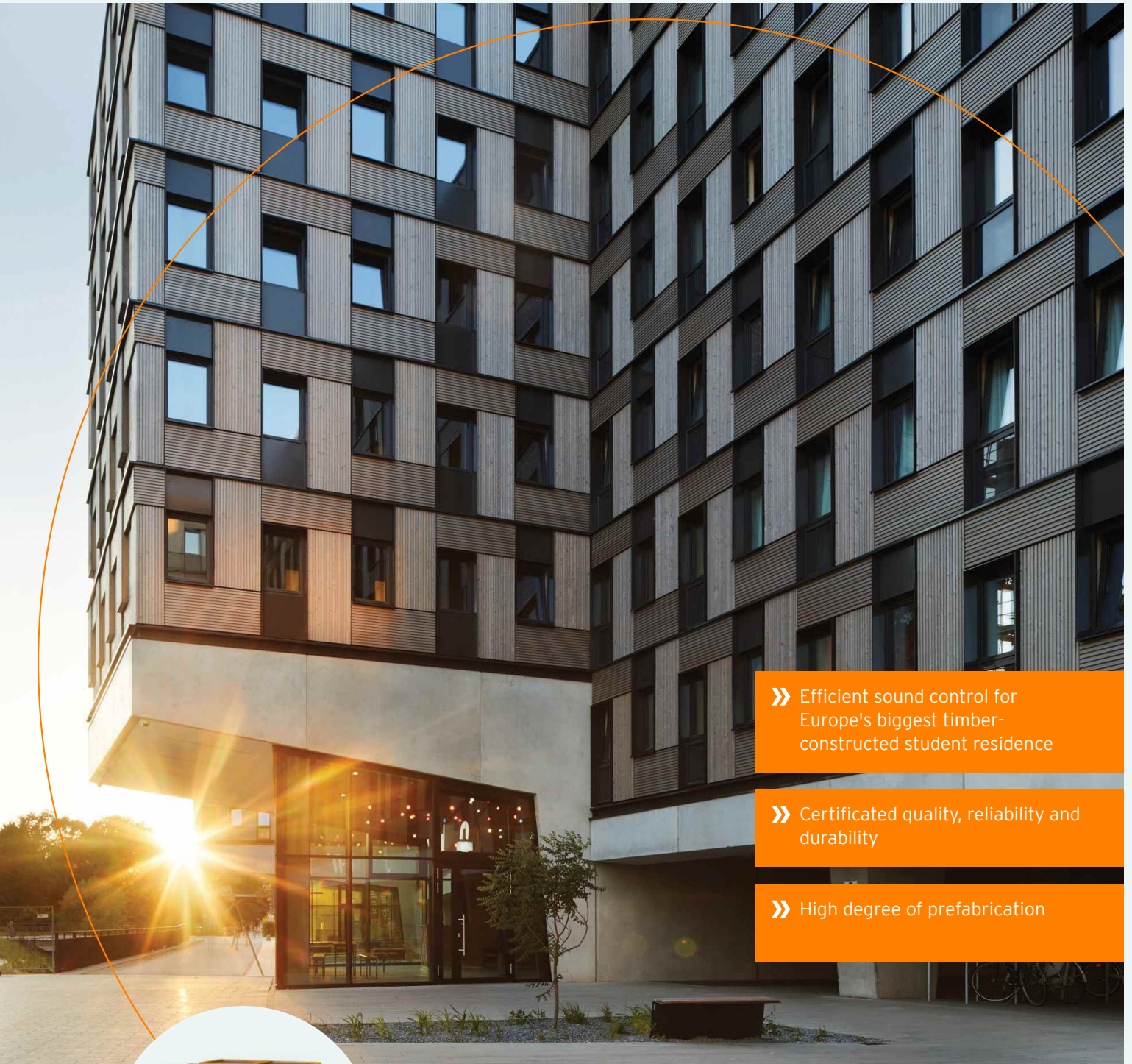


# Case Study

## Student Residence UDAQ, Hamburg (DE)



» Efficient sound control for Europe's biggest timber-constructed student residence

» Certificated quality, reliability and durability

» High degree of prefabrication



# Efficient sound control for timber-constructed student residence



Sectional view of module

Assembling the pre-fabricated solid wood modules

» Shear forces are dissipated by the Sylodyn® bearings, eliminating the need for costly shear cleats.

