

Energy costs reduced as Chilled Beam & Twin Wheel Technology was included in £1.25 Million Greenwich Peninsula Contract



As part of one of the largest chilled beam contracts in London, Fläkt Woods has supplied the complete £1.25 million ventilation solution for the Peninsula Central office development.

In addition to Fläkt Woods supplying over 2,300 active chilled beams, they are also providing air-handling units utilising their patented twin wheel technology, VAV boxes and displacement terminals.



■ FACTS

Architect:

Terry Farrell and Partners

Client:

Lend Lease and Quintain Estates and Developments

M&E Consultant:

Hilson Moran

M&E Contractor:

Skanska Rashleigh Weatherfoil Ltd



The building has officially been awarded a BREEAM "Excellent" rating

At 196,000 square feet the first of two developments on 14 Pier Walk was officially opened in June 2009 by Mayor Boris Johnson. The project will form one of 3 new head office hubs for Transport for London. TFL have taken a 20 year lease on the building with the first of 1800 staff already at work at the-state-of-the-art green office.



The building has officially been awarded a BREEAM "Excellent" rating with a score of 71% and an Energy Performance Certificate band B with a score of 37. The second building, Mitre Passage comprising 115,000 sq ft will be ready for occupation at the end of 2009.

During the design stage, M&E consultant Hilson Moran and M&E contractor Skanska visited the Fläkt Woods Production and R&D Centre in Jönköping, Sweden, where they witnessed a successful purpose built mockup of the system simulating both summer and winter conditions.

The new twin wheel technology is expected to reduce energy costs on summer cooling. Linden Shuttleworth at Fläkt Woods explains. "Using our knowledge of twin wheel technology and active chilled beam systems, Fläkt Woods engineers have created a more efficient method of providing dehumidification to the primary fresh air in order to avoid problems with condensation."

As the name implies, the system uses two thermal wheels (rotary heat exchangers). In winter, the heat of the exhaust air is

absorbed by an aluminium rotor, which then delivers the heat to the supply air, and vice versa in summer. Rotary heat exchangers are used when the supply and exhaust air ducts converge at one point. Low velocities through the rotor can ensure optimum heat exchange efficiencies typically between 70-85% and pressure loss of 60 Pa. What's more, owing to the reheat wheel, a separate re-heater is no longer required. This is ideal for a chilled beam installation that avoids all moisture problems.

The "Flexicool" range of chilled beams have been designed to provide ventilation, heating and cooling on the perimeter zones, and ventilation and cooling only on the internal zones. For both buildings the Flexicool series were specified with IQID (flush mounted chilled beams) and IQCA (flush mounted cassette style chilled beams) integrated within the suspended ceiling.

All chilled beams are fitted with Fläkt Woods patented "Comfort Control", which enables velocity control and can be regulated by means of variable geometry slots.

Fläkt Woods Group

Fläkt Woods is a global company providing solutions for ventilation and air treatment for buildings as well as fan solutions for Industry and Infrastructure applications.

By combining their dedicated range of Chilled Beams, Air Handling Units and Air Cooled Chillers, Fläkt Woods has been able to produce some of the most efficient and green indoor air quality (IAQ) solutions currently available within the Building Services Industry.

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