

Guided auger boring

Most economical installation of small pipes

Examples from Praxis



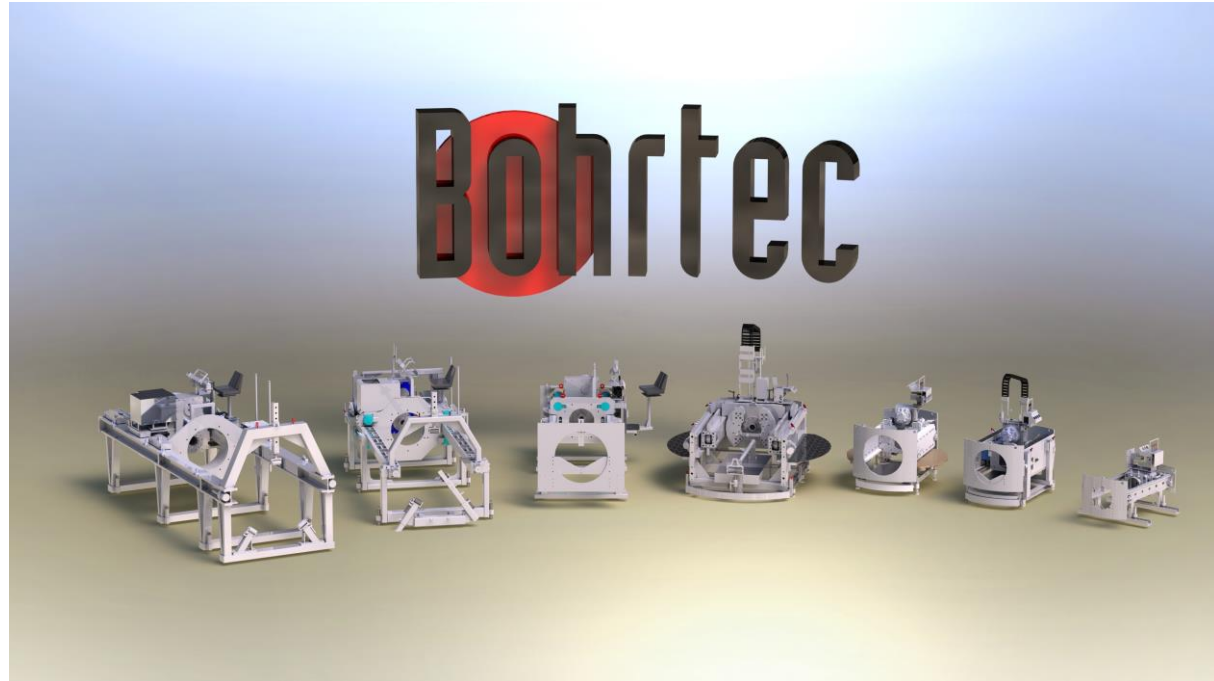
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Bohrtec

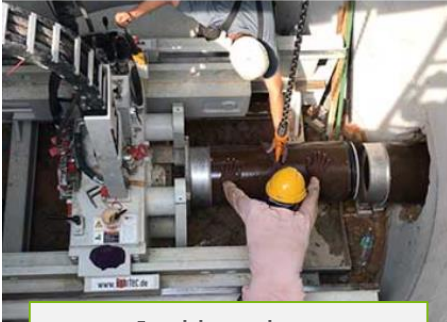
For over **35 years** Bohrtec has been designing and manufacturing auger boring machines for the trenchless construction of sewers. Bohrtec machines have clearly demonstrated their superiority over open trench construction with regards to technical, economical, and ecological aspects. All Bohrtec machines can be operated guided or non-guided. Compared to conventional machines the machines are low-priced and simple to use.

Bohrtec auger boring machines and equipment are the perfect solution for **trenchless installations of small diameter pipes**.

