


## TERRA-JET TJ 1804 S The little power house

Swiss made 



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## German Contractor

The German contractor Plamann from Werder at the Havel has purchased the powerful 4 tonnes horizontal directional drill TERRA-JET TJ 1804 S because its unique double cylinder drive („Direct Ram“) convinced him. The contractor Plamann is a pipe and cable laying company with 50 employees. The company has been founded 32 years ago. Today it is led by Ralf Plamann in second generation. The first bores with their new TERRA-JET TJ 1804 S had been a real challenge. Nevertheless the machine successfully finished the jobs.



Pic 1: The 4 tonnes HDD machine is moving out of the truck.

## Everything on the truck

The idea of Ralf Plamann has been that the complete HDD-Machine should suit on a normal truck. Therefore TERRA made a three dimensional plan of loading. As shown on the photos, everything fits well on the truck. The HDD-machine, the mixing and pumping station with two 2'000 liters (500 gal) tanks and all drilling tools were installed on the truck at the manufactory of TERRA.



Pic.2: The complete mixing and pumping system is on the truck.

### Job site report

This first jobsite required detailed planning and precise drilling. Three air low bores had to be drilled over a length of 41 m (135 ft). 2x HDPE pipes OD 110 mm (4") and 1x HDPE pipes OD 160 mm (6") for a 30 kV electrical cable had to be pulled in.

Narrow space made the drilling challenging. The drill path went alongside an existing voltage cable, which made locating difficult. Additionally it was necessary to keep a minimum distance to existing trees.

The operator decided to drill all 3 pilot bores parallel in relatively close distance, but in different heights (1.50 m, 1.70 m and 2.80 m) (5 ft, 6 ft and 8.5 ft).



Pic. 3+4+5: The ground was filled with stones, concrete and other obstacles down to a depth of 2 m (6.6 ft). Deeper they found sandy clay.



Bild 6+7: The TERRA-JET in drilling position. Due to the extreme entry angle of up to 67% the required drill depth could be reached immediately. The anchoring with the two ground anchors is fast and easy.

## Pilot bore and backreaming

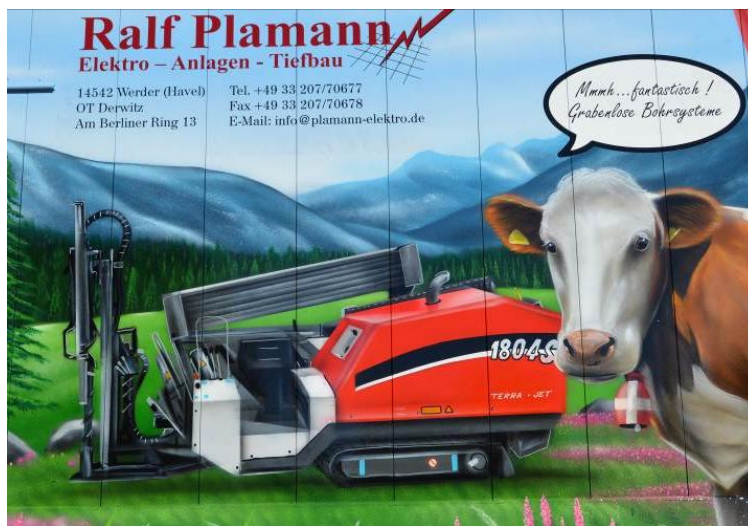
1'600 Nm of torque @ 180 rpm at the drill rods

Pic. 8: The first 2 pilot bores could be finished after 3 hours successfully. The third bore in a depth of 2.80 m (8.5 ft) was finished after 1.5 hours.



Pic. 9: The back reaming and pipe pulling could be finished fast with a 160 mm (6") reamer for the 110 mm (4") pipe. The pipes were pulled in after 45 minutes.

Pic. 10: Also the third pipe OD 160 mm (6") could be pulled in easily with a reamer 215 mm (8").



Pic. 11: This successful jobsite throws the motto of the contractor Plamann:  
" Mmmh...fantastic! Trenchless Technologies"

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