



## **The Ivy, Liverpool** Electric Water Heating For Sustainable Dining

The lvy is a portfolio of luxurious restaurants providing a high-quality dining experience laced with glamour. In 2024, the chain added The lvy Liverpool Brasserie to its roster. Formerly a bank, the building would undergo considerable modernisation to deliver this highly anticipated venue located in the heart of the city...

Modern Plumbing Solutions Limited (MPS Limited) was contracted to deliver the restaurant's hot water system, one of the building's most critical services supporting kitchen and customer hygiene. Having worked with hot water specialists, Adveco at other The Ivy restaurants, MPS was keen to proceed with the company again on The Ivy Liverpool project.

As this would be a refurbishment project, MPS and Adveco would have to work within the existing spatial dimensions of the building and its plant room. There would not be an opportunity to add external plant room space, which meant any system would need to be both compact, efficient and highly resilient given the business-critical nature of hot water supply. MPS and Adveco were also very conscious that the high levels of calcium and magnesium in the local water meant any system installed in the town centre would be prone to damaging limescale build-up. In addition,

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for The Ivy, it was not only critical that the restaurant be assured of robust delivery of hot water, it must also address the increasingly vital need for sustainability in keeping with the company's wider strategic goals, from the sourcing of food to energy used in its preparation and service.

Working closely with MPS, Adveco presented an application design for the domestic hot water (DHW) that could meet the restaurant's daily operational needs, peak demands and any additional unforeseen requirements whilst meeting expectations for efficient, assured operation and sustainability. The recommendation from Adveco was an all-electric system based around the ARDENT P24 Electric Boiler and ATSI indirect cylinder (calorifier), which MPS agreed would be optimal for this restaurant.

## ADY ECO HOT WATER SPECIALISTS



With assured service delivery and sustainability key to the specification Adveco advised for a duplex system - consisting of two P24 premium boilers and a pair of ATSI 300's - which made most effective use of the limited plant room space and would meet all the demands of the restaurant, providing a reliable and robust hot water system.

Deploying the wall mounted ARDENT electric boilers immediately addressed the desire for sustainability, allowing the removal of the former gas-water heating from the building and freeing up considerable space in the plant room to allow for the dual system's installation.

Designed to work as an indirect water heater with a heat exchanger (coil) within a cylinder, ARDENT would provide a high-capacity and reliable response to hot water demands in a compact form factor that enables easier, lower cost installation.

Within each of the 24 kW heat output units installed in The lvy Liverpool are three separate, balanced elements, each featuring six or nine heating circuits which can be adjusted to balance the heating load and ensure longevity of the elements. Should one ever fail, a fault output will be signalled and the other elements will compensate until such time as a repair is affected, ensuing consistent service from each boiler for assured service continuity 24/7. As well as the heating elements and controls, an expansion vessel, relief valve and circulation pump are also included within the boiler's wall-mounted case.

For The Ivy Liverpool, the heated water is passed to a 300 litre ATSI single coil cylinder. The stainless steel ASTx range provide the perfect companion for an electric boiler-based hot water system. Tough and compact, they help control initial capital costs, whilst still being an extremely capable choice maximising storage of hot water for when it is most needed, especially when the plantroom space is restricted, as in the case of The Ivy Liverpool. With multiple floors to service, the ATSI also met additional water pressure demands (greater than six bar) making it the most efficient and cost-effective choice for the project.

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Adveco's design would deploy the same basic building blocks of its award-winning FUSION system. Rather than a pre-specified package, The Ivy's duplex system was a bespoke design but was able to leverage elements of the FUSION system, most notably its ability to prevent the creation of limescale by using the indirect heating method. Due to the fact that the heated water used by the restaurant kitchen and wash basins is separate from that used in the boiler's heating loop, there will only ever be a very tiny and finite amount of limescale that can be deposited on the boiler elements or inside the heat exchanger, typically where damage would normally occur in the system. The cylinder itself, built from highly resilient AISI 316Ti and 316L stainless steel is an ideal choice, no matter the water conditions but with high intensity temperatures which exacerbate limescale generation avoided in the cylinder itself, limescale is almost completely mitigated ensuring the system has a long lifespan for excellent return on investment.

The Ivy Liverpool Brasserie now offers space for up to 180 diners, who come with high expectations from the menu, service and presentation of the building itself. MPS Ltd and Adveco worked in close cooperation, with MPS impressed with the "very smooth" specialist service provided by Adveco. Although, in this case, integration of air source heat pumps to further reduce carbon emissions from the system was not an initial option, having conversed with Adveco with regards to the possibilities MPS and The Ivy have been inspired to consider this approach for future projects.



Adveco ARDENT Electric boiler showing balanced heating circuits