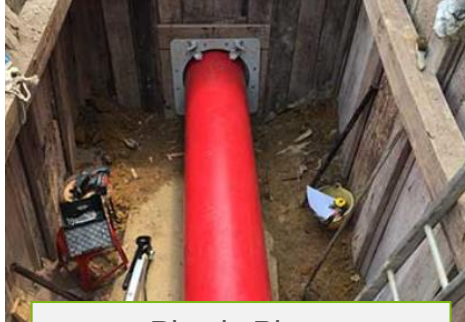


Different applications for guided auger boring

Sewer lines



Jacking pipes



Plastic Pipes



House connections

Drainage Systems



Pipeline Crossings



Pipe roofs



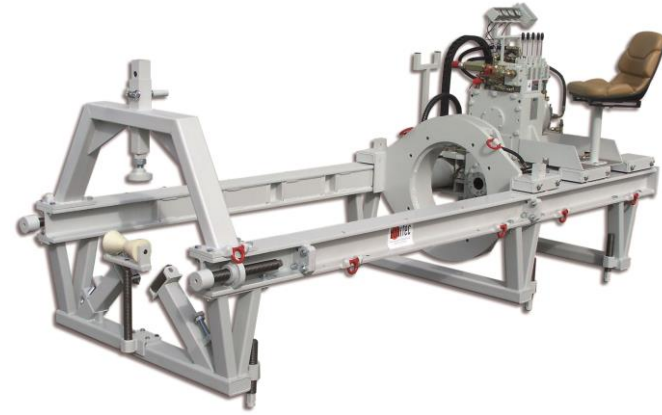
Machine types



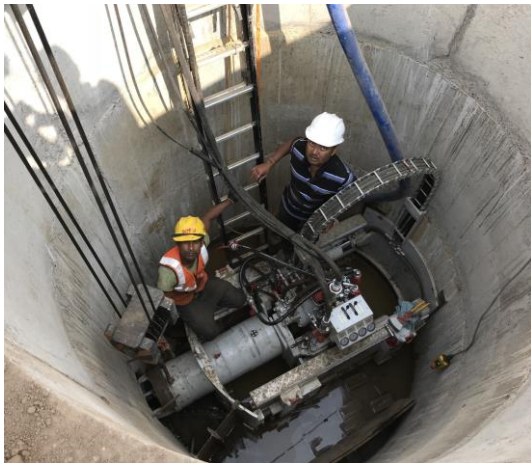
Compact Machines



LSC-Machine



Long frame machines



Compact machines in very small shafts



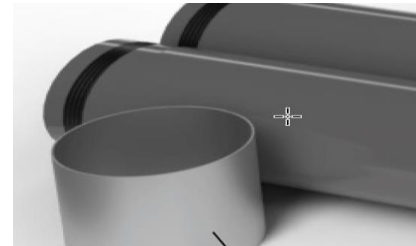
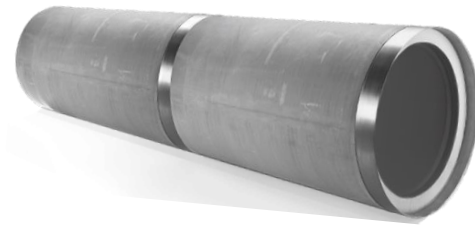
BM400 in 2 m round launch shaft
1 m long product pipes



BM500 in 3,2 m round launch shaft
2 m long product pipes

Product Pipes

- Clay Pipes
- Concrete Pipes
- GRP Pipes
- Steel Pipes
- PP Pipes
- PE Pipes
- PVC Pipes



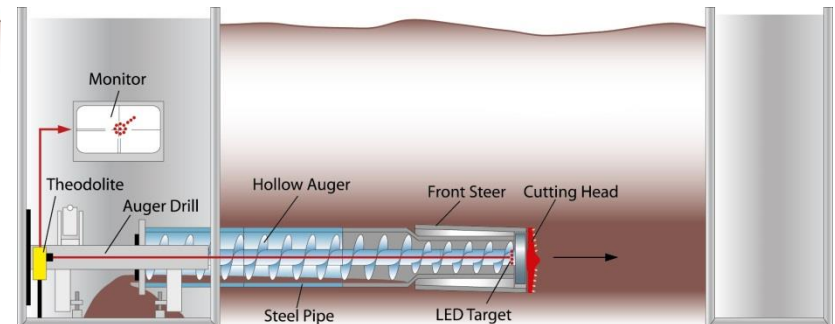
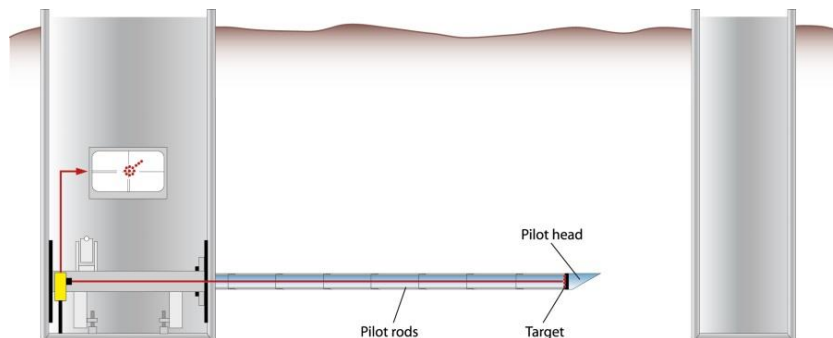
Two methods for different ground conditions

