

Houlton, Civic Living



Property type:

Modular built new build development

Requirement:

A low carbon heating and hot water solution for off-site manufacturing project featuring 38 homes

Technology used:

38 x aroTHERM plus air source heat pump
38 x uniTOWER
38 x sensoCOMFORT RF

Installer: Submodular

Client: TopHat

Land developer: Urban Civic

The Challenge

As the drive to provide low carbon housing intensifies, housebuilders are not only seeking sustainable products, but increasingly, focus is turning towards adopting new and more sustainable construction practices too. One such project which has combined low carbon heating through the installation of air source heat pumps and off-site modular construction, is Civic Living at Houlton that has been delivered by modular housing specialist, TopHat for Urban&Civic, the UK's leading master developer. As Master Developer, Urban & Civic take responsibility for obtaining planning and delivering the sustainable green, grey and community infrastructure to establish high quality places within which they market fully serviced land parcels to housebuilders. With a clear focus on sustainability, TopHat needed a heating solution that would mirror the sustainable objectives of the project, providing future residents with a solution that would exceed the current environmental legislation and performance requirements, but would also be compliant with 2030 Net Zero targets.

When it came to the specification of the heating system, TopHat enlisted the support of Vaillant early on in the project's concept stages, which meant Vaillant's team were able to provide the project's developers with presales consultancy support. From the outset, Vaillant's design services team was clear on the designs of the properties and could deliver a solution that not only complemented the aesthetics of the development but also contributed to the overall goal of sustainable living. With this in mind, Vaillant's award-winning aroTHERM plus heat pump and uniTOWER hot water cylinder unit, were specified to meet the heating and hot water demands for each of the 38 properties.

Project background

- Aim of delivering sustainable homes which exceed the current building standards, future proofing the properties for next generation

The energy concept

- aroTHERM plus with a natural refrigerant which has a global warming potential of just 3
- Quiet operation with sound power as low as 54dB
- Compact and easy installation of indoor components via the uniTOWER solution
- sensoCOMFORT control system with touchscreen interface for easy and efficient management of the heating system



Comfort for your home

The Solution

As the project was modular, some of the construction of the homes was carried out at TopHat's manufacturing site in Derby. This meant that at the design and planning stages, utmost precision was needed to ensure everything was manufactured to the exact specification needed and delivered to site to ensure construction schedules were met.

Vaillant's design services team was on hand to support the project's developers from the onset. Using the individual housing designs of each housing type on site, Vaillant provided in-depth heat loss calculations which were used to provide fully indemnified heating designs.

Another consideration to overcome was the location of the heat pump itself, which needed to carefully balance the clearances required as part of the current building regulations, but also make sure the heat pump was located in a position that was aesthetically pleasing. To overcome this challenge, TopHat specified the installation of a pre-insulated underground duct which offered increased flexibility in the positioning of the aroTHERM plus. This meant each unit was able to be positioned in the rear of the property, minimising its impact on useable garden space wherever possible.



Following the specification of the heating system, Vaillant's team worked closely alongside the project's installer, Sub Modular Ltd, to provide support throughout the project, including in-depth product training at Vaillant's Centre of Excellence in Belper.

Followed up with onsite visits to guide Sub Modular Ltd through the installation and commissioning of the first of the heating systems.

The outcome

As a result of specifying and installing the aroTHERM plus and uniTOWER heating solution, future residents can rest assured knowing that they are getting not only an eco-friendly and efficient heating system but a home that is built for the future now.

Thanks to the success of this project, Vaillant's partnership with TopHat has continued with a number of new projects starting across the country.



Why Vaillant?

Adam Tilford, Sustainability Manager at TopHat comments: "When it comes to selecting a partner to work with, first and foremost we're looking for companies that have products that fit with our own. The focus for this project was to deliver residents a sustainable product and from the outset we knew we wanted to use the most efficient heating system to support this vision. The Vaillant aroTHERM plus provided the perfect solution. Not only is it playing a significant part in ensuring this project is meeting current building regulations but has meant we've been able to reduce carbon emissions from the properties on site by more than 35-40% than current building regulations require us to."



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