

TERRA-DRILL 150x7 V for geothermal power

A residential building in the Swiss city Brittnau required a vertical bore for geothermal power for a depth of 150 m (500 ft). The first 14 m (47 ft) were protected by casing pipes OD 152 mm (6"). Then the DTH hammer 4" with a 127 mm (5") drill bit finished the bore up to the final depth.



**Vertical drill
TERRA-DRILL 150x7 V**



The TERRA-DRILL 150x7 V in its transportation mode.



The rubber crawler can be adjusted hydraulically in its width (telescopic crawler).



The TERRA-DRILL 150x7 V is only 0.95 m (3.14 ft) wide in its transportation mode. So it can drive through 1.0 m (3.3 ft) wide doors.

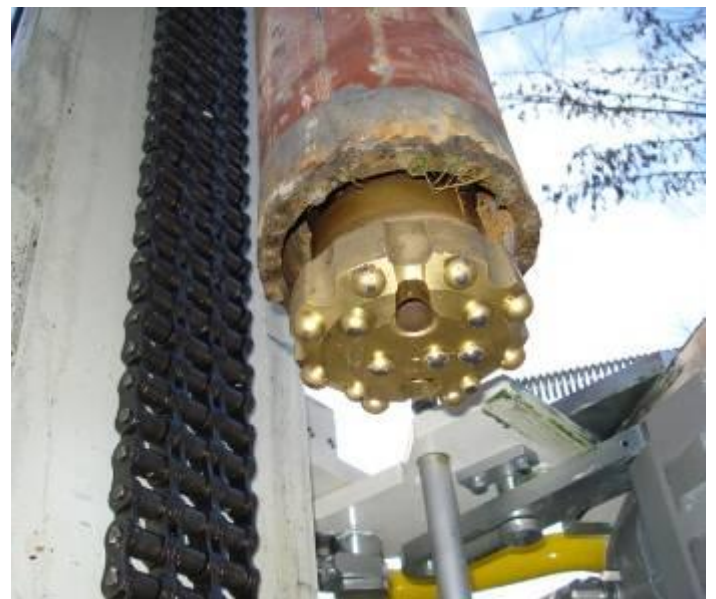


This remote control controls the complete drill. The left picture shows the triplex clamping and breaking system. The two upper clamps swing sidwise hydraulically.

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The handling device lifts a new drill rod and a new casing simultaneously into the drill.



The DTH hammer 4" with its \varnothing 127 mm (5") drill bit.



The air compressor, both mud containers and the power pack for the TERRA-DRILL 150x7 V are positioned outside of the drill spot.



The next drill rod and casing is screwed in.

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The remote control for the TERRA-DRILL. It allows the operator an optimum position with the best view.



The power pack for the TERRA-DRILL.



As soon as the rock bottom is reached with the casings, the preventer is assembled at the bottom. Then the drill rods continue the bore without the casings.



The DTH hammer 4" drills down to the final depth. Then the DTH hammer and the drill rods are disassembled.



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The DTH hammer has been disassembled. Now the geothermal sonde is prepared.

An iron weight is assembled at the geothermal sonde. This weight pulls the sonde downwards in the borehole.



The geothermal sonde 4x HDPE 40 mm (1.57") with the filler pipe OD 25 mm (1") and the 25 kg (55 lbs) weight is slid into the bore hole via the sonde guide.



The geothermal sonde is lowered down into the bore hole.

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The geothermal sonde is lowered down to the final depth. The pipes are filled with water and put under pressure, before the bore hole is filled.



The grout pump mixes the filler material with water and pumps it into the bore hole.



The bore hole is filled from the bottom to the top until the filler material gets out of the bore hole.