

Highest comfort.
Lowest energy consumption.

Uponor

Uponor Combi and Aqua Port Heat Interface Units
for decentralised hot water supply



➤ Decentralisation – for energy savings.

Decentralised Heat Interface Unit water solutions with
Uponor Combi and Aqua Port

When considering the optimal hot water supply for buildings, everyone looks for a smart, efficient and sustainable solution, frequently prompting the question: Which method is most suitable? The most common concepts are centralised and decentralised hot water supply. With its Heat Interface Units Combi and Aqua Port for single and multi-family homes, Uponor focuses on decentralisation. This approach provides distinct advantages in the planning phase before the actual installation, during operation, and in meeting the highest standards of safety, comfort and hygiene.

Decentralised stations are characterised by their energy-efficient performance. They only produce the hot water required, minimising energy costs, and can be easily combined with renewable energy sources.

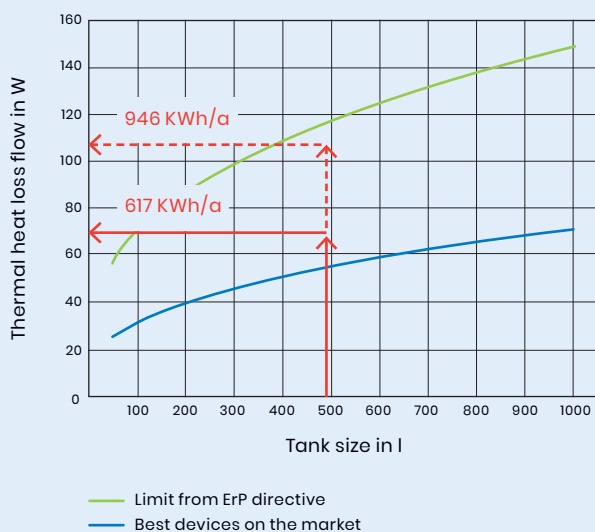
Uponor's Heat Interface Units offer a high degree of customisation and prefabrication, resulting in greater efficiency and quality on the construction sites of decentralised systems. This reduces installation time/costs and material requirements and significantly shortens building time. All processes, from planning to implementation, can be streamlined and accelerated, especially in the event of supply chain disruptions and skilled labour shortages.

By eliminating the stagnation of hot water in the decentralised systems and reducing the overall water volume, the risk of legionella is significantly reduced, ensuring high-quality drinking water.

Uponor Combi and Aqua Port heat transfer stations are the ideal solution for hot water supply. They are energy efficient and characterised by a high degree of prefabrication. They also fulfil the highest hygiene and comfort standards for high-grade drinking water installations.



Standby heat loss of a 500-litre hot water storage tank



Graph shows annual heat loss with average and very good insulated drinking water tank.

Key features:

- On-demand water heating
- Minimum volume of hot water in the system
- Reduced on-site installation efforts
- Only 3 connection pipes instead of 5 – circulation and hot water pipes eliminated
- No breeding ground for legionella, as unnecessary heating of cold water is avoided
- Higher quality due to more prefabricated Heat Interface Units

Benefits:

- Lower investment and operating costs compared to conventional systems
- Instant hot water on demand in every home
- Prevention of legionella growth
- 58% energy savings in distribution pipes thanks to decentralised heat supply
- Smaller installation shaft requirements

➤ Make a difference – and benefit.

Complete package solutions are preferred when choosing a system due to their high quality, efficient operation and superior safety. Uponor Combi and Aqua Port solutions offer benefits along the entire value chain, from planning to installation and utilisation.

Up to

40 %

energy savings



Energy efficiency

Uponor Combi and Aqua Port for decentralised systems provides only the required amount of water directly, leading to an extreme reduction in “storage losses” and eliminating the need to reheat unused water in boilers and circulation lines. Additionally, there are no electricity costs for the circulation pump. The Decentralised Combi and Aqua Port Heat Interface Units from Uponor furthermore allow for the integration of various renewable energy sources.



Efficiency and quality on the construction site

Decentralised systems are particularly efficient thanks to their high degree of prefabrication. Instead of the usual 5 connection pipes, they only have 3, namely flow and return pipes and a cold water connection – circulation and hot water pipes are eliminated. This means less adjustment work in the shaft and a general reduction in line valves required. Overall, far fewer materials are used, significantly reducing on-site installation time. The high degree of industrial prefabrication ensures maximum quality.

