

References

The Mercian Broad

Uponor involvement

- Based on previous successful projects, Moda Living and M&E contractor Imtech specified a number of Uponor's solutions to ensure a high quality water supply at Birmingham's new, 42-storey The Mercian residential tower.
- The bathrooms within the development were all constructed using offsite methods. Using Uponor's products within the bathrooms and in the building's corridors made it quick and easy to connect the bathroom pods once they'd been craned into position.
- Uponor's multilayer composite (MLC) pipes were chosen as the pipe's design would protect the water's hygienic integrity by stopping oxygen getting into the system and by making sure that the water would flow at a fast, unimpeded rate.

Uponor ensures hygienic water for Birmingham's tallest residential tower

Uponor has supplied high-performance plumbing solutions for The Mercian.
Located on Birmingham's busiest street, Broad Street, this building will become the tallest residential tower in the city when it opens in 2022.
Owned and operated by Moda Living, The Mercian has been designed to offer a high-end lifestyle for every resident. This is illustrated by the fact that the 42-storey site includes a 200-metre rooftop running track (one of the first in the UK's housing market) as well as shared lounges, health and wellness zones, virtual sports simulators and a dining club featuring a demonstration kitchen.
The plumbing solutions needed to match the luxury high-rise's commitment to quality and ensure that a reliable supply of hygienic water would be provided to each of the 481 for-rent apartments at all times.

Project Facts:

Location	Completion	
Birmingham, United Kingdom	2021	
Vrsta objekta	Product systems	Number of floors
Multifamily homes	Lokalna distribucija toplote, Sistem višeslojnih cevi	42
Project Type		
Renovation		

Partners

M&E contractor:
Imtech
Client:
Moda Living
Architect:
Glen Howells Architects

Uponor ensures hygienic water for Birmingham’s tallest residential tower

Design, specification and construction
The Mercian has been designed using offsite construction methods, which includes manufacturing each apartment’s bathroom as a pod that is transported to site and then craned into position. Within each bathroom pod, all of the pipework was Uponor’s pre-insulated, multi-layer composite (MLC) system. This was chosen thanks to the design, installation and water quality advantages it would provide.
Both Moda Living and the M&E contractor, Imtech, were aware of the benefits of using Uponor’s MLC pipes thanks to its successful use at a number of previous projects. This past experience was an important factor in the specification process, as it meant that Moda Living could rest assured that the water network would not cause any issues once the site was operational.
Initially, the project design considered using MLC pipes in combination with PE-X pipes, however, the familiarity with MLC as a material combined with the fact that it provides extra protection via an oxidation barrier meant that MLC was exclusively used. The oxidation barrier prevents oxygen from entering the system, which can adversely affect the water. Pre-insulated MLC was also chosen over un-insulated alternatives due to the time that would be saved during installation.
MLC pipes consist of a core of aluminium, layered inside and out with polyethylene, which means they have a smooth internal surface. This improves flow rates and reduces friction losses to maintain pressure and ensure a good flow of water at the outlet.
In total, The Mercian will utilise more than 40,000m2 of Uponor’s MLC pipes in 16mm and 20mm sizes. The two sizes were used to make sure there was a consistent flow rate across the site, as smaller appliances such as taps require the 16mm pipes and larger appliances such as showers require the 20mm pipes.
Uponor’s innovative S-Press PLUS connections were also used to increase water flow onsite. These high-performance press fittings have an increased bore size compared to traditional connections which means that they don’t restrict the pipe size and create pinch points at the joints.
As the project was engineered offsite, Uponor’s design services were required to help ensure that the bathroom pods would

connect to the building without any issues. Both the pod and heat interface unit located above every apartment in the corridor used Uponor's products.
Using Uponor solutions for every pipe required for the apartments created a continuity of supply and avoided the potential design clashes that can occur when switching between materials. Having only a single source for all the apartment's pipes also streamlined the process for the developer, as there was only one supplier they needed to communicate with.
Onsite, Uponor provided training to the installation team so that they knew exactly how to work with the MLC pipes. This training was certificated, to prove that the installers were up to the standard required to deliver a high-quality project. In addition, Uponor's expert team was on-hand throughout the project to offer advice and attend site when necessary as well as quickly react to any changes in supply requirements.

Benefits

- The design expertise Uponor provided ensured that the plumbing installed during the offsite construction of the bathroom pods would work seamlessly with the rest of the building's pipework.
- Uponor's MLC pipes maintain a hygienic, high-quality water supply thanks to the oxidation barrier which prevents oxygen entering the system and the smooth internal surface that improves the flow of water.

> We used Uponor MLCP on this project as we have found it to be ideal for installation in sealed ceiling and wall voids where the omission of joints has been a primary concern. It is a sturdy product but versatile enough to bend in situ without deforming and as such has aided in managing the time periods for first fix installation. Uponor were quick to provide any technical assistance needed throughout the project.
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> Uponor has supplied high-performance plumbing solutions for The Mercian.Paul Farmer, Mechanical Engineer, Imtech

Telefon +381641852299
E-mail
podrskakupcima.bfs@georgfischer.com
W www.uponor.com