## Moving hygiene forward with Uponor water systems

## υροποι

Efficient and reliable installations for residential and commercial buildings



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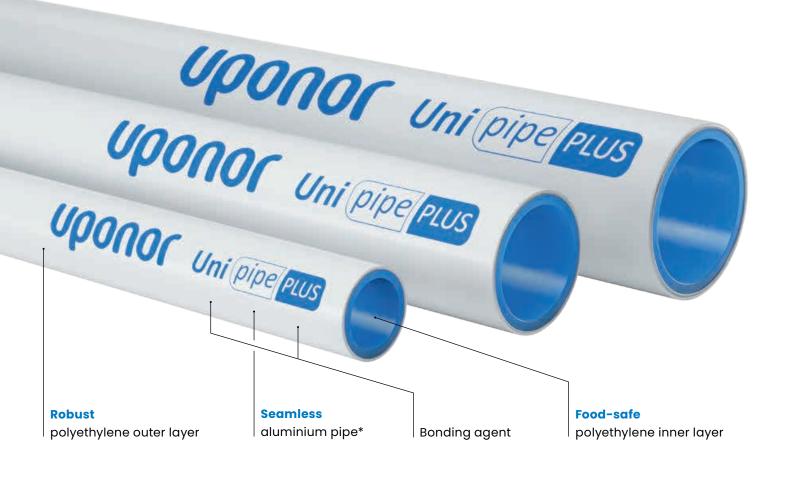
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 $\ensuremath{^*\text{with}}$  ISCC certification, based on the mass balance approach

# Uponor Uni Pipe PLUS Highest bendability for fast drinking water installations



\* Seamless alumunium pipe with SACP technology

\*\* OWV-Technology aluminium pipe

#### Uponor Uni Pipe PLUS with dimensions up to 32 mm

We offer Uni Pipe PLUS in two variants: as straight lengths and coils. Both provide extraordinary advantages. Uni Pipe PLUS coils are significantly more flexible and bendable than current multilayer composite pipes. This enables you to not only save time during installation, but also save costs caused by extra installation components, which are now no longer needed. In contrast, Uni Pipe PLUS straight lengths feature a special aluminium layer that is more rigid than conventional. So you can provide a visually attractive, on-wall mounting solution which optimally caters to today's modern installation technology. Whichever variant you need, you are guaranteed the highest safety possible.

## The highly flexible multilayer composite pipe

- Complies with guidelines for the drinking water directive
- > Provides highest stability and bendability
- Features the best surface finish for preventing the build-up of deposits
- Is absolutely oxygen tight and corrosion resistant
- > Ensures low linear expansion
- > Delivers outstanding strength against ruptures
- Has been certified by the German Technical and Scientific Association for Gas and Water (DVGW) and complies with the Guideline for the Hygienic Assessment of Organic Materials in Contact with Drinking Water (KTW)

## Change direction without additional fittings

Uni Pipe PLUS consists of a seamless or OWC-technology aluminuim pipe\* which not only prevents oxygen from entering, but also compensates for restoring forces and linear expansion caused by changes in temperature. To achieve this, the thickness of the aluminium has been optimally adjusted for the high pressure resistance and bendability needed. Both the inside and the outside of the pipe have been equipped with a layer of polyethylene which is resistant to high temperatures (complying with DIN 16833). All the layers are then permanently joined to one another thanks to the use of a bonding agent applied between the layers.

- 0% readjustment, pipe stays perfectly in shape after bending
- > Up to 15% less fittings, due to the better bendability
- 100% backwards compatibility with Uponor leading multi-layer pipes&press fittings
- > Up to 40% narrower bending radius compared to conventional multilayer composite pipes

#### Choose your variant



#### **Uni Pipe PLUS\***

Uni Pipe PLUS pipes are available in the standard dimensions 16, 20, 25 and 32 mm (based on SACP technology).



#### Uni Pipe PLUS Pipe in Pipe\*\*

Uni Pipe PLUS is also available in a pre-insulated or pipe-in-pipe version (based on overlap-welded technology).



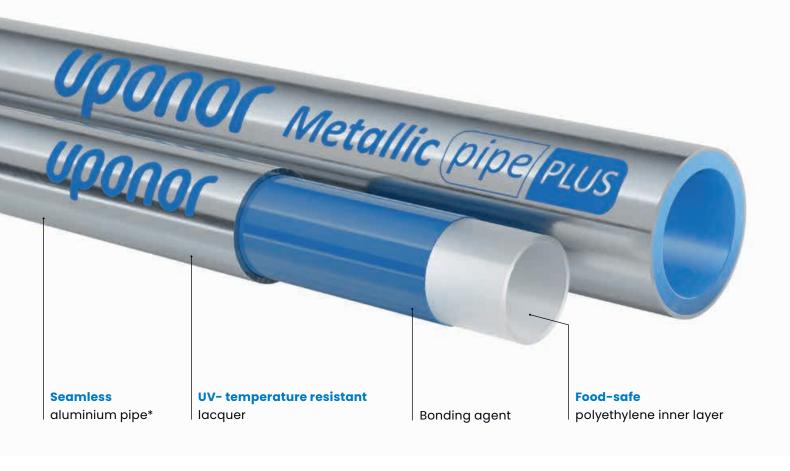
#### **Uni Pipe PLUS insulated\*\***

Choose the right Uni Pipe PLUS composite pipe variant for your precise needs on site - as straight lenghts or coils, pre-insulated or pipe-in-pipe (based on overlap-welded technology)



