



21 April 2016

Energy efficiency at engelbert strauss TROX ventilation and air conditioning for expanded top notch site

With the expansion of their company site at Biebergemünd, near Frankfurt, German workwear specialists engelbert strauss have created a future-oriented place that ideally meets the needs of both staff and customers. The internationally operating market leader offers a wide range of workwear garments as well as accessories, shoes and safety-related items for the workplace. The well designed site with a new retail space and offices blends in perfectly with its surroundings. The site features a flagship store and an administration building.

The energy required for the main building is 100 % regenerative. Geothermal energy is used for zero emission heating and cooling of the building. A photovoltaic system with a total area equivalent to five handball courts provides clean electrical energy to the building. Energy saving LED lighting and intelligent cooling complement the system, and rain water is used for flushing toilets and to water the lawns.

TROX has ensured energy efficient air management. Nine X-CUBE air handling units – the largest one with a maximum volume flow rate of 15,600 m³/h – provide fresh air to the new building. As a special feature one of the air handling units was designed to be built around a pillar – which could not be moved.

Adiabatic cooling is used in some of the air handling units to save even more energy. It helps to cut operating costs by up to one third when compared to conventional cooling systems. Adiabatic cooling means that the airflow is cooled by humidification. Each gram of water that the unsaturated air absorbs results in a temperature decrease by more than 2 °C.

Fire dampers, volume flow controllers, air terminal devices and sound attenuators complement the energy efficient and environmentally friendly air conditioning strategy.

Press Release

TROX[®] TECHNIK

The art of handling air



Nine X-CUBE air handling units provide ventilation to the new building at the expanded engelbert strauss company site.



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Administration building at the engelbert strauss Biebergemünd site, near Frankfurt, Germany.

Press Release



TROX is leading in the development, manufacture and sale of components, units and systems for the ventilation and air conditioning of rooms. With 29 subsidiary companies in 28 countries on 5 continents, 14 production facilities, and importers and representatives, TROX is present in over 70 countries. Founded in 1951, world market leader TROX, whose international head office is in Germany, generated in 2015 with a total of 3,700 employees around the globe revenues of €482 million.

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Press Release