

Farmyard underpassing with TERRA-JET TJ 1804 S



The district heating connection on a former farmyard in Upper Austria had to be newly installed. The connection needed to be laid in the shortest way diagonally across the farm and the adjacent forecourt. As a result a challenging drilling job was given particularly due to expected interference in the building in respect to the rebars in the floor plate and the fix installed metal racks.

The contractor **Wagner Wasser & Wärme** used his new horizontal directional drilling machine **TERRA-JET TJ 1804 S** to face that challenge. The rig was installed at the backside of the farm. From there the 54 m (180 ft) pilot bore underneath the building and the forecourt was realized. Finally a pipe bundle around the district heating pipe with outer diameter 162 mm (6.4") was pulled back.

The HDD machine TERRA-JET TJ 1804 S is equipped with 2 m (6.6 ft) long drill rods, which allow a minimum bending radius of 25 m (82 ft). The torque of 1'800 Nm (1'350 ft.lbs) and the thrust and backream force of 40 kN (4 tonnes, 8'800 lbs) allow bore channels up to \varnothing 300 mm (12"t).

Key data jobsite:

Contractor:	Wagner Waser & Wärme
Place:	Taufkirchen (Austria)
Bore length:	54 m (180 ft)
Backreaming:	\varnothing 280 mm (11")
Pipe bundle:	district heating pipe OD 162 mm (6.4") 1 x HDPE OD 63 mm (2.5") 2 x HDPE OD 40 mm (1.6") 1 x HDPE OD 32 mm (1.25")
Medium:	district heating
Underground:	marl and clay
Peculiarity:	passage under building



Bore path under the former farm and the forecourt.

Horizontal Directional Drilling System TERRA-JET TJ 1804 S

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As expected, the locating underneath the building became a bit problematic with the imprecise, sometimes missing signals due to passive interference. But since there were no existing cables nearby and thanks to the relatively stable pitch signal it was possible to drill tolerably precise and underpass the farm. The above picture shows the arrival in the target pit.

Along with the district heating pipe \varnothing 162 mm (6.4") further preventive empty pipes were installed. In total a bundle of 5 pipes were pulled back, which required a backreaming of 280 mm (180 ft).

Wagner Wasser & Wärme has a specifically equipped trailer that includes not only the mixing and pumping unit and drilling tools, but also the TERRA-JET TJ 1804 S for transport. That way they are efficiently organized for executing such pipe installation projects.



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TERRA AG Tel : +41-62-749 10 10
Hauptstrasse 92 Fax: +41-62-749 10 11
6260 Reiden E-Mail: office@terra-eu.eu
Switzerland www.terra-eu.eu