

Fasanenhof Apartment Building, Frenkendorf

2021



The first four-story timber post-and-beam structure was built in Frenkendorf. Thanks to TS3, the building—which was originally planned to be constructed of concrete—can now be built using wood. The design process for cross-laminated timber panels, which provide multi-directional structural support, is similar to that for reinforced concrete.

The Project

The four-story residential complex with 15 comfortable apartments is located in Frenkendorf in Basel-Land. This sustainably constructed timber building remains the tallest structure to date in which TS3 technology has been used. This means that the floor slabs consist of large-format cross-laminated timber panels joined end-to-end using TS3 technology. This provides building occupants with a comfortable indoor climate as well as maximum flexibility in use.

Thanks to the prefabricated components and precise planning, the entire building was erected in just three weeks.

The Construction Method

The Fasanenhof is a column-slab construction similar to that found in reinforced concrete—but made simply from cross-laminated timber panels and round wooden columns. This allows for a faster construction timeline, as no curing period is required. Only the stairwell core was poured with concrete. Here, however, the usual sequence was reversed: the timber structure was erected first and later served as permanent formwork for the liquid concrete.

The Challenges

The cold temperatures during the pouring of the CLT panels required winter construction measures. To this end, the building was temporarily wrapped and heated. This ensured the necessary temperatures during pouring and curing.



TS3 technology allows for use-flexible room concepts.



The building was once planned in concrete. TS3 technology made the switch to wood construction easy.



Thanks to the load-bearing support, the walls are not load-bearing and can be easily moved.



Thermal bridges made simple. CLT ceiling simply runs through from the apartment to the loggia.

Construction data

- Number of floors: 4
- Floor area: 1,222 m²
- Cross-laminated timber: 293 m³
- TS3 technology: 567 m¹

Architecture

Scherer Architekten AG, Liestal

Timber engineer

Timbatec Timber Engineering Switzerland AG, Bern

Construction management

Scherer Architekten AG, Liestal

Photography

Nils Sandmeier, Biel