

Why whole-house HVAC makes sense for package builds

Collaboration is key to achieving a comfortable, healthy home that performs long-term – and the package home route can deliver just that, says Richard Soper from The Unico System

Right: The Unico System's outlets are exceptionally discreet – barely visible here at the top of the wall above the stairwell – freeing up space to achieve your interior design goals, such as prioritising natural light and views



Imagine being able to commission a new home with complete confidence that it will deliver excellent energy performance, low running costs and healthy, well-ventilated living spaces. I'll let you in on a secret: you don't have to imagine. By putting the right partners in place from the outset, creating a high-performing home that's genuinely comfortable to live in is already eminently achievable – and it doesn't need to be complex.

As you'll see throughout this year's Package Home Bible, many of the leading suppliers are now placing far greater emphasis on the finished performance of the homes they deliver, not just the structure itself. They're well positioned to help ensure your project meets expectations for comfort, efficiency and indoor air quality. After all, the first step is always getting the fabric right – good levels of insulation, airtightness and build quality – which is exactly what package home providers specialise in.

What we're increasingly seeing is a far more holistic approach, where the package supplier looks to extend its service beyond the house kit alone. By working alongside experienced partners, they can help integrate the systems that turn a well-built structure into a truly high-performance home. Heating, ventilation and cooling (HVAC) are central to that equation – and when they're planned as part of the overall design, the benefits are significant.

WHY HVAC DESERVES A SEAT AT THE TABLE

A quality whole-house HVAC system can take care of heating, ventilation and cooling in a single, coordinated solution. This approach has been commonplace in the US for decades, but it's increasingly relevant for UK homes, too – particularly when it's planned in from the start as a core element of a package build.

Rather than treating heating, ventilation and cooling as separate add-ons, HVAC looks at the home as a complete environment. Designed correctly, it delivers consistent temperatures, excellent air quality and year-round comfort, all while operating quietly and efficiently. Crucially, it also supports the kind of airtight, well-insulated construction that package homes excel at delivering – plus a properly planned system will be quick and efficient to install, too.

WHAT IS HVAC & WHAT DOES IT DO DIFFERENTLY?

At its best, HVAC provides fully integrated control of your home's internal climate. It regulates temperature, manages humidity and delivers fresh, filtered air throughout the house. Quality systems run super-quietly in the background, without the need for radiators, underfloor heating or bulky wall-mounted equipment. This frees up wall space, simplifies interiors and gives homeowners far greater design freedom.

Centralised solutions such as The Unico System are designed to deliver this level of performance discreetly. Fresh air is filtered to remove allergens, pollutants and airborne toxins, while humidity is carefully managed to create a healthier indoor environment. The system can also be integrated with other technologies, such as heat pumps, to provide a complete heating and hot water solution.

Importantly, modern HVAC looks nothing like the wall-mounted air-conditioning units many people still associate with the term. Systems such as Unico use small, unobtrusive outlets that can be positioned in ceilings, floors or high on walls, blending seamlessly into the architecture. The result is precise climate control without compromising aesthetics.

CONSISTENCY: THE KEY TO COMFORT & EFFICIENCY

Achieving a comfortable, even internal temperature depends on how air is distributed around the home. This is where whole-house HVAC excels. As a small-duct, high-velocity solution, The Unico System introduces gentle jets of pre-warmed or pre-cooled air that mix effectively with room air. This creates an even temperature throughout the space, eliminating hot and cold spots and making heating and cooling cycles more predictable and efficient. In practical terms, that means lower energy use, reduced running costs and a consistently comfortable home, whatever the season.

Temperature consistency also plays an important role in indoor air quality. Fluctuations in temperature can lead to spikes in humidity, increasing the risk of condensation and mould growth – a particular concern in modern airtight homes. By maintaining stable conditions, HVAC helps protect both occupant health and the building fabric itself.

VENTILATION, HEALTH & INDOOR AIR QUALITY

Getting the ventilation strategy right is more important than ever, given today's demanding energy standards. Airtight construction reduces uncontrolled heat loss, but also means fresh air must be supplied deliberately and consistently.

This is particularly relevant if anyone in the household has asthma, allergies or a compromised immune system. As a central air-handling solution, Unico is founded on the principle of delivering excellent indoor air quality. Advanced filtration removes fine particulates and allergens, while controlled ventilation ensures a steady supply of fresh air without draughts to support health and comfort.

Humidity control is another key advantage. Thanks to its unique cooling coil design, The Unico System can remove

up to 30% more airborne moisture than conventional HVAC. This reduces the risk of condensation and mould growth, and supports long-term durability of the building fabric – a benefit that's often overlooked.



Left: The air handling unit and central duct for The Unico System can be located in a loft space, mechanical room or a void. Small, high-velocity ducts spur off this to deliver controlled heating and cooling to each room

EARLY INTEGRATION IS CRUCIAL

While systems like Unico can be installed in both new builds and certain retrofit projects, the best results are always achieved when HVAC is considered early. Package homes, in particular, offer a unique opportunity to integrate these systems seamlessly from the outset.

By developing the HVAC design alongside the technical engineering of the house kit, clear routes can be allocated for ductwork, fabric performance optimised and costly redesigns avoided. A collaborative approach between the package provider and HVAC specialists ensures that every detail is resolved before construction begins – from outlet positioning and plant space to acoustic performance (a quality HVAC install should be whisper quiet) and maintenance access.

Package homes are about certainty, efficiency and performance – and whole-house HVAC aligns perfectly with those goals. When integrated early, it supports low-energy living, healthier indoor environments and a level of comfort that's difficult to achieve through piecemeal solutions. A coordinated approach will enable you to realise the full benefit of both your house kit and your HVAC system, working together as part of a single, coherent design that continues to perform beautifully for decades to come.

Below left: The Unico System was selected to design and install a high-performance, year-round HVAC solution for Ultrapanel's precision-engineered, zero-bills ready demonstration house. The project showcases how homes of the future could be built faster, smarter and with minimal environmental impact

FIND OUT MORE



RICHARD SOPER is UK managing director at The Unico System. He has over five decades' experience in the heating industry and was awarded a CBE in 2013 for services to the heating and renewable technologies industries. The Unico System provides the perfect home climate control from a small-duct, high-velocity renewable HVAC solution that's efficient and discreet. For advice on your project visit uk.unicosystem.com/build-it or call **01384 422094** to speak with the team's technical experts.