All Uni Pipe PLUS pipes can be installed easily, quickly and safely thanks to the tried-and-tested Uponor press-fitting technology. They are fully compatible with all the current Uponor systems and solutions.

# Dependent of the second sec



\* Uponor SACP technology

# The world's first multilayer composite pipe with metallic look and feel

Uponor Metallic Pipe PLUS has a special aluminium layer which is more rigid. This lets you create an attractive surface mounting that is optimally adapted to current installation techniques. You are guaranteed a seamless product and the highest possible safety level.

Uponor Metallic Pipe PLUS is available in the standard dimensions 16 and 20 mm. Therefore you simply take advantage of the world's first seamlessly manufactured multi-layer composite pipe with metallic look and feel and at the same time be assured that Metallic Pipe PLUS is fully compatible with Uponor's press systems and tools.

#### Combining the advantages of a metal and a plastic pipe in a single solution

- Adheres to the guidelines laid down in the German Drinking Water Ordinance
- Maximum form stability and bending flexibility
- Optimum surface finish to prevent deposits
- Absolutely impermeable to oxygen and corrosionresistant
- > Light weight easier to handle and install
- > Low linear expansion
- > Excellent creep strength
- SKZ-tested

#### Simple mounting using tried-and-trusted techniques

All Uponor Metallic Pipe PLUS can be mounted simply, securely and quickly using our long-established Uponor compression joining techniques. They are also fully compatible with all current Uponor press systems and solutions.

- Available in the dimensions 16 and 20 mm
- Comprehensive delivery programme and mounting-friendly fitting technologies
- Attractive on-wall mounting of extremely rigid straight lengths
- > Low weight due to optimal material distribution
- Higher profits due to time and cost savings during mounting

## Analysed and evaluated layer by layer

The seamless aluminium pipe prevents oxygen penetration and compensates for the restoring forces and linear expansion caused by changes in temperature. The thickness of the aluminium is optimally adapted to the required compressive strength and flexibility.

A layer of high-temperature-resistant polyethylene has been applied inside and the outside is coated with a UV-/ temperature-resistant lacquer. All layers are permanently joined by an intermediate bonding layer.

# Uponor S-Press PLUS Designed for fast and safe connections

Tested and proved





#### The new generation of press fittings for composite pipes

S-Press PLUS is the perfect solution for ensuring permanently tight pipe connections. It's 100% backward compatible with current Uponor composite pipes and tools. Available in dimensions from 16 to 32 mm in both metal and plastic, S-Press PLUS is the fitting that knows no compromise: tough, safe, easy and smart.

- > Durable and corrosion resistant
- > Ensures perfectly tight connection
- > Highly resilient
- > With flow-optimised design

#### Experience Uponor S-Press PLUS in 3D

1

Scan the QR code with your **smartphone or tablet** 





Click on **"Start"** or AR symbol (on the right hand side of the product image)



Place the product on any surface, zoom in and out, move it around



#### Intuitive color coding

The bright colour coding on the press indicator are easy to recognise even from far distances. The matching colour coding on the pressing jaws tells you which tool to use.





#### Easy

#### Simplifying planning and installation

- > New digital engineered body design
- > Decreased pressure loss by up to 60%.
- Fast 3-step installation speeds up installation because no beveling or calibration is required.
- 100% backward compatible with existing Uponor components.

#### Safe

#### **Ensuring your perfect pressing result**

- New sleeve design made of stainless steel ensures the Uponor U-profile jaws can be fixed more precisely than ever.
- It is impossible to press the fitting in the wrong position.
- Fast diameter recognition: Even in dark and difficult conditions on the construction site, you will be able to easily and quickly pick the correct fitting dimension. The bright colour coding and big dimension numbers on the press indicator are easy to recognise even from far distances. The matching colour coding on the pressing jaws tells you which tool to use.
- Unique press indicator on the stainless steel sleeve: It enables a secure check if pressed or not. The press indicator (foil) is removable as soon as the connection is safe.
- Accurate test safety function: The fitting will leak immediately if it hasn't been pressedproperly, even at a very low pressure level.



#### Smart

#### Answering all your questions on site

- > Innovative QR code for immediate access to:
- > 24/7 tutorial and installation support
- > Your individual project database
- > Item list and online ordering.

