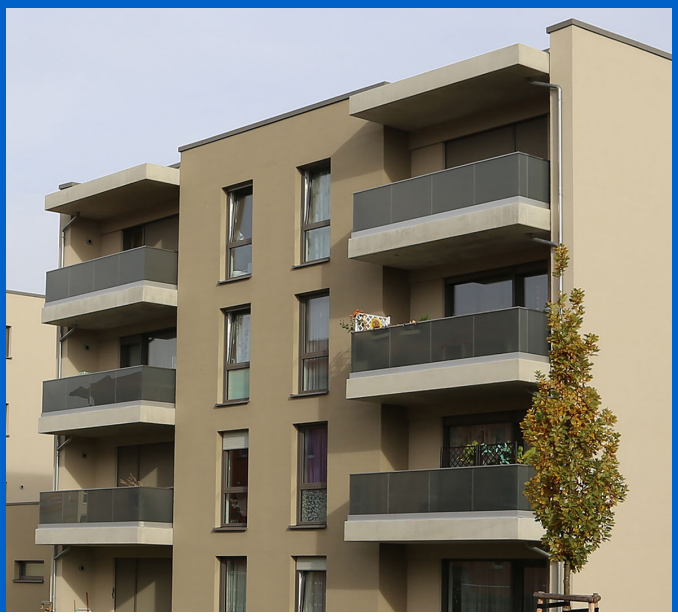
References

Multi-family homes



Uponor involvement

- 27 KaMo heat interface units PRO | 1990 m² Uponor Klett underfloor heating | 1000 l KaMo system buffer storage including control | 1978 m Uni Pipe PLUS multi-layer composite pipe | 60 m Ecoflex Thermo Twin with Quick & Easy press fitting system | 60 m Ecoflex Supra drinking water with Quick & Easy press fitting system

Multi-family homes, Stadtroda

Heat interface units provide a high level of warmth and comfort as well as optimum drinking water hygiene in three multi-family homes.
The apartments in Stadtroda offer high-quality living space in a superior location. An ingenious combination of district heating, heat interface units and underfloor heating systems ensures an ideal supply of heat and fresh hot water. The consistent system solution from a single source is characterised by sophisticated technology and optimum drinking water hygiene, as well as a clear structure.

Project Facts:

Location	Completion
Stadtroda, Germany	2018
Building Type	Product systems
Multifamily homes	Radiant Heating & Cooling, Multilayer Pipe Systems, Prefabricated systems
Address	Project Type
August-Bebel-Straße 5, 7, 9 07646 Stadtroda	New building

Partners

Client: Stadtroda Housing Association
https://www.wohnung-stadtroda.de

Planners: K&R Ingenieur + Planungsbüro, Stadtroda

Installers: Kranzel GmbH Sanitär- und Heizungstechnik, Stadtroda

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Multi-family homes for the 55-plus generation

By building these three multi-family homes, the Stadtroda Housing Association has created modern living space just 15 minutes walk from the town centre. A total of 27 apartments have been created, some of which are barrier-free and all of which are specially tailored to the needs of the 55-plus generation, with sizes ranging from 55 to 115 m2. The guiding principle was to harmoniously combine classical and modern elements. Thus, for example, the living and kitchen areas are open-plan and the latest materials have been used during construction. At the same time, the architecture and colour scheme of the apartments follow more classic lines.

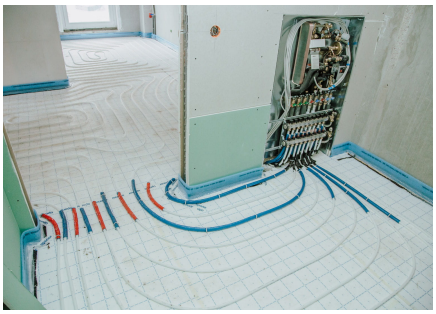
System solution consisting of heat interface units, Klett underfloor heating and Uni Pipe PLUS

This concept was also retained for heat distribution. Using the existing district heating connection as a basis, the participants developed a modern but simple and clear system solution. The key elements are KaMo's decentralised heat interface units. These not only ensure optimum drinking water hygiene and a high level of hot water convenience, but also provide a supply temperature for Uponor Klett underfloor heating at an efficient level of 35 °C. All pipework was also implemented using Uni Pipe PLUS multilayer composite pipe, so that Uponor was able to offer its local partners optimum support in the apartment project as a complete provider of the entire drinking water and hot water installation.

Drinking water hygiene and efficiency with heat interface units

The heat interface units satisfy two key criteria in the apartments: The systemic separation of the living areas from the rest of the system, as well as optimum drinking water hygiene. They are supplied with hot water via the risers and then provide domestic hot water as required using the through-flow principle. Since there is no need for a central hot drinking water tank or circulation in the buildings' shafts, the energy efficiency of the system as a whole also increases at the same time. This is also aided by the very low return temperatures with large return differentials, which can be up to 45 K when using hot water.

Flexible and safe Ecoflex local heating pipes

The pipes for local heat distribution were installed in a supply and media shaft specially designed for the three apartment blocks. A total of 60 m of Uponor Ecoflex PEX-insulated plastic pipes were used; these are highly flexible thanks to their corrugated outer pipe. The easy handling made it a simple matter to install the pre-assembled pipeline lengths in the finished concrete shaft. It was then easy to implement the house connections at right angles using the tried and tested press fitting system. This can be assembled much faster than conventional screw fittings and ensures a permanently seal as well as a secure connection with high-level protection against leaks.

Multi-family homes, Stadtroda