

# Timber construction in the shape of a magician's hat at Knies Kinderzoo

Rapperswil, CH



## Project details

Client	Gebrüder Knie, Schweizer National- Circus AG
Architecture	Carlos Martinez Architekten AG
Project type	Event construction, Leisure and sport
Construction type	Free Form
Services	Timber construction
Construction	2020
Locality	Rapperswil
Country	Switzerland

## A timber magician's hat for events at Knies Kinderzoo

The events structure in the shape of a magician's hat with a 26 m high tower was constructed at Knies Kinderzoo to replace the former Otarium. Blumer Lehmann was in charge of the substantial timber structure for this extraordinary Free Form construction, including preliminary planning, mock-ups, designing the timber construction for the supporting framework and interior cladding, detailing and 3D modelling plus planning, coordinating and executing the exterior cladding, supporting framework and interior cladding.

The roof of the event space is reminiscent of circuses and magic: a magician's hat or a magic cloth. Creating the curved roof shape was possible thanks to Free Form timber elements designed as a prismatic shell structure.

Prefabrication of the timber structure also kept construction and assembly times to a minimum. Irregularly shaped, matt scales made from sheet metal cover the entire roof like a membrane.

Music and sound emissions presented a particular challenge in planning and executing the events venue. The resulting sound insulating facade ensures that people in the surrounding area are not adversely affected. Inside the events structure, the interior cladding uses 418 acoustic elements to ensure excellent sound quality.

A pull-out platform and interchangeable podiums are installed inside to allow the space to be adapted for a variety of events. The events venue features an arena, sanitary facilities, green rooms, kitchen, storage room and two entrances, and is designed to hold an audience of 500 people.

## Specific Contact



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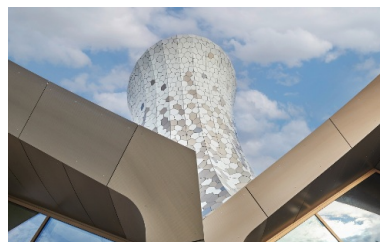
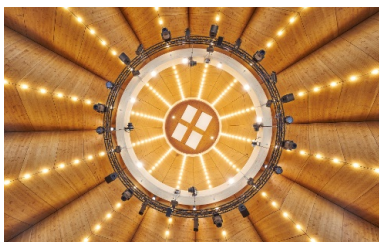
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Although the timber roof is the dominant feature inside the magician's hat, its curved shape and use of timber give it a light and airy feel.



The cantilever timber roof, designed as a prismatic shell structure, is surrounded by irregularly shaped sheet metal sheds.



Free Form timber elements shape the prismatic shell structure of the curved roof.

Tower and windows of magician's hat at Knies Kinderzoo

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It was only possible to implement the extraordinary magician's hat design by constructing it out of timber.



With a height of 26 m, an extraordinary building design and a roof covered in metal scales, this magician's hat is a truly eye-catching structure.



An advantageous design using local wood: the prefabricated elements are assembled in no time on the construction site.