



Case Study



Property Owner

De Groot Vroomshoop



Main Contractor

Aveco De Bondt



Architect

Finch Buildings



Acoustic Consultant

Aveco De Bondt, Nieman

OVERVIEW

In Alkmaar on Koelmalaan stands one of the largest wooden residential buildings in the Netherlands. The development consists of two buildings with 5 floors each, totalling 129 apartments. The residential buildings are constructed from 260 prefabricated CLT modules. These prefabricated modules are made in the factory of Houten Gebouwen.

Housing corporation Woonwaard deliberately chose timber module construction in cooperation with Finch Buildings. By doing so, they opted for speed, sustainability and circular construction. The wooden buildings maintain their quality and value over time. Moreover, the buildings are fully demountable, reusable, relocatable and the modules can be rearranged when a new situation presents itself.

Straviwood ModuLink

- Bracket for structural joints with acoustic isolation features thanks to the resilient pads in the bracket
- Significant reduction in flanking sound transmission

Straviwood ModuBreak

- Resilient pads designed to acoustically decouple adjacent modular building parts of CLT
- Minimizes flanking sound transmissions, improving the vibration and structural noise isolation



SOLUTION

Cross-laminated timber (CLT) made from sustainably managed forests was used to make the units. This environmentally friendly alternative to concrete is rapidly gaining popularity. By using CLT instead of concrete, about 4,800 tonnes of CO₂ will be saved in this project. In addition, wood naturally stores CO₂, which in this building is about 1,600 tonnes of CO₂.

The modules are produced entirely in De Groot Vroomshoop's Wooden Buildings factory. Ready-made, including bathroom, windows and doors, electricity, insulation, flooring, facades and roofs. From the factory, the modules are transported to the building site to be assembled into a residential building. This construction method is more efficient and safer.

Our local partner Delta-L made sure that the stacked modules are all acoustically decoupled to achieve high impact sound insulation. To do this, the units were placed on top of [Straviwood ModuBreak](#) polyurethane foam supports.

[Straviwood ModuLink](#) isolators fix the wooden modules horizontally. The elevator on the other hand, is decoupled using [Stravibase Fix](#) isolators. To reduce impact noise coming from people walking on the galleries, the wooden gallery floor has been decoupled with rubber granulate pads under the wooden beams.

AT A GLANCE

CHALLENGES

- Use of different materials to cope with different loads and dimensions
- Labeling and packaging per building unit
- Custom Straviwood ModuLink design
- Very short delivery time because of fast construction method

40 sets

Stravibase
Fix

2080 pcs

Straviwood
ModuBreak

400 pcs

Straviwood
ModuLink