## Description of the project The solution

On six floors, 100 metres in length and made of solid wood, 371 student flats are strung out in the district of Wilhelmsburg in Hamburg. This makes "UDQ" the biggest timber student residence in Europe and the tallest timber building in Hamburg.

Inspired by the stacked containers in the Port of Hamburg, "UDQ" is made up of prefabricated timber modules that are stacked on top of and next to one other. The whole construction sits on a base of reinforced concrete. Each of the 20 m<sup>2</sup> apartments is fully furnished - with bed, bathroom, built-in wardrobe, kitchenette and folding table. Where necessary, single modules can also be combined to create larger apartments.

Effective sound insulation is essential on a project such as this. That is why Getzner was brought on board as experts by contractor Kaufmann Bausysteme GmbH.

To prevent sound transmission between the apartments, the individual modules were bedded on Sylodyn® from Getzner.

Timber was chosen as a building material due to its ecological properties and the warm interior ambience it creates. The modules were pre-fitted with Sylodyn® linear supports at the factory for reliable soundproofing.

"Sound mainly propagates through the flanking of the modules. Using elastic bearings, means we have been able to almost completely eliminate sound transmission between the individual modules", explains Hendrik Reichelt, Project Manager at Getzner.

### Certificated sound control

The quality of the vibration isolation material is certified by the German Institute for Building Technology with a national technical approval (abZ). This approval also guarantees the reliability and durability of the material in conformity with the latest technology standards. Sylodyn® and Sylomer® from Getzner are the only polyurethane materials in this field to have been awarded this approval, making it an obvious choice for construction projects.



Pre-fabricated and fully furnished modular apartment

### Assessment concept for structural engineers

Kaufmann Bausysteme, a modern timber construction company, has been relying on Getzner for sound control solutions for many years. Along with the approval, they also value the consultancy service provided by the material manufacturer. Hendrik Reichelt explains the main ways this makes things easier for customers: "Along with effective sound control, we also provide an assessment concept, in addition to the material, that will facilitate simple and reliable structural analysis. This allows the structural engineer to check and approve the choice of material, selected based on the specifications of the acoustic consultant."

### Feedback

#### What does the client have to say about the project?

"Sound control measures are essential in modern timber construction. They significantly enhance living standards and add to the value of the property. We have worked with Getzner over many years and our experience has shown us that they are true vibration protection experts: you can not only rely on the sound control solutions, but also their consultancy service."

Christian Kaufmann, Managing Director of Kaufmann Bausysteme GmbH



Manufacturing of the modules with Sylodyn® linear support



## Facts and figures at a glance

### UDQ student residence with 371 apartments

|                      |  |
|----------------------|--|
| Location:            | Hamburg, Wilhelmsburg  |
| Design:              | Modular timber construction  |
| Client:              | Kaufmann Bausysteme GmbH   |
| Architect:           | Sauerbruch Hutton Architekten  |
| Operator:            | DRITTE PRIMUS Projekt UDQ GmbH                                       |
| Structural engineer: | Merz Kley Partner ZT GmbH  |
| Solution:            | Bearing of the individual accommodation modules with Sylodyn® strips |
| Implementation:      | 2017   |

### Getzner Werkstoffe GmbH

|                    |  |
|--------------------|--|
| Founded:           | 1969 (as a subsidiary of Getzner, Mutter & Cie)  |
| Managing director: | Jürgen Rainalter   |
| Employees:         | 420  |
| 2017 turnover:     | 95.2 million euros   |
| Business areas:    | Rail, construction, industry   |
| Headquarters:      | Bürs (AT)  |
| Locations:         | Berlin (DE), Munich (DE), Stuttgart (DE), Lyon (FR), Amman (JO), Tokyo (JP), Pune (IN), Beijing (CN), Kunshan (CN), Charlotte (US) |
| Ratio of exports:  | 94 %   |

### Timber construction references (extract)

- Lykseth Eiendom AS, Moelven (NO), 2017
- Klintbacken, Luleå (SE), 2016
- Refugee centre, Bremen (DE), 2016
- Accommodation modules, Dreispitz, Basel (CH), 2016
- Ulm Kindergarten (DE), 2016
- Treet, Bergen (NO), 2015
- Hall of residence, CROUS du Bourget Du Lac (FR), 2015
- Eight-storey residential complex Puukuokka, Jyväskylä (FI), 2014
- Ickburg School, London (GB), 2013
- Retirement home, Hallein (AT), 2012
- Egenes Park, Stavanger (NO), 2007