



Photo credit: Orllati Géothermie SA

Project report

GEROthem[®] FLUX geothermal probes

Villa, 1260 Nyon

Installation of new geothermal technology

The layout of the site did not allow multiple geothermal probes to be installed. It was therefore necessary to dig deeper at a single spot in to obtain sufficient energy to heat the villa. For this reason, we installed a GEROtherm® FLUX 53 mm geothermal probe at a depth of 350 metres.

Some of the main technical tools used to install this geothermal probe included, of course, a drill rig, but also a compressor with a flow rate and pressure that made it

possible to drill to such a depth. We used a reel that was designed, constructed and then assembled onsite at Orllati. A distinctive feature of this reel was that it was motorised to ensure just the right control when sinking the geothermal probe into the drill hole.

The drilling company Orllati Géothermie SA is extremely proud to have installed the first GEROtherm® FLUX 53 mm. The conical shape of this probe together with the large 53 mm outside diameter of its single pipe enable a huge reduction in pressure losses compared to

conventional cylindrical probes while guaranteeing a resistance appropriate to the buckling pressure exerted at this depth. It is also worth noting that the temperature of the heat transfer fluid increases proportionately at the drill depth, which improves the efficiency of the installation (seasonal performance coefficient) while considerably reducing energy consumption.

Projects involving installing geothermal probes at depths of up to 500 metres are rare, and a challenge we relish.



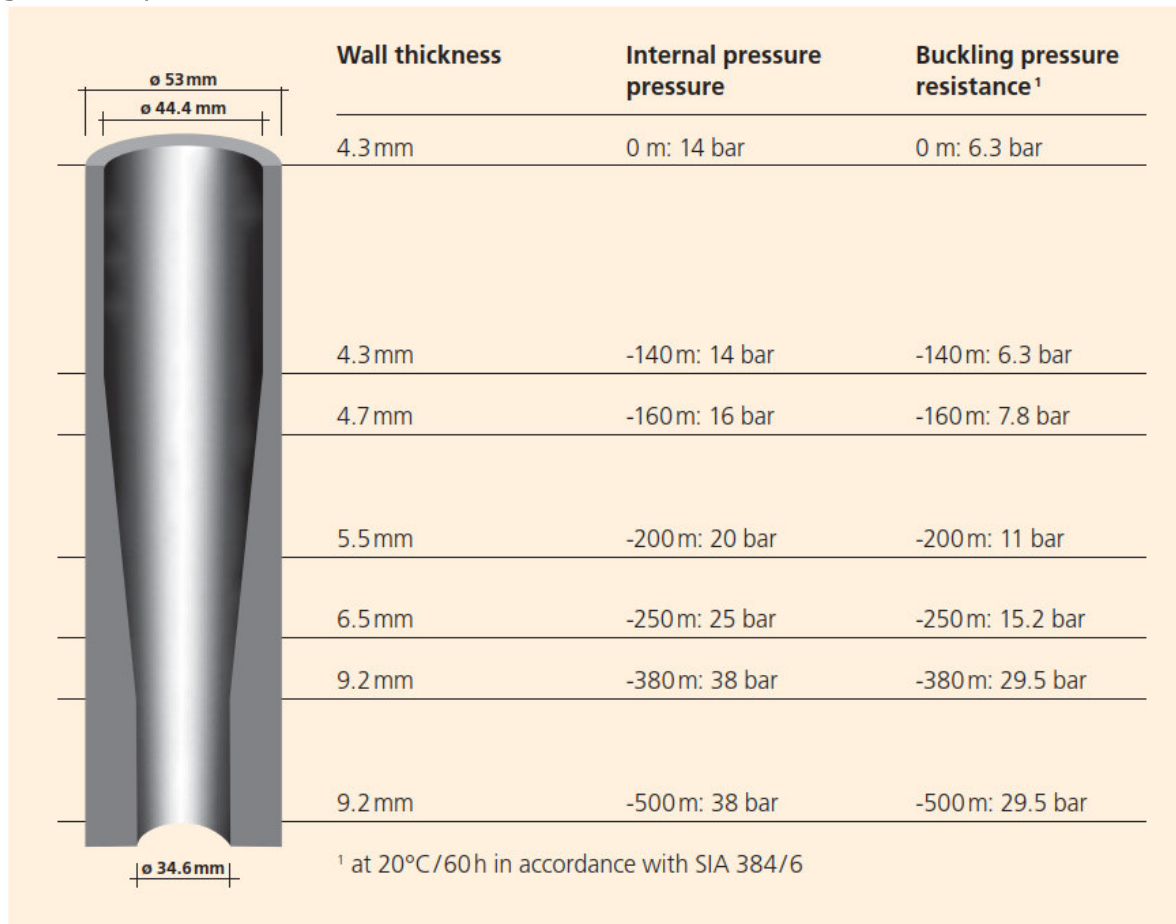
1. GEROtherm® FLUX 53 mm probe on the reel, ready for delivery to the site (photo credit: Orllati Géothermie SA)
2. GEROtherm® FLUX 53 mm geothermal probe and injection piping ready to sink (photo credit: Orllati Géothermie SA)
3. GEROtherm® FLUX 53 mm geothermal probe being lowered (photo credit: HakaGerodur)
4. Thickness distribution of the walls and resistance to the pressure of the GEROtherm® FLUX 53 mm geothermal probe
5. Pressure loss comparison between GEROtherm® FLUX conical probes and DUPLEX cylindrical probes