#### Tough

#### Withstanding the harshest conditions

- Improved connection between new designed stop ring and fitting body for more load and shock resistance.
- New body design and stainless steel sleeve for great stability under heavy mechanical forces.
- The new brass alloy for Uponor S-Press PLUS and with more than 20 years proven PPSU material for
- Uponor S-Press PLUS composite makes the fitting stronger against soft water, as well as low concentrations of calcium and magnesium ions
- Water tangent material is listed on the positive list of the 4MS. Approved material to be in contact with water for human consumption.
- All raw materials used for S-Press PLUS are highly resistant to corrosion.

# Dponor S-Press PLUS sound and leak protection Reduced noise and increased safety



#### Reduce water noise. Increase installation safety.

Disturbing noise from drinking water installations can be really annoying. If they exceed a certain level, they can even result in costly lawsuits and require reworking. Our latest invention helps installers prevent such inconveniences from occurring in the connection between the wall and the external pipe system.

UPONOR S-Press PLUS sound and leak protection avoids small sound bridges that conduct acoustic noise throughout the installation. The result is unprecedented noise reduction that complies with the VDI 4100 regulatory standard.

In addition, the integrated drainage cap prevents water from leaking tap connections behind the wall. With the innovative drainage function in the Uponor S-Press PLUS sound and leak protection, the water is drained directly from the leaking connection to the front of the wall, where it can be easily detected.

#### **Benefits**

- > 2 in 1: unique solution with dual functionalities
- Meets highest certification standard incl. DIN 18534 for drainage function
- Compatible with all recommended drain plugs
- Quick and easy detection of leaks at tap connection
- Extremely lightweight material and easy to cut with just a knife
- Similar installation steps as a tap end elbow without protection
- > High installation flexibility
- > Add-on for S-Press PLUS fitting series
- > Available for both tap end and U-tap elbows
- Dimension 16-20 mm for tap and elbows and for U-tap and elbows
- > Dimension 16 mm for mounting unit

#### Uponor S Press PLUS sound and leak protection with its unique drainage function

The interlocking of the mounting piece and the end cap allows water to drain away to the front of the wall in case of a leak.





Uponor S-Press PLUS sound + leak protect 16–20 mm for tap end elbows



Uponor S-Press PLUS sound + leak protect U 16-20 mm for U-tap end elbows



Uponor S-Press PLUS mounting unit sound + leak protect 16 mm

# Uponor RTM Permanently tight connections without tool use



#### Fitting technology with integrated press function

Like all our products the Uponor RTM fitting was subjected to demanding tests and extreme working conditions. Uponor RTM fulfils all the current test standards of the drinking water and heating installation. And furthermore also withstands extraordinary stresses such as pressure surges and length expansions in the pipe through temperature changes.

The memory effect of this pretensioned ring makes it an integrated pressing tool and furthermore ensures stable denseness of the connection. Thanks to the constant pressing pressure that acts completely circumferentially on the pipe, length expansions in the pipe are compensated. The RTM technology with the TOOL-INSIDE concept is DVGW certified. No additional pressing tool is required thanks to the integrated pressing function.

#### Click and press without a tool

- > Integrated press function
- > Dimension-specific colour coding
- > No special tools required
- > Visual and acoustical connection check
- > Rapid and simple to process

Uponor RTM contains an extensive range of fittings for selected Uponor pipes so that no mounting tools are required in order to establish the pipe connection. RTM fittings can be mounted rapidly and provide a high degree of reliability and durability in both drinking water installation and heating/cooling applications.

#### Colour code dimension



## Ring tension memory technology

The materials used for Uponor RTM combine ultralight plastic with the best mechanical properties of metal and guarantee extraordinary performance. The pressing ring consists of highstrength special-coated carbon steel.

During manufacturing of the RTM fittings with integrated pressing function, technologies and materials are used that are also used in the automobile industry, for example for ABS disks. The revolutionary RTM technology offers the advantages of the tried-and-tested pressing technology combined with the novel TOOL-IN-SIDE concept. Thanks to the integrated pressing function this results in a perfect and permanent connection.

#### **Available fittings**



#### **Uponor RTM tee PPSU**

with integrated pressing function, pressed state identification and colour coding.



#### Uponor RTM coupling PPSU

with integrated pressing function, pressed state identification and colour coding.



#### Uponor RTM tee

with inner thread – with integrated pressing function, pressed state identification and colour coding, cylindrical inner thread to ISO.



#### **Uponor RTM** transition Cu and stainless steel

# Uponor Motion Ensuring water hygiene and comfort



Planning a drinking water installation according to hygienic requirements is an absolute must. Incorrect planning and installation can endanger the quality of drinking water in two ways: stagnation and warming. Legionella, in particular, love warm (25 – 55 °C) and stagnant drinking water.

