

ADVECO NEWSLETTER

July 2023

Welcome to Adveco's July newsletter,

We start July with the exciting announcement of the arrival of the next generation of low-carbon FUSION electric water heating systems. Completely revised and updated, FUSION now comes in four distinct models with 48 pre-sized variants to address the hot water demands of a wide range of commercial building projects.

We also highlight recent research on the commercial building space that flags up concerns over lack of plans to retrofit UK building stock in advance of the 2050 net zero deadline.

We wrap things up with some thoughts on when and how to adopt heat pumps for your hot water systems and the options for selecting hot water cylinders that sit at the heart of any renewable system...



FUSION

Next Generation Low-Carbon Water Heating

Adveco's FUSION packaged water heating system makes use of familiar technology that is relatively simple and quick to install, and easy to maintain and enables it to be combined and operated in the most efficient way possible. As an all-electric system, FUSION has been conceived as a more sustainable approach to securing hot water whilst addressing familiar issues of water quality, cost of acquisition, cost of operation and system longevity.

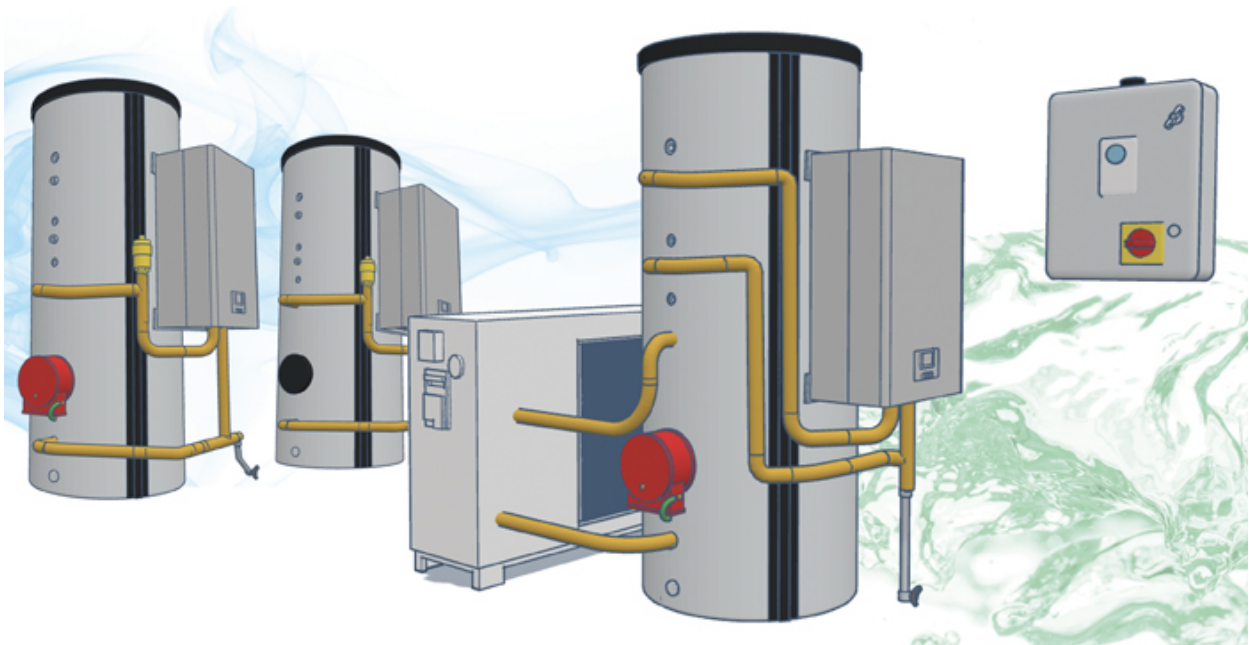
FUSION-E is a tough, high-efficiency electric water heater. FUSION-T extends the system with the addition of a system-integrated heat pump and advanced controls. Both ranges can be further expanded with the addition of an electric immersion for greater resilience (FUSION-Eplus and FUSION-Tplus).



FUSION packaged systems start with all new specially designed single- (ATSI) or twin-coil (ATST) corrosion-resistant stainless steel high-pressure indirect cylinders. Offering capacities from 200 to 500 litres, the cylinders feature dedicated mounting points for Adveco's ARDENT electric boiler. By mounting the electric boiler directly to the cylinder FUSION is a more compact, space-saving option. Supplied with pre-built pipework the latest generation of FUSION is now faster and easier to install.

