uponor

REFERENCE MAGAZINE

PANORAMA 2962 "Germany's highest underfloor heating system"

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What we stand for

At Uponor, we believe that water holds the key to a sustainable future. With a purpose to unlock its full potential and protect our planet, we are leading the change in sustainable water solutions. From cities and buildings to homes and the planet, we see ourselves as stewards of the world around us.

With over a century of expertise and proven performance, we rise to meet the challenges of today with tomorrow's innovations in delivering water safely and intelligently, while minimizing the use of energy and maximizing comfort.

Partnering with our customers, we are committed to advancing their goals and moving water, innovation and our industry forward with an entrepreneurial spirit like no one else.

We are dedicated to the idea that by moving water, we can reshape and accelerate the construction and performance of buildings and infrastructure, resulting in more sustainable homes, communities, and ultimately a healthier planet. We are a force for change, moving water to move the world.

Uponor. Moving Water.



OMNITURM, FRANKFURT, GERMANY PREMIUM TECHNOLOGY FOR PREMIUM APARTMENTS

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.

OMNITURM 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. The skyscraper's building services are fully geared towards sustainability. By virtue of these the building has been awarded LEED platinum certification. Uponor developed 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 needsbased energy distribution for each user. An underfloor heating and cooling system heats in winter and cools in summer, whereas hot water is generated using the exceptionally hygienic continuous-flow principle.

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.







Project facts

• Location: Frankfurt, Germany Building type: Skyscraper, mixed use

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- Gross area: 8.200 m² living space
- Floors: 45 • Project year: 2019
- Website: www.omniturm.de

Uponor contribution

- 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

Uponor Heat Interface Unit

© BIG – Bjarke Ingels



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- Location: Madrid, Spain
- Building type: High-rise housing
- Floor: 196 homes
- Project year: 2023
- Website: www.grupoibosa.com

Uponor contribution

Uponor underfloor heating and cooling

Uponor Klett

Uponor Klett

RESIDENCIAL ZAURAK BY GRUPO IBOSA, MADRID, SPAIN

A PINNACLE OF MODERN DESIGN AND SUSTAINABILITY ALONG THE MANZANARES RIVERBANK

THE DYNAMIC CITYSCAPE OF MADRID, WITH ITS HISTORICAL ROOTS INTERTWINED WITH MODERN ASPIRATIONS, WITNESSES A MONUMENTAL SHIFT AS THE BANKS OF THE MANZANARES RIVER UNDERGO TRANSFORMATIVE CHANGE.

The epicenter of this change is the Residencial Zaurak of Grupo Ibosa, standing as a beacon of avant-garde architecture and sustainability in the burgeoning Ribera del Calderón area on Madrid's revered Paseo Imperial. A collaboration of creative minds from Grupo Ibosa, Uponor, and Morph Estudio, the Zaurak Residential has emerged as a defining architectural statement, setting new benchmarks for urban living.

The Residencial Zaurak by Grupo Ibosa isn't merely a housing project; it's a vision of what the future of urban living should aspire to be. With its avantgarde design, commitment to sustainability, and emphasis on providing residents with a customizable and comfortable living experience, it truly stands as a landmark in the Ribera del Calderón area. As Madrid continues to evolve, projects like these ensure that it remains at the forefront of global urban development trends.

With an impressive offering of 196 homes, ranging from 1 to 4 bedrooms, Residencial Zaurak caters to diverse needs, ensuring everyone from a single professional to a bustling family finds their perfect abode.

Collaboration with Uponor has been pivotal in ensuring that the homes at Residencial Zaurak aren't just sustainable but also exude unparalleled comfort. Uponor provides underfloor heating and cooling. Not only does this offer residents the luxury of consistent temperatures throughout the seasons, but it does so with lower energy consumption than traditional systems.



- Location: Vienna, Austria
- Building type: Office building
 Gross area: 28,000 m² office
 space
- Floor: 38
- Project year: 2021
- Website: www.soravia.at/ project/austro-tower

Tomater

Uponor contribution

- Uponor Contec TAB system
 <u>Uponor Tacker underfloor</u>
- heating and cooling system

A HHH

- Installation planning
- Instructing the installers



Uponor Contec



NEW HEIGHTS WITH UPONOR TECHNOLOGY



VIENNA'S 136-METER-TALL SKYSCRAPER IS HEATED AND COOLED SUSTAINABLY USING WATER FROM THE DANUBE CANAL. ITS INNO-VATIVE THERMALLY ACTIVE BUILDING SYSTEM (TABS) BY UPONOR CONTEC ENSURES IDEAL TEMPERATURE REGULATION ON ALL 38 STOREYS.

