References

Wooden living



Uponor involvement

- Surface temperature control with Uponor Tacker wet construction system | Hygienic drinking water installation on the floors | Convenient installation of the distribution and riser lines
- 1,400 m2 underfloor heating Tacker wet construction system | Uni Pipe PLUScomposite pipe | S-Press PLUSFittings up to dimension 32 | MLCPipes, press fitting system Uponor RS

Holzwohnen Vienna

Ecological living and a feel-good climate in rental housing
The "Holzwohnen Wien" project is an example of sustainable densification in urban areas: The Holzbau Mach office is replacing the existing building on its own company premises with a high-quality residential building with 21 rental apartments - and its own office on the ground floor of the building. The new building in the 14th district is being constructed in solid wood. With "Holzwohnen" the focus is on ecological living and a feel-good climate, accordingly Felix Mach, planner of the project and managing director of Mach Holzbau, also relies on energy-efficient surface temperature control, which also ensures special living comfort: It heats in winter and cools in summer. The builder also relies on quality for the drinking water installation.

Project Facts:

Location	Completion		
Vienna, Austria	2021		
Building Type	Product systems		
Multi storey building	Radiant Heating & Cooling, Multilayer Pipe Systems		
Address	Website	Project Type	
Linzerstrasse 359, 1140 Vienna	https://www.holzwohnen.at/	New building	

Partners

Client:
Make wooden construction
www.mach-holzbau.at
www.massivholzbau.wien

Execution of building services:
Fa. Bernhardt Building Technology GmbH, Biedermannsdorf

CO2 in view

Wood as a building material makes green building much easier, it has a neutral CO2 balance compared to other building materials: One ton of CO2 is bound in every cubic meter of wood. With solid wood construction, i.e. building with multi-layer solid wood panels glued at right angles to one another, large quantities quickly accumulate - around 600 m³ of solid cross laminated timber were used for the new building. "Holzwohnen" thus stores 600 tons of CO2, which roughly corresponds to the pollutant emissions of ten cars over a period of 37 years.

"Throughout the planning, the focus was on building sustainably and enabling ecological living," explains Mach. Accordingly, geothermal energy was chosen as the energy source for heat generation in this project in combination with a heat pump. "This heating technology is particularly efficient when the temperature level only needs to be increased slightly, i.e. the flow temperature of the heating system is low," explains Mach. ‘‘That is the case with panel heating. This is one of the reasons why we decided to use Uponor surface temperature control for the entire 1,400 square meters."

Well tempered in every season

For the planner and builder, the "Holzwohnen Wien" project not only focused on ecological living, apartments with a feel-good climate should also be created. "The underfloor heating ensures even heat - there is no cold feet. The best prerequisites for feeling really good at home," emphasizes Mach. In summer, the system provides pleasant cooling in the same way. With the decision to use geothermal energy, the client has also created the basis for pleasant room temperatures on hot summer days: The comparatively cold earth temperature is then used for cooling.

"Simple" convinced the experts during assembly

When deciding on the Uponor Tacker wet construction system for underfloor heating, the ease of installation also played a major role. All components are precisely matched to each other, so the system can be installed quickly, easily and – thanks to the right tool – ergonomically. And all components are designed for maximum safety and reliable operation.

For the drinking water installation on the individual floors, the installation company Bernhardt Gebäudetechnik used Uni Pipe PLUS and the associated S-Press PLUS fittings up to dimension 32.Uni Pipe PLUS is characterized by the innovative SACP Technology (Seamless Aluminum Composite Pipe) - it is the world's first multi-layer composite pipe with a seamless extruded aluminum layer. The innovative tubes enable bending radii that are up to 40 percent tighter than conventional composite tubes, so that changes in direction through tube bends can be easily implemented during assembly. That means: Fewer fittings and less assembly time. S-Press PLUSFittings are particularly robust and, thanks to appropriate color coding, make assembly easier.

Thanks to the modular press fittings Uponor RS, the distribution and riser lines used made of composite pipe can also be installed particularly conveniently - thanks to pre-pressing on the workbench. On site, the pre-assembled composite pipe sections could then simply be inserted into the fittings and locked without tools. Stressful work with heavy pressing tools in tight corners or in an overhead position was therefore not necessary.

Holzwohnen Wien

















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