30 %

faster installation

100 % hygienic



Drinking water hygiene

In 2021, a record 2.4 cases of legionella per 100,000 housing units were registered in the EU/EEA. 75% of these cases were recorded in Spain, Italy, France and Germany. Decentralised solutions provide no surface for legionella to spread and significantly improve water hygiene. The installation of Uponor Combi and Aqua Port heat interface units works with a minimum amount of water in the system. Heating close to the point of use ensures that hot water is only provided when needed, eliminating the need to store hot water in the central plant room and greatly reducing the volume of water in the entire system. Our precise temperature control prevents unwanted heating of cold drinking water in the pipes, depriving bacteria of a crucial breeding ground and ensuring unparalleled water purity.

Combi and Aqua Port for

The right solution for every situation

Source of heat

Heat pumps, low temperature networks, etc.

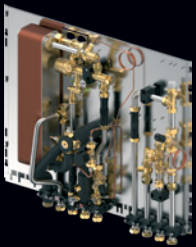
High comfort

Standard comfort

High comfort

Combi Port M-4 Pipe

➤ Heating and cooling



Combi Port M-Hybrid

➤ Electronic reheat



Combi Port E

Versions:

- Basic (Combi Port E-Pro)
- Two heat exchangers (Combi Port E-ProX)



amily

District heating, local heating, CHP, hybrid, gas, oil, pelleting, etc.

Standard comfort

Combi Port M

Versions:

- Basic (Combi Port M-Pro)
- Two heat exchangers (Combi Port M-ProX)
- Fully insulated (Combi Port M-INS)
- Limited functions and size (Combi Port M-XS)



Standard comfort hot water

Aqua Port M

Versions:

- Basic (Aqua Port M-XS)
- Fully insulated (Aqua Port M-INS)



Special solution for renovation

Combi Port M-Retro

- Replacing a gas boiler



➤ Combi Port E

Fully electronic interface unit with motorised valves for the heating circuit and domestic hot water.

The complete HIU solution for immediate domestic hot water production and simultaneous heat distribution at the highest level. The main feature of the Combi Port E is its adaptive learning capability and rapid response time. This enables the unit to provide hot water within seconds, regulate temperatures in the heating system for higher efficiency, and save energy by delivering heat only when needed. The HIU's intelligent control allows it to adapt to the customer's needs.

Energy efficiency

Effective solution for hot water supply.

Products:

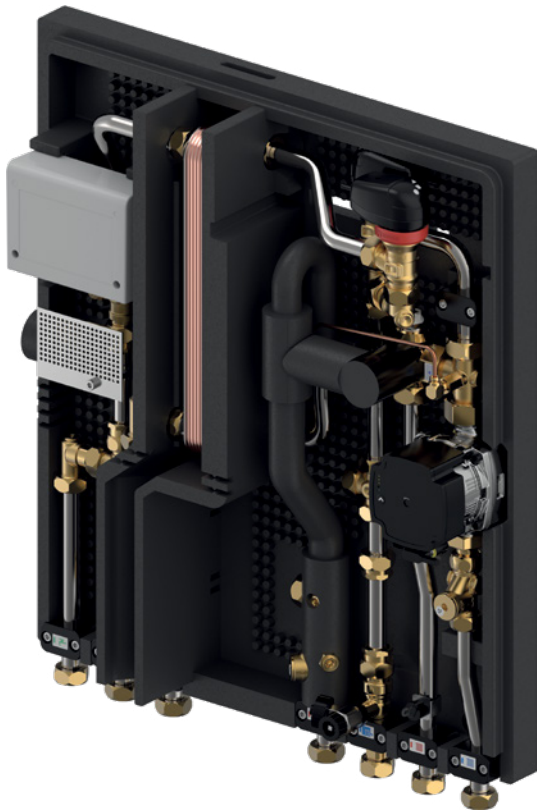
- E-Pro
- E-ProX

Construction site efficiency and quality

High degree of prefabrication and less pipework installation required.

Drinking water hygiene

Elimination of vital breeding ground for bacteria.



