

Uponor involvement

Uponor Weber Comfort 17mm underfloor heating and cooling | Radio 24V regulator system (wired)

The luxury flats by the Töölönlahti bay remain at the ideal temperature thanks to underfloor heating and cooling

Construction began in 2012 on two modern blocks of flats – known as Helsingin Aalto and Helsingin Ruislintu – along the shore of the Töölönlahti bay in the centre of Helsinki.
Helsinki's most central cultural landscape began to change in appearance in 2012 when Alma Media's new headquarters were built in the area between Finlandia Hall and the railway. Soon after this, two blocks of flats, known as Helsingin Aalto and Helsingin Ruislintu, were constructed by Töölönlahti bay. Since then, the area has been filled out with office buildings for KPMG and Ernst & Young as well as residential buildings known as Alvar and Arietta.

Project Facts:

Location
Helsinki, Finland

Completion
2013

Building Type
Multifamily homes

Product systems
Radiant Heating & Cooling

Project Type
New building

Partners

Construction company
Lemminkäinen Talo Oy

Planner
Projectus Team

Contractor
LLSP Oy

The residential sites designed by JKMM Arkkitehdit contain a total of 40 flats, of which 22 are in Aalto and 18 are in Ruislintu. The style is clear and modern, both for the internal spaces and the façades: the buildings are clad partially in rendered bricks and partially in natural stone. Floors 2–5 follow the same floor plans, while the sixth floor – the top floor – is split between two flats in both buildings. The ground floor contains restaurants and commercial premises. The basement contains technical facilities, spaces for hobbies and storage, and garages.

The flats are equipped with Uponor underfloor heating and cooling. The energy that is used for underfloor heating is obtained from the district heating network, while the cooling energy is supplied by the district cooling network. Thanks to the system, there are no radiators at all in the flats. In Ruislintu, the floors of the entrance area are tiled, while the remainder of the flat has a parquet floor. In Aalto, the flats have parquet flooring throughout.

Underfloor heating guarantees a stable temperature on a demanding site

Uponor was involved in the construction work on the site in 2012. Lahden lattia- ja seinäpäällyste Oy (LLSP) was contracted to the site by Lemminkäinen Talo Oy. Uponor worked for LLSP as a subcontractor, installing the underfloor heating, which included insulation panels, piping, manifolds and regulators.

"The objective on this site was to deliver a functional overall solution that fulfilled the technical requirements as regards heating and the structure. This is a low structure that reacts quickly. A key feature was the stable surface temperature of the floor," says Mika Tarvainen, who is responsible for Uponor's sales to construction contractors and construction firms.

Uponor's underfloor heating system circulates water through its piping at a good flow rate, which makes the temperature of the floor's surface feel constant. As the heat is exactly in the locations where people spend time, the room temperature can be reduced by a few degrees without compromising on comfort. Thanks to the low temperature in use, it is suitable for installation with any type of floor surface material. The pipes are made from strong PEX material, which prevents oxygen diffusion, and they are installed without joins so there is no risk of corrosion or leaks.

The cooling solution also played a key role on this site.

"Architecturally, this is a really light property. The floor cooling system enabled large windows and glazed balconies facing due south – the best direction in terms of the landscape. At the same time, the room temperatures of the flats remained within building regulations, with the surface temperature of the floor being at least 20.5 degrees," says Sami Tjurin, Uponor's project development manager.

Carefully selected partners for a high-value site

Overall, the project went excellently and the building regulations were comfortably fulfilled.

"As regards basic installation, the project progressed well, despite some slight teething troubles involving the underfloor cooling. There were also minor problems with the use of the bathroom thermostats to begin with. Despite these, the partnership with Lemminkäinen went well and we received positive feedback from them," says Tarvainen.

Partners were selected particularly carefully for the demanding construction project. The location, architecture and high price per square metre ensured that the residential blocks of flats at Töölönlahti bay were subject to heavy scrutiny.

"Uponor had proven itself to be a good partner on previous sites. We are a large, reliable operator in the sector and we have a long history of delivering underfloor heating solutions. These things are sure to have worked in our favour when we were selected," Tarvainen says.

"It is possible to implement all sorts of solutions on high-value sites. However, when underfloor cooling is implemented in a sensible manner, it does not give rise to any extra costs," Tjurin says.

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