



Image source: RLC Architekten AG (www.rlc.ch)

Project report

**GEROthem[®] VARIO geothermal probes and
SAVE 250 collector/distributor**

JUST International AG, high-bay warehouse, 9424 Rheineck



A new building that sets new standards both visually and in terms of energy efficiency. The fully automated high-bay warehouse will feature a striking special façade that exudes an unusual lightness in contrast to structures with comparable volumes and uses. This is achieved by incorporating plant motifs underneath the ventilated façade, which is comprised of folded and perforated sheet metal panelling. The partially visible

plants create a link to the high-quality and sustainable products from JUST. Heat is generated for the new high-bay warehouse and all existing JUST International AG buildings on Langenhagstrasse in Rheineck by a brine-water heat pump, which is located in the new technical centre in the basement. A total of 62 conical GEROtherm® VARIO geothermal probes, each 200 metres long, will be drilled for energy extraction. The PV system

with its own salt battery storage will be installed on the roof of the high-bay warehouse and the front office, and also as an integrated part of the south façade. In future, deliveries will be made via three further loading bays with three stations for picking customer orders. New offices, washrooms and recreation rooms for employees will also be built. The high-bay warehouse is scheduled for completion by the end of December 2024.



1. Drilling rig in use with the staged conical GEROtherm® VARIO geothermal probes (image source: HASTAG St. Gallen Bau AG)
2. Connection cables ready for the later building inlet (image source: HASTAG St. Gallen Bau AG)
3. Collector/distributor for combining the geothermal probes in the technical centre (image source: HASTAG St. Gallen Bau AG)
4. Building excavation (image source: HASTAG St. Gallen Bau AG)
5. Laying the connection cables (image source: HASTAG St. Gallen Bau AG)
- 6./7. Connection cables and building inlet (image source: HASTAG St. Gallen Bau AG)

Sixty-two GEROtherm® VARIO geothermal probes were used for the probe field. Pressure loss on the conical, pressure-optimised GEROtherm® VARIO geothermal probes is significantly reduced in comparison with a PN20 geothermal probe, resulting in lower energy requirements for the circulation pump. HASTAG St.

Gallen Bau AG, which specialises in drilling geothermal probes, was on site with the appropriate drilling equipment and carried out the drilling professionally. The boreholes were then backfilled. The probes are connected using the GEROtherm® SAVE 250 collector/distributor, which is equipped with a plastic ball shut-off

valve, a filling and emptying valve, and flow regulating valves. This allows the optimal integration of each geothermal probe into the probe network and correct hydraulic matching of the various circuits to each other to achieve the best performance.



Project details

Construction site



JUST International AG
High-bay warehouse
9424 Rheineck, Switzerland

Client



Just International AG
Dorf 62
9428 Walzenhausen, Switzerland
<https://www.just.swiss>

HVAC engineer



Vadea AG
Arton Dauti
Heiligkreuzstrasse 28b
9008 St. Gallen
<https://vadea.ch>

Architects

RLC

RLC Architekten AG
Thalerstrasse 10
9424 Rheineck, Switzerland
<https://www.rlc.ch>

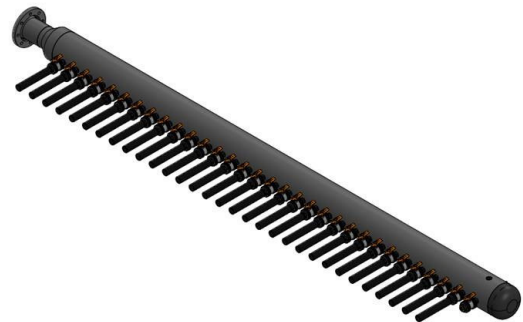
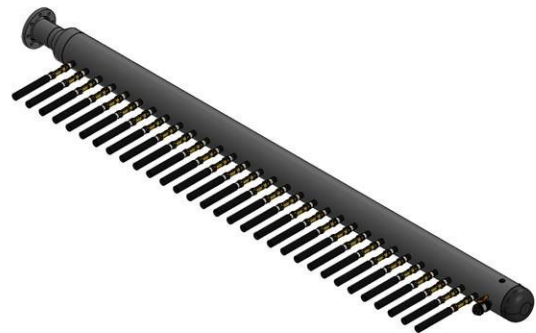
Drilling company



HASTAG St. Gallen Bau AG
Waldmannstrasse 9a
9014 St. Gallen, Switzerland

Products used

- 62 x GEROtherm® VARIO geothermal probes, de 40 mm to PN20, length 200 metres
- 2 x GEROtherm® SAVE 250 flow collectors with 31 connections 50 mm and inline setter
- 2 x GEROtherm® SAVE 250 return manifolds with 31 connections 50 mm and ball valves
- 4 Ebro shut-off valves
- Approx. 4,000 metres of GEROtherm® d50 mm PN16 connecting pipes supplied on reels, incl. all electrofusion fittings



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