Uponor Combi Port E-Pro

The Combi Port E-Pro is a fully electronic HIU for domestic hot water, radiators, and surface heating in a completely insulated cabinet. It offers optimum convenience and fast, on-demand production of individual hot water. Equipped with a fully electronic control system, it can be used as a stand-alone unit or as an interface to a BUS network. An efficient way of producing hot water for secondary circuits in applications such as radiator heating, underfloor heating or a combination of both. Ideal for multi-family homes and apartment blocks.



Key features:

- Intelligent adaptation to individual heating and hot water requirements
- Rapid response time
- Compatible with the local BUS network
- Fully insulated to separate cold water from the heating area
- Easy monitoring of energy consumption
- High output (l/min.) on demand
- Reduced heat loss



Benefits:

- Energy cost savings
- High-quality drinking water
- Maximum comfort
- Smaller installation shaft requirements



Uponor Combi Port E-ProX

The Combi Port E-Pro is a fully electronic HIU for domestic hot water, radiators, and surface heating in a completely insulated cabinet that uses a second heat exchanger. It offers optimum convenience and on-demand production of individual hot water with a short response time. Equipped with a fully electronic control system, it can be used as a stand-alone unit or as an interface to a BUS network. An efficient way of producing hot water for secondary circuits in applications such as radiators, underfloor heating, or a combination of both. The second heat exchanger enables the simultaneous operation of two heating circuits. Ideal for multi-family homes and apartment blocks.



Key features:

- Intelligent adaptation to individual heating and hot water requirements
- Compatible with the local BUS network
- Fully insulated to separate cold water from the heating area
- Easy monitoring of energy consumption
- Rapid response time
- High output (l/min.) on demand
- Second heat exchanger for system separation
- Reduced heat loss
- Two circuit operation



Benefits:

- Energy cost savings
- High-quality drinking water
- Maximum comfort
- Smaller installation shaft requirements

➤ Combi Port M

The best-known mechanical proportional controller with thermostatic controls for heating and domestic hot water.

HIU for immediate domestic hot water production and simultaneous distribution of heat/cold to domestic heating circuits. Designed to achieve a new level of comfort, hygiene and energy efficiency. The heating/cooling side varies depending on the design of the building's heating system and the type of heat source. Combi Port M's biggest advantage is its automatic mechanical regulation with the PM valve. The units are very thin, with a height of only 115 mm, and offer the widest range of variants.

Energy efficiency

Effective solution for hot water supply.

Construction site efficiency and quality

High degree of prefabrication and less pipework installation required.

Drinking water hygiene

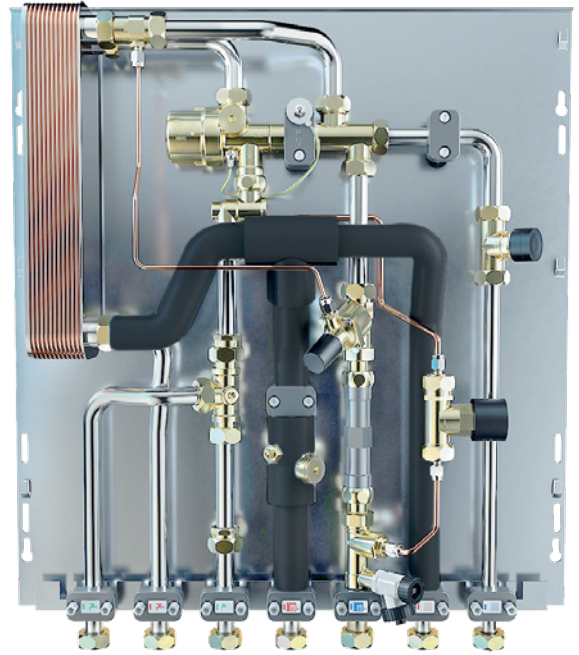
Elimination of vital breeding ground for bacteria.

Products:

- M-Pro
- M-ProX
- M-INS
- M-XS
- M-Retro
- M-Hybrid
- M-4 Pipe

Uponor Combi Port M-Pro

A range of "industry standard" HIUs for domestic hot water and direct heating via the heat supply pipe connected to the HIU. A Heat Interface Unit that provides high-quality, hygienic hot water and connections to secondary heating circuits such as radiators or underfloor heating with a mixing group. Its slimline design is perfect for flush-mounted installation in flats and can be combined with specially designed accessories and cabinets.