Different Solutions for different Ground Conditions

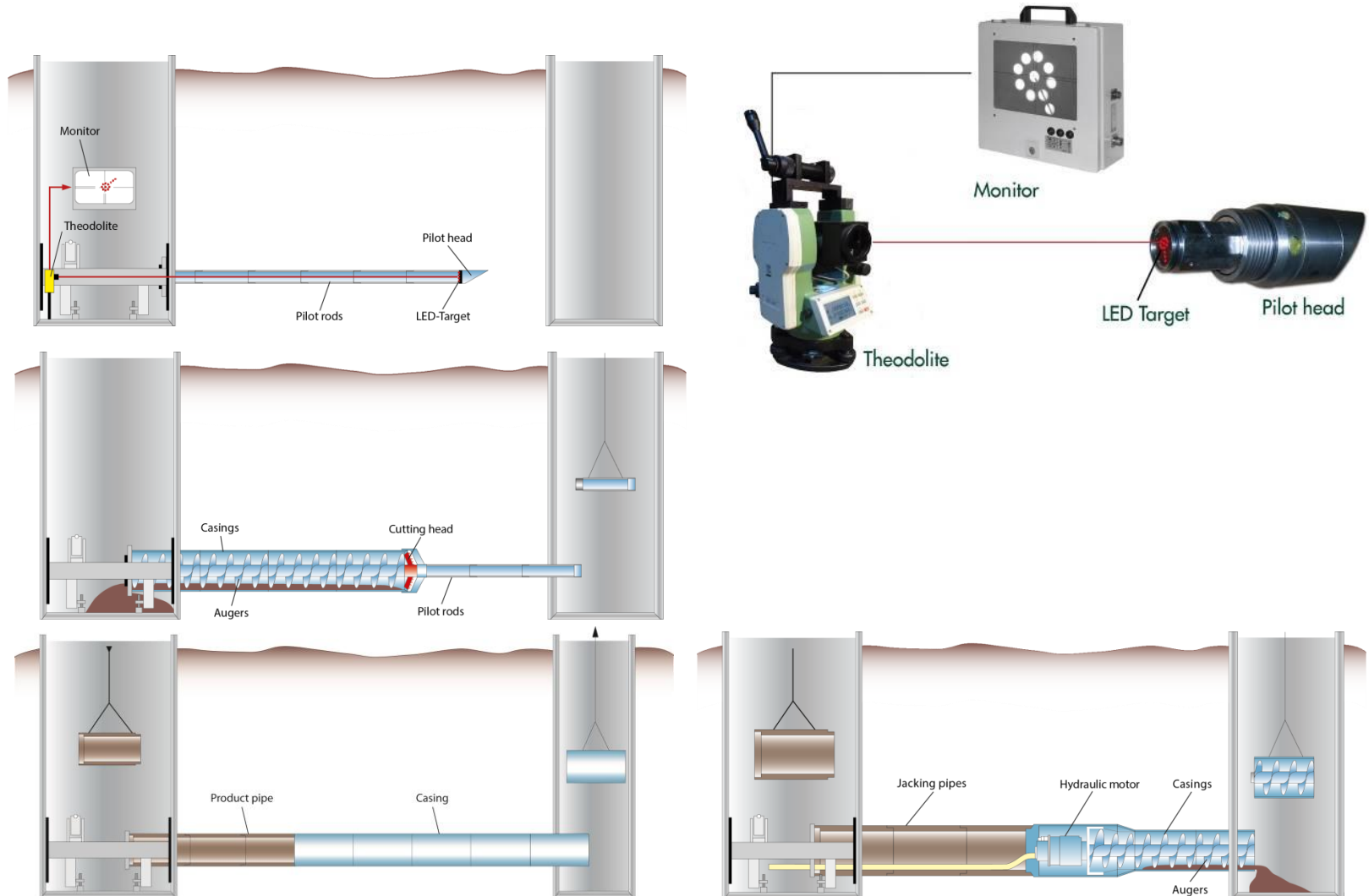


Soil Suitable for **Pilot Pipe Method**
SPT values < 35

Soil Suitable for **Front Steer Method**
Non displaceable soil and rock



Pilot Pipe method – Procedure for jacking pipes



Pilot Pipe method – Procedure for jacking pipes

Pipe jacking in Israel

Owner: May Ramat Gan

Contractor: Tamam Yosef and sons Techn.

Trenchless installation of gravity sewers with GRP jacking pipes ID 500 mm (OD 616 mm) in the center of Tel Aviv

