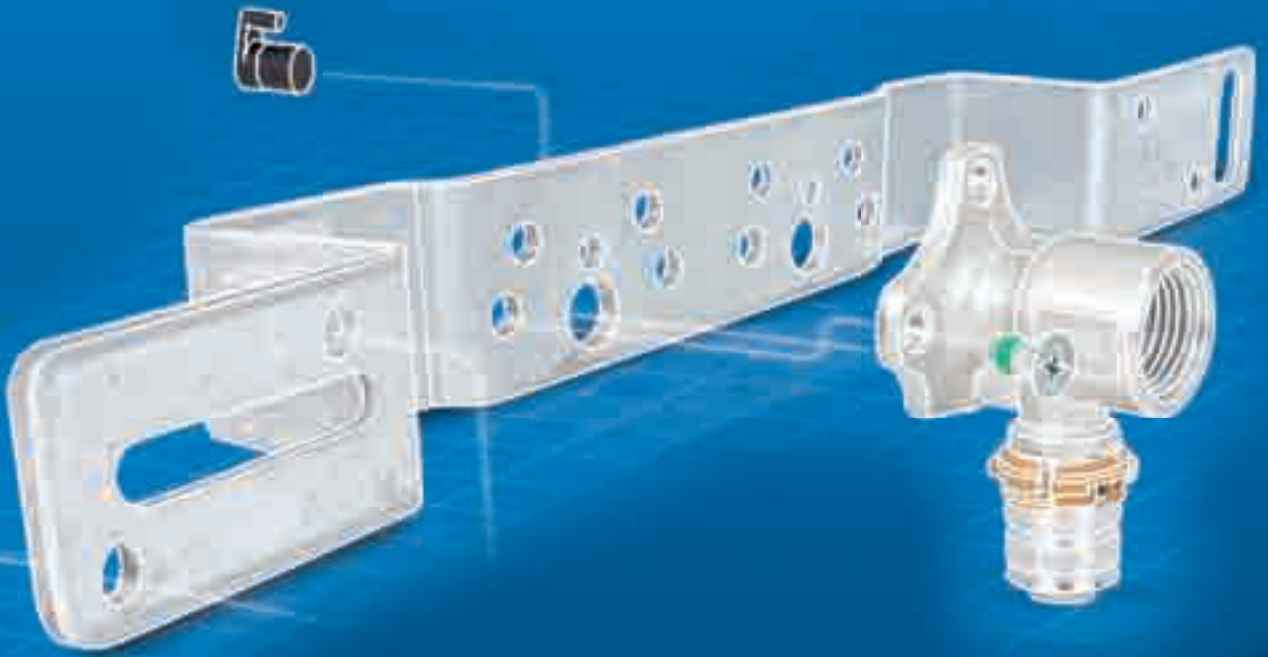


SMART**Ends**

uponor

Advanced Hygienic Plumbing: Serial and Loop Installations



**ELIMINATE
DEAD LEGS**

MLC Press-Fit

Q&E Shrink-Fit™
PLUMBING SYSTEM

www.uponor.co.uk

SMART**Ends**

Advanced hygienic Serial and Loop plumbing from Uponor eliminates Dead Legs



Designed for hygiene

Loop and serial installations are more hygienic than traditional T-piece systems because the risk of standing or stagnant water is significantly minimised. Serial installations have no dead legs, fewer fittings and connections, and the total pipe length is easier to calculate.

A loop installation has the similar advantage of no dead legs, fewer connections and fewer fittings. In addition, there is no variance with the pipe dimensions and it is independent from outlet positioning.

Designed for flexibility

Newly developed, fully revised and with many new features provided - with the new port components and a novel fastening technology installation is quicker, flexible and thus economically efficient.

A wall washer - several mounting options: both surface mount, as well as mounting plates, rails and sets installed. Flexible use: all mounting brackets and plates compatible. Facilitates site work: pre-assembled mounting kits are available in different versions.



- Less Fittings
- Easy Install
- More Mounting Possibilities
- Eliminate Dead Legs
- Improved Flow Rates
- Soundproof Pipe System
- Smart Finish
- Easily Maintained System
- Available for all Uponor Plumbing Systems



1 Fix bracket



2 Position and fix smart end



3 Fix pipe



4 Plug and test



5 Finish wall



6 Add extensions if required



7 Add tap connector

Serial Installation



The serial installation prevents the collection of stagnation water in the feed lines of consumers that are rarely in use, e.g. outdoor taps in a single-family home, or a washing machine connection in the shared laundry of a multi-family property.

In this system, the consumers are connected by means of Uponor U-end elbows that are routed directly to the next consumer, therefore excluding any stagnation of the water in the system if the plan is to install the consumer that is used most frequently, usually the

toilet flushing or basin at the end of the serial installation. This means that the last consumer propagates the exchange of water at the upstream piping and taps.