Uponor Motion ensures regular water exchange in your installation. Combining our innovative flushing station with our proven loop system significantly reduces the risk of contamination by dangerous pathogens. In addition, Uponor Motion enables the operation of a drinking water facility in accordance with DIN 1988 – 200. Uponor Motion naturally meets the high requirements of DVGW W540.

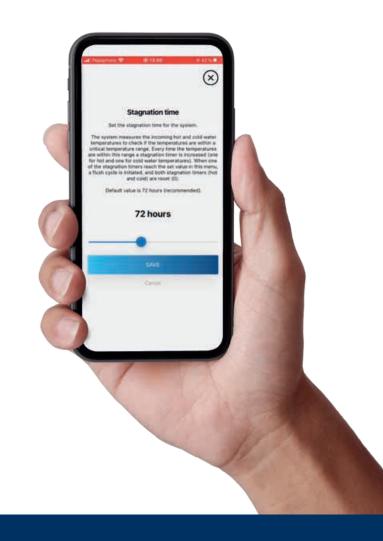
#### **Convenience in motion**

Drinking water installations must also meet the highest standards in terms of supply convenience. Uponor Motion helps you to meet these requirements with an integrated comfort function. This ensures the desired water temperature is provided instantly. The preselected settings can be programmed according to customer's preferences.



#### Easy to use

- Pre-programmed flushing logic according to VDI/DVGW 6024 standard or individual flushing settings (e.g. interval, time,temperature)
- Detailed flush logs via Uponor Motion app or pre-installed SD card
- Intuitive operation on a smartphone or tablet via WiFi



#### **Invisible installation**

- No visually disturbing parts in sanitary room
- No additional planning effort, as a washbasin is part of a sanitary room
- > No additional wastewater connection
- Pre-installed universal connections included
- Adapter kits compatible with the leading sanitary wall frame systems on the market

#### Intelligence in motion

- Innovative drain siphon enabling a turbulent flow of 151/min at min. 1bar water pressure
- Intelligent product design and a noiseinsulating housing made of EPP help contribute to meet the increased sound insulation requirements according to DIN EN 4109/5, VDI 4100 SSt III, SSt EB II



## Suitable for any installation type



**Pre-assembled** in washbasin frame



Integrated into drywall or sanitary walls



Wall mounted without washbasin frame

#### Experience Uponor Motion in 3D



Scan the QR code with your **smartphone or tablet** 



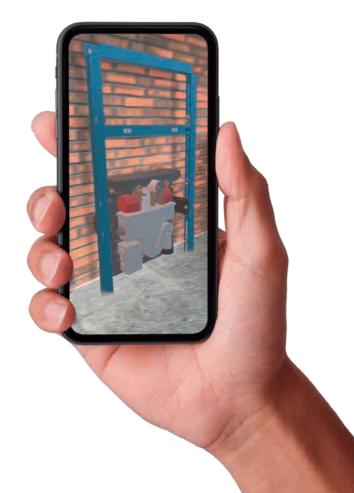


Click on **"Start"** or AR symbol (on the right hand side of the product image)





Place the product on any surface, zoom in and out, move it around



Loop installation
Uponor Uni Pipe PLUS
Uponor S-Press PLUS



Hygiene flushing system > Uponor Motion

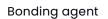
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Riser installation

Uponor MLC
Uponor INOX

# > Uponor MLC Multiple layers, multiple benefits



Polyethelen-RT outer layer Overlapp-welded aluminium pipe

Bonding agent

Polyethelen-RT inner layer

Uponor MLC Uponor MLC

## The multi-layer composite pipe system for risers

Longitudinally welded aluminium pipe which not only prevents oxygen from entering, but also compensates for restoring forces and linear expansion caused by changes in temperature. To achieve this, the thickness of the aluminium has been optimally adjusted for the high pressure resistance needed. Both the inside and the outside of the pipe have been equipped with a layer of polyethylene which is resistant to high temperatures (complying with DIN 16833). All the layers are then permanently joined to one another thanks to the use of a bonding agent applied between the layers. Uponor MLC is available in dimensions from 40–110 mm.

**100%** oxygenproof barrier through the inner aluminum layer

With our 5 layer composite pipe we developed a product with a future, which combines the benefits of both metal and plastic pipes. Product benefits are obtained that cannot be surpassed: The inner aluminium layer provides a 100 % oxygenproof barrier. It compensates for the snap-back forces and the linear expansion caused by temperature changes. The basis of the system is simple, safe and fast pipe installation: simply bend by hand, cut to length, bevel, join together, press – done!

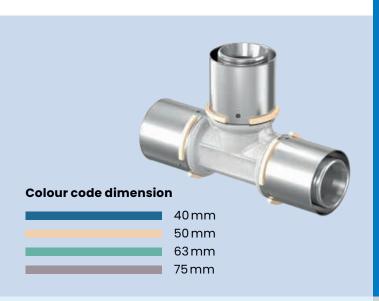
# > Uponor S-Press Reliability in large dimensions



#### Riser fittings up to 75 mm

The Uponor S-Press fitting 40 – 75 mm is applicable for all sanitary facilities as well as for heating and cooling, e.g. for house construction and for public and commercial buildings.