BM 500 S with temporary steel casings 406 mm

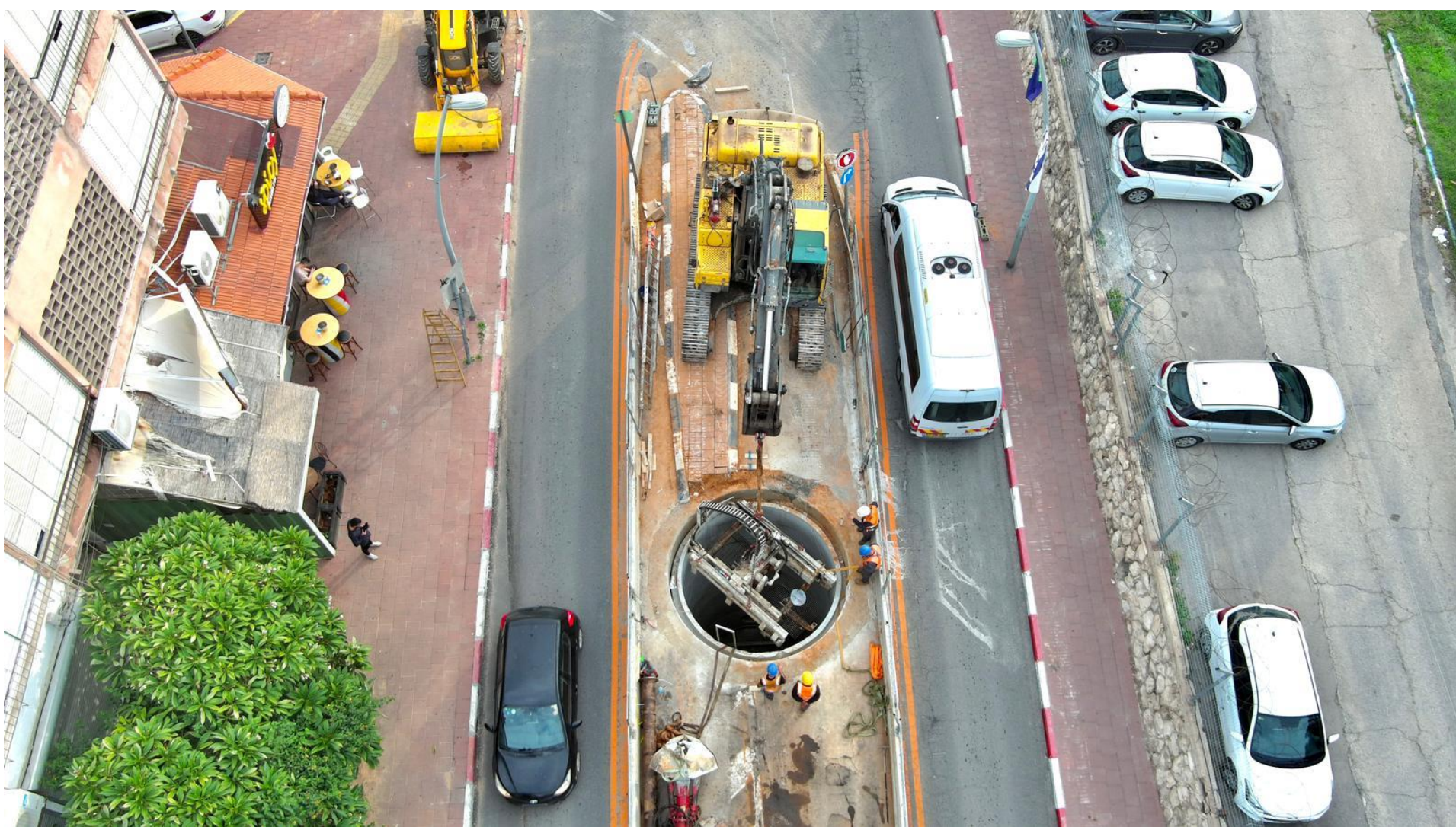
Displaceable sandy clay

Single drive length up to 105 m

Pilot Pipe method – Procedure for jacking pipes



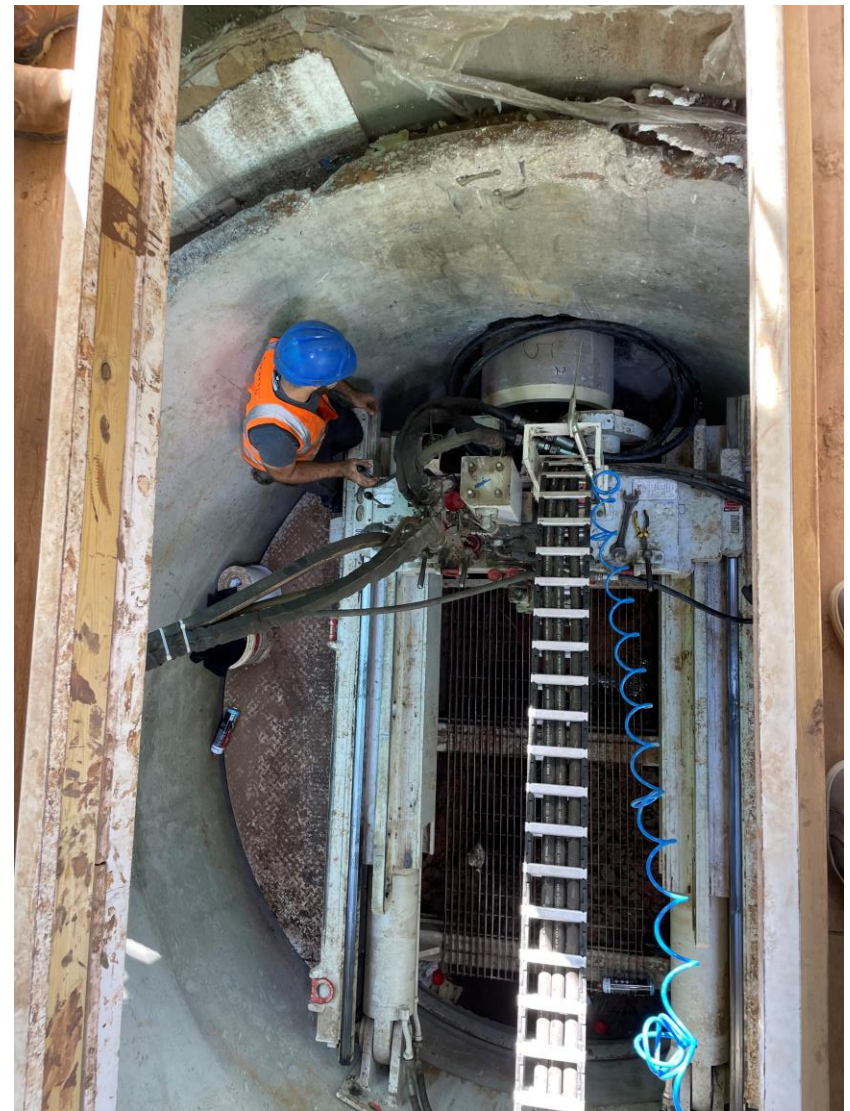
Pilot Pipe method – Procedure for jacking pipes