Just like the neighbouring TrIIIple complex, the Austro Tower is heated and cooled using water from the Danube Canal, thereby maximising the location's potential. The water is channelled to an energy centre in one of the TrIIIple towers, where it is – depending on the season – either heated or cooled using high-temperature heat pumps. Designed for LEED and ÖGNI platinum standards, it offers 28,000 m² of office space, conference facilities, a restaurant, and a cafe. Austro Tower's commitment to environmental consciousness sets new standards in eco-friendly urban architecture.

In order to thermally activate the 30 cm-thick concrete ceilings, the installers fitted Uponor Contec modules on the ceilings lowest reinforcement layer. The individual modules were prefabricated on-site. Each of these modules comprises a backing mat and the exceptionally flexible and highly resistant Uponor PE-Xa pipes, which are used to transport the heating or cooling water. The pipes, which have an exterior diameter of 20 mm and a wall thickness of 2 mm, have been installed at a distance of approx. 6 cm to the lower edge. The Uponor Contec system not only utilises the surfaces of the ceilings for heat transfer, but also the storage capability of the concrete. For example, the ceilings can be cooled overnight before once again absorbing heat from the building during the day. This kind of system offers the advantage that it is both silent and invisible. It also avoids draughts, as the operating temperature is only marginally higher or lower than the ambient temperature. Some 600 m² of Uponor Contec have been installed on each office storey, which equates to more than 22,000 m² overall.





PANORAMA 2962 ZUGSPITZE, GARMISCH-PARTENKIRCHEN, GERMANY

COSY TEMPERATURES IN THE MOUNTAINTOP RESTAURANT







Project facts

- Location: Garmisch-Partenkirchen, Germany
- Building type: Hotel buildings
- Project year: 2018
- Website: www.zugspitze.de

Uponor contribution

- 720 m² of Uponor underfloor heating Classic
- 250 m of Uponor composite piping for connecting heating lines
- 500 m of composite piping for drinking water distribution system

Uponor MLC pipe





AT PANORAMA 2962 ATOP THE ZUGSPITZE, GERMANY'S HIGHEST MOUNTAIN, STATE-OF-THE-ART RESTAURANT ARCHITECTURE MEETS INNOVATIVE KITCHEN DESIGN. FROM ITS ELEVATION AT ALMOST 3,000 METERS, DINERS EXPERIENCE THE NATURAL SPECTACLE FIRST HAND, GAZING OUT OVER THE MAGNIFICENT PANORAMA THROUGH FLOOR-TO-CEILING WINDOW FACADES WHILE ENJOYING ALPINE DELICACIES IN A PLEASANTLY CLI-MATE-CONTROLLED SETTING.

Uponor underfloor heating Classic ensures draught-free and comfortable radiant heat in Germany's summit restaurant. What's more, the designer and specialised construction company also opted for proven quality by installing multi-layer composite pipes from Uponor for the facility's drinking water system and interconnecting heating system.

Visitors enjoy the warm interior ambiance of the Panorama 2962 summit restaurant all the more because outdoor air temperatures atop the Zugspitze rarely climb higher than five degrees Celsius (41°F), even in midsummer. Some 720 m² of Uponor underfloor heating Classic ensure comfortable radiant heat throughout the restaurant's interior. Radiators and air curtains are used in the entrance area and in the stairwell.

The Zugspitze is not only the coldest place in Germany, but also its sunniest, having long averaged 1,800 annual hours of sunshine. Understandably, a south-facing photovoltaic solar power system has been installed on the valley side of the building and on its roof, generating power to supply the three 45 kW cartridges for firing the building heating system water in the 300-litre buffer storage tank. Most of the power produced directly feeds the system.

