

COOL-FIT

Keeping cool in summer, staying warm in winter

"Porta Samedan" shopping mall, Switzerland

This plastic piping system outperforms systems made of metal in terms of both energy efficiency and installation convenience.

Optimized indoor climate makes for an enjoyable shopping trip

The vacation region Engadin is home to the new "Porta Samedan" shopping mall with the Minergie-P standard label. In realizing the project, nothing was more important than sustainability. The owners champion the use of renewable energy sources and sustainable building materials such as the COOL-FIT pre-insulated plastic piping system. And so the sustainable operation of the local shops, like the region's first Migros supermarket for example, is guaranteed.

Project background

"Porta Samedan", a new construction project realized by Pfister Immobilien AG and the Migros Ostschweiz cooperative, is focused on sustainability. The building envelope fulfils the Minergie-P standard; the aim is for the building technology to operate in a resource-saving and largely emission-free manner. The building can be cooled and heated by groundwater, for example. In the summer, the ground water is used as an energy source to recool the refrigeration systems and during the winter months, it can effectively heat rooms and the service water.

Selected technical solution

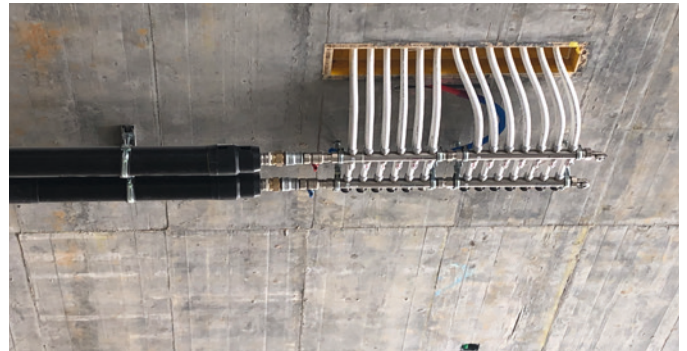
The primary solution for the low-temperature heating and the changeover operation in the summer is the thermal component activation system (TABS). The COOL-FIT 4.0 pre-insulated, diffusion-resistant plastic piping system was identified as the best technical solution to supply the pipe grids embedded in the concrete core. Indeed, the components of the piping system are highly resistant and corrosion-free. The pipes are also pre-insulated with the durable GF HE foam, meaning that installation can be done in just one operation. Plastic sheathing and insulation have a low thermal conductivity, something that reduces energy consumption and hence cuts operating costs.

Accomplished improvements

For the project, metal composite pipes were offered for tender. The project requirement was that the piping system is capable of being encased in concrete and has to be free of pressing joints. Since these two latter requirements were also met by the COOL-FIT pre-insulated plastic piping systems, K+M Haustechnik AG suggested COOL-FIT to the planning engineers and won the contract. "We are impressed by the time-saving, simple installation and the outstanding appearance of COOL-FIT 4.0", says Luca Giovanoli, Heating, Ventilation and Plumbing Project Manager at K+M Haustechnik. "The low weight of the pipes also makes it easier to work in the five meter high rooms. The system, with its numerous components, is well thought out, and electrofusion is a fast and safe connection technology."



COOL-FIT 4.0 reduces the amount of energy required for heating and cooling.



TABS supplied with 1500 meters of COOL-FIT 4.0.

Customer benefits

- **Faster installation thanks to pre-insulated pipes**
- **Lower weight facilitates assembly in high rooms**
- **More energy efficiency due to lower thermal conductivity**
- **Lower CO2 emissions from pipe production**
- **Maintenance-free and durable**
- **Long-lasting attractive appearance**

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