Together with the Uponor MLC it has system approvals all over Europe for drinking water incl. hygiene approvals.



## For fast and reliable riser installation

- Free choice between Uponor S-Press brass 40-50 and PPSU 40-75
- S-Press 40 75 material is listed on the 4MS positive list of the as approved lead-free material to be in contact with water for human consumption
- Fast installation with easy bevelling and without calibration
- > Compatibility to current pipes and tools
- Free choice between Uponor RS portfolio and S-Press composite portfolio 40 – 75
- Colour coding
- > Test safety function
- Stop ring segments for easy and precise jaw fixation

#### Tap water

The permanent operating temperature ranges from 0°C to 70°C at a maximum permanent operating pressure of 10 bar. The short-term malfunction temperature is 95°C for a period of 100 hours in the operating life time.

#### Heating

The permanent operating temperature ranges up to 80 °C at a maximum permanent operating pressure of 10 bar. The short-term malfunction temperature is 100 °C for a period of 100 hours in the operating life time.



# Uponor RS Many possible connections with just a few system components



# Modular press fitting system for distribution lines and risers

Thanks to the Uponor RS modular system for distribution lines and risers, all the required press connections can be done easily and safely on the workbench. Only here are heavy tools required. When on site the pre-mounted composite-pipe units then simply have to be inserted into the fittings and locked. This ensures rapid high-quality installation even under difficult spatial conditions.

Difficult working conditions with heavy pressing tools in cramped corners or over-head positions are a thing of the past. Thanks to the modular system design of Uponor RS all the connections are created with same procedure.

Tools are only required for the pressing process – and this step can be carried out directly at the workbench. The system covers almost every installation situation and also offers a high degree of flexibility in the event of changes on the construction site.

#### Flexible planning, reliable procurement, simple mounting for large dimensions

- Connection concept consisting of base parts and matching adapter inserts made of brass
- Innovative fitting connection between base part and adapter
- Higher flexibility and less logistic effort thanks to minimal number of system components
- Optimal availability at low storage space and investment requirements
- Rapid mounting through pressing on the workbench and tool-free connecting on site
- Optional usage of the pressing machines UP 75 or UP 110 (cordless)
- Simple correction possibilities when plan changes occur during the installation phase

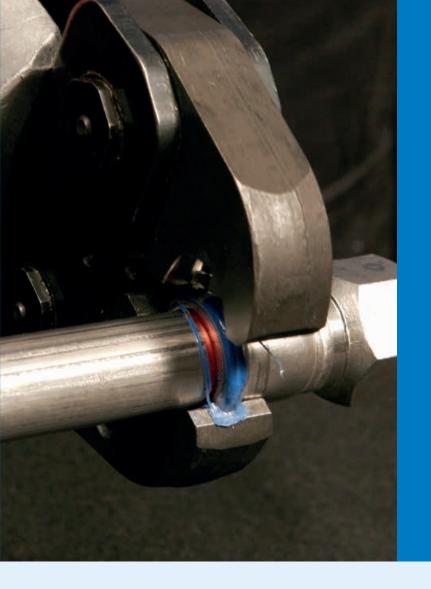
#### Easy colour coding

Uponor RS is the press modular fitting range for distribution lines and risers.



# Uponor INOX fittings Simplified installation, safer than ever





#### Easily pressed. Safer than ever.

The Uponor INOX system simplifies installation in two ways.

#### **Press indicator**

Blue plastic foil on the fitting ensures quick detection of unpressed connections.

#### **Test safety function**

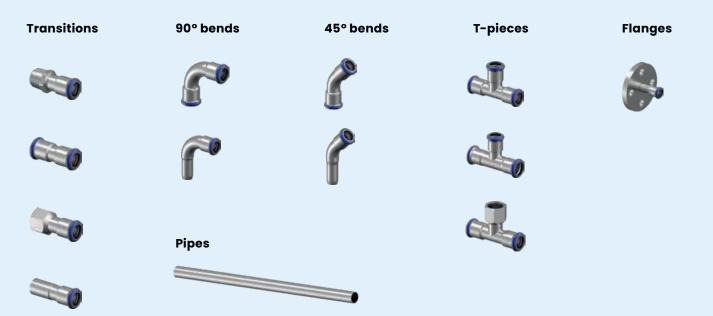
The unique polygonal shaped O-ring guarantees that unsealed connections are reliably detected during the first pressure test.

## Fittings for stainless steel risers

Why not source all the components for your drinking water supply from a single supplier? Uponor offers the entire range of products required for a seamless hygiene solution – simplifying both planning and installation.

