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HASSLACHER
NORICA TIMBER

From **wood** to **wonders**.



References & Products



HASSLACHER in China



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Company

Austria

Sachsenburg

Stall im Mölltal

Hermagor

Preding

Rennweg am Katschberg

Nikolsdorf

Rangersdorf

Slovenia

Bohinjska Bistrica

Germany

Kleinheubach

Magdeburg

Schmallenberg

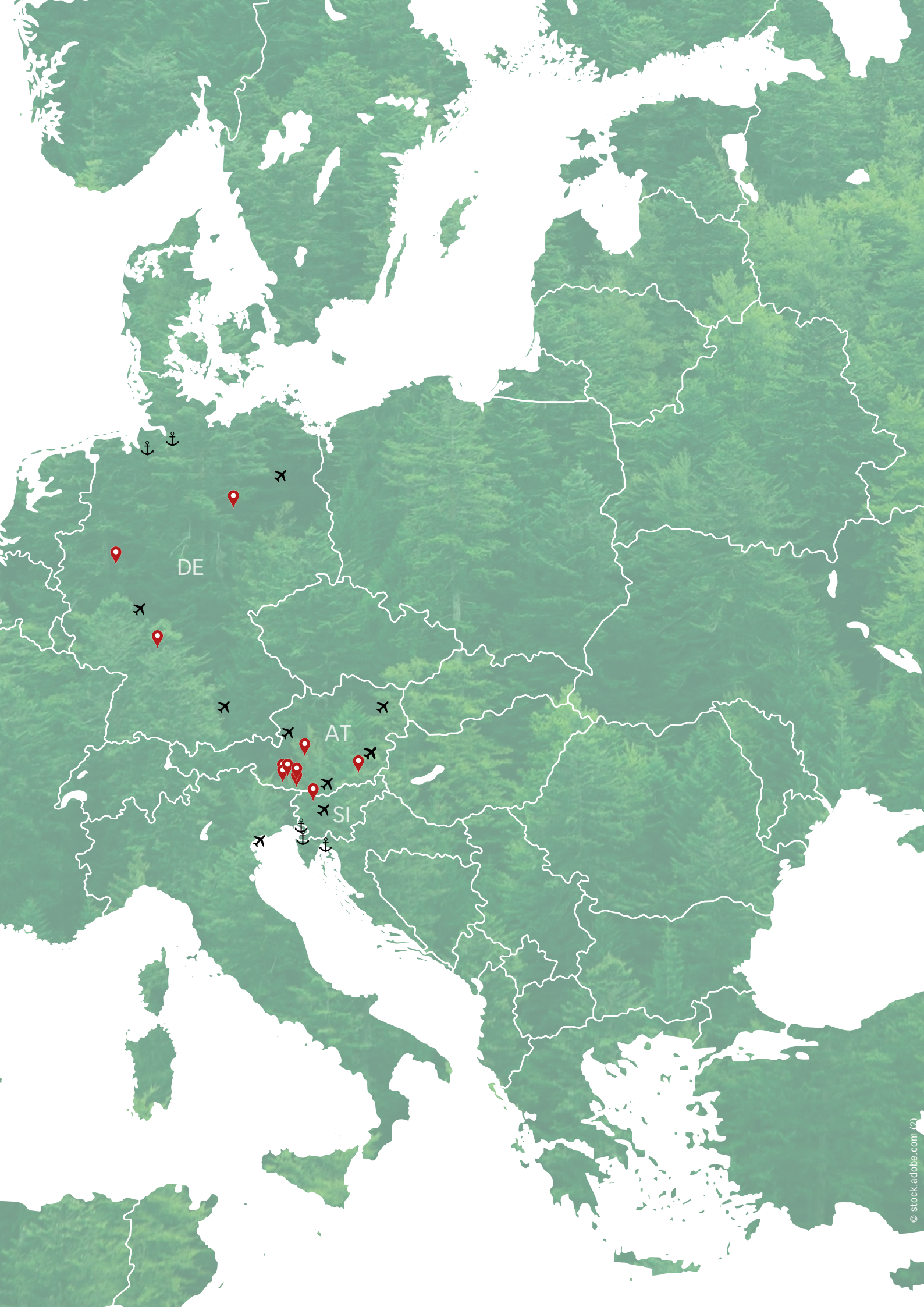
Spain

Ea

Legutio

✈ **AT** | Klagenfurt, Graz, Salzburg, Vienna; **IT** | Venice;
DE | Munich, Frankfurt, Berlin; **SI** | Ljubljana; **ES** | Bilbao;

⚓ **DE** | Hamburg, Bremerhaven; **IT** | Trieste; **SI** | Koper; **HR** | Rijeka; **ES** | Bilbao;



Tianfu Agricultural Expo

Chengdu | CN

References



Taiyuan Botanical Garden

Domes

Three timber gridshell dome structures form the centerpiece of this garden, with each of the three domes creating different climates and environments. Two of the three domes accommodate the pavilions for tropical and desert plants, while the third dome is designed to house an aquatic environment sitting directly on a lake.