Key features:

- Flat design
- High output (l/min.) on demand
- Increased safety with hydraulic impact dampeners
- Reduced heat loss
- Pre-heating function

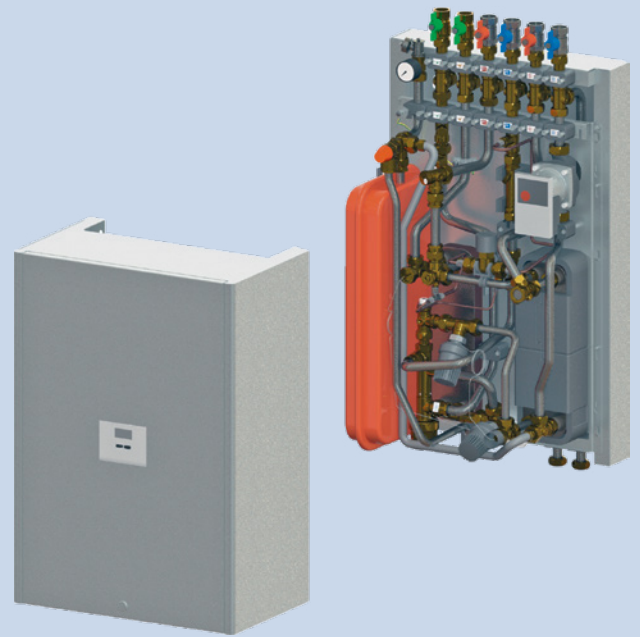


Benefits:

- Energy cost savings
- High-quality drinking water
- Maximum comfort thanks to faster response time

Uponor Combi Port M-ProX

A metal-clad Heat Interface Unit for the immediate decentralised production of hot water and heating. It is designed with a second heat exchanger for a perfect combination with a heating pump and expansion tank for separate heating circuits. The unit allows direct connections to a second heat exchanger without system separation. Due to the complexity of hydraulic balancing, stations with a second heat exchanger are preferred in high-rise buildings and projects with high-temperature heating systems.



Key features:

- Flat design
- Increased safety with hydraulic impact dampeners
- High output (l/min.) on demand
- Reliable thermostatic regulation of the heating circuit
- Second heat exchanger for system separation
- Additional safety requirements: manometer, expansion tank and safety valve
- Reduced heat loss
- Pre-heating function
- Two circuit operation



Benefits:

- Energy cost savings
- High-quality drinking water
- Maximum comfort thanks to faster response time

Uponor Combi Port M-INS

A fully insulated, compact Heat Interface Unit for immediate decentralised hot water production. Equipped with mechanical flow control and direct connections for secondary heating circuits, such as radiators or panel heating with a circulation pump. Specially designed for common applications in apartment buildings and multi-family homes.



Key features:

- Flat design
- High output (l/min.) on demand
- Increased safety with hydraulic impact dampeners
- Ideal for flats up to 100 square meters
- Reduced heat loss



Benefits:

- Energy cost savings
- High-quality drinking water
- Maximum comfort

Uponor Combi Port M-XS

The smallest Heat Interface Unit for demand-driven, decentralised hot water and radiator heating. Ideal for apartments and blocks of flats due to its compact size and budget-friendly design that offers excellent functionality.



Key features:

- Consistent domestic hot water output
- Overall compact size
- High output (l/min.) on demand
- Reduced heat loss

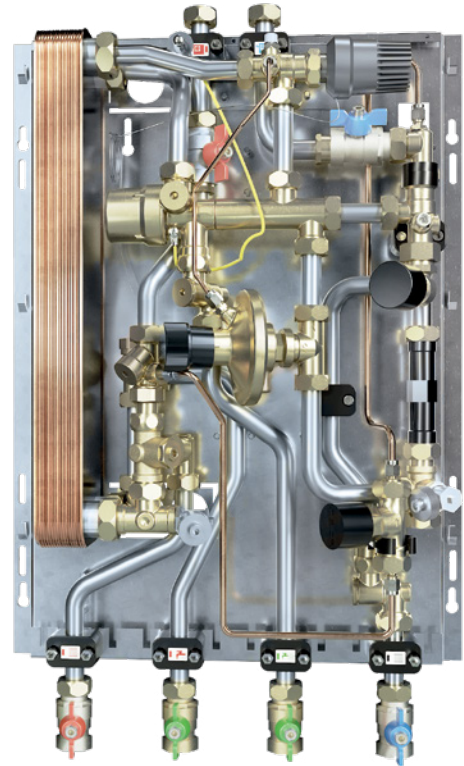


Benefits:

