References

Leica Camera AG Headquarters



Uponor involvement

27,000 m² | 17,000 m² Classic | 3,000 m² Thermally activated building technology

Leica Camera AG Headquarters

The company headquarters of Leica Camera AG features a unique architectural design – controls temperatures with solutions from Uponor and Zent-Frenger.

Project Facts:

Location	Completion	
Wetzlar, Germany	2014	
Vrsta objekta	Product systems	
Industrial buildings	Površinsko grejanje i hlađenje	
Address	Website	Project Type
Leitz-Park	http://de.leica-camera.com/	New building

Partners

Client:
Leica Camera AG
Am Leitz-Park 5
35578 Wetzlar

Architects:
Architekturbüro Gruber + Kleine-Kraneburg
Niddastr. 84
60329 Frankfurt am Main

Energy concept:
HPI Himmen Ingenieurgesellschaft
Zülpicher Straße 58 e
50674 Cologne

Installers:
Imtech Deutschland GmbH & Co. KG
De-Saint-Exupéry-Straße 10
60549 Frankfurt am Main

"The new company headquarters of Leica Camera AG in Wetzlar is more than just a building. It also marks the origins of this venerable brand and a return to its historical roots. The building designed by architects Gruber + Kleine-Kraneburg uses Batiso active mass cooling from Zent-Frenger and Uponor radiant heating Classic for temperature control.

Covering a footprint of 27,000 m2 and costing EUR 60 million, a high-tech complex has been constructed for 700 Leica Camera employees from the production, administration, training and customer care areas. Transparent production zones, an event facility, a Leica gallery and a store, photographic studio, restaurant and coffee shop round off the visitor's experience.

The energy concept designed by engineers HPI Himmen from Cologne and implemented in cooperation with Imtech Deutschland, Frankfurt/Main, needed to consider both the architectural constraints and the functional demands of temperature control in the public areas, production facilities, which use clean room technology, and the offices.

The team under project manager Jürgen Drolshagen came up with an energy concept that would reduce energy consumption by 46.4% compared with the requirements of EnEV 2009. The building has been awarded the European Union's Green Building Certificate and has received gold DGNB prequalification.

Two-thirds of the energy is generated from CHP plants and one third from the thermal pump. The generator system, consisting of absorber, CHP plants, condensing boiler, refrigeration machines and a thermal pump is managed with a controller specially designed for the project. Building automation (with BACnet capability) is used to record and update measurement data from 450 meters on a continuous basis. This enables the entire system to be controlled and optimised.

The public areas of the building and the offices are kept cool using Batiso active mass cooling from Zent-Frenger and Uponor radiant heating Classic.

Concrete walls are set behind the floor-to-ceiling glass elements of the gallery on the ground floor and use Zent-Frenger Batiso active mass cooling. In addition, the temperature of the floor of the gallery is controlled using Uponor underfloor heating.

As well as the gallery temperature control on the ground floor, the ceilings of the offices on the first and second floors are also heated and cooled using Zent-Frenger Batiso technology. The 580 m2 wall and 2,400 m2 ceiling area is thermally controlled by 400 heating circuits. The Uponor PE-Xa DN 20 pipes have been laid on the tube registers at intervals of 15 cm. The public areas and offices are also heated and cooled with Uponor Classic underfloor heating.

Radiant heating was provided by the PE-Xa Comfort Pipe PLUS 17 x 2.0 mm pipes, which were laid on the installation mats at intervals of 15 cm. When it came to laying 800 heating circuits on 17,000 m2, this was a major factor in reducing costs.

The hot water for radiant heating in the coffee shop is provided buy means of the Ecoflex pipe system. The pipe system consists of a stable and yet flexible outer pipe with medium pipes made from cross-linked polyethylene (PE-Xa) and non-cross-linked polyethylene (PE 100), which are encased in insulation consisting of several layers of cross-linked polyethylene foam."

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