Pilot Pipe method – Procedure for jacking pipes



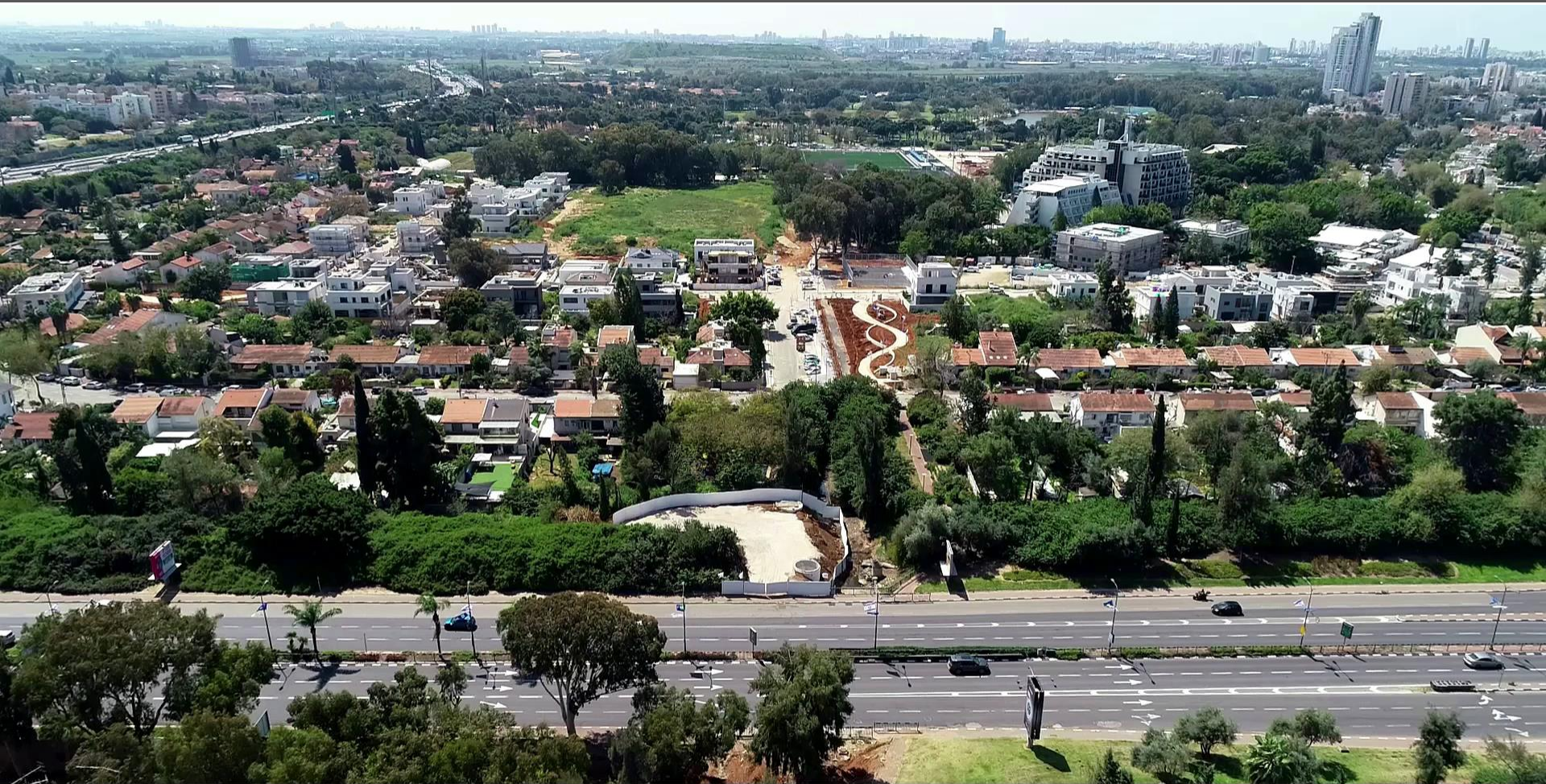
Pilot Pipe method – Procedure for jacking pipes



Pilot Pipe method – Procedure for jacking pipes

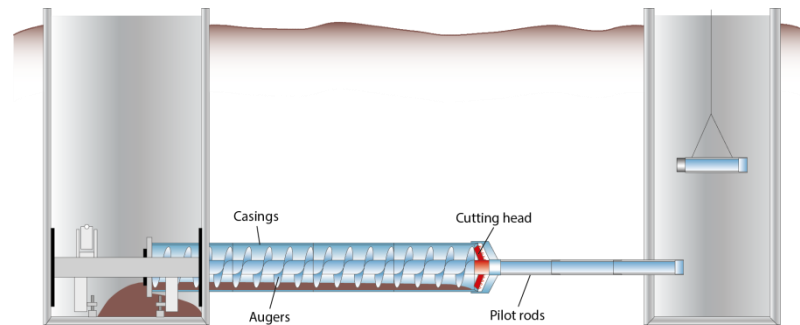
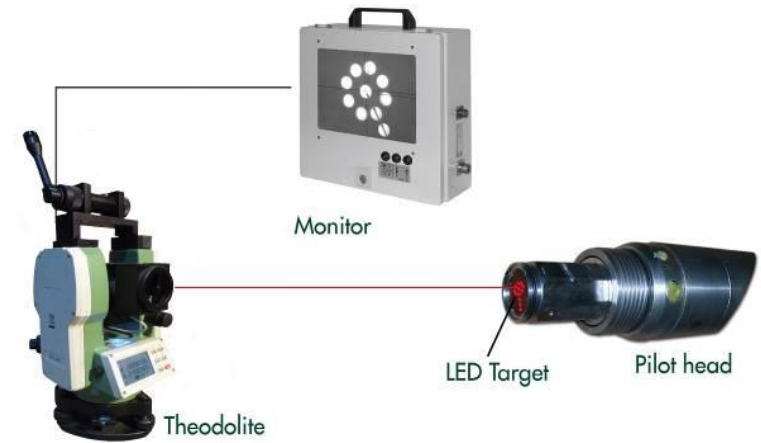
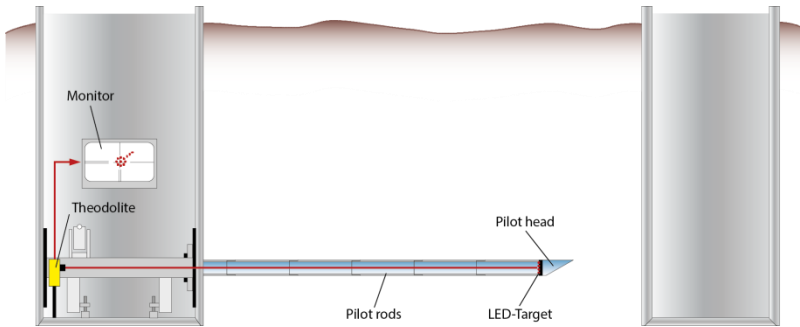


