References

Würth Logistics Centre, Lithuania

Uponor involvement

- 18 km PE-Xa d20 | 23 Q&E manifolds | 2,4 km Ecoflex Thermo Twin

Würth Logistics Centre, Lithuania

Würth Logistics Centre is an exclusive build-to-suit project incorporating renewable energy sources.

Würth Logistics Centre: an exclusive build-to-suit project incorporating renewable energy sources

Project Facts:

Location Ukmergė district municipality, Vilnius county, Lithuania	Completion 2014	
Building Type Industrial buildings	Product systems Radiant Heating & Cooling, Local Heat Distribution	
Address Jačionys village, Pivonija Neighbourhood, Ukmergė District Municipality,	Website http://www.wurth.lt/	Project Type New building

The low-parameter, surface heating/cooling solutions deployed in this project are much more efficient than conventional heating systems. As a result, the desired temperature can be maintained in designated parts of the buildinginstead of overheating zones at the top, as is the case with convection heating. System integration with efficient geothermal sources ensures very low operating costs, and creates maximum comfort for people working in the building.

High demand and market potential for logistics buildings was recorded in Lithuania in the years 2011–2014. Therefore, a number of construction projects were implemented in that period, including build-to-rent logistics centres and build-to-suit buildings catering to highly specific client requirements.

The construction of the Würth Logistics Centre began in spring 2013 and combines two different zones: industrial warehousing and administration. The warehousing zone is an open 13-metre high space. The first floor of the centre's administrative section contains a lobby, a shop, a café-canteen with a kitchen, a meeting room and technical premises. Administrative rooms and a meeting hall are located on the second floor.

The combination of different purposes in one building dictated the need for exclusive engineering solutions. Moreover, the client requested an energy-efficient solution.

The plot of land on which the logistics building is situated has 18 geothermal wells and Stiebel Eltron heating pumps with a total heating capacity of 138 kW. The pumps take heating from vertical geothermal probes.

The entire centre has Uponor radiant heating/cooling solutions installed. The administrative zone has a fitted PE-Xa d20 underfloor heating system with wired room controls (the parameterof the heat-transfer medium is 45 / 40 °C). The industrial and warehousing zone has an industrial underfloor heating system whose temperature is controlled via heat-transfer medium. The system maintains heating in the range of 25–35 °C.

The object has about 5,000 m^2 of heated surface in total, with approx. 18 km of pipes and 23 Q&E modular collectors fitted under the floor. These collectors stand out from other similar products due toconnectors that are free of rubber sealants and sturdier than a pipe, and due to theheat-transfer medium which is fed via pre-insulated Uponor Thermo Twin pipe systems.

In industrial buildings, large heating systems are usually mounted next to the ceiling. However, solutions such as these affect construction elements of the building and the reliability of connecting points. In order to avoid such issues, Uponor developed the Thermo Twin pipe systems. These systems are mounted in the ground: they are more reliable, fewer pipes are needed and they are faster to install and implement.

Due to selection of the right heating system, the logistics centre buildingcan also be cooled to 16-19 °C in summer.

The centre is built next to Vilnius-Panevėžys motorway. Its functional zones are clearly distinguished by bright colours on the outside of the building: the warehousing zone is grey and the administrative zone is red, with extensive use of tinted glass. This colouring mirrors that of the Würth logo.

Watch a video of the building process: https://www.youtube.com/watch?v=2PvsxIEmUmI

Würth Logistics Centre, Lithuania

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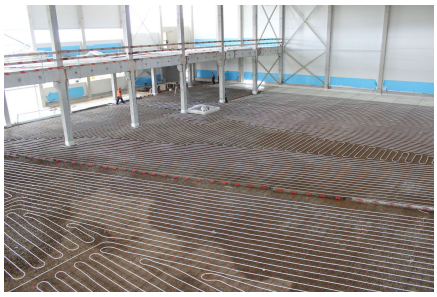

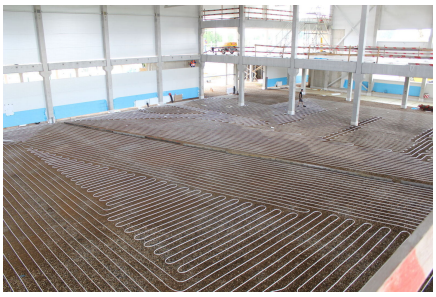

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