HakaGerodur

Image source: www.papieri-cham.ch

Project report

GEROtherm® FLUX geothermal probes

Papieri site in Cham

1

The Papieri site in Cham stands for a visionary transformation: By 2034, this former industrial site will be transformed into a trailblazing residential and service district that sets standards in sustainability and energy efficiency. It will feature an energy system that is completely free of fossil fuels, with the aim of producing as much energy as possible locally and making intelligent use of any surplus. It is impressive not only that the site produces 75% of its own energy, but also that it innovatively combines renewable energy sources such as river water, geothermal and solar power. A central component of this sustainable concept is the geothermal probes, to which we as a manufacturer have proudly contributed. This technology enables the efficient utilisation of geothermal energy for heating and cooling, thus making a significant contribution to the site's overall energy efficiency. The integration of our geothermal probes into the overall concept not only increases the sustainability of the Papieri site but also sets an example for future projects. The Papieri site was recognised as a pioneering project on the Swiss energy scene with the "Watt d'Or 2024" award. It demonstrates that climate-neutral living and working is possible and that innovative solutions such as our geothermal probes play a key role in this.

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A central component of this trendsetting project is the geothermal probes, to which we as a manufacturer have proudly contributed. For the Papieri site, a total of 120 probes were drilled, each 320 metres deep. Our innovative GEROtherm® FLUX technology was used – a conical geothermal probe that is optimised for safety and pressure loss and specially developed for deep geothermal use. This engineering solution offers crucial advantages over conventional probes: it significantly reduces pressure loss during operation compared with a 40 mm PN20 geothermal probe, offers greater operational safety with an internal pressure resistance of up to 32 bar and provides increased buckling resistance, a particular advantage when using grouting materials that are heavy or highly thermally conductive. The geothermal probes were professionally installed by Johann Bohrtech AG, a company specialising in such complex drilling. Each geothermal probe was tested and logged in accordance with SIA 384/6 to ensure the highest quality standards.
High-quality HakaGerodur collectors and distributors were used to connect the geothermal probes for optimal connection to the heat pump. Our products feature easy installation, safety in use and flat-sealing connections that enable quick assembly. The welded connections comply with the DVS Guideline 2207-1, while the GEROtherm® collector/distributor meets the requirements of SIA 384/6.

With this technology, we are making a significant contribution to ensuring that the Papieri site is not only self-sufficient in terms of energy but also a role model for sustainable construction projects.

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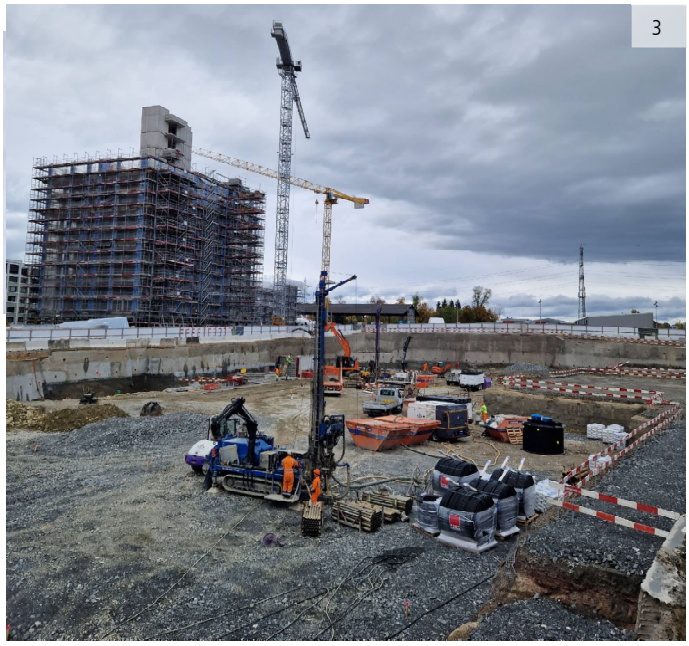

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Project details

Construction site
Papieri Areal
CH - 6330 Cham

Client
Cham Immobilien AG
Fabrikstrasse 5
CH - 6330 Cham

Planner
Andy Wickart Haustechnik AG
Oberdorf 5
CH - 6313 Finstersee

Drilling company
Johann Bohrtech AG
Acherfang 6
CH - 6274 Eschenbach

Products used

120	GEROtherm® FLUX geothermal probes 43 × 3.5-6.5 mm, length 320 m
120	GEROtherm® grouting tubes PE-HD, outside diameter 25 mm, length 322 m
6,350m	GEROtherm® rolls, 50 × 4.6, PN16
1	GEROtherm® SAVE 125 collector/distributor, Hyline Setter 20-60 l/min and ball valve, special
10	GEROtherm® SAVE 180 collector/distributor, Hyline Setter 20-60 l/min and ball valve, special
3	GEROtherm® SAVE 250 collector/distributor, Hyline Setter 20-60 l/min and ball valve, special

1. Overview of the Papieri Cham site (Image source: www.papieri-cham.ch)
2. Georg Dubacher and Roland Regli present a piece of a geothermal probe (Image source: www.papieri-cham.ch)
3. Excavation pit at the Papieri Cham site (Image source: HakaGerodur AG)
4. Excavation pit with GEROtherm® FLUX (Image source: HakaGerodur AG)
5. Technical room, installing the GEROtherm® SAVE 125 (Image source: HakaGerodur AG)
6. Technical room, installing the GEROtherm® SAVE 125 (Image source: HakaGerodur)
7. Excavation pit with GEROtherm® FLUX (Image source: HakaGerodur AG)

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