## Extensive Uponor INOX portfolio

Uponor's comprehensive product line in the nominal diameters DN12 to DN50 is designed for the ideal drinking water supply.





1

Simply insert the deburred composite pipe into the pressing adapter.





Press the connection.



Insert the pressing adapter into the base part.







Slide the lock pin into the opening of the fitting body and click it into place







## Flexible realisation of main distributors

Thanks to the modular fitting system and the associated spacing adapters, distributors of different sizes can be realised flexibly and in just a few steps.

#### Faster planning with just 40 components

Conventional 63 – 110 mm installation systems require up to 300 different components. Our system just needs 40 components – a significant facilitation in planning. Despite the low number of components the system covers almost any conceivable task and opens up new room for creativity.





#### **Flexible angles**

Particularly in old buildings walls and ceilings are often not really at right angles to each other. The short spacers (5 mm) in combination with two 45° elbows allow almost any desired angle to be realised by rotating the components.

## Simple and faster changing of piping levels

Thanks to the space adapters in combination with 45° elbows, level jumps with only minimal height differences are possible.

# > Uponor INOX Minimum effort for high-quality drinking water



#### Stainless steel system for drinking water delivery

When it comes to the supply of drinking water in large apartment buildings, the new INOX stainless steel system from Uponor meets the highest demands. The material guarantees maximum safety and hygiene during operation, while the design allows for minimum installation effort. In addition, Uponor INOX pipes can be easily combined with other products from our portfolio to create a smart all-round solution.

#### Experience Uponor INOX in 3D



Scan the QR code with your **smartphone or tablet** 





Click on **"Start"** or AR symbol (on the right hand side of the product image)





Place the product on any surface, zoom in and out, move it around

#### High-quality drinking water supply and safe installation

- High-quality stainless steel EN1.4404 for high technical and hygienic requirements
- The system is certified in accordance with DVGWW543, DVGWGW541 and DVGWW270
- A foil facilitates the detection of unpressed connections. After pressing, the coloured indicator can easily be removed by hand
- I6 bar operating pressure for drinking water installations even in large construction projects
- > Established M-profile for the press fittings



# Uponor PE-Xa system Extremely flexible and easy to connect



## Combining experience and competence

Entirely designed to make the installation work as easy as possible, the flexible Uponor PE-Xa system is the ideal solution for installation tasks in the field of potable water and heating installation systems.

Uponor's PE-Xa system features PE-Xa pipes in coils or straight lengths, pipes in conduits, fittings made of PPSU, thread fittings made of brass, manifolds and an extensive range of accessories.

Durable material which is not affected by high flow velocities or low pH-valued water

#### Flexibility and resistance

- Perfect for modern building designs such as shear-walls
- > No corrosion or sediment build-up
- Good resistance to chemical-dissolving agents
- Low pipe roughness meaning less friction and pressure loss
- Shock-absorbing reducing water hammer by 30%
- Durable material which is not affected by high flow velocities or low pHvalued water
- Largely resistant to stress crack formation
- Resists condensation on cold-water lines
- > Life expectancy well over 50 years\*
- Available in coils for easy transportation and handling or straight lengths in dimensions up to 110 mm, optionally in PN6 or PN10
- Also available as pipe in conduit and insulated version

# > Uponor Aqua Pipe Long term durable performance



#### **Uponor Aqua Pipe - Certified quality**

Uponor Aqua Pipe, demonstrate its quality for safe and long term durable performances. and proven responsibility for maintain the tap water quality in independent test performed by RI.SE, Research Institutes of Sweden on the basis of the ISO standards and state of the art test methods.

The cross-linked polyethylene pipe (PE-Xa) Uponor Aqua, produced with a minimum of 70% cross-linking, in accordance with the DIN 16892/93 and EN standards ISO 15875 is the ideal solution for drinking water installation with flexible pipes. Available in dimensions from 16 to 110 mm, as coils or straight bar with possibility to choose between PN6 and PN10 pressure rating.

## Highest tap water quality and hygiene

- > Ideal for drinking water
- > Long term performance
- Compatible with Uponor Q&E joint technique



Test conducted by **RI.SE** in January – March 2018

# Uponor Radi Pipe Connecting radiators efficently



#### **Flexibility in heating connections**

For the connection of heating and cooling elements such as radiators or water based fan-coils Uponor Radi pipe is the perfect selection. The oxygen barrier fulfills the requirements for oxygen diffusion resistance as per DIN 4726 and the system flexibility allowed an easy and efficient installation both in new building and in renovation. Uponor Radi pipe is complemented by all needed accessories for radiators and cooling elements connection e.g. as tee or manifold installation.

Available in dimensions from 16 to 110 mm, as coils or straight bar with possibility to choose between PN6 and PN10 pressure rating.

#### One for every method

Uponor flexible plumbing systems can be installed using conventional T-fitting, serial- or manifold installation method. No matter the installation method, with our extensive range of manifolds and other accessories, Uponor always provides you the best solutions to save on installation time and costs.