The Uponor prefab press tap elbows and mounting panels, rails and sets support the flexible and rapid serial installation, while reducing piping material and making it relatively simple to route the piping.

The pressure loss is lower when consumers that demand the highest total flow rate are positioned at the start and not at the end of the piping segment.

Loop Installation



The Uponor U-end elbows are also used to connect the taps to the loop installation and to route the multi layer composite pipes directly to the next tap.

However, the piping is routed back from the last object to the riser pipe. The loop installation system is therefore hygienically impeccable, thanks to the optimized turnover of water in the piping.

In order to achieve a consistent hygienic flow in the loop installation, it is advisable to select a pipe with the same diameter as

far as possible and less than that of the serial installation, as the objects are supplied from both sides.

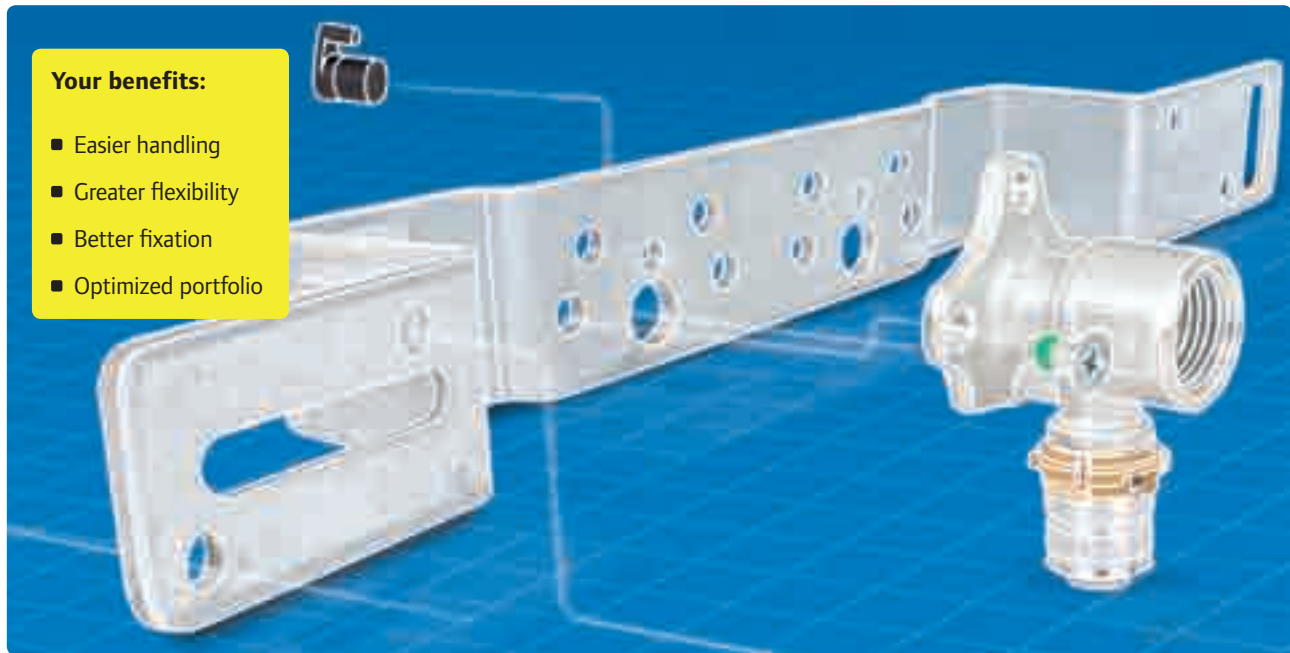
Compared to the serial installation, the lower pressure losses allows you to significantly increase the number of tap outlets per installation system.

However, as this renders the planning and calculation processes slightly more complex, you may rely on the building technology software Uponor HSE that provides you with support when engineering the project.

**ELIMINATE
DEAD LEGS**

SmartEnds Elbow Range

For Uponor Tap Water System



Your benefits:

- Easier handling
- Greater flexibility
- Better fixation
- Optimized portfolio



One hand installation

The NEW fixation design allows fixation of the new Smart End Elbows onto the new mounting plates, angles and tracks much easier using just "one hand." Try it!

Seal cover on the screw tip will hold the screw in place. Preventing it from slipping out during the Smart End Elbow installation process.

More mounting possibilities

Use the NEW design Smart End Elbows for both: on wall direct mounting or mounting onto the new mounting plates, angles and tracks.

Easier positioning

The new guiding pins allow for simple quick positioning. Choose an installation angle and put the Smart End Elbow onto a mounting plate, angle or track.

Less items

Smart End Elbow Range is created to use less items and cover more installation options.

