

Successful trial of air source heat pumps leads to Gleeson Homes specifying Panasonic Aquarea for its affordable housing developments





South Yorkshire. United Kingdom

2022

Outdoor units: Aquarea 5kW A2W Heat Pump units

Indoor units:

Control:

Gleeson Homes

Gleeson Homes has recently completed a heat pump trial for its housing projects in South Yorkshire, which hold affordability for buyers at its core. The developer was looking for a sustainable alternative to replace gas boilers in its new housing developments. Panasonic provided 5kW Aquarea Mono-bloc air to water heat pumps to the trial homes in three locations.

Challenge

At the Gleeson Homes development in Poolsbrook, Chesterfield a 3-bedroom detached home 'The Kildare' was chosen to be fitted with a 5kW Panasonic Aquarea monobloc ASHP and have its performance benchmarked against an identical, but gas boiler heated home, located on another nearby Gleeson development. A trial that is also being carried out at two other Gleeson developments in England.

Solutions & Tech Applied

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On final examination of the trial property fitted with the Aquarea Mono-bloc, the project provided

great insight for the Gleeson Homes team regarding the ease of installation and energy efficiency benefits of using Panasonic. Gleeson Homes has now planned a controlled roll-out of the Panasonic Aquarea heat pump within 1000's of its properties, of which 256 homes in South Lincolnshire have already commenced construction.

Gleeson Homes aims to build affordable homes to appeal to its customer base: 80% of whom are first-time buyers, with an average age of 28. Additionally, the developer aims to reach sustainability targets beyond the requirements of the new SAP10 regulations, looking forward to the 2025 Future Homes Standards. Therefore, the trial required a solution to deliver affordable and effective heating and hot water.

Adam Butterfield, Design Manager for Gleeson Homes explained: "The Panasonic units have been found to offer unmatched energy efficiencies, with the heat pumps listed as having an average of 300%, whereas a gas boiler only offers about 92-94%. It came down to looking beyond upfront costs and considering quality, ease of installation and critically the seasonal coefficient of performance (SCOP) figures for the units. Following independent testing by one of the UK's leading energy consultants, the Panasonic Aquarea unit achieved industry-leading efficiencies in the UK climate. We also used this trial at our Erin Court development in Chesterfield to learn about the installation process and to ensure we have the right skilled subcontractors on board, so that, as air source heat pumps become the standard solution, we can hit the ground running and smash our sustainability goals.

The 5kW Aquarea Mono-Bloc heat pump is specifically designed for smaller homes which have high performance requirements. It is simple to install not only for new build, but also retrofit projects, as it can be connected to underfloor heating, radiators, or fan units. The heat pump has an A+++ energy class rating (average climate at 35°C), and works in temperatures as low as -20 °C. This minimises carbon emissions whilst maintaining occupant comfort.

Switching from a familiar technology such as gas boilers to renewable alternatives can be challenging. Simon Brown, Business Development Manager for Panasonic says, "We know adopting to change can be difficult, so we have worked hard to make the Aquarea installation process very simple, to make the transition from gas boilers to heat-pump systems as easy as possible for both the installer and homeowner. The intuitive simple smart cloud controls mean homeowners and installers can easily get to grips with this new technology, via an app on their mobile phone or laptop. The system offers remote programming, energy consumption monitoring, and notifies in the event of an anomaly. Additionally, installers can remotely maintain and monitor the heat pump via the Panasonic Service Cloud app."

Adam concluded: "Feedback from the team has been overwhelmingly positive, we are excited for our first customers to move into the ASHP homes next year. It was found that any caution about introducing new technology into the home was outweighed by the customers mindfulness about their environmental impact and the benefits of the Panasonic heat-pump provided."

For more information on Panasonic air source heat pumps, please visit www.aircon.panasonic.eu/GB_en. To learn more about Gleeson Homes please visit <https://gleesonhomes.co.uk/>.

[For video of the above project.](#)

Capacity

5kW