

Hugo.Stay Hostel timber-concrete hybrid façade elements

Client Profile

KRC Ehitus is an Estonian main contractor based in Tartu, Estonia. They have built different projects from residential to kindergartens and have used a hybrid timber-concrete system also previously on an office building. The owner/landlord of the building is developing hostel style rental apartments with a unique modern design approach.

Challenge

Because of the central location in the city and a relatively small site, managing the logistics and assembly sequences needed coordinating with different parties. Also, the first floor was over 4m high, which meant special transportation and production solutions. As with all timber-concrete hybrid projects the critical part is how the two parts – concrete structure and prefab timber elements - fit together and since this project did not have a BIM model, we could not use the clients IFC model as a reference.

Goals

- Construction speed – the site work could concentrate on the concrete works while the façade elements were produced in parallel in the factory.
- Building quality – Since the assembly of the elements happened during cold months, weather protection was important
- Window assembly – to assemble all the windows in the factory to ensure the best quality for taping and insulation of the joints.

Results

The Hugo.Stay project is a great example of simple architectural form that is complemented with smart façade details. This approach made the prefab façade elements simple, easy to manufacture and assemble. The final look of the building is definitely not banal and boring but rather stylish and refreshing. The final coating material and the details around the windows were assembled on-site because of tolerance and transportation damage risks. Despite the lower degree of prefabrication, the elements allowed for the building envelope to be closed quickly and initiate parallel jobs inside and outside, meaning that the on-site critical path was still cut shorter.



"Since the construction time of the façade was during a cold and relatively wet winter period, building the elements in factory conditions made a lot of sense from a quality perspective. Besides the quality control benefits the offsite approach allowed us to minimize and control the actual site time by getting the box insulated and weatherproof as fast as possible and start with interior work. Our site crew was very satisfied with the overall solution"

Siim Kroodo, CEO of KRC