



PLUMBING SYSTEMS

UPONOR LOGIC VS.
HOMERUN PLUMBING

FREQUENTLY
ASKED QUESTIONS

Uponor Logic vs. Homerun Plumbing FAQs

What is Uponor Logic Plumbing?

Uponor Logic is an organized arrangement of flexible crosslinked polyethylene (PEX-a) tubing, ProPEX® fittings, multi-port tees and out-of-the-wall systems for a plumbing design that minimizes complexity, accelerates water delivery, installs easily and requires little or no maintenance.

What is a typical Uponor Logic configuration?

A typical Uponor Logic configuration involves Uponor AquaPEX® (PEX-a) tubing connected to branch (closed-end) and/or flow-through multi-port tees located near fixture groupings. Individual branches extending from a single multi-port tee provide water to all fixtures in a single grouping.

Does Uponor Logic include homerun configurations?

Uponor Logic can sometimes incorporate homerun systems, but only when it meets the configuration criteria stated above.

Does either a homerun system or a multi-port tee configuration offer any advantage with respect to rapid hot-water delivery?

The time it takes to deliver hot water to a fixture (e.g., faucet, showerhead, etc.) depends on the layout and physical configuration of the plumbing system and the distance (as measured in the length of tube) from the water heater to the fixture. The configuration of the plumbing system (e.g., homerun or multi-port tees) does not necessarily determine the water-delivery time.

What about consecutive or clustered uses of hot water?

Multi-port tees will typically offer significant advantages for clustered or consecutive uses of hot water. Once hot water arrives at a multi-port tee, it is readily available to all fixtures connected to that tee. Essentially, that multi-port tee's fixture grouping is 'charged' with hot water. However, in a homerun configuration, hot water is not necessarily readily available for clustered uses that occur at faucets other than the original (first-use) fixture. Hot water is available only at the central manifold. The system must still deliver hot water all the way from the manifold to the faucets where subsequent clustered uses are taking place.

Is it true that homerun systems sometimes use smaller-diameter tubing than other plumbing layouts?

Several factors dictate tubing size requirements, including fixture flow rates, number of fixtures, water-travel distance, working pressure and code requirements. Depending on these factors, homerun systems can, at times, utilize $\frac{3}{8}$ " diameter tube to convey water from the manifold to the fixtures. However, when considering water velocity, using smaller-diameter tube can pose problems. Water velocity in smaller-diameter tube is higher than in larger-diameter tube, and higher velocity can result in excessive noise and possible erosion of metal components in the plumbing system.

Is it necessary to use fixture stops (shutoff valves) in homerun systems?

Section 2903.9.3 of the International Residential Code (IRC) — the most widely used model building code — requires stops at all fixtures with the exception of showers and bathtubs. Consequently, code may require homerun systems (with shutoff valves already at the manifold) to also have redundant stops at the fixtures. However, even in areas where code does not require stops at the fixtures, there are some practical reasons to incorporate them. Installing a shutoff at a juncture immediately near the fixture (e.g., at the entry to a riser) is often more desirable than a shutoff only at a manifold (which might be a considerable distance away from the fixture). Thus, the perceived benefit of eliminating fixture stops when using homerun systems may actually either not be allowed by code or is not a practical installation practice. Hence, utilizing shutoff valves only at a centralized manifold offers little or no benefit to homeowners.

Do homerun systems have less sensitivity to pressure variations caused by multiple fixtures operating simultaneously (e.g., flushing a toilet while a shower is operating)?

Because all codes now require pressure-balancing shower valves to protect users from hot-water scalding, this eliminates pressure-balancing concerns and should not dictate which type of plumbing configuration to select.

Do homerun systems use more tubing compared to Uponor Logic configurations with multi-port tees?

In most layouts, a homerun system requires more tubing than a multi-port tee (or trunk and branch) configuration. For example, a two-story home featuring an Uponor Logic design with multi-port tees uses 637 feet of tubing while a homerun system uses 1,515 feet of tubing — nearly 2.4 times more tubing. In fact, homerun systems can sometimes require up to 5 times more tubing than a multi-port tee Logic configuration.

