



Image source: BERN 131 (www.bern131.ch)

Project report

GERO^{therm}® DUPLEX geothermal probes

BERN 131
3014 Bern



BERN 131 boasts eye-catching architecture and a striking location in the middle of the Wankdorf motorway junction. The site is seen by thousands of drivers and rail passengers every day. For tenants, this means both high visibility and excellent connections with every form of transport. The basic shape of the building complex is a regular circular triangle. BERN 131 has a variety of different uses and guarantees an exceptionally

high-quality working environment. Once complete, it will also feature a catering area ideal for meeting up with other people that includes facilities for company events, workshops and seminars. A total of 50 boreholes, each 165 metres long, were drilled for geothermal probes. All boreholes are located below the floor slab and provide up to 280 kW of thermal output during the heating period. In the summer months, the heat from the building is fed into the probe field and thus

serves as an underground storage tank. The building is cooled via free cooling. Thanks to its sustainable timber hybrid construction with in-house electricity production and innovative, energy-efficient building technology concept combined with a geothermal heat pump, the building achieves a reduced carbon footprint and enables reduced energy requirements when fully operational.





1. Visualisation, view from motorway (image source: Atelier 5)
2. Figure-ground diagram for BERN 131 (image source: Atelier 5)
3. Site photo for BERN 131 (image source: Geotherm AG)
4. Two drill rigs in use at the BERN 131 construction site (image source: Geotherm AG)

Fifty GEROtherm® DUPLEX geothermal probes were used for the probe field. Geotherm AG Düdingen, which specialises in geothermal probe drilling, was on site with two drill rigs and performed the technical drilling process. The boreholes were then

backfilled. Each geothermal probe was tested and the results recorded using a measuring device for pressure and flow tests (in accordance with SIA 384/6). The probes are connected via five of our type 2 GEROtherm® manholes. These are equipped with plastic ball

shut-off valves, filling valves and draining valves. This allows optimal integration of each geothermal probe into the probe network so they can achieve the best performance.



Project data

Construction site



BERN 131

BERN 131
Stauffacherstrasse 131
3014 Bern
www.bern131.ch

Owner



SWISS PRIME SITE

Swiss Prime Site
Alpenstrasse 15
6300 Zug

Real estate developer and general contractor



Losinger Marazzi AG
Wankdorfallee 5
3014 Bern
www.losinger-marazzi.ch

Drilling company



GEOTHERM

Geotherm AG
Birchstrasse 20
3186 Düringen
www.geotherm.ch

Architecture

Atelier 5

Atelier 5
Sandrainstrasse 3
3001 Bern

HVAC, sanitary, electrics



AMSTEIN+WALTHERT

Amstein + Walthert Bern AG
Hodlerstrasse 5
3001 Bern

Products used

- 50x GEROtherm® DUPLEX geothermal probes, de 40 mm, length 165 metres
- 1x type 2 GEROtherm® manhole with access ladder, SAVE 125, 11x 50mm with ball valve
- 1x type 2 GEROtherm® manhole with access ladder, SAVE 125, 9x 50mm with ball valve
- 1x type 2 GEROtherm® manhole with access ladder, SAVE 125, 10x 50mm with ball valve
- 1x type 2 GEROtherm® manhole with access ladder, SAVE 125, 9x 50mm with ball valve
- 1x type 2 GEROtherm® manhole with access ladder, SAVE 125, 11x 50mm with ball valve



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