

Barracks roofing, Chamblon

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A PD/ID shelter with an unusual folding/angled roof became a reality in the Chamblon barracks thanks to TS3 technology. This fantastic project impressively demonstrates the diverse possibilities of the TS3 system. The architects not only won the competition with their design, but also made a statement about the possibilities of modern timber construction.

The project

The architectural firm Atelier d'architecture Charrière-Partenaires SA from Granges-Paccot won the competition to extend the Chamblon barracks. An angled wooden roof construction was planned as an additional PD/ID stand - a real challenge. The shelter has a size of 18.8 x 11.5 meters with a column grid of approximately 4.5 x 9 meters. Together with the timber constructor Vial Charpente from le Mouret and the timber construction engineering office Timbatec, a solution made of solid wood panels was developed.

[Video](#)

Our video of the spectacular folding/angled roof in Chamblon on [Youtube](#)

The construction method

In the Vial Charpente workshop, the 280 mm thick CLT panels were bound and joined to form six separate roof sections using TS3 technology. Because of the angular bonding, the panels were placed on negative molds as falsework. After a long waiting period in the sheltered hall, the individual parts were transported to the barracks site and joined on site using five more TS3 joints. The roof was supported on 10 V-shaped steel girders.

The challenges

The angle joints could not be subjected to heavy loads during transportation and the crane lift. For this reason, the entire roof was built on negative molds resting on two beams. The beams were attached to the crane and the entire structure was pulled up and then lowered onto the supports. The lifting weight was approx. 30 tons.

**Construction data**

- Roof area: 216m²
- Cross laminated timber: 43m³
- TS3 technology: 124 linear meters of joints
- Column grid: 4.5 x 9 meters

Architecture

Atelier d'architecture Charrière-Partenaires SA,
Granges-Paccot

Client

Armasuisse, Berne

Timber engineer

Timbatec Holzbau Ingenieure Schweiz AG, Délemont

Timber construction

Charpentes Vial SA, Le Mouret

CLT - Manufacturer: Schilliger Holz