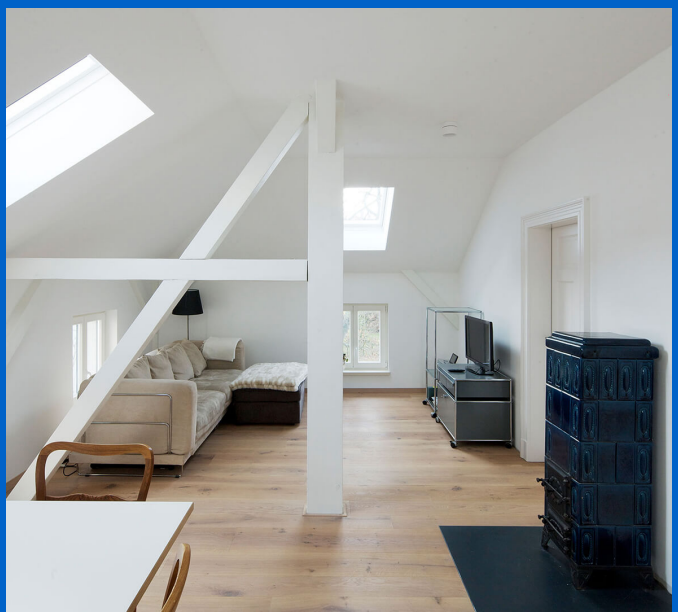
References

# Jugendstil Villa in Leipzig



**Uponor involvement**

235 m²

## Jugendstil Villa in Leipzig

Comfort and energy efficiency versus protection of historical structures. Squaring the circle in a Jugendstil villa in Leipzig.

**Project Facts:**

| | |
|---|---|
| Location | Completion |
| Leipzig, Germany | 2013 |
| Building Type | Product systems |
| Single family home | Radiant Heating & Cooling |
| Address | Project Type |
| Demmeringstraße 34 | Renovation |

**Partners**

Clients:

Katja Czogalla
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04179 Leipzig

Stefan Preiß
Im Laichle 9/1
73527 Schwäbisch Gmünd

Architect:

Katja Czogalla
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04179 Leipzig

Installers:

SHK Berger
Burkhardtsdorfer Str. 7
09221 Neukirchen-Adorf

Energy concept:

Preiß Energieberatung
Im Laichle 9/1
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Renovation solution with efficiency and comfort

With a floor space of about 235 m2, the building is a successful example of how intelligent solutions can be used to transform a disused property into a real gem that satisfies the criteria for a Reconstruction Loan Corporation (Kreditanstalt für Wiederaufbau, KfW) subsidized efficiency project without visible intervention in the protected structure. In addition to improved fire safety and noise-proofing measures, a superior living standard is achieved through the innovative energy concept.

In close consultation with energy consultants Preiss and the specialists at Uponor, the building consortium decided to control the building's temperature with various radiant heating system as part of the renovation project.

This meant that part of the historical tiled floors could be preserved. There was no need to create additional installation shafts. In the attic, too, the moisture-sensitive wooden beams are protected from condensation by the radiant heat. This can prevent heat bridges and the associated increased risk of mould.

Surface heating systems Siccus, Minitec and Renovis by Uponor

The Uponor drywall system Uponor Siccus was used on the ground floor and first floor, while the Minitec wet plaster system was used on the wall of the mezzanine. Furthermore, on the first floor, Uponor Renovis was installed on the wall in the stairwell and in the bathroom and on the ceiling in the bedroom. Architect and developer Katja Czogalla chose a ceiling

heating system for the attic with the new Renovis renovation system from Uponor. First the existing roof was given an energy upgrade with insulation placed both between and under the rafters.

Measuring approximately 90 m2, the apartment in the attic is heated with 36 Renovis 2000 x 625 mm panels, 14 1200 x 625 mm panels and 14 800 x 625 mm panels.

Following the installation of the substructure and panels, the installers connected the pipes to the ring lines of high-pressure cross-linked PE-Xa pipe, dimensions 20 x 2 mm, using Quick & Easy technology and linked them to the Tichelmann distributor.

After the leak test, the joints between the panels were filled and sanded. Work could then continue immediately on the Renovis elements.

Surface heating reduces energy costs

Because of its low pipe coverage, drywall ceiling heating allow particularly low supply temperatures. When heat is required, the elements in the attic of the Jugendstil villa are operated with a supply temperature of 41.9 ° C and a return temperature of 33.6 ° C. The energy for the building, with a standard heat load of 17.2 kW, is generated by an air-to-water heat pump. Water heating is supported by a thermal solar system.

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