

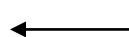
TERRA MINI-JET MJ 1600 drills in the city Chur in the Alps



In the Swiss city Chur a new house connection had to be laid underneath the Masanser Street, which goes directly to the highway. The house connection required a protection pipe OD 90 mm (3.5") for a gas line. It had to be laid trenchless.

The contractor HEW AG received the order from the Authorities Industrielle Betriebe Chur IBC.

The ground consisted of very compacted gravel. Therefore the TERRA MINI-JET MJ 1600 was used with the TERRA-ROCK Air Percussion Head \varnothing 65 mm (2.6"). The pilot bore was drilled with a directional rock bit \varnothing 76 mm (3"). For the expansion of the bore hole this rock bit was replaced by a hole opener bit \varnothing 110 mm (4.3"), which drilled through the bore channel for a second time. Then the pipe OD 90 mm (3.5") was pulled in.

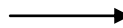


The TERRA-ROCK Air Percussion Head 65 mm (2.6") with the directional rock bit \varnothing 76 mm (3").

**Horizontal Directional Drilling (HDD)
TERRA MINI-JET MJ 1600**



The TERRA-ROCK Air Percussion Head reaches the target pit.



The pilot bore was finished. Then the hole opener bit \varnothing 110 mm (4.3") was assembled.



The bore channel has been successfully expanded up to 110 mm (4.3").



The protection pipe OD 90 mm (3.5") has been pulled in. Then the gas line could be pushed through the protection pipe.

