HakaGerodur

Image source: SQUAREBYTES

Project report

GEROtherm® geothermal probes

Village im Dritten
Otto-Preminger-Strasse, Vienna, Austria


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Image source: PORR Bau GmbH

The Village im Dritten project, located in Vienna's third municipal district, is one of the city's most significant inner-city development projects and represents a pioneering approach to sustainable and forward-looking living and working. Covering an area of over 11 hectares, it will see the creation of a diverse urban district that includes both residential and commercial space, extensive local services and leisure offerings, and educational and childcare facilities. The project, which is scheduled for completion in 2027, will include around 1,900 apartments, complemented by public areas and green spaces.

The energy concept sets new standards in urban district development. An innovative combination of geothermal probes, photovoltaic installations and district heating will ensure a particularly climate-friendly energy supply and make the district largely self-sufficient. The project's architecture and construction methods prioritise the use of sustainable and ecological materials.

This is also reflected in the awarding of the DGNB Gold pre-certificate for urban districts, making the project a showcase model for environmentally conscious urban development.

The Village im Dritten underscores the city of Vienna's commitment to implementing sustainable urban development projects that provide an environment with high quality of life for both current and future generations. It serves as a prime example of how ecological, social and economic aspects can be combined harmoniously.

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The energy concept centres around what will, in future, be the largest geothermal probe field in Austria.
Consisting of 500 geothermal probes with a depth of 150 metres, the project involves the creation of Austria's largest geothermal probe field to date, with a total length of 75,000 metres. The installation uses GEROtherm® DUPLEX geothermal probes with an outer diameter of 32 mm made from polyethylene-100 with resistance to cracking (PE-100 RC). The probes are distributed across 16 construction fields and will be installed in two construction phases.
A higher-level anergy network transports the brine to the heat pumps within the buildings. This network enables the efficient use of renewable energy sources and stores excess heat from the buildings in the ground over the summer months to be used again in winter. The probe field is a central component of the district's sustainable energy concept.


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Project details

Construction project

Village im Dritten
Otto-Preminger-Strasse
1030 Vienna, Austria
https://villageimdritten.at/

Client:

VID Energie Infrastruktur GmbH & Co KG
Trabrennstrasse 2b
AT-1020 Vienna, Austria
Fabian.Resch@big.at

Drilling company

PORR Bau GmbH – Special Civil Engineering department
Absberggasse 47
1100 Vienna, Austria

1. Drilling process for geothermal probes
2. Geothermal probe construction site
3. GEROtherm® PUSH-FIX
4. GEROtherm® DUPLEX geothermal probe
5. Installation of GEROtherm® geothermal probes
6. GEROtherm® DUPLEX geothermal probes at the construction site
7. Drilling process for geothermal probes
8. Installed geothermal probe

Products used

- 500 GEROtherm® DUPLEX geothermal probes PE100-RC, da 32 × 3.0 mm, length 150 m, S5 SDR11, double-U 4 × 32 mm
- 500 GEROtherm® grouting tubes PE-HD, da 25 × 2.3 mm, length 152 m, S5 SDR11
- 500 GEROtherm® PUSH-FIX impact-resistant sleeves in structural steel, holder for double-U 32 mm

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