© Matthias Fend

GRAND TOWER, FRANKFURT, GERMANY

MEETING THE DEMANDS OF HIGH-RISE HEATING

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Project facts

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- Location: Frankfurt, Germany
- Building type: residential
- Floors: 47
- Project year: 2019

Uponor contribution

01100

401 custom-designed heat interface units Combi Port
300,000 m Uponor Comfort Pipe

Uponor Heat Interface Unit

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TO MEET THE DISCERNING NEEDS OF GERMANY'S HIGHEST RESIDENTIAL COMPLEX, UPONOR IS DELIVERING A PACKAGE OF CUSTOM-MADE HEATING SOLUTIONS.

Together with subsidiary KaMo, Uponor is currently working on one of its largest contracts to date. In Frankfurt's Grand Tower, Germany's highest residential complex, all 401 luxury apartments and penthouses are being fitted with compact heat interface units. Custom-made for the project, these units will enable optimum temperature control and convenience for all residents to meet the high demands of the award-winning construction project.

The heat interface units are being supplied as a complete package from Uponor with ready-wired control technology to ensure fast and efficient installation. In addition, around 300,000 metres of Uponor comfort piping will be used for underfloor heating throughout the 47-floor high-rise. Together, this package of solutions will help reduce system pressure, support easy retrofitting tasks, and enable faults to be quickly identified.



Project facts

- Location: Gijón, Spain
- Building type: Office building
- Gross floor area: 1.500 m²
- Floor: 3
- Project year: 2020

Uponor contribution

- 7,500 m of Uponor Comfort Pipe PLUS pipes
- Support with HEAT2 simulation software from Uponor to find out best way to use TABS within the building

Uponor Comfort Pipe PLUS



GREENSPACE OFFICES, GIJÓN, SPAIN

SCIENCE, TECHNOLOGY AND ART COME TOGETHER TO CREATE ZERO EMISSIONS

GREENSPACE PCTG IN GIJÓN, ASTURIAS, SPAIN, IS THE FIRST NET-ZERO ENERGY OFFICE BUILDING IN THE REGION AND ONE OF THE FEW OF ITS KIND IN THE WHOLE COUNTRY. AN IMPRESSIVE ACHIEVE-MENT MADE POSSIBLE BY A COMBINATION OF HIGHLY EFFICIENT ACTIVE ENERGY AND PASSIVE SYSTEMS.

Spanish architects EMASE Arquitectura worked with engineering firm SvR Ingenieros to create a sustainable, environmentally friendly design. It uses solar panels for keeping solar loads out of the building on one hand and to generate more energy than the building consumes on the other hand. In order to minimise the building's energy use, the project partners turned to Uponor and its thermally active building systems (TABS) for heating and cooling. Greenspace, located in Gijón Technology Park, spans 1,500 square meters across its basement, three above-ground floors, and roof. This LEED gold-certified building, designed by EMASE Arquitectura and SvR Ingenieros, is a shining example of sustainable construction in line with the European Circular Economy Action Plan.

One of the critical components that made Greenspace possible was Uponor's thermally active building systems (TABS) for heating and cooling. SvR Ingenieros, with the support of Uponor's technology, was able to tailor the system to the building's structure, ensuring energy efficiency and earning the building an impressive A energy rating.

The innovative and efficient design of Greenspace results in a net-zero building with a positive energy balance. Uponor's TABS solution, utilizing the thermal inertia of the building's concrete structures, plays a crucial role in maintaining comfortable temperatures year-round with minimal energy consumption. The collaboration between Uponor, EMASE Arquitectura, and SvR Ingenieros facilitated an efficient design process, cutting construction times while ensuring maximum comfort and sustainability. Greenspace's lighting system uses low-energy LED bulbs, and the solar panels on the pergola provide shade and generate power, resulting in over 70 MWh of excess energy annually.



LOG HOUSE, ÄÄNEKOSKI, FINLAND

COMFORTABLE LIVING CONDITIONS IN A LOG HOUSE WITH UPONOR UNDERFLOOR HEATING AND COOLING



NESTLED ON THE PICTURESQUE SHORES OF LAKE KEITELE IN ÄÄNEKOSKI'S SUOLAHTI, THEIR NEW LOG HOUSE OFFERS BREATHTAKING VIEWS AND MODERN COMFORTS. WHAT'S EVEN MORE IMPRESSIVE IS THE INCORPORATION OF UPONOR'S INNOVATIVE UNDERFLOOR HEATING AND COOLING SYSTEM, PROVIDING A COZY AND SUSTAINABLE LIVING EXPERIENCE YEAR-ROUND.

