


TERRA-JET TJ 3008 ES
Fiber optic cable laying in gravelly
underground in Austria

Swiss made 



TERRA-JET TJ 3008 ES

Further development in close coordination with the client

Fiber optic cable laying in gravelly underground and confined space conditions

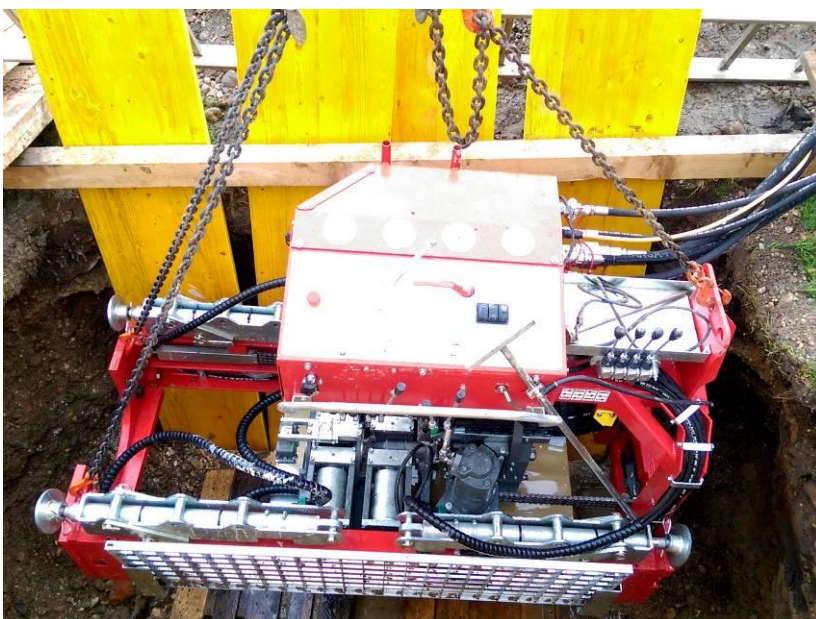
GL Bau GmbH is the trenchless company within the **Spindler Group** in Upper Austria. Its main activity is pipe installation with HDD drilling for energy and telecom. Currently their order backlog is full with bores for fiber optics in Upper Austria and the area around Salzburg. In particular the area of Salzburg provides some extra challenges for the GL Bau GmbH. Firstly, the local geology is full with gravelly underground, which belongs to the more demanding underground for HDD drilling. Secondly, most drill job sites allow only narrow room for installation of drilling equipment. That is why GL Bau GmbH has enlarged its HDD machine fleet with the new **TERRA-JET TJ 3008 ES**.

Further development of the powerhouse TERRA-JET TJ 3008 ES

The **TERRA-JET TJ 3008 ES** has been further developed in close cooperation with the customer requirements of GL Bau GmbH. The driving saddle was completely redesigned in order to ensure an even more reliable operation also under maximum load. The new power pack is driven from a 55 kW Hatz engine. The additional 11 kW are used for increased revolution speed at the drill rod. Particularly for the reaming and pipe pulling process, this brings a significant gain in productivity. Moreover, two gears for drilling are now available and the operator can choose between maximum revolution speed of 135 rpm (and reduced torque of 2'000 Nm) and maximum torque of 3'000 Nm (and reduced revolution speed of 90 rpm). That can be done through simple switching a hand lever.

With 8 metric tons thrust- and pullback-force, as well as 3'000 Nm torque, the TJ 3008 ES has the necessary power reserve for the normally smaller pipe dimensions in fiber optic projects to realize drilling distances of even 100 m in demanding gravelly underground.

The TJ 3008 ES is designed with the approach of having driving components separate to the actual compact drilling rig. Although this requires a fix set up of the power pack and mixing and pumping unit including bentonite tank on the truck, that allows installation and working in job sites with confined space conditions. The truck only needs to be placed near the actual installation site, from which the pit launched rig is supplied with power and bentonite through hoses. This corresponds to exactly the requirements which GL Bau GmbH is facing in the area of Salzburg.



Pic 1 + 2: The TJ 3008 ES can be installed in pits of minimal lengths of 2.10 m.

Trenchless installation of water pipe in a steered path

TERRA-JET TJ 3008 ES



Pic 3: Drill rods allow a bending radius of 24 m.



Pic 4: Drill master Thomas doing the pilot bore gradually steered on the total length of 42 m.

In Frankenburg / Upper Austria a new drinking water pipe with outer diameter 90 mm had to be installed. The course of the pipe was meant to follow the road, so that the later installed valves for house connections were to be laid at the road rim but still within the asphalt surface.

The starting pit for the TJ 3008 ES was chosen in a way that it could be used to drill in both directions, road up- and downwards. With 1 m drill rods and a machine length of 2 m the compact pit launched HDD rig is ideal for urban areas with confined space conditions. The drill starts directly where the pipe needs to be installed, hence no additional drill meter and pipe length are needed.



Pic 5: Foreman Markus locating the drill head with the DigiTrak F5.

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Working in smallest pits



Pic 6: Accurate reach of the drill head in the target pit after the pilot bore.



Pic 7: The pressure water pipe 90 mm was quickly pulled in with the TJ 3008 ES.

The TJ 3008 ES allows pulling the drilling tools and pipe into the machine at the end of the bore. As a result drilling tools can be dismantled within the drilling rig and the shortest possible starting pit size can be realized. The break-apart system is loosely supported for that purpose.

Pic 8: The satisfied team of GL Bau and TERRA after the first bore and commissioning of the new TJ 3008 ES.



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