References

Multi-family home



Uponor involvement

- Underfloor heating Uponor Klett Silent (180 sqm of laying panels)
- Uponor Klett Comfort Pipe PLUS, 1,250 linear meters
- Uponor Smatrix Base control

Attic extension - underfloor heating combined with fireproof screed

Attic extension, Multi-family home Berlin
In attics with wooden joist ceilings, fire protection is a top priority. Uponor and Knauf had the right solution for a Berlin apartment building: underfloor heating with mineral fiber insulation, combined with a special fire protection screed.

Project Facts:

Location	Completion
Berlin, Germany	2019
Building Type	Product systems
Multi storey building	Radiant Heating & Cooling, Control engineering, Multilayer Pipe Systems
Address	Project Type
Soldiner Straße 29, 13359 Berlin	Renovation

Partners

Building owner: privat

Architect: Architekturbüro Lindstedt,
Berlin
https://architekturbuero-lindstedt.de

Installation: Karl Kloas Installations-
und Service GmbH, Berlin
https://www.kloas-heizung.de

Planning screed: Knauf Gips KG,
Iphofen
https://www.knauf.de/

Everything for fire protection

A builder wants to convert the attic and thus create new living space: as far as that goes, a perfectly normal construction task. But which heating system is the right one when the attic has wooden joist ceilings? This was the question recently faced by the private owners of an attic apartment in a Berlin apartment building. Because of the wooden construction, the heating system had to meet particularly high requirements for fire and sound protection. Energy efficiency also played a major role: because the owners wanted to use the apartment themselves, low operating costs were particularly important to them.

Combining fire, insulation and sound protection

Uponor and Knauf were able to offer the client and its planners - the Berlin-based architectural firm Lindstedt - a solution that combined all these factors: the mineral wool-based Uponor Klett Silent underfloor heating system, combined with the new Knauf FE Fire fireproof screed. "We were completely convinced by the technical fire, insulation and sound protection values of this solution," says interior designer André Henneberg from Office Lindstedt. Uponor and Knauf supported the project team from concept development and planning to installation of the system and construction supervision. "For us, it was a joint pilot project that showed in practice how well our products complement each other," says Andreas Lang, Uponor sales representative in the Berlin area.

Non-combustible insulation layer

The entire apartment, 180 square meters, was equipped with the Uponor Klett Silent underfloor heating system. The installers first laid the compact and particularly lightweight installation panel with Velcro foil laminated to it and then attached the pipes, which were wrapped in a spiral with Velcro tape - a total of 1,250 meters of Klett Comfort Pipe PLUS pipes were installed. The installation panel with integrated mineral fiber insulation is non-combustible and provides both thermal insulation and tested impact sound insulation that meets the requirements of DIN 4109 "Sound protection in building construction" for the higher building standard in apartment buildings. The installation company Karl Kloas from Berlin particularly appreciated the fact that the Velcro system can be laid quickly and on site by one person. The processing is almost cut-free, so that the installers could work with a common cutter knife and did not need any special tools. Uponor Smatrix Base is used to control the underfloor heating and the hydraulic balancing - a wired 24 V control with auto-balancing function.

Wooden ceilings up to F90

The pipes were covered with a 30-millimeter layer of Knauf FE Fire flowing screed. "This screed has been on the market since 2019 and is unique so far. It enables the construction of floor systems with fire resistance classes F30 to F90," says Jochen Hohenstein, Berlin area manager at Knauf Gips KG. Knauf FE Fire is a ready-to-mix premixed ready-mixed dry mortar made of calcium sulfate that is very easy to work with. The screed is particularly suitable for wood joist ceilings. It exceeds the standard, which only extends to F60 constructions. "Even during the development of the screed, Knauf successfully tested the fire protection properties with Uponor's Klett Silent system," emphasizes Hohenstein. The mineral wool of the Klett-Silent system and the high mass of FE Fire also significantly improve sound insulation. The apartment has now been completed. The client was able to move in - and now has the secure feeling of being optimally protected in the event of a fire.

Attic extension - underfloor heating combined with fireproof screed















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