Pilot Pipe method – Procedure for jacking pipes

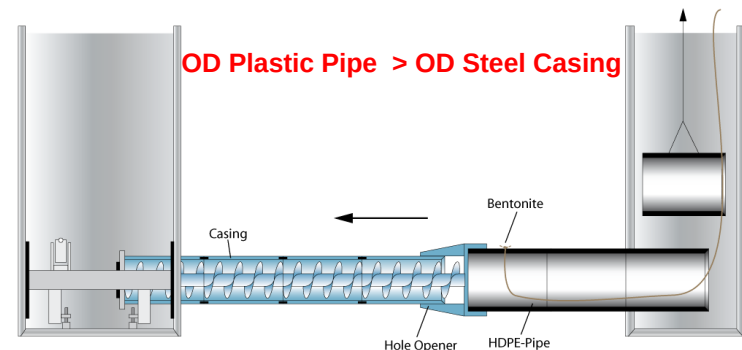
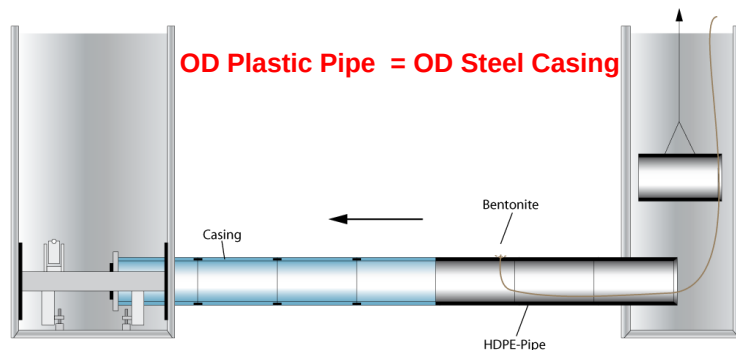


Auger boring in displaceable ground

Pilot Pipe method – Procedure for plastic pipe pulling



Special steel casing joint allows for up to 80 to of pulling force



Pilot Pipe method – Procedure for plastic pipe pulling

Plastic Pipe Pulling in Singapore

Owner: Singapore Power
Contractor: Wee Guan Construction Pte Ltd

Trenchless installation of gravity sewers with plastic pipes
(Polypropylen PP) with OD 560 mm

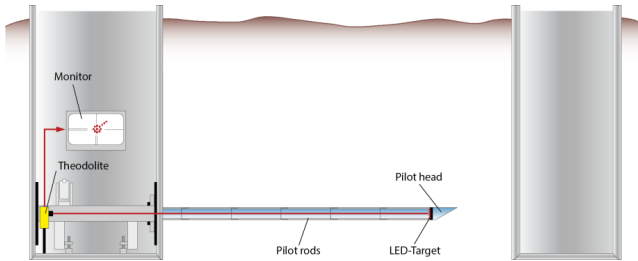
BM 400 S with temporary steel casings 406 mm

Displaceable silty sand

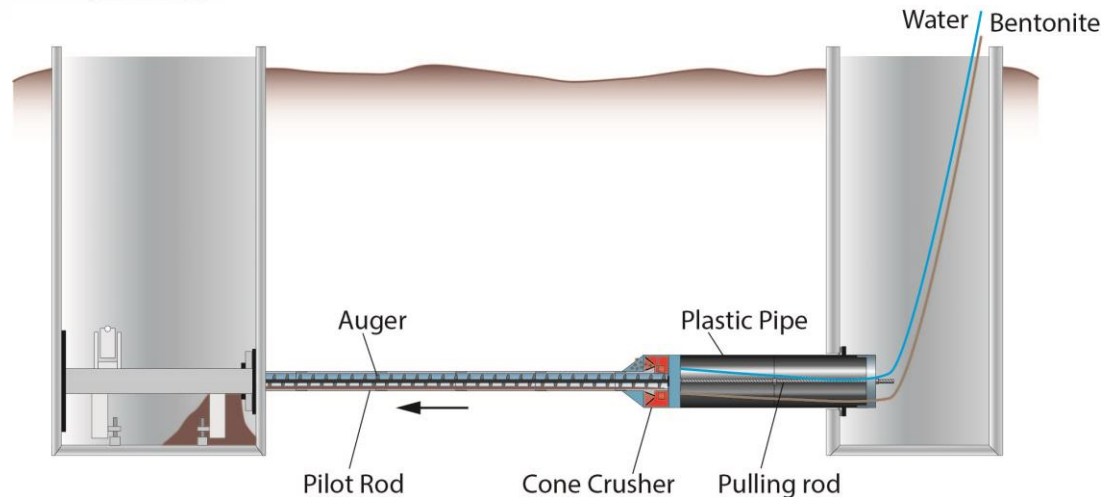
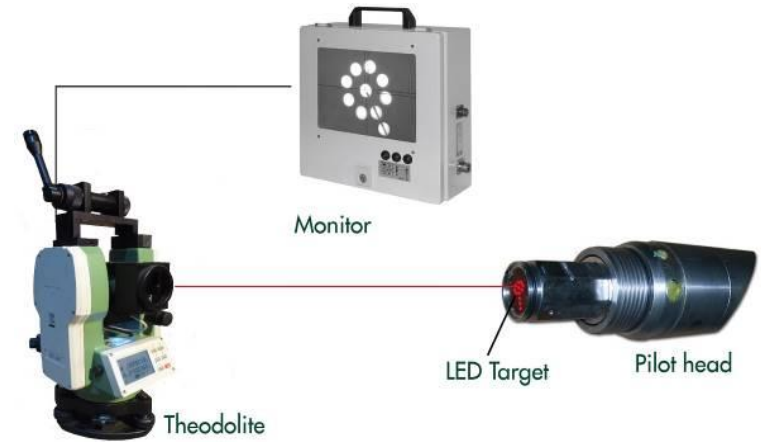
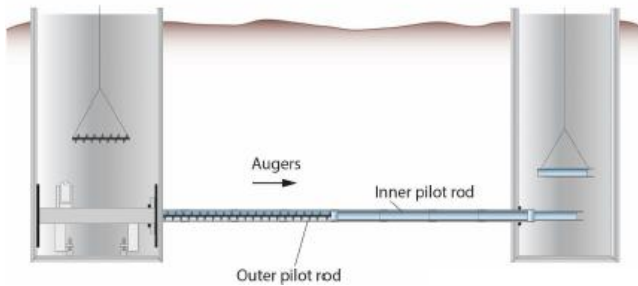
Single drive length up to 80 m

