VIENNA HOUSE EASY, VIENNA

CASE STUDY
Europe's largest timber-built hybrid hotel

SUSTAINABLE PROTECTION AGAINST NOISE AND VIBRATION WITH A LIGHTWEIGHT CONSTRUCTION

getzner

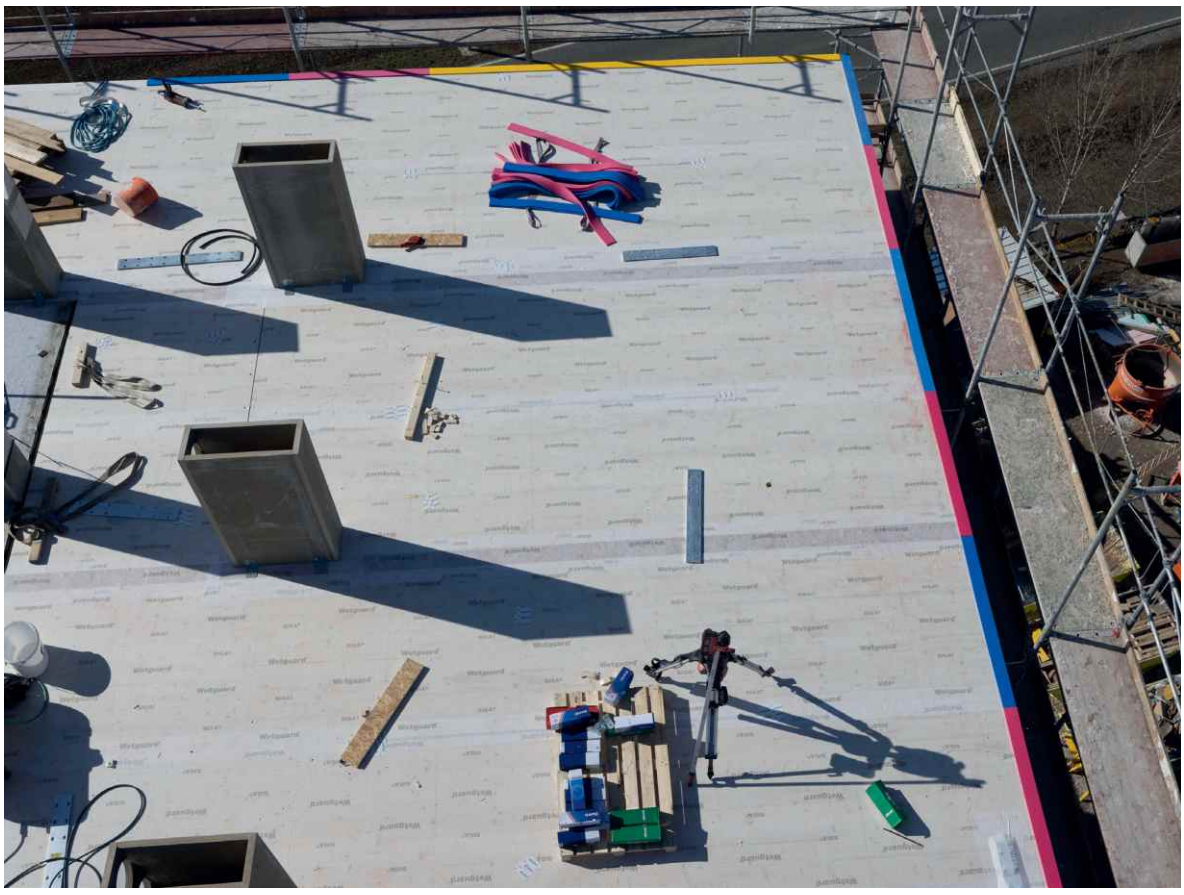
EFFICIENT SOUND CONTROL FOR EUROPE'S LARGEST TIMBER-BUILT HOTEL

The project

The new 'Vienna House Easy by Wyndham' is setting new standards even during construction: it is currently being built as Europe's largest hybrid timber hotel, located directly at Schwechat Airport near Vienna. With 510 rooms, it will not only be the largest hotel at the location, but also the fourth largest hotel in Austria.

