



Deltion College in Zwolle, The Netherlands

Regional Training Centre with Heating and Cooling

Deltion College is responsible for the professional education of more than 16.000 children and adults. The building was erected in 2006 like a small city with multiple use buildings. Every level of education has his own building with a completely different atmosphere. The buildings are linked together by a covered boulevard that forms the lifeline of the Deltion College.

The use of Thermal Active Concrete in renovation projects

During the building of the Deltion College a wide variety of energy and environmental solutions were implemented. Not just only a number of classical solutions like a high insulation level but also some pure innovation. A system for underground energy storage combined with the heat pump system and Thermal Active Concrete was also applied.

In the existing buildings the floors are covered with a extra thick concrete layer into which the TAC system is installed.

Facts and Figures

Building

- Floor space : 50.000m²
- Insulation: Rc = 3,0 m².K/W

Source of energy

- Heatpump installation with supplementary boilers
- Closed circuit ground source

Climate system

- Thermal Active Concrete
- Heating and Cooling
- Active heating with HP up to 45°C
- Active heating with boilers up to 65°C
- Passive cooling up to 20°C
- Balanced ventilation

WTH-system

- Full service project management
- LT-manifolds for UFH and ring system for Thermal Active Concrete
- 328,1 km underfloor heating tube

Fast and uncomplicated

The Application of a Thermal Active Concrete system influences the different stages of the building process. It requires an accurate build plan. It was therefore, important that WTH/Thermo-Floor was involved in every design stage of the building as the TAC specialist.

Also in the installation phase of the project the WTH/Thermo-Floor specialists on site showed their extensive experience in this type of project.

Thanks to the experience and systematic approach WTH/Thermo-Floor was able to execute this project in a fast and efficient manner.