The new log house, perched on the cliff's summit, posed a unique challenge for the heating and cooling system. Uponor's water based underfloor heating and cooling solution proved to be the ideal choice. With sunlight streaming through the west-facing windows, efficient cooling became essential for summer comfort.

The draft-free floor cooling system ensures even and gentle air distribution to all rooms, relying on a large floor area and minimal temperature difference between the air and floor surface. Fears of chilly floors are unfounded as the cooling is meticulously designed to maintain a comfortable floor temperature of around 21 degrees. The Uponor Smatrix Pulse control system, expertly integrated with a geothermal heat pump, ensures seamless and efficient temperature regulation.

The owner expects effortless control over their home environment, and the Uponor Smatrix Pulse control system precisely delivers that. The latest addition, the integration of heat pumps, ensures optimal control without the intervention of residents. With the mobile app, residents can monitor and adjust room temperatures remotely, offering a sense of tranquility during extended periods away from home.



SADDLE RESTAURANT MADRID, SPAIN FIRST LEED® GOLD CERTIFIED

FIRST LEED® GOLD CERTIFIED RESTAURANT IN THE COUNTRY

SADDLE RESTAURANT, LOCATED IN THE VIBRANT CITY OF MADRID, HAS QUICKLY ESTAB-LISHED ITSELF AS ONE OF THE MOST AUTHENTIC GASTRONOMIC EXPERIENCES IN THE REGION.

Opened in 2019, it reflects the city's evolving culinary landscape, aiming to offer a unique and immersive dining experience. Owned by iKasa, the restaurant's CEO, Haryán Rodríguez, envisioned Saddle as a place where the focus goes beyond just the food, encompassing every aspect of customer experience and service. This ambitious concept paid off as Saddle was awarded its first Michelin Star merely a year after opening.

The collaboration between iKasa and Uponor has resulted in an ambitious project that sets new standards for energy efficiency and sustainability. Together, they implemented a comprehensive heating and cooling solution using renewable geothermal energy. The system comprises 12 geothermal probes with PEX pipes, each 125 meters deep, along with invisible radiant floor heating and Uponor's Smatrix Pulse system for HVAC control and monitoring. Uponor's reputation as a global leader in indoor climate solutions, energy efficiency, and sustainability made them the ideal partner for this pioneering venture.





CARTUJA QANAT, A GROUNDBREAKING URBAN TRANSFORMATION PROJECT THAT REDEFINES THE CONCEPT OF PUBLIC SPACE. NESTLED IN SEVILLA, SPAIN, THIS INNOVATIVE ENDEAVOR REPRESENTS THE URBANISM OF THE FUTURE, FOSTERING ENVIRONMENTAL COMFORT, SOCIAL INTERACTION, AND SUSTAINABLE URBAN GROWTH.

Cartuja Qanat – a pioneering urban masterpiece in Seville, a result of Uponor's fruitful partnership with Grupo Termotecnia for over 15 years and together, they champion energy-efficient solutions for buildings. At its core is Uponor Thermatop M, renowned for its invisible radiant cooling system. Integrated seamlessly into 700 sqm of unique ceiling, the system features nine panels with varying inclinations, 125 distribution circuits using Uponor Uni Pipe PLUS, and 14 prefabricated Uponor Comfort Port Duo manifolds. Innovative design harnesses naturally produced hot/cold water and air production through submerged/buried ducts, blending efficiency and eco-consciousness. Originally considering an active floor system, the developers embraced Uponor's Thermatop – a flawless match. It marries active underfloor benefits with minimal inertia, delivering swift response times. Cartuja Qanat sets an unprecedented global prime example for urban development, fusing technology, sustainability, and inviting spaces. A testament to innovation and environmental stewardship, creating a brighter future for all.



CARTUJA QANAT, SEVILLE, SPAIN GROUNDBREAKING

URBAN TRANSFORMATION









Project facts

- Location: Västeros, Sweden
- Building type: Renovated office building
- Project year: 2023
- Website:
- www.malardalensror.se

Uponor contribution

- Uponor Smatrix Style
- Uponor Smatrix Base
- Uponor Ecoflex Quattro

Uponor Ecoflex Quattro

OFFICE, VÄSTERÅS, SWEDEN

NEW OFFICE IN VÄSTERÅS WITH A FOCUS ON MODERN AND ENVIRONMENTALLY FRIENDLY SOLUTIONS.