- Energy cost savings
- High-quality drinking water
- Maximum comfort

Uponor Combi Port M-Retro

A compact Heat Interface Unit specially developed for renovation, replacing gas, hot water on demand and radiator heating systems. With an ingenious connection concept and adapter sets, they seamlessly fit with major gas boiler manufacturers (such as Vaillant, Junkers, etc.) or common universal boiler suppliers. The concept and accessory portfolio are designed for renovation projects where gas boilers are replaced in multi-family homes.



Key features:

- Flat design
- High output (l/min.) on demand
- Increased safety with hydraulic impact dampeners
- Reliable thermostatic regulation of the heating circuit
- Standardised flexible connection sets available
- Installation on existing gas-fired boiler without new pipework
- Reduced heat loss

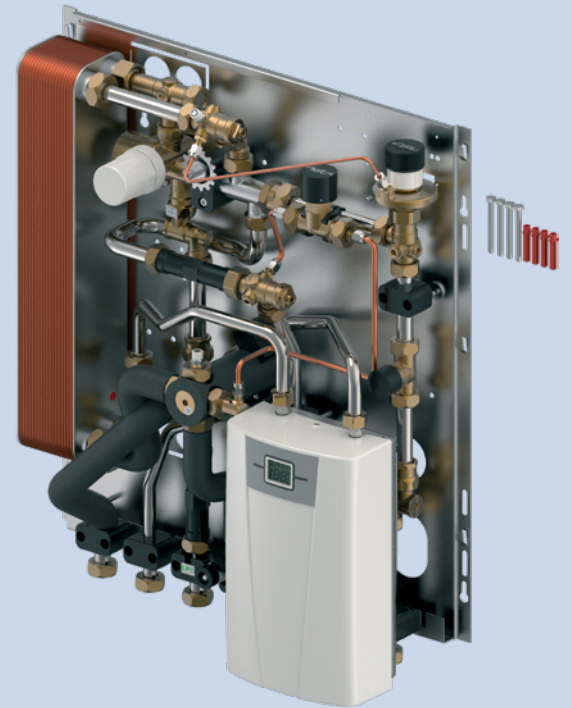


Benefits:

- Energy cost savings
- High-quality drinking water
- Maximum comfort
- Less dirt and noise during renovation
- Shorter renovation times

Uponor Combi Port M-Hybrid

A Heat Interface Unit for hot water production from low-temperature heat sources such as heat pumps. The electric booster provides additional energy to bring the hot water to the desired temperature. Ideal for the efficient operation of heat pumps in combination with underfloor heating. Its slimline design is perfect for concealed installation in apartment blocks and multi-family homes. Thanks to the wide range of accessories, the station is perfect for new buildings and renovations.



Key features:

- Flat design
- High output (l/min.) on demand
- Increased safety with hydraulic impact dampeners
- Low-temperature solution for efficient use of heat pumps
- Reduced heat loss

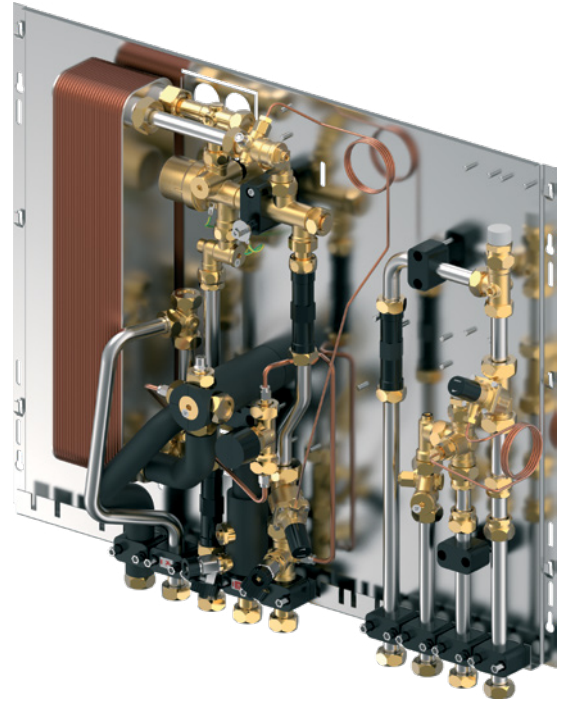


Benefits:

