

Case study

Royal Papworth Hospital

Cutting-edge technology and unprecedented sustainability underpin one of the UK's biggest health sector construction projects.

The Challenge

Daikin Applied UK successfully bid to work with Skanska on the design and build of 60 Air Handling Units (AHU) plus 3 water cooled chillers, totaling 1MW of cooling for one of the biggest health sector construction projects in the UK. The contract included design, build, on-site installation, commissioning and maintenance.

Solution

The early appointment of Daikin Applied as the specified manufacturer allowed our engineering team to custom design each AHU unit to provide a bespoke solution and satisfy multi-space air conditioning requirements.

Daikin Applied's unique modular design has provided complete design flexibility with no restrictions to satisfy a bespoke solution to meet tight building and plant space limitations internally and externally. To provide 1MW of cooling, Daikin Applied Engineers collaborated with the Skanska design team to modify the original design of air cooled installation, achieving a lower cost and improved efficiency water cooled solution.

Spatial restrictions are always an issue for plant rooms, particularly in hospitals where the strict HTM maintenance requirements must be met.

Use of the latest high efficiency EC motor, low pressure drop and low maintenance components were the key features of the proposal by Daikin Applied. This was

adopted by the Skanska design team as it exceeded the clients expectations in unit size, performance, efficiency and budget.

During the commissioning period further design restrictions imposed by the site mechanical installation has created additional challenges to our site commissioning team. Our highly qualified site team responded to these issues by modifying the AHU designs in collaboration with our manufacturing facilities located in the UK, while our experienced project manager ensured the delivery and commissioning of the units was completed within the original time scale and budget.

Equipment

- › 60 AHU's - Professional range (various air volumes)
 - › 42 Internal units
 - › 18 External Weather-proof Units
- › 3 Water Cooled Chillers - EWWQ 430 L SS (360kW)