MÄLARDALEN RÖR, THE ESTEEMED PLUMBING COMPANY IN VÄSTERÅS, IS PROUD TO UNVEIL THEIR BRAND NEW OFFICE SPACE, SETTING A NEW BENCHMARK FOR SUSTAINABILITY AND INNOVATION IN THE INDUSTRY. WITH A FOCUS ON PRESERVING THE ENVIRONMENT, MÄLARDALEN RÖR'S NEW OFFICE STANDS AS AN EXAMPLE OF SUSTAINABLE DEVELOPMENT IN VÄSTERÅS, SWEDEN.

After decades of operating from their previous premises, Mälardalen Rör recognized the need for a transformative change as their business continued to flourish. Throughout the entire project, sustainability took center stage, firmly reflecting the company's values and vision for a greener world.

Mälardalen Rör seized the chance to craft a space that not only accommodated their expanding team, but also embodied their commitment to environmentally conscious practices.

Hiring an interior designer with a focus on sustainable materials, captivating colors, and harmonious shapes allowed them to maintain a pleasant atmosphere without compromising on quality. A fundamental element of their environmental strategy was the incorporation of underfloor heating. Not only does this innovative system offer unparalleled comfort, but it also operates with a low-temperature supply, significantly reducing energy consumption. Together with Uponor Smatrix Base, the office now enjoys a user-friendly and energy-saving control system. Moreover, their decision to embrace Uponor's bio-based PEX Pipe BLUE in the tap water system further solidified their commitment to sustainable practices.



- Location: Komorniki, Poland
- Building type: Office building
- Gross area: 2.000 m²
- Project year: 2022

Uponor contribution

SEC. C. J. C. Martin

- Uponor Thermatop M
- Uponor Vario Plus Manifolds
- Uni Pipe PLUS multilayer pipes
- Support to the planner office

10.0 Uponor Vario PLUS manifold

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Uponor Thermatop M







DEPENBROCK POLSKA, A LEADING CONSTRUCTION COMPANY KNOWN FOR ITS EMPHASIS ON SUSTAINABLE CONSTRUCTION, HAS ONCE AGAIN PARTNERED WITH UPONOR, FOR THE CON-STRUCTION OF THEIR SECOND OFFICE BUILDING.

Following the successful implementation of Uponor's thermally activated ceilings in their 3-storey office building back in 2007, Depenbrock has now opted for Uponor's energy-saving Uponor Thermatop M ceiling panel system for their new project in Komorniki, Poland. This collaboration highlights Depenbrock's commitment to efficient and environmentally conscious building solutions.

In response to the expectations of future occupants and the desire for costeffective operation, the large-scale office building in Komorniki has been equipped with Uponor's Thermatop M heating and cooling system. This highly efficient system not only reduces investment and operational costs but also ensures sustainable energy use throughout the building's lifecycle. The Uponor Thermatop M ceiling heating and cooling system has proven to be the optimal choice for the new office building. Thanks to its high efficiency, it serves as the main source of heating and cooling within the facility. The system seamlessly integrates with dedicated plasterboards from Regips, creating a complete and harmonious solution. Uponor Thermatop M, used in the current investment, is a water heating and cooling system that meets special architectural requirements. Prefabricated modules are extremely light and their lengths can be flexibly adjusted to a given installation. The Uponor Thermatop M system can be easily integrated with lighting, ventilation openings, fire alarm systems, sprinklers, or loudspeakers.

In the existing Depenbrock Polska office building, the Uponor Contec system has been in use, harnessing the thermal mass of concrete partitions to efficiently heat and cool the rooms. Pipes embedded in the ceiling structure transport heating and cooling water, providing thermal activation to the entire building and ensuring a comfortable temperature. The successful implementation of Uponor's innovative solutions in the Depenbrock office buildings exemplifies the fruitful partnership between the two companies and reinforces Depenbrock's commitment to sustainable and efficient construction practices in the heart of Poland.

DEPENBROCK OFFICE BUILDING, KOMORNIKI, POLAND SUSTAINABLE AND

EFFICIENT CONSTRUCTION

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