

World beating energy saving technology used at Korean Exco Centre



The Korean Exco Centre is an exhibition and convention centre in South Korea.

It offers more than 11,000 m² of exhibition space arranged in a series of three levels, with a convention hall (capacity of 4,200 people) and 11 conference rooms of different sizes.

■ FACTS

Customer:

The Korean Exco Centre

Need:

Energy efficient air handling solution for the convention centre

Solution:

Fläkt Wood's EU-82 air handling unit with exhaust fans and TE3 energy recovery wheel



Ground-breaking energy recovery technology with TE3 wheel

As part of its contract to supply air handling equipment to the Daegu Exco, an exhibition and convention centre in South Korea, Fläkt Woods' equipment will incorporate ground-breaking energy recovery technology, with the inclusion of their patented TE3 energy recovery wheel.

The Fläkt Woods contract will involve supplying air handling equipment for the concert hall, where the supply of fresh air for the audience was of prime importance. Working for Samsung Construction, the Company has built a specially outsized EU-82 air handling unit, which includes exhaust fans to accommodate the large airflow.

Fläkt Woods' TE3 energy recovery wheel is built into the EU unit, and pre-cools and dehumidifies the outdoor air during the cooling season and preheats and humidifies the outdoor air during the heating season. As a result, the outdoor air quantity can be increased from 5 to 20 cfm per person without increasing energy costs.

There is virtually no cross-contamination (they have been independently certified to be less than 0.04 percent) and the system can be applied where stationary heat exchangers cannot. As importantly, the first cost savings associated with the reduction in Chiller and heating/humidification capacity, typically pays for the added cost associated with the installation of the total energy recovery equipment.

Fläkt Woods Korea (Ltd)

Wonbang Bldg. 15th Fl, 143-42, Samsung-dong
Gangnam-gu, Seoul, Korea

t +82 2555 9423

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The wheel features an aluminium transfer core, and as the wheel slowly rotates between the outdoor and return air stream, the higher temperature air stream gives up its sensible energy to the aluminium. This energy is then transferred to the cooler air stream during the second half of the revolution.

Due to the enormous energy and hygienic benefits, these wheels have been installed in many applications including research laboratories, offices, hospitals, casinos, aeroplanes and automotive painting, schools, universities and pharmaceutical.

Daegu is the metropolitan city of the Yeongnam area in Korea and the internationally renowned Exco Centre offers more than 11,000 m² of exhibition space arranged in a series of three levels, with a convention hall (capacity of 4,200 people) and 11 conference rooms of different sizes.

The EU range

The EU range offers all needed functionality and high degree of flexibility. The sturdy frame members and corner pieces form a very stable framework which is well suited to the full range of sizes.

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.

Contact information

Boyd Tan
Fläkt Woods Asia
Tel: +82 2555 9423