Pulling PP Pipes with BM400 S

Pilot Hole Opener – Plastic pipe pulling without casings



Inner pilot rods are replaced by augers

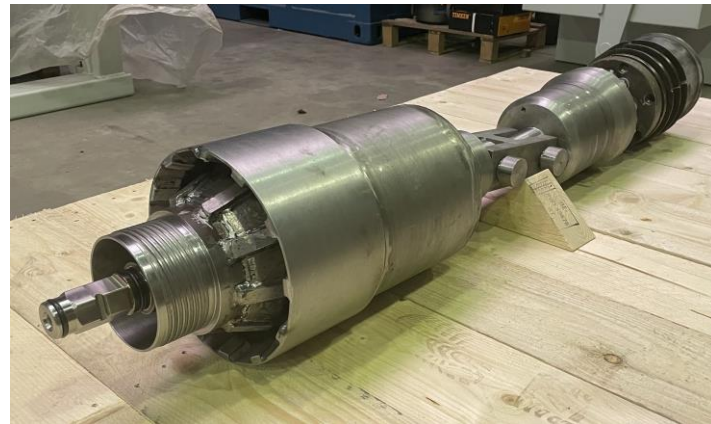
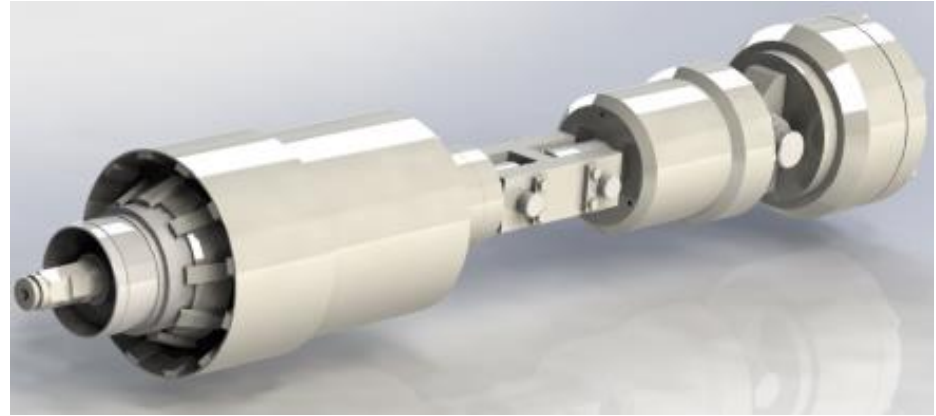


Pilot HoleOpener –Plastic pipe pulling without casings

Passive HoleOpener



Active HoleOpener



Pilot Hole Opener – Plastic pipe pulling without casings



Pilot Hole Opener – Plastic pipe pulling without casings



Pilot Pipe method – Advantages

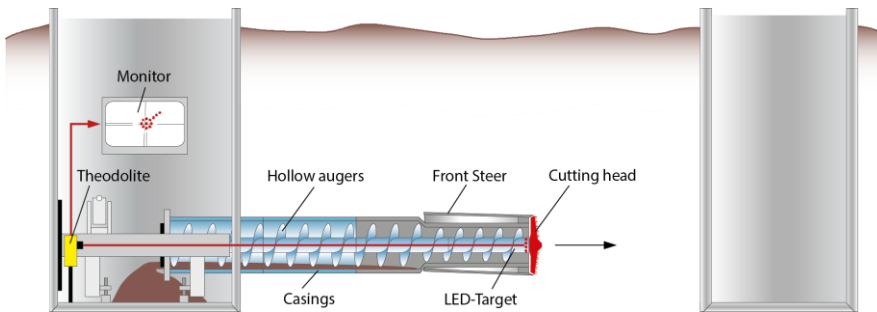
- Low capital investment
- Short setup times
- Easy operation and simple handling
- Less space for site setup
- No separation plant required
- Applicable in narrow streets due to min. sizes for launch and reception shaft

Front Steer Method

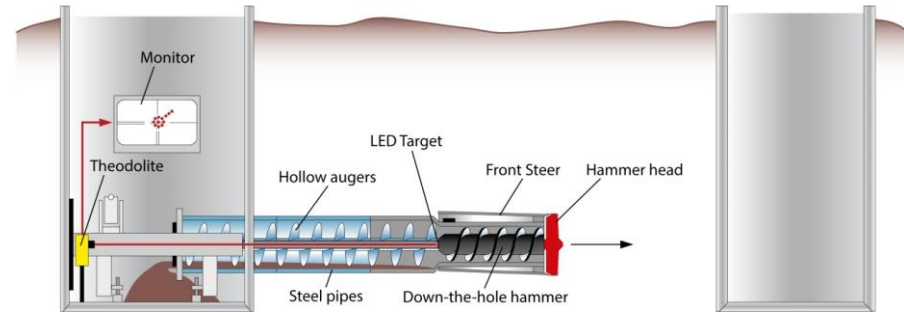
Applicable for almost all non-displaceable
ground conditions and hard rock

