



PROJECT CASE STUDY

COST-SAVING WEATHERPROOF AHU FOR QUEEN ELIZABETH HOSPITAL, WOOLWICH

Weatherproof HTM-03.01 Compliant Air Handling Units complete with service corridor.

As a result of changing legislation, new external AHUs that are being provided to the healthcare sector now have to include an enclosed working space for engineers to undertake maintenance work on the equipment at any time of day and irrespective of weather conditions. Also, this will protect the plant from biological contamination associated with; bird, pest, vermin corpses and droppings, In effect, this means the AHU has to be contained within a mini self-contained plant room in many instances.

Unfortunately, creating this self-contained plant room has a direct impact on manufacturing costs and importantly, for units going on rooftops, there is an additional consideration relating to unit weight. This, in some cases, may require the commissioning of building works to increase structural support to the roof.

Following a successful installation of a weatherproof self-contained rooftop AHU for the Lewisham and Greenwich NHS Trust, AirCraft Air Handling was asked by the Trust's M&E Services Contractor if we could provide an AHU solution that would reduce both manufacturing and installation costs.



Working with our customer, AirCraft Air Handling's designers and technical engineers proposed that we manufacture a self-contained AHU unit with a narrower service corridor of only 1200 mm wide. This would provide ample space for maintenance engineers to work within the enclosure.



The AHU section would be designed at a maximum width of 1600 mm. The choice of components selected for the AHU needed to be small enough for maintenance engineers to easily withdraw them from the unit if repairs or replacements were required in the future. The combination of the overall dimension reduction of the self-contained plant room and its internal components collectively achieved the significant cost reductions the Trust was looking for.

With this confirmed, the Lewisham and Greenwich NHS Trust agreed for AirCraft Air Handling to manufacture the HTM-03.01 compliant AHU. Although the unit was designed and manufactured for installation at ground level, the reduction in size has resulted in an overall weight reduction which, in some cases, may lower or negate the need for additional building works.

After final quality testing at our premises in Stafford, we broke the unit down for transporting and shipped the AHU in a modular form directly to the site for reassembly and installation. The new weatherproof AHU was delivered to the Queen Elizabeth Hospital in Woolwich late this summer, that delivers conditioned air at 2.2m³/s and is 2800mm wide overall, including a 1200mm wide service corridor. Our team were on-site for the reassembly and testing, prior to handing it over to our client for final installation.

