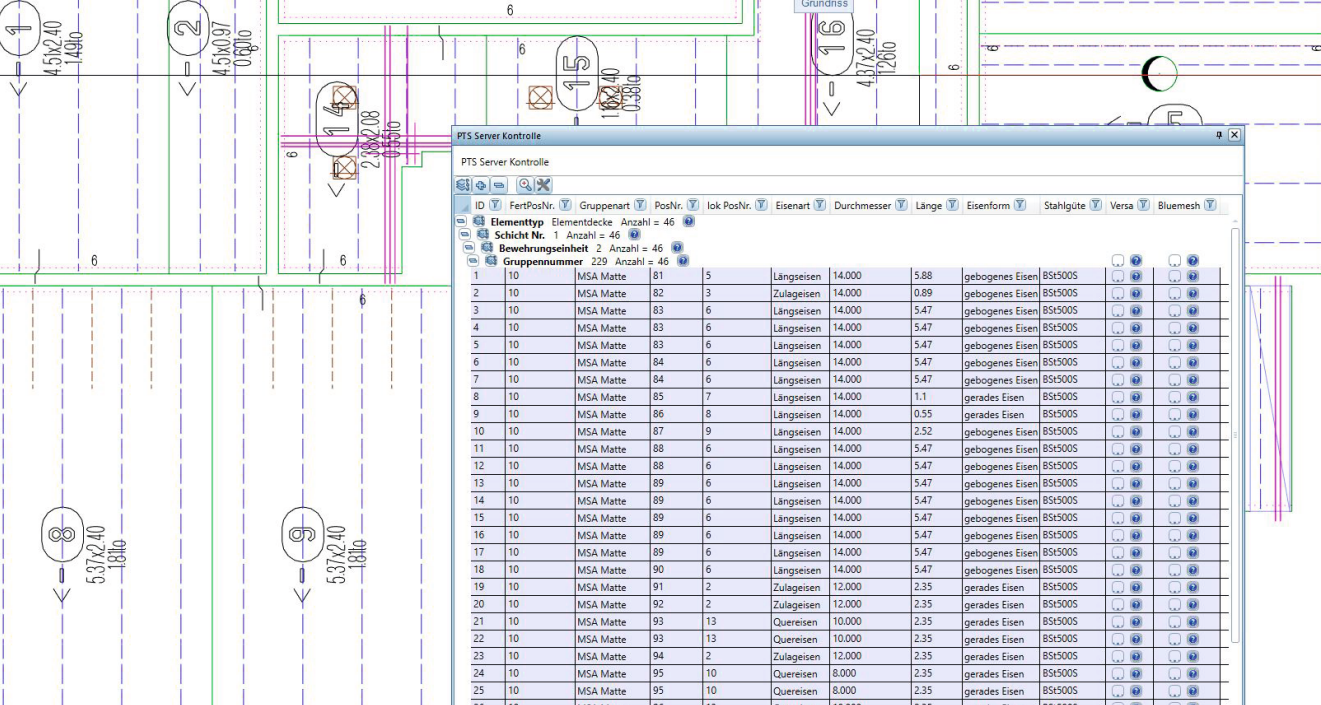
ALLPLAN in practice | Prefabrication

HIGHLY AUTOMATED PRECAST CONCRETE PLANT

One thing that should not be missing in a new precast plant is, of course, the precast concrete parts themselves. For Ralph Rembeck, Managing Director of Rembeck KG, it was clear from the outset that the new plant would be designed, produced, and constructed using ALLPLAN Precast.

The ultra-modern circulation plant has been operating successfully since July 2023, specializing in the production of precast concrete slabs with in-situ topping, double walls, and thermal walls. In addition, Rembeck also produces structural precast elements such as stairs, balconies, and special parts. A special highlight is the successful production of lattice and lattice girders in the new plant. Technical Director Andreas Kerscher and his team managed the

challenging technical preparation of the conversion brilliantly. Mr. Kerscher paid particular attention to the seamless exchange of data between the design office and the production plant. To support this, individual training sessions were held for the planners in the technical office.



ALLPLAN's MWS-Connect enables the automatic generation of production data tailored to the respective mesh welding plant.

Precise planning

Another important success factor was the extensive adaptation of settings and constraints to the new production plant. It is crucial for the precast plant that the interface to the production host computers works smoothly. It was clarified in advance what the new requirements would be and which steps would remain the same or need to be changed. With the support of the ALLPLAN Precast team, solutions were developed to optimize the data flow between the host computer and the production plants. Previously, collisions and conflicts were common because the 2D plans were difficult to read. Now, errors can be detected early, employees have a better overview, and they can review the components on large touch screens.

ALLPLAN Precast enables smooth data flow

The new mesh welding systems are now reliably supplied with quality checked data. ALLPLAN Precast takes into account the individual abilities of the production plant and displays them in CAD. This means that you can design directly in ALLPLAN with the correct, preset machine parameters. Blocked zones, diameters, grid positions, and much more are automatically taken into account. In addition, ALLPLAN Precast checks the producibility and allows you to make changes if necessary. ALLPLAN supports the entire workflow – from initial drafting to the final delivery – providing

PROJECT INFORMATION AT A GLANCE

- > **Focus:** Precast
- > **Software:** ALLPLAN Precast
- > **Client:** Rembeck KG
- > **Design, production, construction phase:** 18 months