All three domes have a unique topology, opening towards the south for maximum solar gain during summer and winter. The geometrical design of these domes presented a particular challenge, as they are not spheres, and initially each of the Glulam elements would have been doubly curved to create the geometry.

The largest dome has a clear span of over 88 m, making this one of the largest timber gridshells worldwide.



© StructureCraft (1) © GreatARLight Chaser for Taiyuan StructureCraft - SKF for Tianfu (3)



Project information

Location

Taiyuan / China

Year of construction

2019-2020

Architect

Delugan Meissl Associated Architects

Products used

Glued laminated timber
special components,
glued laminated timber

Tianfu Agriculture Expo

With the aim of revitalizing the agricultural area in the Chinese province of Sichuan, the Tianfu Agriculture Expo Park which has an exhibition area of around 75,000 m² is the largest wooden structure in China to date.

Unique hybrid Vierendeel truss

At the Tianfu Agriculture Expo, five halls in the form of a structure make up the roofing of this area. The Vierendeel truss arched girders span a length of 115 m and reach a height of up to 45 m. Each truss segment weighs up to 30 tons. Canadian firm StructureCraft is the structural engineer and builder of the roof structures, working closely with local design institute CADG for the past two years to design a world-first hybrid Vierendeel truss made of wood and steel, a signature design by Gerald Epp from StructureCraft.

Glulam single element manufacturing

All glulam elements are individual and made to order and were manufactured at the HASSLACHER Group's sites in Hermagor and Kleinheubach, provided with the necessary joinery work and delivered to Chengdu as a kit by rail on the new Silk Road.

Machining was entirely by an automated digital fabrication process for generating CNC files directly from the StructureCraft Rhino models. With this outstanding project, the HASSLACHER Group was once again able to assert itself against the strong international competition.



Project information

Location

Chengdu, China

Year of construction

2021/2022

Architect

CuiKai / CADG

Products used

Glued laminated timber



Taiyuan Botanical Garden

Restaurant and Tea-House

A botanical garden of gigantic proportions is being built in the Chinese province of Shanxi, close to the city of Taiyuan with its population of four million. The restaurant's design is similar to that of traditional Chinese temples and reminiscent of the wooden structures of a Chinese pagoda. After several studies aimed at putting the structure on a contemporary and economically sensible foundation, a shifted wooden structure made of stacked glued laminated timber elements was established as the main supporting structure of a very attractive and atmospheric space.

Embedded in the landscape, the geometry of the restaurant is both detached and extends onto the lake. The restaurant consists of 750 m³ straight glulam beams, which were manufactured at the HASSLACHER Group's location in Magdeburg. The restaurant and tea house are right next to the Taiyuan Domes, which are home to the Botanical Garden.



Project information

Location

Taiyuan / China

Year of construction

2019

Architect

Delugan Meissl Associated
Architects

Products used

750 m³ glued laminated timber
made of spruce

Haikou Community Centre

Haikou is a city in the north of China's Hainan Province, serving as both its capital and economic centre. The Haikou Community Centre project is intended to symbolise the dawn of a new age and to transfer the old timber construction tradition into the modern age. 1,300 m³ of glued laminated timber special components were used to span a brick building and to expand the covered area. The roof was covered with shingles to give the construction a natural look and to embed itself perfectly into the tropical surroundings of the popular holiday island. The glued laminated timber used was produced at the HASSLACHER Group's location in Hermagor and shipped by container to the port of Hong Kong. Because there is hardly any space in the port of Haikou, the beams for the wooden structure had to be loaded onto smaller ships, which required extensive and challenging logistical efforts. This project was the first large timber construction project in China in this dimension and size.



Project information

Location

Haikou, China

Year of construction

2019

Products used

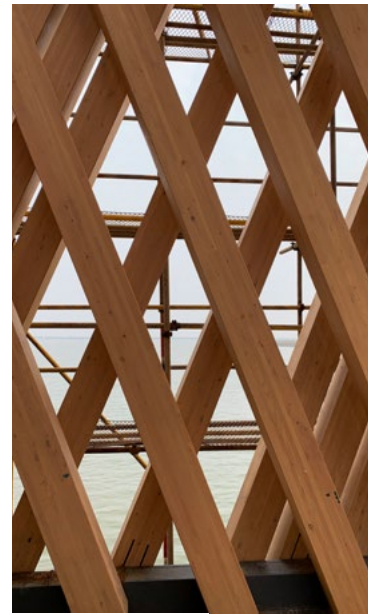
1.300 m³ glued laminated
timber special components
made of spruce



Shanghai Bridge

At the end of the 19th century, Shanghai developed into a cosmopolitan city. Today, the Chinese metropolis – with its more than 26 million citizens – is the most important industrial city in China and one of the largest cities in the world. Shanghai is also a unique place of art and cultural traditions that are often forgotten. This is also true of China's timber construction tradition.