Does the high volume of tubing for homerun systems pose any particular problems?

Yes, there are several, including:

- Considerably more labor and time to install homerun systems compared to multi-port tee layouts
- Space issues when accommodating large bundles of tubing at the manifold or in other areas of the building that have large and/or closely spaced fixture groupings
- Problem isolating hot and cold water lines because of the high-tubing density, leading to heat transfer from the hot water lines to the cold water lines
- Difficulty with firestopping the large bundles of tubing that must penetrate a firewall (e.g., for installations where the manifold is located in a garage)

Does a homerun system require fewer connections?

In the two-story home example cited above, the Logic configuration required only 18% more connections than a homerun system.

Homerun systems claim to require fewer fittings behind walls. Is this a benefit?

If a PEX plumbing system utilizes reliable, leak-resistant fittings (such as Uponor's ProPEX expansion method), there should be no concern about placing fittings behind walls, and ProPEX connections are approved for use behind walls.

Does a homerun system cost less to install than an Uponor Logic system with multi-port tees?

It is highly unlikely that a homerun system costs less to install than an Uponor Logic system, primarily due to the cost of the central manifold along with the high volume of tubing required (which affects both installation time and the bill of materials).

Can homerun systems use hot-water recirculation?

Not effectively. In a homerun configuration, recirculation can usually only be done between the central manifold and the water heater, but not between the fixtures and the water heater (because it would be necessary to recirculate from each fixture).

Do multi-port tees provide benefits in recirculation systems?

Yes. Because flow-through multi-port tees are available, it is easy to install recirculation 'loops' that return water to the heater. In addition, the D'MAND® Hot Water Delivery System, offered by Uponor, is the only type of recirculation system allowed by most Green Building programs.

Do Green Building programs provide additional incentives to install homerun systems?

We are not aware of any Green Building programs that provide additional incentives to install homerun systems.

Is Uponor Logic with multi-port tees a proven concept?

Millions of Uponor multi-port tees have been sold in North America for use in Logic plumbing installations, proving the viability of the product as well as the design concept.

Does Uponor offer a full line of multi-port tees to plumb a wide variety of home plans?

Uponor currently offers about 20 different multi-port tees, including branch (closed-end) and flow-through configurations with ¾" or 1" inlets and outlets.

Is the plastic material used to manufacture multi-port tees a reliable and proven product?

Absolutely. Since 1998, millions of ProPEX fittings made from Uponor's engineered plastic (EP) — the same reliable, durable plastic used in multi-port tees, as well as other demanding applications such as medical appliance and aerospace — are in service in plumbing and heating systems around the world.

Are Uponor multi-port tees available with connection methods other than ProPEX?

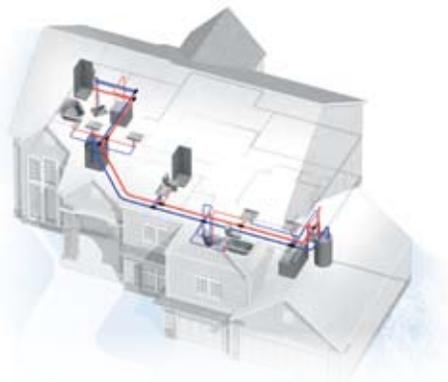
No. Uponor multi-port tees are only available with ProPEX, which is considered the most reliable connection method in the PEX industry.

What is the warranty for Uponor's multi-port tees?

When used with Uponor AquaPEX (PEX-a) tubing and installed by an Uponor-trained professional, the EP multi-port tees are backed by a 25-year limited warranty.

What company has the highest North American market share among PEX plumbing system suppliers?

Uponor holds the highest market share for PEX plumbing in North America.



Uponor, Inc.
5925 148th Street West
Apple Valley, MN 55124 USA
Tel: (800) 321-4739
Fax: (952) 891-2008
Web: www.uponor-usa.com

Uponor Ltd.
2000 Argentia Rd., Plaza 1, Ste. 200
Mississauga, ON L5N 1W1 CANADA
Tel: (888) 994-7726
Fax: (800) 638-9517
Web: www.uponor.ca

uponor