In keeping with the developer's aims, the focus lay on using ecological building materials. In addition to the hybrid timber design, the sustainable construction also makes use of carbon-free heating and cooling. The hotel has three wings coming off a long central building, with the staircases being constructed from reinforced concrete to act as a bracing core. Around 10 900 m^2 of cross-laminated timber walls create space for the five floors, which are supported by the ground floor constructed from reinforced concrete.

Thanks to a high degree of prefabrication and well-planned logistics—supported by our partner Haberkorn—the entire timber shell was erected by Graf-Holztechnik in Schwechat in just three and a half months.



More than three kilometers of Sylodyn® strips were laid as line bearings in various degrees of stiffness.

Sylodyn® decouples joints from flanking sound.

The Getzner solution

The modern timber construction offers a great deal of potential for sustainable, resource-efficient and climate-friendly buildings. However, effective sound insulation poses a particular challenge. Compared to solid construction methods, using wood – a lightweight material – means that vibrations are conducted to a much greater extent, both from airborne and impact noise. Effective isolation of vibrations becomes extremely important here, with careful planning, expertise in architectural acoustics and innovative detailed solutions are required. Of particular importance here is using vibration engineering techniques to decouple flanking sound at the component joints.

Sylodyn® strips are easy to install. They are prefabricated and are also available as self-adhesive variants.

Strip bearings

Graf-Holztechnik therefore decided to mount the wall elements on elastic bearings in the form of highly effective Sylodyn® strips from Getzner. In addition to the best possible acoustic decoupling, the timber construction company was impressed by the overall package: "We received excellent support from the Getzner experts and the required models and sizes were delivered at exactly the right stage in construction," confirms Georg Stelzhammer, Head of Engineering + Structural Calculations at Graf-Holztechnik.

In perfect harmony

In total, around 2 000 Sylodyn® strip elements (each one 12.5 mm thick) were laid, which equates to a total area of around 300 m^2. As part of a customised design, different types of the high-tech elastomer were selected based on the compressive load and vibration frequency. In addition to the minimal settling, the outstanding long-term behaviour of the material was another key factor in the decision to use Sylodyn®. This ensures that its sophisticated spring characteristics can guarantee effective protection against airborne and impact noise over several decades.

ADVANTAGES FOR THE CUSTOMER

- Effective protection against airborne and impact noise
- Outstanding long-term behaviour of the spring characteristics
- Custom widths and designs according to customer requirements

» ***"We received excellent support from the experts at Getzner and Haberkorn, who ensured that the Sylodyn was customised exactly to our requirements, perfectly synchronised with the construction progress and delivered on time – an impressive solution for this large cross-laminated timber project."***

Franz Hahn, Site Manager at Graf-Holztechnik

A COMPLETE SOLUTION

With 510 rooms, the 'Vienna House Easy by Wyndham' is currently Europe's largest hybrid timber hotel and the fourth largest hotel in Austria. As a lightweight material, timber conducts vibrations from airborne and impact noise to a much greater extent than is encountered with solid construction methods. Effective isolation of vibrations becomes extremely important here.

A perfect opportunity for Getzner to demonstrate its strengths in materials and applications:

- Increased comfort through targeted vibration isolation
- Efficient sound control
- Lasting effectiveness through the high fatigue strength of Sylodyn®

Project	Holzhotel ›Vienna House Easy‹
Location	Flughafen Schwechat, Wien (Austria)
Principal	Graf-Holztechnik, Horn (Austria)
Partner	Haberkorn, Wolfurt (Austria)
Developer	Mamma Group, Vienna (Austria)
Technical Project Manager & Control	BauConsult real estate project-management GmbH
Solution	Sylodyn® 12,5 mm in various types
Implementation	2025

In cooperation with:

HABERKORN

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