The electric boiler, with multiple immersions inside its sealed storage tank, provides automatically balanced usage to prolong system life and immediate resilience for the boiler. Used in a sealed 'primary' loop, the electric boiler heats the same water continuously effectively eliminating limescale issues typically found in electric systems used in hard water areas.

For the FUSION-T renewable variants, the monobloc air-to-water FPi-32 heat pump (ASHP) is used as a source for system preheat. Contribution from the ASHP is maximised via the bespoke FUSION Control Box. These controls smartly balance the two heat sources, enabling the water in the cylinder to be heated in the most efficient way. As the electric boiler is not required to work as hard to raise flow temperatures to the 65°C demanded by commercial applications. Electrical demand on the boiler is reduced by as much as 30%, delivering operational savings and reducing carbon emissions by up to 71%. This variant is perfect for organisations seeking to invest in a water heating application as part of a decarbonisation strategy without losing sight of higher operational costs associated with all-electric systems compared to equivalent gas-fired water heating.



Where hot water demands become a business-critical service, FUSION packaged systems will also support the addition of an Advenco backup immersion providing additional resilience. Fitted into the front-facing clean-out access, the immersion ensures there is no single point of failure for assured service provision. When only used as an emergency heating source, or during periods of unplanned excess demand, the inclusion of an electric immersion can be extremely advantageous. For FUSION systems incorporating the additional backup immersion (FUSION FPH-Eplus & FPH-Tplus) controls are further extended to incorporate remote alerts to advise building managers of a fault scenario and automated engagement of the immersion back-up to guarantee business-critical hot water supply.

FUSION offers specifiers a simple range of options to address the most complicated projects. Pre-sized for easy selection but offering four models and 48 variants FUSION should be able to meet most applications without specifiers needing to take the more expensive bespoke route. FUSION has is broadly applicable to several vertical markets and buildings, both new build and retrofit.

With systems up to 34 kW, the next generation of FUSION offers greater versatility for meeting domestic hot water demands across a range commercial projects with small to medium/large basin led, daily demands for domestic hot water (DHW), typically seen in restaurants, schools and care homes. For taller buildings with higher pressure demands, such as boutique hotels and student residences, FUSION caters for a wide range of building types and applications. The built-in resilience, capability to work with both soft and hard water conditions and the addition of backup immersion for assured operation also makes the system perfect for organisations with 24hr /365 operations that demand hot water for regular operations. This is especially true of the hotel, catering, licensing sectors.

For commercial organisations seeking a hot water system for new buildings faced with the regulatory changes on new gas connections or planning to move from existing gas-fired systems to electrical alternatives, FUSION provides an impressive range of choices. Whether cost, sustainability or business security are the driving factors for specification, FUSION offers a comprehensive response that can be quickly matched to the requirements of your project.

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[READ THE BROCHURE](#)

Are We Heading For A Retrofit Crisis?



A new report warns of a building retrofit crisis in the UK as non-domestic buildings appear to be failing to address necessary alterations to achieve net zero. Construction consultancy Ridge and Partners LLP carried out [independent research](#) questioning 101 property and facilities heads from leading UK organisations. This is a small, but meaningful number of conversations, given that fewer than one in four of the public or private sector organisations questioned were attempting to make their non-domestic premises more environmentally sustainable.

Of greater concern was the finding that just one in ten is assigning any kind of budget to retrofit buildings to reduce their environmental impact suggesting a retrofit crisis is indeed on the cards. The vast majority (86%) of organisations underestimated the need to retrofit buildings to make them more energy efficient. Over a third mistakenly believe less than 39% of the UK's current building stock will still be in use by 2050. Whereas in reality, it will be nearer twice this level at 70%.

The research is suggestive, pointing to 'vast swathes' of UK organisations sleepwalking towards a building crisis. The consultancy believes that unless major changes are introduced the UK will have failed to reach the government's net zero target in 2050 due to a large majority of businesses occupying old, inefficient buildings that have failed to receive necessary retrofitting.

According to the report, lack of government action is seen as a key problem, a belief that concurs with our experiences across the country as a key provider of sustainable hot water for commercial building projects. 52% of those questioned believe VAT on refurbishments should be removed. Almost half (49%) observed business rates continue to discourage retrofit. More than half called for financial incentives to encourage retrofitting of buildings.

But what else can be done?