Now, it is experiencing a renaissance, especially in Shanghai along the Yangpu River. For some years now, small kiosks, restaurants, exhibition spaces, galleries and, in 2020, after only three months of construction, a bridge made of wood have been built along this stretch of water. 220 m³ of glued laminated timber made of larch were used to ensure the construction's durability. The new bridge over the Yangpu River is also the first wooden bridge of its kind in China.



Project information

Location

Shanghai in China

Year of construction

2020

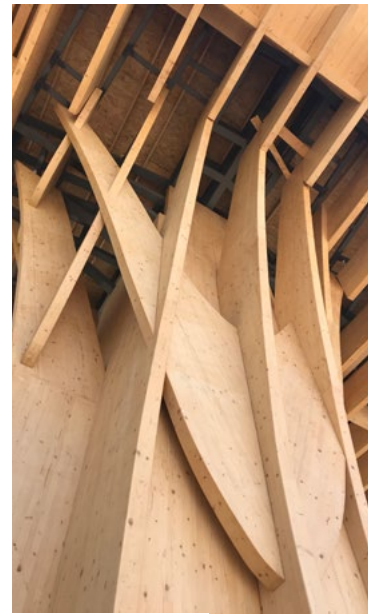
Products used

220 m³ glued laminated timber
made of larch

Taiyuan Botanical Garden

Entrance Portal Tree Structure

The Taiyuan Botanical Garden in northern China marks a very unusual project that is currently in development. The entire concept for this complex reflects the traditional Chinese wooden roof structures. A recreated landscape with mountains, hills and water features is being created here, as is a research centre, a bonsai museum and three greenhouses with glass domes that simulate different climate zones. The entrance building, connected to the street and a big parking lot, plays two roles: It invites the urban landscape into the garden and at the same time lets the natural landscape interact with the built-up environment. The reception and the welcoming lobby are situated directly near the entrance. Located very close to this entrance is an impressive wooden structure in the shape of a large Chinese tree. This wooden structure was made of spruce glued laminated timber made of spruce and was produced at the HASSLACHER Group's location in Hermagor and delivered to Taiyuan fully CNC machined.



Project information

Location

Taiyuan in China

Year of construction

2019

Products used

Glued laminated timber
made of spruce

Products



1,000,000 m³
Sawn timber



150,000 m³
Surfaced timber



120,000 m³
Structural finger jointed solid timber & GLT®



400,000 m³
Glued laminated timber



150,000 m³
Cross laminated timber



1,200,000 m²
Formwork panels



2,000,000 units
Pallets & packaging solutions



100,000 t
Pellets



320 GWh
Heat



110 GWh
Electricity



Bjergsted Financial Park

Bjergsted | NO

T3

Atlanta | US

The 7-story T3 West Midtown project in Atlanta is one of the largest solid wood buildings in the United States, with 20,000 square meters of floor space, and is the second T3 office building for developer Hines, a global real estate investment, development and management company in private ownership. T3 stands for timber, transit and technology. The system, consisting of glulam columns and beams, was produced at the HASSLACHER Group sites in Kleinheubach, Sachsenburg and Hermagor and fitted with around 10 tonnes of steel parts. The first T3 in Minneapolis was completed in 2016 and showed that wood can be used competitively in large commercial office spaces through efficient design and construction.

Project information

Location

Atlanta, USA

Year of construction

2019

Architect

HPA / DLR Group

Products used

HASSLACHER BauBuche
GL75, glued laminated
timber, block glued
glulam



Glued laminated timber

High-quality glued laminated timber is characterised by the high load-carrying capacity, dimensional stability and formability of the timber components. Glued laminated timber is available in straight and curved shapes, thereby opening the door to virtually limitless design freedom in timber construction.



North Surrey Sport & Ice Complex

The North Surrey sports and ice stadium located in the Canadian city of Surrey in Southwest British Columbia is home to three ice complexes and offers in addition space for further sporting activities. Long-span hybrid timber/steel trusses span up to 43 m to form the main roof support. The roof covers an area of around 10,219 m². The king-posted trusses consist of Glulam top chord, steel rod tension chord and HSS web members. For this project executed by customer StructureCraft, glued laminated timber and glulam special components were delivered by container from the HASSLACHER production sites in Magdeburg and Kleinheubach respectively.