WHOLESALERS:

- Less items in portfolio
- Less lead time

INSTALLERS:

- Less stock in the van
- Less items to carry

Less is more

- Compatible with all new mounting plates, angles and tracks
- Sound insulation
- Longer pins and screws

U-profile tap elbow

New U-profile tap elbow perfectly fits into hygiene oriented and water flow rate optimized installations using different loop installation methods.

- Use the same Smart End Elbow fixation solution
- Improved profile design allowing better flow rate
- Simpler and more flexible installation

Serial Installation

Product selector



Smart End Brackets
1057842 In wall
1057840 On wall
1057844 Universal

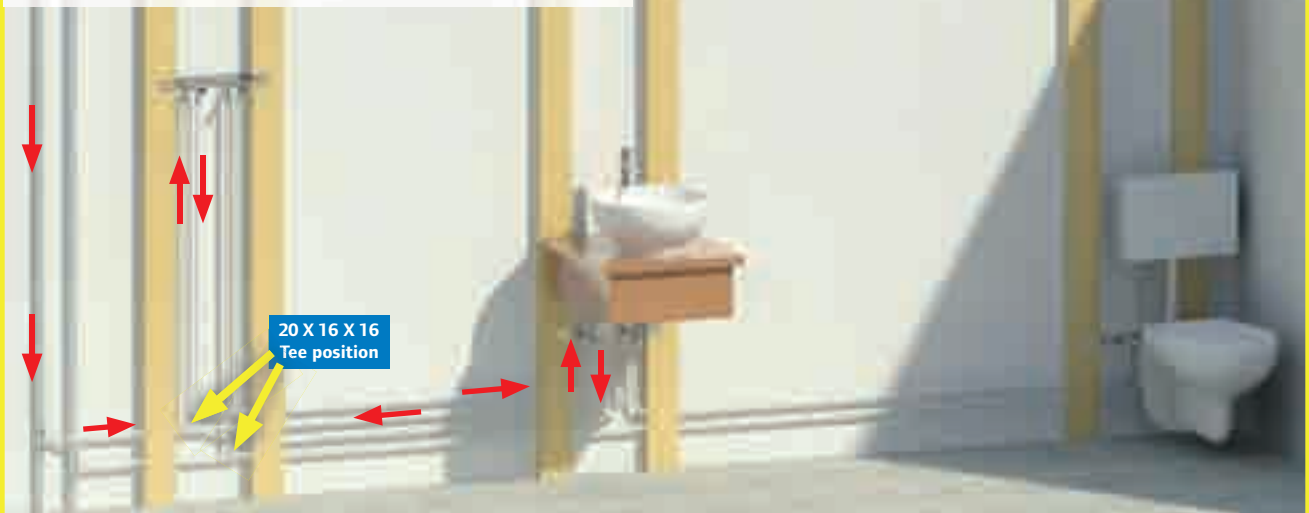
Smart End Shower nipple connectors
1036151 1/2 x 3/4 plain
1036150 1/2 Chrome Cover

Smart End Flexis	Smart End
1072100 1/2 x 1/2 cons	Q&E
	MLC Press
	RTM

Smart End Angle Valve
1072098 10mm outlet
1072098 3/8 outlet
1072099 1/2 outlet
1072099 12mm outlet

Loop Installation

Product selector



Smart End Brackets
1057842 In wall
1057840 On wall
1057844 Universal

Smart End Shower nipple connectors
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Smart End Angle Valve
1072098 10mm outlet
1072098 3/8 outlet
1072099 1/2 outlet
1072099 12mm outlet

Uponor MLC Smart End

Press tap elbow



Made of plated brass, with fixed press sleeve and smart end backplate. XL denotes extended length body. For use with MLC Smart End mounting brackets. See page 35.

Description	Code	Qty
16x $\frac{1}{2}$ "	1015345	10
20x $\frac{1}{2}$ "	1015512	10
20x $\frac{3}{4}$ "	1015515	5
25 $\frac{3}{4}$ "	1048471	5
16x $\frac{1}{2}$ " XL	1046332	10
20x $\frac{1}{2}$ " XL	1046333	10

Press U-tap elbow



For use with MLC Smart End mounting brackets. See page 35.

Description	Code	Qty
16x $\frac{1}{2}$ " FT x16	1015454	5
16x $\frac{1}{2}$ " FT x20 NEW	1060098	5
20x $\frac{1}{2}$ " FT x16 NEW	1060097	5
20x $\frac{1}{2}$ " FT x20 NEW	1060096	5

Press U-tap elbow mixer **NEW**



For use with MLC Smart End mounting brackets. See page 35. Use with in wall mixers.

Description	Code	Qty
$\frac{1}{2}$ " MTx16x16	1060105	5
$\frac{3}{4}$ " MTx20x20	1060108	5

RTM U-Tap Female Elbow **NEW**



For use with MLC Smart End mounting brackets. See page 35.

