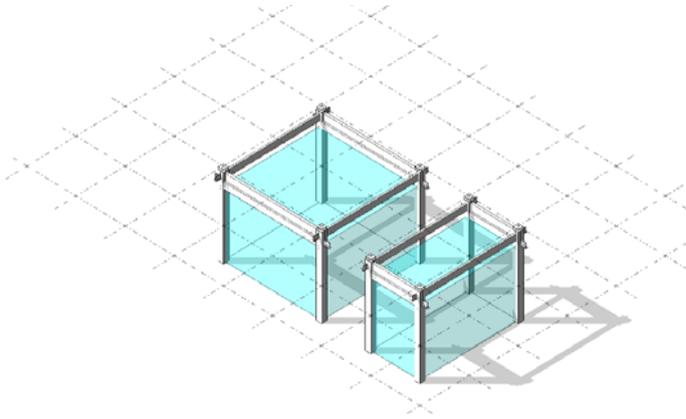


## TIMBECO BUILDING SYSTEM OF WOOD PRODUCTS

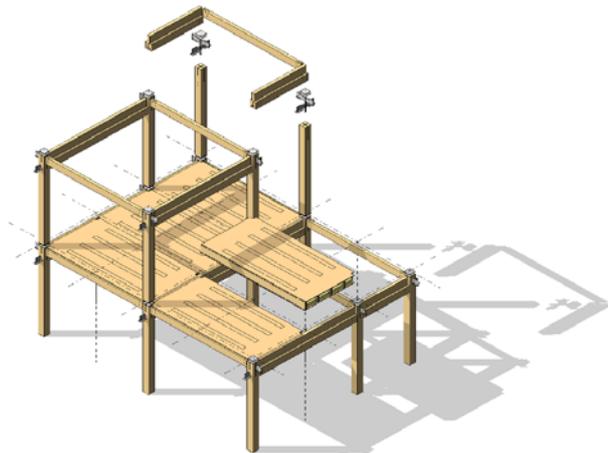
TIMBECO is a wooden, building system utilizing modern CAD design and prefabricated production of components and elements. Modular dimensions create a 3D-grid for the architectural design and flexibility is preserved due to spacious basic dimensioning.



Timbeco uses prefabricated post, beam, slab and façade elements. The posts and beams are connected with steel joints always hidden and fire-protected inside the wooden components. The framework is stiffened by both façade elements and party walls. The separate post and beam framework allows the special envelope requirements for each project.

Installation of the framework is quick and easy, and the erection stage is protected with a shelter canopy with flexible crane, rising with the framework. The main construction solutions and joint elements are listed in a detail library with alternative surface and insulation options.

The posts are solid gluelams in buildings of 1-3 floors. In buildings of 4-8 floors the posts are hollow gluelams with steel pipe profiles inside to increase the load bearing capacity. Tightening installation methods of facade elements, windows and doors create an air tight envelope without plastic sheets.



The floor structure is based on cassette slabs, where the voids between the gluelam webs allow installations. The framework beams allow system holes for installations. The HVAC system is apartment based with heat recovery units. The vertical installations are mainly in staircases to ease the maintenance.

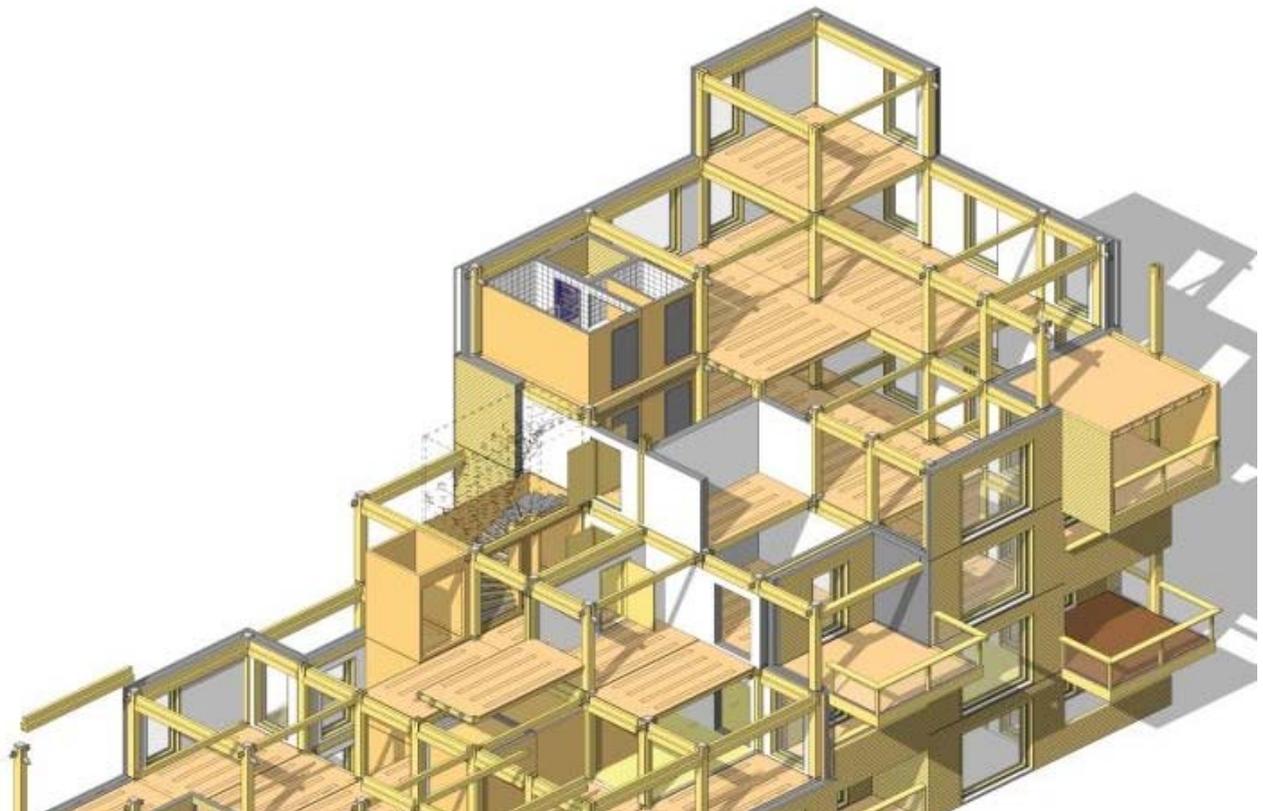
Acoustic and vibration insulation separate the apartments and staircases acoustically. A solid fibre concrete slab is cast on the floor to provide good soundproofing and final horizontal stiffness. Stairs and lifts are prefabricated wooden box elements or products from any manufacturer. The sanitary spaces are wooden frame box elements or built in site.

Due to the modularity of this system, the number of special components is quite low, they are easy to lift and fast to erect. The modularity allows for interior adaptations and the apartments have a special character where the posts and beams remain visible.



Due to the separate framework the buildings are easy to extend, modify and renovate. Façade elements can be changed to new ones, the facing surface elements, windows and doors are easy to unfasten and reinstall after repair. In the end of their life span the wood components and steel parts can be disassembled and recycled or wood used as energy.

BIM and CAD-CAM techniques are utilized in component manufacturing. Component based system is especially well suited for export since the elements can be modified to meet the requirements of each country and the transportation is easy. A sold unit may be a complete house as well as a set of individual components.





## **Timbeco Building System Development Project**

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