



Image source: www.atelier-vert-pomme.com

Project report

GERO^{therm}® FLUX geothermal probes

**En Mapraz – Rte de Crochy 11/
Rte du Bois 14, 1024 Ecublens VD**

In Ecublens, bonainvest is planning the En Mapraz project with 143 apartments, commercial units and an underground car park. The apartments are intended to offer urban flair for various segments such as students, families and seniors. The district planning process was successfully completed at the end of 2021. Construction will be carried out in accordance with the bonacasa construction standards. Construction work has begun. Completion is planned for the second half of 2026.

Environmentally sound, social and sustainable

In order to achieve sustainable goals in the building sector, the

client needs to be committed to environmentally and socially sustainable construction. It is essential for all parties involved to have a set of policies in place with clear guidelines regarding the energy supply, the recycling of materials and building materials, as well as unhindered and barrier-free accessibility and consideration of the topic of diversity in all its dimensions. Since its founding in 2009, bonainvest has been committed to sustainable construction and bases its work on the Swiss construction standard Minergie, among other considerations. For example, all bonainvest residential properties are built in line with the Minergie standard and over 75% of the portfolio area is also Minergie

certified. Based on the promise of "Net Zero by 2035", bonainvest relies exclusively on pellet/woodchip heating systems, **geothermal probes** and district heating solutions (renewable energy sources) in cooperation with local municipalities. Scope 1 emissions are to be reduced to net zero by 2035. The buildings are constructed to be energy efficient, both with regard to the building envelope and the technical equipment. Wherever possible and reasonable, solar energy is also generated and used. For example, it is noteworthy that over 80% of the entire portfolio is already heated with non-fossil energy, which is well above the Swiss average (44%, FSO 2022).



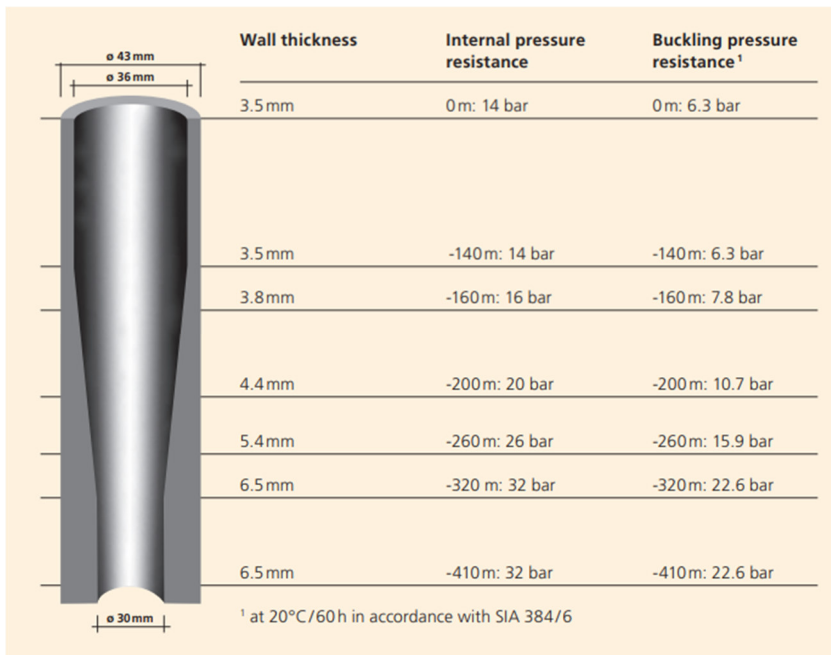
In this project, the client entrusted the drilling company Orllati géothermie SA because it was familiar with the technology of conical probes from HakaGerodur AG.

62 GEROtherm® FLUX geothermal probes each measuring 310 metres in length were used for the probe field. Pressure loss on the conical, safety- and pressure-optimised GEROtherm® FLUX geothermal probes is significantly reduced in comparison with a conventional PN20 geothermal probe, resulting in lower energy requirements for the circulation pump. The probe connection is made by our GEROtherm® pressure pipes.