#### **Efficient installations**

- > Ideal for heating connections
- > Easy and fast installation
- > Compatible with Uponor Q&E joint technique

# > Uponor Combi Pipe Simplified installations with only one pipe



#### A single pipe for every application

Uponor Combi Pipe is the perfect solution to optimize time and cost on the building side as it can be used both for drinking water delivery and for the connection of heating or cooling elements such as radiators or water-based fancoils. The pipe is thanks to the innovative heat treatment in production certified for drinking water application and the oxygen barrier fulfills the requirements for oxygen diffusion resistance needed for heating and cooling systems.

The cross-linked polyethylene pipes (PE-Xa) Uponor Combi pipe is available in coils and straight lengths, as naked and insulated version and in a protective tube, to always offer the perfect fit to the installation needs.

### **Simple installations**

- Designed for heating and drinking water installations
- > Available as coils, bars and pipe-in-pipe
- > Compatible with Uponor Q&E joint technique



#### **Uponor U-tap**

connections for inwall mixer and cisterns



#### **PEX Clamp**

connection WIPEX™−for dimensions up to 110 mm

# > Uponor PEX Pipe Blue The world's first bio-based PEX pipes\*

\* with ISCC certification, based on the mass balance approach



### New standard in the transition to renewable raw materials

With PEX Pipes Blue, Uponor sets a new standard in the transition to renewable raw materials. PEX Pipes Blue are the world's first bio-based PEX pipes\* on the market. The new pipes feature a reduced carbon footprint of up to 90% compared to fossil-based PEX pipes.

The new PEX Pipes Blue's significantly low carbon footprint is based on Environmental Product Declaration (EPD) calculations according to the standards EN15804+A1, CML/ISO21930. The EPD comprehensively evaluates a product's environmental impact along its entire life cycle.

We offer complete value chain transparency through full ISCC (International Sustainability & Carbon Certification) certification and the supply of renewable raw materials is based on the so-called mass balance approach. This means that for every tonne of ISCC certified renewable raw materials used in production, a corresponding quantity of PEX pipes can be designated as ISCC certified. The use of ISCC certified bio-based material contributes to replacing fossil resources with renewable raw materials.

#### 90% reduced CO<sub>2</sub> footprint

- Reduced CO<sub>2</sub> footprint of up to 90% compared to fossil-based PEX pipes \*\*
- Same outstanding product quality, features and performance as our conventional PEX pipes
- Full compatibility with current Uponor fittings, accessories and tools
- Complete value chain transparency through full ISCC certification (International Sustainability and Carbon Certification)



### **Uponor** PEX Pipe Blue

\*\* based on Environmental Product Declaration (EPD) calculations according to the standards ENI5804+A1, CML/ISO21930

# Uponor Quick & Easy Connecting pipes within seconds



## Innovative jointing technology for PE-Xa pipes

The Uponor Q&E fitting is a tried-and-tested concept with over 500 million fittings already sold worldwide. The jointing concept relies on the unique elastic features of Uponor PE-Xa pipe to give a joint that is stronger than the pipe itself.

Uponor Q&E cold-expansion fittings make solid, permanent, manufactured connections without the need for torches, glues, solder, flux or gauges. The unique shape memory of Uponor PE-Xa piping forms a tight seal around the fitting creating a strong reliable connection within seconds!

Uponor Q&E fittings are available in a range of high-performance plastic polyphenylsulfone (PPSU) and threaded brass fittings for pipe dimensions up to 75 mm. Uponor PE-Xa pipe can also be used with Uponor's range of compression fittings.

### Reliable connections can be made within seconds, saving time and installation cost

#### Unique Quick & Easy system

- No solder, torches or messy fluxes and solvents required
- No scale or corrosion build up means clear and clean water
- Flexible piping manifold options for optimised material usage and fewer connections reducing potential leak liability, system and maintenance costs
- All installations feature low pipe noise and water hammer reduction
- Uponor Q&E is a watertight jointing system that gets tighter with time minimising the cost of re-work or maintenance
- Unique fitting design provides 30% higher flow rates throughout the system and reduces pressure drop
- > 10 year system warranty
- Plastic material eliminates theft concerns



## Connect in seconds in three simple steps. Fast. Simple. Secure.

#### **Benefits**

- Quick and innovative jointing with minimal effort even in cramped conditions such as niches or shafts, reducing workmanship fault
- 100% permanent and leak-proof joint if properly installed
- Q&E evolution ring with stop edge for accurate positioning on pipe
- Internal jointing ensures joint integrity even in case of external pipe damages on site
- No O-rings or other movable parts, reducing risks of leakages
- Visual connection
- No fire or other hazardous risks since no solder, torches, fluxes or solvents required for installation
- > Possibility of full plastic system
- No pitting, scaling or corrosion ensuring clear, clean and healthy water

#### C ir

Cut the pipe in a straight angle.

