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Partner of Stora Enso

A² Timber
Design • Build • Product

World Expo 2025 Pavilion Czech Republic
Osaka, Japan

Meet the design winner of the 2025 World Expo for the Czech Republic. This groundbreaking wood structure with a glazed façade is poised to inspire the world with its use of wooden materials.

The eye-catching pavilion is located in a prominent position next to the ocean front. Visitors can look forward to a 260-meter-long educational trail, with views of Osaka Bay, and a multifunctional auditorium that will offer a rich program throughout the entire exhibition. The interior exhibition space of 402 m² has widths from 1.8 to 7 metres wide and 12 metres high.

The design concept, rooted in the principle of raw material efficiency, ensures rapid on-site assembly using a mass-customised cross-laminated timber (CLT) kit of parts, Sylva™ CLT Walls and Floors by Stora Enso and manufactured in the Czech Republic.

Kit of parts construction

The circular floor plan is divided into thirty-six equal sections using rational geometry, which are structurally and visually inscribed into the whole building. Japan has a very long and rich history of building with wood dating over a thousand years. In fact, Horyu-ji Temple in Nara, Japan was built in 607 AD and is the world's oldest surviving wood building.

Stora Enso has been delivering posts and beams and sawn wood to Japan for many, many years. The adoption of mass timber has been increasing in the region due to its sustainability, cost efficiency, and design flexibility. The pavilion will undoubtedly showcase beautifully how unique buildings can be constructed using a kit of parts with Sylva™ by Stora Enso.

Seismic tests

Due to the geographical location and weather conditions, (which include frequent tornadoes and earthquakes), a series of important engineering calculations had to be carried out to comply with local regulations. However, given that CLT has naturally very good seismic properties, the Sylva kit met all of the required tests successfully and now erected, it is one of the tallest wooden structure in Japan.

Transport

Transport to Japan was aiming to low emissions, first to Hamburg and then by sea in a total of 50 shipping containers.

Design for reuse

The design is optimised for the easiest possible assembly on site and subsequent dismantling after the event.

Construction timeline

Construction work began in mid-September 2024. By mid-December, the structure was completed, after which glazing was applied to the spiral.

The World Expo will be open from April to October 2025.

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Read more

Advantages to building with mass timber - Download the white paper

View other demountable pavilions made with a Sylva™ kit?

Nordic World Ski Championship's Pavilion 2023

Finnish Pavilion at Astana Expo 2017

Slovenian Pavilion EXPO 2021 Dubai

Swedish Pavilion in Dubai EXPO 2021

General

Delivery year

2024

Building type

Others

Area (m²)

2,450

Storeys

4



Photo credit: ©Office of the Czech Commissioner General, EXPO 2025, Apropos Architects

Products

Products and Services

Sylva™ CLT Floors and Roofs, Sylva™ CLT Walls, Temporary Membrane, Sylva360™

Product quality

PEFC Certified Wood | Industrial non-visual grade

Product volume (m³)

811

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Team

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Developer

Ministry of Foreign Affairs of the Czech Republic (MFA CR)
Office of the General Commissioner of EXPO

Architect

Apropos Architects

Main contractor

Daisue Construction Co., Ltd.

Specialist Timber Subcontractor

A2 Timber s.r.o.