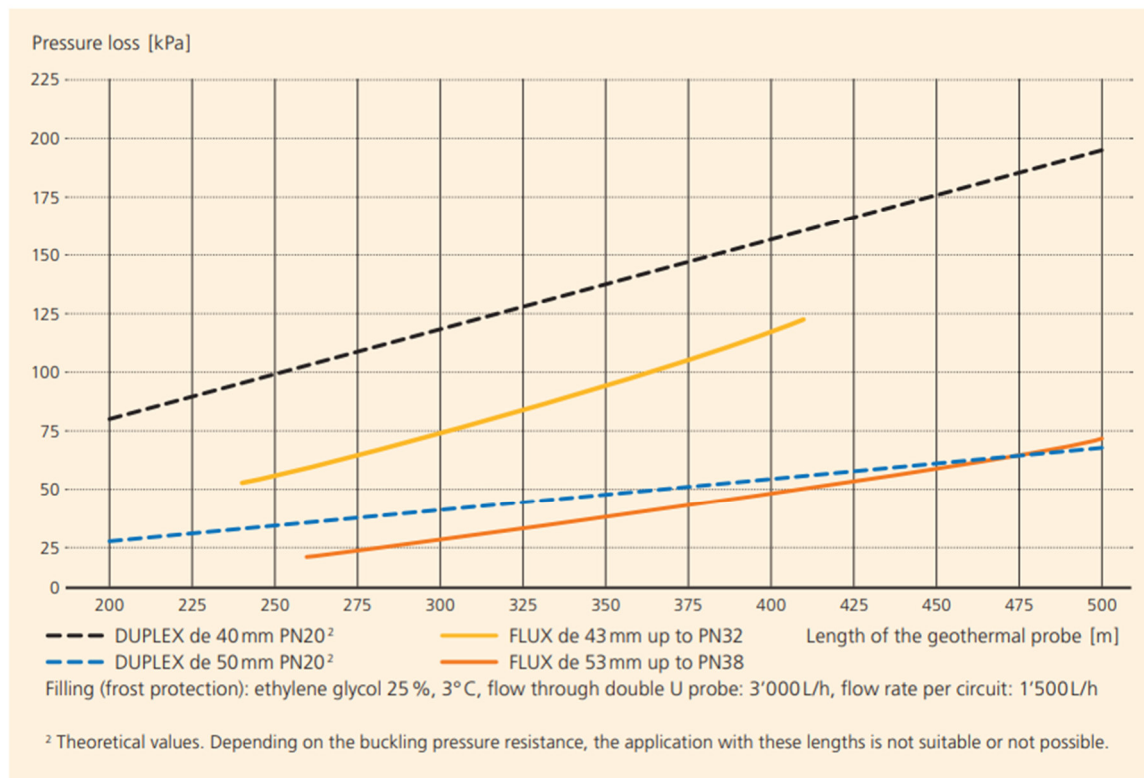


1. GEROtherm® FLUX de (outer diameter) 43 mm geothermal probe ready for installation (image source: HakaGerodur AG)
2. Drill rigs in operation; overview of part of the construction site (image source: HakaGerodur AG)
3. GEROtherm® FLUX de (outer diameter) 43 mm geothermal probe delivered to the construction site, ready for installation (image source: HakaGerodur AG)
4. GEROtherm® FLUX geothermal probe "on the road" (image source: HakaGerodur AG)

Wall thickness distribution and pressure resistance of a GEROtherm® FLUX de (outer diameter) 43 mm geothermal probe



Pressure loss comparison: GEROtherm® FLUX and DUPLEX



Project details

Construction site

En Mapraz
Rte de Crochy 11/ Rte du Bois 14
1024 Ecublens, Vaud

Client

bonainvest

Bonainvest AG
Weissensteinstrasse 15
4503 Solothurn
<https://www.bonainvest.ch/>

Drilling company

Orlati

Orlati Géothermie SA
Route de Bettens 13
1042 Bioley-Orjulaz
www.orlati.ch/competences/geothermie/

Planner

H2 Engineering

H2 Engineering
Ch.des Champs-Courbes 19
1024 Ecublens
<https://h2-engineering.ch>

Products used

- 62 GEROtherm® FLUX geothermal probes, de (outer diameter) 43 mm, length 310 metres
- 62 GEROtherm® grouting tubes, de (outer diameter) 25 mm, length 312 metres
- 62 GEROtherm®, initial weight 19 kg
- GEROtherm® connection pipes, PE 100-RC, de (outer diameter) 50 mm, PN16

HakaGerodur

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