Anton Bruckner Private University Linz: A region-owned passive building for music, drama and dance



The passive house building of the Anton Bruckner Private University for Music, Drama and Dance is characterised by modern architecture, a sophisticated acoustic concept, highest energy efficiency standards, and innovative building technologies. It offers optimal conditions for high-level training of around 850 students. In this new building, owned and built by the region of Upper Austria at the foot of the Pöstlingberg in Linz, all departments of the university are now united under one roof and have 25 % more space than before. The construction process was managed by the regional building department.



The building at a glance

- usable area: 8,600 m²
- around 850 students and 220 teachers
- opening: autumn 2015
- passive house standard: $HWB_{c\nu}$ 5 kWh/m²year (heat demand)
- construction: reinforced concrete with suspended wooden sandwich elements
- triple glazed windows
- 30 cm thermal insulation in the façade and roof
- district heating (40 % renewable energy)
- 30 kWp PV (200 m²)
- 20 m² thermal solar

 total costs: 55 million Euro (price basis 2015)

• builder: Region of Upper Austria



Holistic architectural and acoustic concept

The 8,600 m² of usable area house around 110 classrooms and halls, 6 ensemble rooms, 45 offices, a large library and a bistro. The building also comprises 2 concert halls, a studio stage and a Sonic Lab for computer music, offering a total capacity of 600 visitors.

The modern building is recognisable from both the inside and outside as the "New Home of Music and Arts". The organically shaped structure reflects the different artistic disciplines taught on the premises. Inside, the building's multi-storey, open common areas are flooded with daylight. The holistic acoustic concept ensures perfect sound insulation throughout the building as well as optimal room acoustics in the classrooms and halls (i.e., through special curtains and wall coverings, and well-designed room shape). Outside, a large amphitheatre-like staircase can be used for open-air performances.

Innovative building technologies and maximum energy efficiency

The building not only meets high requirements in terms of acoustics and sound insulation, but also in terms of energy efficiency. It was built according to passive house standards (heat demand: HWB_{SK} 5 kWh/ m^2year), meaning very high insulation values for all components combined with controlled ventilation. The innovative lamellar façade is a visual eyecatcher. In addition, it offers shading against overheating in summer while enabling a high use of daylight by guiding diffused light into the building. District heating, 20 m² solar thermal and 200 m² of PV cover the building's energy demand.

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