- Energy cost savings
- High-quality drinking water
- Maximum comfort

Uponor Combi Port M-4 Pipe

The Heat Interface Unit for decentralised hot water in combination with underfloor heating or cooling. With two parallel heating/cooling supply lines, its extremely slimline design makes it ideal for concealed installation in apartment blocks and multi-family homes. Enables easy switching between cooling and heating in apartments, with the option to switch from centralised to decentralised heating or cooling, depending on the user's preference and the selected HIU type.



Key features:

- High output (l/min.) on demand
- 4-line station
- For heating and cooling
- Low water volume in the system
- Reduced heat loss



Benefits:

- Energy cost savings
- High-quality drinking water
- Maximum comfort

➤ Aqua Port M

Mechanical proportional controller for domestic hot water.

HIU ensures the immediate production of household hot water for separate water heating. Customisable with additional devices for greater durability, safety, and user comfort. Ideal for large homes with distant connections, as a complement to Combi Ports or in areas where conventional heating is not necessary.

Energy efficiency

Effective solution for hot water supply.

Construction site efficiency and quality

High degree of prefabrication and less pipework installation required.

Drinking water hygiene

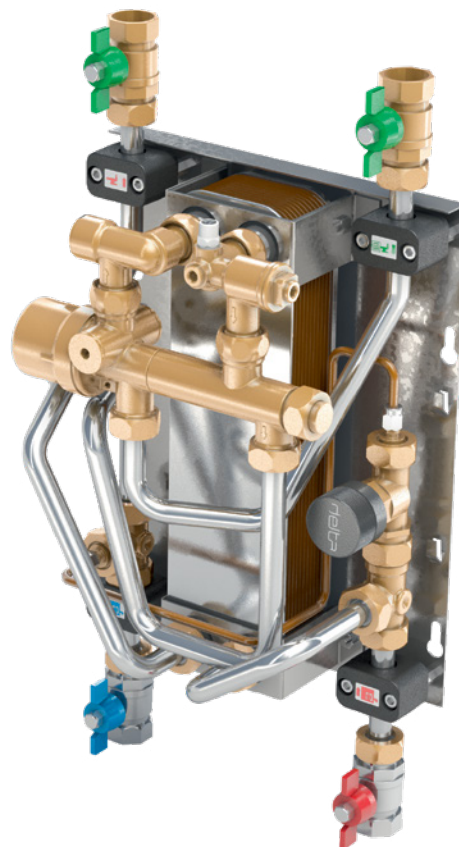
Elimination of vital breeding ground for bacteria.

Products:

- M-XS
- M-INS

Uponor Aqua Port M-XS

This Heat Interface Unit is our portfolio's smallest station for decentralised hot water production. It offers excellent functionality combined with a budget-friendly design. The compact system is ideal for apartment buildings and multi-family homes as it reduces the need for hot water pipes to reach distant tapping points from the HIU. With the Aqua Port M-XS you can reduce the total volume of hot water in the installation, so it is the perfect solution for larger apartments, to fulfill local requirements e.g. the 3 or 5 liter's rolls, country specific requirements.



Key features:

- High output (l/min.) on demand
- Overall compact size
- Reduced heat loss



Benefits:

- Energy cost savings
- High-quality drinking water
- Maximum comfort

Uponor Aqua Port M-INS

A fully insulated, compact Heat Interface Unit for immediate, decentralised domestic hot water production with excellent functionality. Specially designed for common applications in apartment buildings and multi-family homes.



Key features:

- Compact installation
- High output (l/min.) on demand
- Increased safety with hydraulic impact dampeners
- Reduced heat loss



Benefits:

- Energy cost savings
- High-quality drinking water
- Maximum comfort

Uponor project planning service

Professional planning, smooth construction process



Your contact to Uponor

We are here for you



The Uponor project planning service helps you to manage the planning tasks in your day-to-day business. We offer an expert project planning and design service that provides you with professional support.