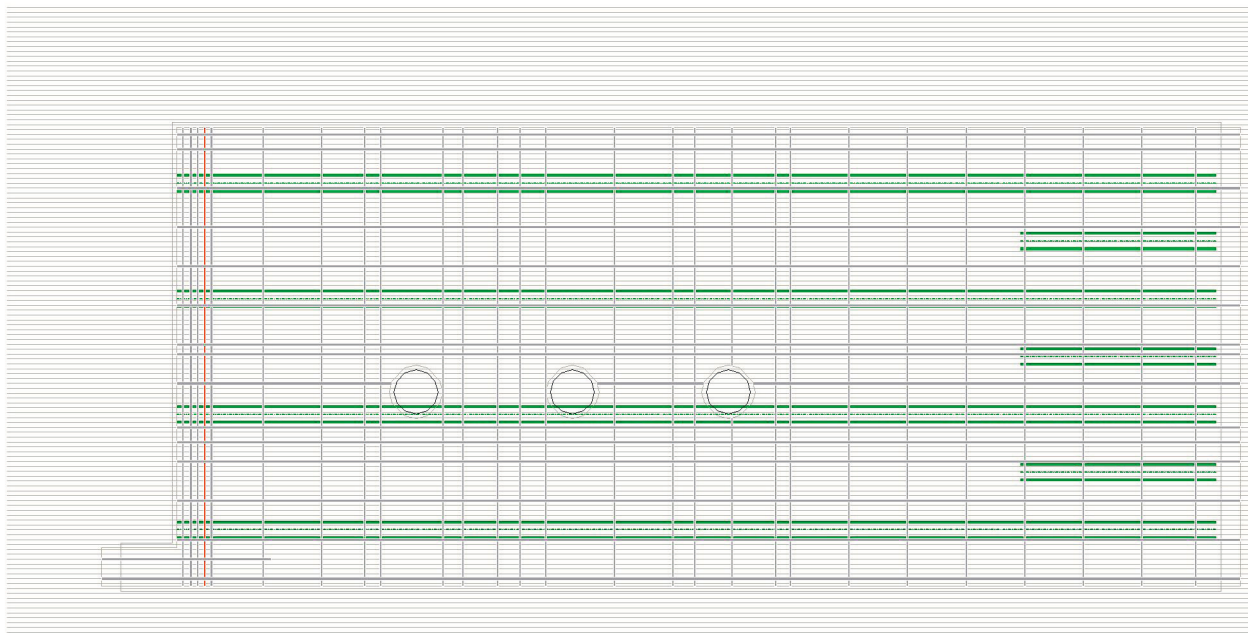
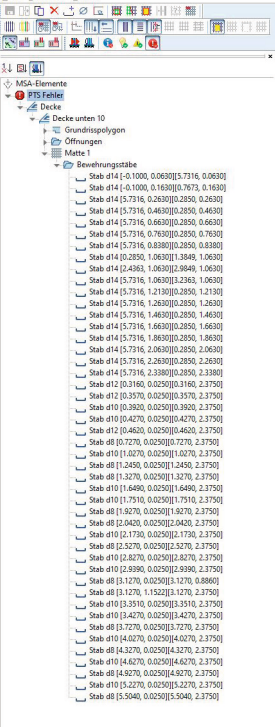
the completed plan, reinforcement details for the customer, and the final invoice. This way, the software ensures a smooth, error-free process from planning to production.

ALLPLAN Precast: a clear recommendation

From Andreas Kerscher's point of view, ALLPLAN Precast is easy to understand and can be used across products. He also appreciates the knowledgeable support provided by ALLPLAN employees, who always have reliable solutions. When asked if he would recommend the software, the answer is a resounding, "Definitely!"

Highly automated circulation system

The precast plant in the Bavarian town of Massing has been fully automating the production of precast concrete floor slabs and wall elements since July 2023. A large part of the work is carried out by the production system itself: for example, robotic arms place the formwork elements in the desired position. Once all the elements have been measured,



MWS-Connect automatically generates reinforcement data in a form suitable for production.

the seven-ton pallet moves automatically to the next station. There, a robot inserts the steel reinforcement, which was previously precisely manufactured on the upper floor of the large hall. At the end of the production line, a robot automatically pours concrete into the correct position. A crane is also used here to lift the precast elements onto heated high racks for curing. Further steps, such as cleaning the 45 steel pallets or assembling the concrete elements into double walls with millimeter precision, are also fully automated.

At around nine million euros, the new circulation system was the largest investment in the company's history to date. But Rembeck is almost more pleased that production in the new precast plant is running smoothly and that the plant is one of the most modern in the whole of Bavaria. In the future, up to 180,000 square meters of precast concrete slabs and 35,000 square meters of double or thermal walls will be produced annually.



„With ALLPLAN we can easily improve our own work. Errors are practically eliminated.“

Andreas Kerscher,
Technical Manager at Rembeck KG

The Client

In 1936, Alois Rembeck Sr. founded the company now known as Rembeck KG as a construction company specializing in agricultural construction. He was quick to recognize the potential of increasing automation in the construction industry, and in 1953, he built a hall for the production of concrete products. The company continued to expand through innovation, with the first ready-

mixed concrete plant being built in Rottal in 1965 and the production of precast concrete floor slabs starting in 1967. The company also focused on the continuous development of its products and added double walls and thermal walls to its product range. Rembeck KG has approximately 130 employees in three premises and is located in Bavaria, Germany.

About ALLPLAN

ALLPLAN is a global provider of AEC software with BIM solutions, architecture, structural engineering, detailing, fabrication and construction. True to our "design to build" claim, we provide tools that enable earlier data-driven design decisions, support digital fabrication and leverage information throughout the entire construction process. Integrated cloud technology further optimizes interdisciplinary collaboration on building and infrastructure projects. Our innovative workflows empower architects,

engineers, and construction professionals to deliver their projects more productively, safely, and eco-consciously.

Around the world, over 700 dedicated employees continue to write the ALLPLAN success story. Headquartered in Munich, Germany, ALLPLAN is part of the Nemetschek Group – a pioneer for digital transformation in the construction sector.

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