2

Expand the pipe end. To ensure a uniform expansion, the expander rotates according to the integrated auto rotate function.



Push the expanded pipe end in quickly until it stops on the fitting nipple. Hold until the pipe has been shrunk. Ready!

### 16 mm

32 mm

#### 240mm







# Uponor Decibel Less water noise, lightweight handling



#### Soil and waste water pipes with excellent sound insulation

Uponor Decibel is a complete soil and waste pipe system with pipes and parts available in dimensions from 50 to 160 mm. Its suitable for new buildings, as well as renovations. Mineral-reinforced polypropylene, a multi-layered structure and a high specific gravity help keep the Decibel system quiet. Decibel is well suited to acoustically demanding buildings.

#### Uponor decibel pipe system

- > Suitable for new buildings and renovations
- > Easy to install without special tools
- Available in dimensions: ø 50, 75, 110 and 160 mm
- Temperature range: 85–100°C
- Compliant will all requirements within European Standard EN 1451

**10 db** The noise of a falling leaf. And Uponor Decibel. They system is designed for max allowed temperatures 85 °C which can temporarily increase up to 100 °C. Max allowed temperatures are continuous 85 °C, temporarily 100 °C. and is resistant to detergents and sewage. The smooth inside resists grooving and minimises the risk of blockage. The system is dimensioned according to and complies with all requirements within European Standard EN 1451. Each pipe is traceable and all parts are individually tested to guarantee a long, maintenance-free life. Impact on the environment is low, and all plastic components are 100% recyclable.

### **Areas of application**

The key to a quiet soil and waste pipe is unhindered flow. Uponor Decibel not only achieves that, but also features a totally new solution with an efficient noise-suppressing intermediate layer consisting of a high-density mineral.

Certain noises are airborne, i.e. they are generated in the pipe and are carried to the outside air. Uponor Decibel's multilayer construction with a mineral intermediate layer dampens vibrations. Other noises are structure-borne, i.e. carried from the pipe into the structure of the building via its fastenings, creating a resonant vibration. One way of avoiding that is to use noise-suppressing fastenings.

Uponor Decibel is the most advanced noisesuppressing indoor soil and waste pipe, created after extensive research and development. It has resulted in excellent performance for acoustic damping, function, installation and environmental protection.



Uponor Decibel is equally suitable for use in new builds as well as in refurbishments.

#### **Tried and tested**

Acoustically tested – the Decibel system has been tested in accordance with the EN 14366 standard. The standard includes laboratory measurements of the noise generated by the sewer system.

Flow rate [I/s]	Sound level L <sub>sc, A</sub> [dB (A)]
0,5	< 10
1,0	< 10
2,0	< 10
4,0	14

Measurement results for the Decibel system in accordance with the EN 14366 standard (Fraunhofer Institute). The test differs significantly from practical installation sites and conditions. However, standardised test conditions enable noise-reducing sewer systems to be compared. When the noise level is below 10 dB (A), the result is marked on the test report as <10 dB (A). Noise levels below 10 dB are undetectable in a normal residential environment.

#### Strong

WHERE HAVE AND LINES ON & A . . . .

impact-resistant external layer made of PP

#### **Rigid mid-layer** with effective noisereduction made of MD-PP

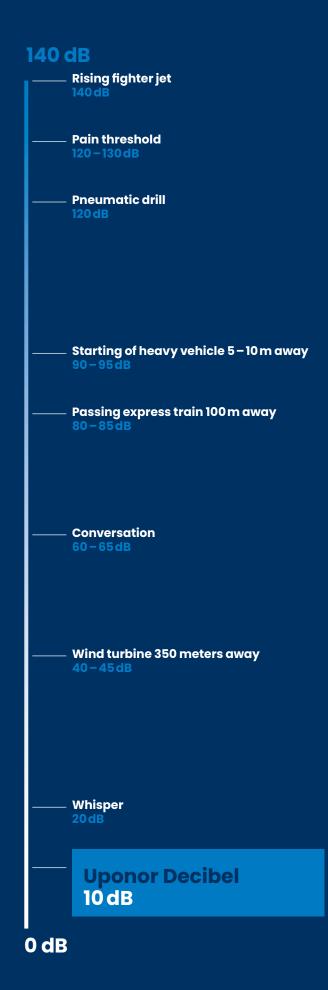
#### Smooth

maintenance-free internal surface made of PP, white internal surface facilitates imaging

Uponor Decibel is light and easily workable. Compared with a traditional cast iron sewer system, installation can be up to twice as fast. Pipes can be cut off with a saw or pipe cutter, and sleeve couplings make installation quick and easy, even in tight spaces. No hot work is required for installation, so there is no risk of fire. The Decibel angled ground connector is ready to install, making work faster.

#### **Decibel overview**

Our scale compares Uponor Decibel with other sound sources.







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