Certification

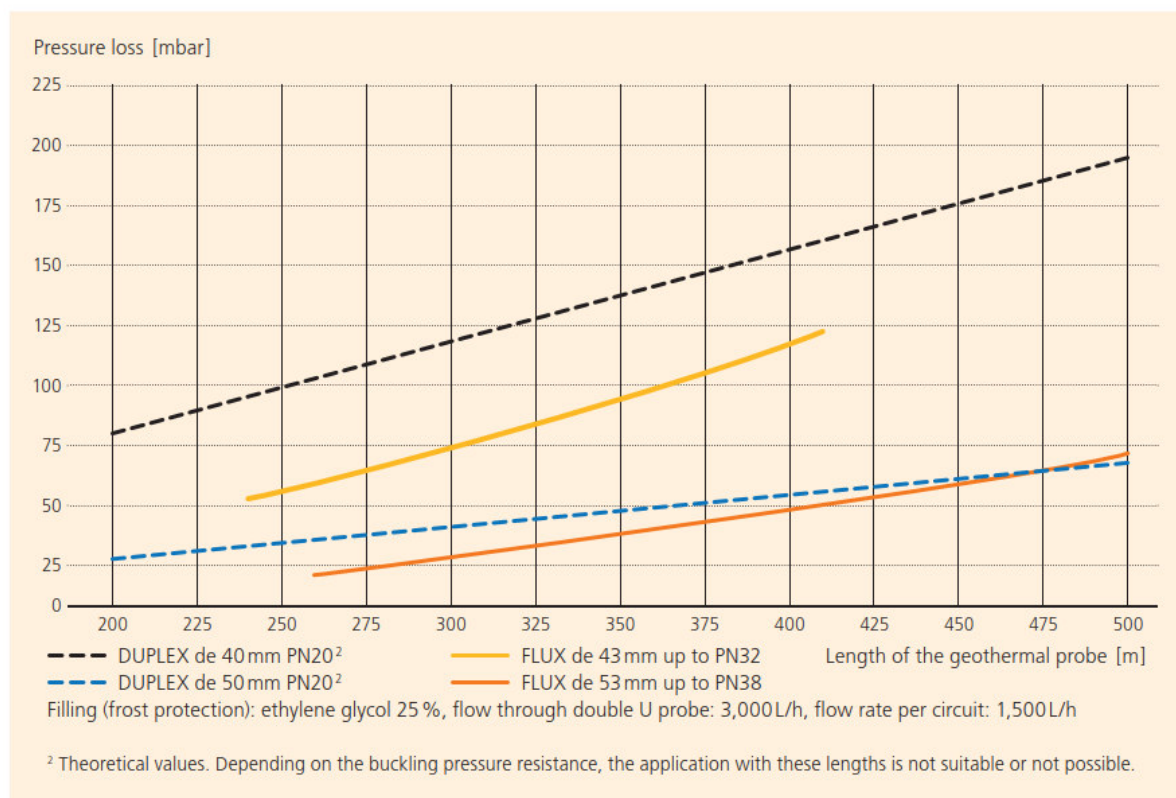
The complete geothermal probe is certified and regularly monitored by the Süddeutsches Kunststoff-Zentrum (SKZ). SKZ certificate A724



Thickness distribution of the walls and resistance to the pressure of a GEROtherm® FLUX 53 mm geothermal probe



Pressure loss comparison: GEROtherm® FLUX and DUPLEX



Project details

Site
Villa
1260 Nyon

Drilling company commissioned with the work



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

Product used

1 × conical GEROtherm® FLUX
53 mm geothermal probe, up to a PN of 38 bar
350 metres long



For logistical reasons (weight), the double-U probe was packed and delivered as two single-U probes.



HakaGerodur AG
Giessenstrasse 3
CH-8717 Benken
T +41 (0)55 293 25 25
verkauf_ews@hakagerodur.ch
www.hakagerodur.ch