Guided Auger Boring with Front Steer

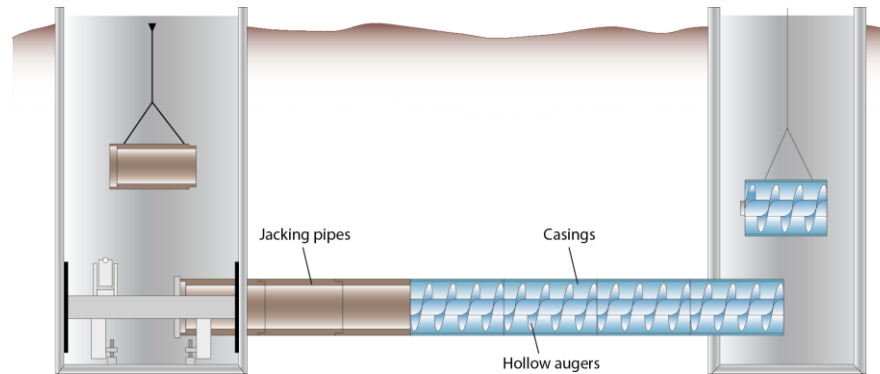
Auger boring with drilling head
in rock up to 40 MPa



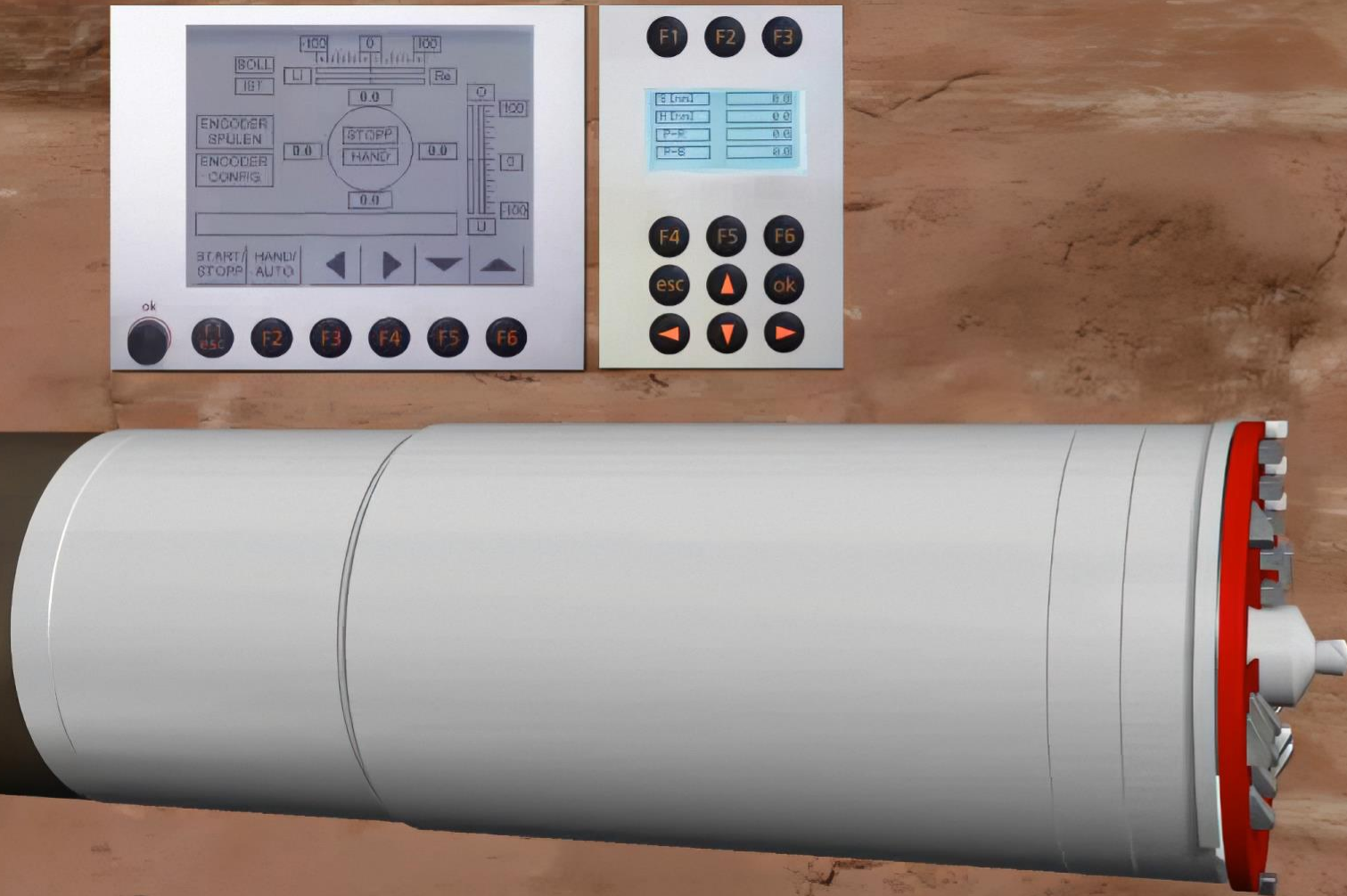
Auger boring with DTH hammer
in rock up to 250 MPa



Pushing product pipes



Guided Auger Boring with Front Steer



Guided Auger Boring with Front Steer

Drilling heads suitable up to 40 MPa



Guided Auger Boring with Front Steer



BM400S and FS406 on customers workshop

Guided Auger Boring with Front Steer and DTH hammer

FS324 and DTH hammer



Job Site Impressions Udaipur – FrontSteer with hammer



Udaipur FrontSteer drilling in hard rock



[BM500 and FS406 in Udaipur Rock]

Thank You for Your Attention