From the calculation of the heat load and the pipe network to hydraulic balancing and implementation planning, our experienced team supports you with a wide range of services.

Uponor project planning service for drinking water installation and radiant heating/cooling

- Support through a wide range of services, e.g. implementation planning and calculation of the heat load
- Preparation of detailed requirement

CUSTOMER SERVICE

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Documentation



Technical information, installation and operating instructions and much more collected in one central location.

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In our practical tips, professionals show you how it's done.

Catalogue ordering



The full technical catalogue combines all Uponor technical documentation in a single volume.

Trainings



We are offering different online and offline trainings – please get in touch with us to get more information

Installation overview



1

Uponor Uni Pipe PLUS

The Uni Pipe PLUS composite-pipe system is a unique solution in the industry due to its flexibility and stability. It is perfect for loop installations and manufactured under the strictest hygienic conditions and then hygienically sealed.

2

Uponor S-Press PLUS

The S-Press PLUS press fitting system is designed for composite pipes and offers a reliable solution for permanently tight pipe connections. With a best-in-class Zeta value, it is resistant to all types of drinking water, reducing pressure loss by up to 60%.

3

Uponor Motion

The intelligent Uponor Motion rinse station ensures automatic water exchange in drinking water installations. Combined with loop-through in-line and ring installations, the innovative flushing station reduces the risk of contamination with dangerous pathogens through hygienic, on-demand flushing. Moreover, Uponor Motion ensures proper operation in accordance with VDI guideline 6023.



4

Heat Interface Units

The complete range of Uponor Heat Interfacing Units enables the efficient heating of domestic hot water via a centralised heating system. A storage tank or distribution network is not required. The unit's heat exchanger quickly heats the cold drinking water when the tap is opened.

5

Riser installation

Uponor risers prevent the heating riser from warming up the cold domestic water riser by keeping the cold water temperature below 25 °C at all times, helping to prevent legionella growth and the ensuing health problems. We recommend using mineral wool insulation between the cold and hot water risers for a professional installation.

6

Uponor MLC

Uponor was the first to introduce MLC pipes with overlap welding technology in combination with the first radial press fittings in 1990. Up to 40% tighter bend radii than conventional composite pipes mean that many directional changes can be made with pipe bends during installation. This reduces the number of fittings required and cuts installation time.

➤ Combi and Aqua Port in action



Location: Frankfurt am Main, Germany

Building type: Apartment block

Area: 8,200 m²

Topic: Surface heating and cooling

Completion: 2019

Number of storeys: 45

Tailor-made indoor climate. Omniturm Frankfurt

The 190-metre high “hip curve” Omniturm is a highlight of the Frankfurt banking district. Parts of the building break from the vertical footprint to create additional space for apartments and luxury flats. These 150 dwellings benefit from the customised HIU technology provided by Uponor.

The company’s Combi Port E-Pro and M-Hybrid products were used in designing the compact residential units to create an individual living climate and efficient water supply. A heat exchanger for heating and hot water allows for the individual distribution of energy. Six-way ball valves prevent the heating and cooling sides from mixing. The temperature of the underfloor heating, which provides warmth in winter and cooling in summer, can be easily adjusted with a push-button sensor. In addition, the continuous flow hot water system ensures maximum hygiene. The decentralised hot water supply saves energy, cuts costs and simplifies maintenance.



Comfort in the skies. Grand Tower Frankfurt

The Grand Tower in Frankfurt is Germany's tallest residential building, with over 400 apartments and penthouses supplied by Uponor residential stations. Our products perfectly fulfil the high demands placed on heating and cooling and the individual requirements for temperature comfort. We developed specific methods for this project. The use of Combi and Aqua Port Heat Interface Units ensures a clear separation of the primary and secondary networks in the building.

Room temperatures and temperature mixing can be set completely independently of the overall system. The six-way ball valves in the decentralised stations ensure the required water flow rates are reliably available all times, allowing troubleshooting in the living areas while the rest of the heating/cooling system remains fully functional.



Location: Frankfurt am Main, Germany

Building type: Apartment block

Topic: Surface heating and cooling, composite pipe systems, prefabricated systems

Completion: 2020

Number of storeys: 42

150

apartments were
supplied by Uponor

400

apartments were
supplied by Uponor

Moving > Water

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