Project information

Location

Surrey, British Columbia

Year of construction

2019

Architect

Franci Architecture

Products used

glulam, glulam special components



Glued laminated timber

Special components

In our role as a producer that also serves as consultant, we are available to support the development of a building project with our excellent product quality. From consulting and CAD planning to static design. We are able to offer large spans and various support systems. Our glued laminated timber special components are produced at the Hermagor and Kleinheubach sites.



HoHo

At 84 metres tall, this 24-storey building is one of the tallest wooden buildings in the world. The HASSLACHER Group supplied 777 block-glued glulam columns of the highest strength class in visual quality. Furthermore, CLT wall elements with „Excellentsurface“ were produced and further refined by means of a double surface treatment. In addition to this, all CLT elements were delivered with pre-installed windows and a vapor barrier.

Project information

Location

Vienna, Austria

Year of construction

2016-2019

Architect

Rüdiger Lainer + Partner
Architekten ZT GmbH

Products used

365 m³ of glued laminated timber, blockglued;
1,600 m³ of CLT wall elements with „Excellentsurface“, water-based coating applied twice.



Cross laminated timber

Cross laminated timber is a solid, multi-layered building material made of wood. Thanks to its excellent structural and mechanical properties, this planiform wood material has excellent thermal insulation properties. It is able to dissipate loads in several directions.



Anaklia- Ganmukhuri Pedestrian Bridge

The wooden Anaklia-Ganmakhuri footbridge is one of the longest pedestrian bridges in Europe (505 m). The bridge spans the River Enguri and connects the Georgian resort of Anaklia with the neighbouring town of Ganmukhuri. The river then flows into the Black Sea. For quality assurance purposes, all glued laminated timber elements in this project were pre-produced at the plant in Kleinheubach. To meet the special requirements and difficult logistics requirements, the HESS LIMITLESS solution was used. This allowed the joining of the individual elements (a total of 141 joints were carried out) in Georgia. The resulting beams have an impressive length of 48 m. The maximum free spans of the bridge are 84 m.

Project information

Location

Anaklia, Georgian
Republic

Year of construction

2011 - 2012

Architect

Leonhardt, Andrä und
Partner

Products used

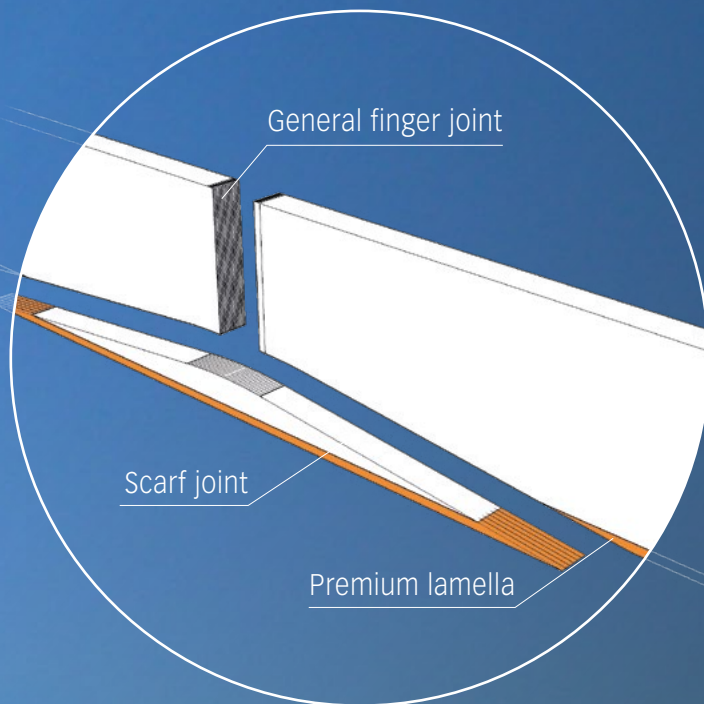
Glued laminated timber –
HESS Limitless



HESS LIMITLESS

Large spans are no problem when building with glued laminated timber. However, in overseas projects or in places that are difficult to access, long components can quickly result in insurmountable challenges. For this reason, HESS TIMBER - a HASSLACHER group subsidiary - has been developing and implementing projects around the world for ten years using the HESS LIMITLESS longitudinal performance joint.

HESS LIMITLESS is a patented and approved solution for the manufacture of theoretically infinite rod-shaped building components. Glued laminated timber beams are segmented at the factory and specially prefabricated. The advantage is that this segmentation enables flexible, safe and cost-effective transport in conventional standard containers. Especially for overseas projects or narrow access roads to construction sites, segmentation often provides the decisive advantage. In addition, the pure timber-to-timber connection is superior to conventional connection technologies in terms of performance – the patented technology is 100 % efficient – especially with wide-span roof structures.



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From **wood** to **wonders**.



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