Description	Code	Qty
16mmx $\frac{1}{2}$ " FT	1061621	5
20mmx $\frac{1}{2}$ " FT	1061622	5

RTM U-Tap Male Elbow Mixer **NEW**



For use with MLC Smart End mounting brackets. See page 35.

Description	Code	Qty
16mmx $\frac{1}{2}$ " MT	1062221	5

Uponor MLC Smart End

Q&E Tap elbow **NEW**



For use with MLC Smart End mounting brackets. See page 35.

Description	Code	Qty
16½" FT	1059822	5
20½" FT	1059823	5

Q&E U-tap elbow **NEW**



For use with MLC Smart End mounting brackets. See page 35.

Description	Code	Qty
16½" FTx16	1059820	5
20½" FTx20	1059821	5

Q&E U-tap elbow mixer **NEW**



For use with MLC Smart End mounting brackets. See page 35.

Description	Code	Qty
16½" MTx16	1060344	5

Mounting plate



For use with Smart End wall elbows. Designed for on-wall mounting. Allows tap connections with 75mm or 150mm spacings. Supplied with 2 insert pins and screws per plate.

Description	Code	Qty
75/150mm	1057840	5

Mounting angle



For use with Smart End wall elbows. Designed for in-wall mounting and flush finish. Allows tap connections with 75mm or 150mm spacing. Supplied with 2 inserts pins and screws per angle.

Description	Code	Qty
75/150mm	1057842	5

Mounting track



For use with Smart End wall elbows, on-wall or in-wall construction, with mounting steps every 75mm.

Description	Code	Qty
2000mm	1057844	10

Uponor MLC Smart End Accessories

Flexible hose



Used with isolation angle valve.

Description	Code	Qty
½" FT x ½" FT	1072100	2

Isolation angle valve



Uponor Smart End angled isolation valves complete with isolation. With threaded adaptation on the outlet. Made of chrome.

Description	Code	Qty
½" MT x 10/3/8" MT	1072098	2
½" MT x 12/½" MT	1072099	2

Insert pins and screws for mounting track



For attachment of Smart End wall elbows to mounting plate/angle/track. Set contains 10 insert pins and 10 screws.

Description	Code	Qty
Set contains 10 insert pins and 10 screws	1057847	1

Sound protection set



For sound insulation of a pair of Smart End elbows. Contains shroud, baffle, insert pin and screw.

Description	Code	Qty
Set contains shroud, baffle, insert pin and screw	1057846	1

U-tap elbow sound protection set NEW



For sound insulation of a pair of Smart End elbows. Contains shroud, baffle, insert pin and screw.

Description	Code	Qty
U-tap elbow sound protection	1060367	1

Inlet piece NEW



Use with Smart End in wall mixer connecting nipple.

Description	Code	Qty
½" x ¾ x 75mm	1036151	1

Q&E Shrink-Fit™ PLUMBING SYSTEM

- Pushfit alternative
- Fast and simple to install
- More watertight and durable
- Superior water flow
- Universal and comprehensive
- 3,000 million metres installed worldwide



MLC Press Fit

- Copper replacement
- Fewer connections
- Inherent flexibility
- Formstable
- No hot works
- Designed to deliver fast and clean installations



Codes of Practice

The following Standards apply in the design and installation of plastic pipes for heating and hot/cold water applications

BS EN 12828:2003

Heating systems in buildings. Design for water-based heating systems.

BS EN 12831:2003

Heating systems in buildings. Method of calculation of the design heat load.

BS 6700:2006

Specification for design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages - specification.

Note: BS 6700 is to be withdrawn and replaced by a new British Standard BS EN 806 parts 1-5, which is currently under development, as is BS 8558, which will be a supplement and guide to BS EN 806

BS 5449:1990

(Withdrawn & replaced by BS EN 12828, but included for reference) Specification for forced circulation hot water central heating systems for domestic premises.

BS 5955-8:2001

Plastics pipework (thermoplastics materials).

Specification for the installation of thermoplastics pipes and associated fittings for use in domestic hot and cold services and heating systems in buildings.

BS 8000-15:1990

Workmanship on building sites. Code of practice for hot and cold water services (domestic scale).

PAS 33:1999

Specification for the design, installation and commissioning of gas fired central heating systems in domestic premises.

Water Industry Act 1991

Water Supply (Water Fittings) Regulations 1999.

The Building Regulations 2010

(Including approved documents G and L).

MLC Press-Fit

Q&E Shrink-Fit™
PLUMBING SYSTEM

For more information please visit

www.uponor.co.uk

Uponor Limited

Head Office,
The Pavilion, Blackmoor Lane
Watford,
Hertfordshire, WD18 8GA

T. 01923 927000
E. enquiries.uk@uponor.com
W. www.uponor.co.uk