

Ecology meets economy in a sustainable office building



The Slovak city of Košice has recently seen the construction of a new and innovative building – the EcoPoint Office Center. The building complex is a fine example of how green thinking can save energy as well as money. Traditional air conditioning has been replaced by an innovative heat pump solution which lowers heating and cooling costs by more than 70%. Built in 2013, the complex will expand with two further buildings in 2014.



Saving big money on cooling and heating

In a typical office building, lighting, heating and cooling represent a huge amount of the total expenditures, making those systems the best targets for energy savings. The EcoPoint Office Center has an indigenous system to do just that. The construction activates the concrete core in the ceilings and the hot and cold air is streamed through the building with the use of heat pumps. The result is an ecologic and sustainable construction that offers a healthy workspace for both smaller and larger businesses, while substantially lowering the cost for heating and cooling. Without a traditional air conditioning system, there is the possibility of natural airing through the opening of windows, and a ventilation system that provides fresh, thermally treated air.

Finding the right solution

Naturally, a lot of thought has to be put into the construction of such a building. ABC KLÍMA s.r.o., a leading company among HVAC technology companies on the Slovak market, was chosen to handle the installation of the heating and cooling system. Plate heat exchangers are part of almost all of their installations. "Our company has cooperated with SWEP

Slovakia for more than ten years, using the brazed plate heat exchangers concept", says Rudolf Baran, engineer at ABC KLÍMA. "We know all of their benefits. We are well acquainted with the technology of manufacturing BHPes, especially the challenging environment and regulations needed to be established and maintained in order to produce a heat exchanger with the high quality standard that SWEP offers."

Small space – high capacity

The biggest challenge was that the space for the heat pump installations was very small, but still demanded equipment with high capacity. SWEP was asked to do calculations for a cooling application as well as a cycle divider from heat pump and chiller for the sustainable building during its lifetime. The condition was only 1K LMTD free cooling approach. "The workout from the heat exchangers needed to be extremely effective without any losses", says Igor Durcansky, Regional Sales Manager for SWEP Central Europe. SWEP engineers used their expertise and were able to make an offer with three B50 units with very precise results. "From

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DGNB (Das Gütesiegel Nachhaltiges Bauen), Seal for Sustainable Construction

The certificate guarantees investors and tenants that principles of sustainable construction will be adhered to. The certificate is based on assessment of authorized experts of ÖGNI (Österreichische Gesellschaft für nachhaltige Immobilienwirtschaft), an Austrian non-profit organization that focuses on certifying sustainable constructions.

a technical point of view this was the best solution, considering the small space and the demand for high capacity and effectiveness", says Durcansky. "It is also a very cost-efficient solution and will bring a good return of investment."

Flawless design

The cooperation between ABC KLÍMA and SWEP goes all the way into the design process. "Our designers and engineers have been trained by representatives from SWEP", says Rudolf Baran at ABC KLÍMA. "We create the design process ourselves, but the design is always checked by experts from SWEP. Our response to any customer inquiry is always swift, and we have not recorded any complaint or problem regarding SWEP heat exchangers."

A unique building

The development company Bischoff & Compagnons, which has invested in the EcoPoint Office Center, was recently awarded the VISIO 2020 prize for the unique project. EcoPoint has also received the prestigious Silver DGNB pre-certificate and the LEED certification for sustainable buildings. Always at the forefront of environmentally sustainable friendly solutions, SWEP is proud to have contributed to the unique and innovative construction of the EcoPoint Office Center.



SWEP B50

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LEED (Leadership in Energy & Environmental Design)

An internationally recognized certification system for green buildings providing a third party verification that a building was designed and built using strategies aimed and targeted to improve the performance through the most important parameters such as energy conservation, water consumption efficiency, reduction of CO₂, indoor environmental quality with respect to resources and their impact on the environment.



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