FOUR THINGS THAT NEED TO CHANGE

Thinking About ASHPs



Air source heat pumps (ASHPs) are a type of renewable energy technology that can be used to heat and cool business properties. At Advenco we use ASHPs to supply preheat heat for domestic hot water (DHW) demands in commercial properties, such as washroom facilities, shower blocks, professional kitchens, laundry, and hot water demands for multiple occupancy sites like hotels, care homes and schools.

Air source heat pumps leverage well-understood refrigerant circuit technology that is employed in your domestic fridge, but rather than cooling, the system is reversed to extract usable heat. They work by transferring heat from the outside air to the inside, using electricity to power a compressor. ASHPs are more efficient than traditional heating and cooling systems, and they have the potential to save businesses money on their energy bills and importantly will reduce carbon emissions generated by buildings.

If you are considering installing an air source heat pump, there are a few things you need to keep in mind when applying the technology to water heating. Unlike space heating, you do not need to consider the levels of insulation in the buildings, so ASHPs are advantageous for both new build and refurbishment properties. Second, consider the actual hot water demands of your buildings as this will influence decisions on the size or the number of heat pumps required to meet occupant demands. You want to size a system to meet those demands without oversizing the heat pump which will prove more expensive to buy and operate. For existing properties consider metering usage before committing to a design, Advenco can help with the temporary installation of flow meters, data interpretation and correctly sized design.

COMMERCIAL HEAT PUMPS

LIVE METERING SERVICES

Choosing A Hot Water Cylinder



Choosing the right hot water cylinder for a commercial project is an important part of a system's specification. There are many factors to consider, starting with the size of the building, the number of occupants, and the type of activities that will be taking place.

Start with professional help: always talk to an Adveco expert. For more than 50 years the company has been designing, supplying and servicing thousands of hot water applications throughout the UK. In fact, there is a very good chance you will have used one of our systems without even realising it. Use that long technical experience and history as a reputable supplier to your advantage.

We constantly see hot water system designs that have been oversized to address potential rather than actual demands. This comes with increased capital and operational costs, so it's sensible from a project-build perspective as well as being able to hand over an efficient final building where future costs are understood and can be better planned for. Adveco offers metering services, sizing and bespoke application design to ensure you have all the necessary information to make a considered decision.

With the desire for net zero, hot water systems have become increasingly complex and characterised by a range of proven but also new and emerging low-carbon technologies. Choosing the correct hot water cylinder for a commercial project can be a complex task, but it is important to get it right. By following the tips in this blog post and asking the right questions you can choose the right cylinder for your needs and get the best possible value for your project.

WHAT TO LOOK FOR WHEN CHOOSING A HOT WATER CYLINDER

Sustainable Electric Hot Water



ARDENT Electric Boiler

Air Source Heat Pumps

The FPI32 & L70 ranges of commercial Air Source Heat Pumps (ASHP) for the provision of preheat in domestic hot water applications. Adveco ASHPs can be supplied as a part of a bespoke hybrid, or all-electric system, as well as an element of a prefabricated plant room system.

FIND OUT MORE

Solar Thermal

A proven and extremely reliable technology, solar thermal offers a clear path to reducing CO₂ emissions and offsetting expensive electric costs for organisations using large amounts of hot water. Adveco's collectors with drain back provide a low maintenance option to help achieve sustainability goals.

FIND OUT MORE

ARDENT is designed to serve as an indirect water heater or heating system. Wall-hung and floor standing variants for those seeking to avoid a reliance on gas energy supplies. In hard water areas the ARDENT electric boiler can be used to dramatically reduce the costly build up of damaging limescale.

FIND OUT MORE

Adveco 2023 Product Guide

Now updated to include the new Adveco FUSION system and Live Metering service, our guide provides a full summary of Adveco's current product portfolio. Don't forget these are just the start of our offering, acting as the buildings blocks for your bespoke hot water systems...

2023 PRODUCT GUIDE



Discover Adveco's expanding range of low carbon and renewable products

[FPI R32 monobloc Air Source Heat Pump](#)

[L70 Air Source Heat Pumps for larger projects](#)

[FUSION packaged electric water heaters](#)

[Hot Water Cylinders, Indirect Water Heaters, Calorifiers & Buffers](#)

[Commercial Gas-Fired Water Heaters](#)

[Standalone Heat Recovery from Chillers](#)

[Offsite Constructed Packaged Plant Rooms](#)



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