References

Omniturm Frankfurt



Uponor involvement

- nearly 150 heat interface units
- Individual room climate
- Apartment stations in a completely pre-assembled condition | Fully wired-up control units | Ready for flush-mounted installation

Premium technology for premium apartments

Premium technology for premium apartments with nearly 150 heat interface units for an individual room climate.

A single glance upwards is enough to reveal that the OMNITURM skyscraper in Frankfurt's banking district is anything but ordinary. Between the 15th and 22nd storeys, the 190-metre-high building slides out from its vertical structure. The architects of the Danish Bjarke Ingels Group refer to this spectacular middle section, with its protruding terraces, as the "hip swing". As apartments are contained within, tenants not only enjoy a breathtaking view of the financial capital below, but also benefit from their own personalised ambient conditions – with the technology provided by Uponor.

Project Facts:

Location	Floor space	Completion
Frankfurt am Main, Germany	8.200 m²	2019
Building Type	Product systems	Number of floors
Multifamily homes	Radiant Heating & Cooling	45
Address	Website	Project Type
Große Gallusstraße 16-18, 60312 Frankfurt am Main	https://www.omniturm.de/en/home/	New building

Partners

Building owner:
Tishman Speyer
https://tishmanspeyer.com/

Architect:
Bjarke Ingels Group
https://big.dk/

Installation:
Klum GmbH, Bad Camberg
https://www.klum.de/

Nearly 150 heat interface units for an individual room climate

Tishman Speyer, one of the world's leading owners, developers, operators and fund managers in the property sector, has created a spectacular yet functional skyscraper with OMNITURM. It is the first such project in Germany to offer genuine mixed use; alongside public areas with restaurants, co-working spaces and event venues in the lower floors, the tower also offers ample space for offices and private residential units. "As the name suggests, OMNITURM is a tower for everyone. It brings people together," explains Ingo Langner, Technical Manager at Tishman Speyer.

The skyscraper's building services are fully geared towards sustainability; energy-saving LED lighting is in use, for example, and the lifts are operated using intelligent technology. By virtue of these and other measures, the building has been awarded LEED certification at the highest level (platinum) from the U.S. Green Building Council.

The building technology required to heat and cool the apartments in the "hip swing" also had to be seamlessly incorporated within the overall concept. These eight storeys accommodate a total of 147 apartments measuring between 25 and 150 square metres. Each tenant has their own set of requirements: "After all, what constitutes an agreeable ambient temperature is highly subjective," remarks Langner. "We needed a system with which we could offer tenants maximum flexibility in terms of setting their desired ambient temperature." The technology expert from Tishman Speyer also emphasises that the dimensions of the system played a crucial role when it came to choosing the right supplier: "We do, of course, have to think commercially when letting the apartments. Every square metre lost means a drop in rental income," points out Langner.

Uponor devised a concept for compact heat interface units in the apartments, thus winning the contract. They use a district heating connection, with cooling provided via cooling units. The stations are fitted with a heat exchanger for cooling, as well as one for heating and one for hot water generation. This enables needs-based energy distribution for each user. Six-way ball valves prevent mixing between the heating and the cooling sides. An underfloor heating system heats in winter and cools in summer, whereas hot water is generated using the exceptionally hygienic continuous-flow principle.

The desired ambient temperature can be easily adjusted at the push of a button – and the same applies when switching from heating to cooling mode. This ensures maximum convenience. A decentralised hot water supply is also extremely efficient because it can run on lower temperatures in the distribution system compared to a centralised supply, which saves energy and lowers costs.

The client was also impressed with installation and maintenance; Uponor supplied all apartment stations in a completely pre-assembled condition, and with fully wired-up control units, ready for flush-mounted installation. "This was worth its weight in gold, as the assembly time was considerably reduced, explains Ingo Langner. Tobias Schwarzer and his team, from specialist heating contractor Klum in Bad Camberg, were behind the seamless and efficient installation. Uponor assembled each of the stations in a mirrored configuration, enabling the specialist installers to connect them in an alternating formation on both sides of the rise pipe. At the same time, Uponor met the need for maximum compactness with the apartment stations, which

are installed within a tight space of 850 mm (w) x 1,800 mm (height) in the rental apartments.

Decentralised systems also offer advantages in terms of maintenance, as faults can be quickly identified and resolved. “However, there have been no significant outages thus far,” notes Ingo Langner. The apartment stations have been working perfectly ever since they were installed. He is completely satisfied with the systems provided by Uponor. And Thomas Raadts, Vice President Marketing and Development Building Solutions Europe at Uponor, is delighted by the praise received: “OMNITURM is a premium property in the heart of Frankfurt. We are thrilled that we have been able to play an important role in ensuring comfortable conditions for residents with our apartment stations.”

Premium technology for premium apartments














