



Tesco Homeplus, Preston

Daikin provides environmental excellence for Tesco Homeplus

Retail giant Tesco turned to Daikin UK to ensure that its newly developed Tesco Homeplus store in Preston, Lancashire, would provide an environment that offers the utmost in shopper and staff comfort, while helping to minimise its carbon emissions.

With 35,000 sq ft of retail floor space plus office space, the new Preston store is part of Tesco's network of 10 Homeplus outlets in the UK, which sell products from the company's online business alongside the homeware range available in its superstores,

For this sizeable building, Tesco required an integrated climate control solution for both the retail and office spaces, which was capable of maintaining an even temperature throughout. However, the solution also needed to be highly energy efficient to meet Tesco's stringent environmental policy, as the Company has pledged to halve its carbon emissions by 2020.

The store required a system that would compensate for heat loss from the building caused by the continual opening and closing of the main doors. False ceilings were not feasible because of a mezzanine floor, so the air conditioning system also needed to be installed without the indoor units being recessed in ceiling voids.

The bespoke solution developed for Tesco satisfied both planning requirements and the high standards of energy performance expected by Tesco.

The Solution:

Daikin UK provided a tailor-made solution comprising its award winning VRVIII system, which offers a fully integrated system for heating, cooling, and options to connect air curtains and hot water. The highly versatile system diverts heat from areas being cooled to areas requiring heat, to minimise operational costs. The VRVIII system offers the flexibility to control internal climates, zone by zone with maximum energy efficiency, so it is ideally suited to meet the requirements of large buildings.

This was combined with the company's innovative FUQ four way ceiling suspended cassettes for the mezzanine level. A compact and versatile package just 165mm in depth, the ultra slim FUQ cassettes provide the store with easily managed, energy efficient and whisper quiet temperature control.

To manage heat loss from the building, a Daikin Sky Air system connected to a Biddle air curtain provides an efficient heated air barrier between the internal and external temperatures. This creates an impressive separation efficiency of approximately 90%, ensuring that the optimum temperature is maintained indoors.



Offering savings of up to 67% compared to electrically heated air curtains, it is estimated that it will save the Tesco Homeplus store in Preston around £1,500 per year in terms of energy savings.



Tesco had also stipulated that it was important to minimise the risk of refrigerant leaks, which could be harmful to the environment. Therefore standard flare connections were converted to brazed connections throughout the system. Although the initial risk was low, these modifications vastly reduce the chance of refrigerant leakages, thus meeting the retailer's stringent environmental standards.



The Conclusion:

The systems were installed by specialist contractor, Ceilite, an installation company that has worked with Tesco for over twenty years and is familiar with the high standards of workmanship and energy efficiency that the retailer demands.

Ceilite's Managing Director Bill Gleed commented: **"As an important long standing client for Ceilite, we know that Tesco is committed to reducing its emissions and this plays an important role in the kind of energy solutions it will accept. We have worked closely with Daikin UK in the past at other Tesco branches because it is willing to develop bespoke systems to meet the particular requirements of this customer."**

Although the project demanded careful consideration and planning to overcome the particular challenges of the system requirements, the combination of technical expertise and specification of innovative products ensured that Tesco Homeplus in Preston benefits from a versatile air conditioning system that provides optimum performance and energy efficiency, while helping to deliver on Tesco's commitment to reducing carbon emissions. The project marks a success for Daikin UK and Ceilite alike, and both companies look forward to maintaining their fruitful and successful relationship.