

# Scaffolding tower cloudwork, Zürich

2019

---



Wood is not only the right choice of material for residential and commercial buildings, it also offers ideal properties for temporary structures. At 70 meters high, the scaffold towers are the tallest wooden structures in Switzerland.

## The project

For the construction work on the three high-rise buildings of the Wolkenwerk development in Zurich, a scaffold tower was needed on each side of the facade. A temporary wooden construction placed on a concrete slab proved to be the best solution. One platform per floor enables the building materials to be loaded and unloaded. The 70-meter-high scaffold towers are designed to be attached to the buildings only for bracing. All loads are transferred in the wooden structure so that the high-rise buildings are not loaded with additional weights.

## The construction

Timbatec's engineers planned the towers as skeleton structures. For each structure, the timber constructors needed 27m<sup>3</sup> glulam, 32m<sup>3</sup> structural timber and 560m<sup>2</sup> three-layer panels. This results in a timber volume of around 200m<sup>3</sup> per tower. To ensure the shortest possible construction time, most of the towers were delivered to the construction site as prefabricated elements.

## The challenge

With a height of 70 meters, the high-rise limit of 30 meters is clearly exceeded. As a result, increased fire protection regulations also apply during the construction phase. Accordingly, conditions were imposed by the authorities. To prevent a possible fire from simply spreading from one floor to the next, fire barriers were planned for all platforms.



View from a wooden platform



Fire protection transom per floor



View over the city of Zurich



Scaffolding tower from below

### Construction Data

- Total amount of wood per tower 200m<sup>3</sup>
- Glulam 27m<sup>3</sup>
- Structural timber 32m<sup>3</sup>
- Three-layer boards 560m<sup>2</sup>

### Services of Timbatec

- Fire protection planning
- Statics and construction

### Timberconstruction engineer

Timbatec Holzbauingenieure (Schweiz) AG Zurich  
8005 Zurich

### Timberconstruction

Carpentry Frei AG  
6331 Hünenberg