



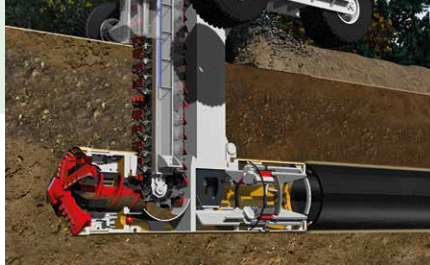
PIPE EXPRESS®: ECO-FRIENDLY AND COST-EFFICIENT INSTALLATION OF PIPELINES.

- Pipeline installation in a single step
- High installation speed
- Low personnel requirements
- High degree of work safety
- Less jobsite equipment
- High degree of standardization possible
- Eco-friendly:
 - Smallest-possible route width
 - Minimum earth shifting
 - Minimum disturbance of flora and fauna
 - No groundwater lowering along the route





Surface vehicle with control cabin.



Tunnel boring machine with trenching unit and buggy.



Herrenknecht Pipe Thruster.

MINIMIZED LANDSCAPE ENCROACHMENTS.

REQUIREMENT

ECO-FRIENDLY INSTALLATION OF LONG PIPELINES

- Lengthy installation stretches
- High installation speed
- Less jobsite equipment
- Minimum disturbance of flora and fauna
- Minimum route width

Both the utilities and construction industry are faced with major challenges in ensuring that the population is dependably supplied with oil and gas, but also with electricity, fresh water and district heating. On the other hand, installing the necessary pipelines – some of which have an overall length of more than 1,000 kilometers – represents a considerable encroachment into the environment. The usually deployed open-trench installation in ditches substantially alters the natural environment (flora and soil) – changes that are still evident after many years and after complex landscape recultivation. To carry out the required work (excavating ditches, temporarily storing soils and rock, material handling and material stores) the

need is for cleared corridors of over 40m in width across the entire length of the route. The Pipe Express® operation has been developed to both minimize the extent of these encroachments into the natural environment and to shorten them. As a result, the required route width can be reduced by up to 70%.



BENEFITS AND MODE OF OPERATION OF PIPE EXPRESS®.

SOLUTION

PIPE EXPRESS®

- Drive length: > 2,000m
- Pipeline diameter: 900 – 1,500mm (36" – 60")
- Overburden: 500 – 2,500mm
- Advancing rates of up to: 1.2m/min

Pipe Express® allows pipelines of a total of 2,000 meters in length to be installed in a semi-trenchless process. This involves removing the soil for the pipeline to be installed using a TBM and transporting it to the surface via a trenching unit. The TBM is tracked by a surface vehicle which consists of a number of individual modules. This vehicle provides the requisite logistics for operation and control of the entire system. The required thrust for boring and pushing along the pipeline is being provided by a

Herrenknecht Pipe Thruster. In a first reference project in the Netherlands at the end of 2012, the machine worked with tunnelling speeds of up to 1.20m per minute.



Sponsored by:



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Building the future together. Herrenknecht AG is a technology and market leader in mechanized tunnelling. Herrenknecht is the only company in the world to supply high-tech tunnelling machinery for all ground conditions and in all diameters.

HERRENKNECHT



Tunnelling Systems