

Handl Commercial Construction, Haiming Tirol

2020



In the Austrian Tyrol, a 650-square-meter cross-laminated timber panel was constructed in just two days using TS3 technology. This sets a world record: it is the largest single piece of CLT.

The Project

Markus Handl Beteiligung GmbH is an Austrian family-owned company based in Tyrol. Given the company's focus on its home region, it stands to reason that Handl GmbH would rely on wood, a natural building material, for the construction of this major new project.

For the new production building in Vorarlberg, Austria, the panel end faces were pretreated with TS3 special primer at the Binder CLT plant in Unternberg and immediately afterward fitted with sealing and segmentation strips. The 3.5-meter-wide panels, some weighing over five tons, were loaded just-in-time and transported directly to the construction site in Pians with an escort vehicle.

Construction Method

A temporary scaffold was erected for the installation. TS3 ensures a rigid connection between the individual 240 mm cross-laminated timber panels using patented casting technology with Henkel's two-component polyurethane adhesive. The Spider column head reinforcement from Rothoblaas was installed above the columns in a 7 x 7-meter grid. X-Fix devices from Schilcher Trading & Engineering GmbH were used as assembly aids.

The Challenges

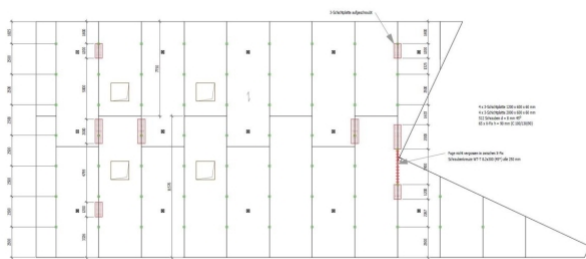
Until now, the TS3 joints were constructed in parallel. These were each laboriously sealed on the underside of the slab. In this project, an advanced joint design was implemented for the first time. This requires less casting resin and simplifies the process, as sealing on the underside is no longer necessary.



Bird's eye view of the entire building



CLT panels on the wooden supports with a grid of 7 x 7 meters



CLT plate division



Interior of the restaurant

Construction data

- Number of floors: 1
- Gross floor area: 650 m²
- Cross-laminated timber: 156 m³
- TS3 technology: 223 m¹

Architecture

ATP Architects and Engineers, Innsbruck

Client

Markus Handl Beteiligung GmbH, Pians

Timber engineer

ETH Zurich University of Innsbruck

Construction management

HTB Baugesellschaft m.b.H., Arzl im Pitztal

Photography

Tom Bause, Innsbruck

CLT Manufacturer

Binderholz GmbH, St. Georgen near Salzburg