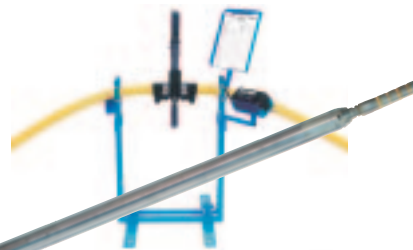


**Grundomat** - soil displacement hammers, 14 models from 45 -180 mm Ø (OD 40 - OD 160, < 40 m)



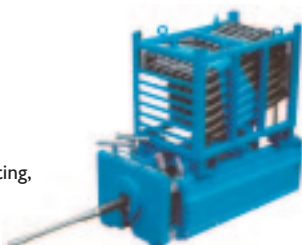
**Grundosteer** - the first guided mole (OD 63 mm, < 70 m)



**Grundoram** - Steel pipe rammers, 13 models for steel pipes up from ND 50 to ND 4000 Impact energy from 230 Nm to 40500 Nm



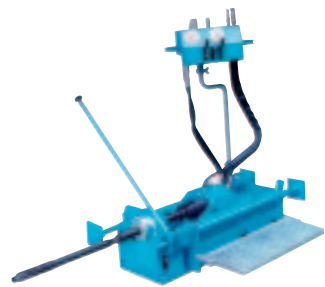
**Grundocrack** - Dynamic pipe bursting, Pipe renewal up to ND 1000



**Grundoburst** - Static pipe bursting model 400 G, 400 S (manhole), 800 G, Pipe renewal up to ND 600



**Grundopull** - Exchange of lead pipes ND 20-50



**Grundopit** - house connection technique Standard version: OD ≤ 110, 50 m Power version: OD ≤ 160, 80 m



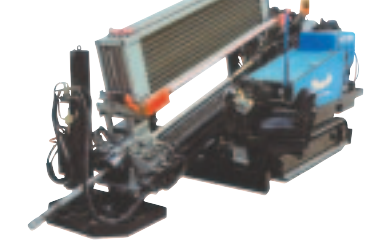
**Grundopit** - house connection technique Manhole version: OD ≤ 125, 50 m



**Grundopit** - house connection technique Compact version: OD ≤ 160, 100 m



**Grundodrill-HDD system, model: 7 X**, with on-board mixing system DN ≤ 250, 200 m, thrust/pull back 65 kN



**Grundodrill-HDD system, models: 10X + 13X:** ND ≤ 350, 250 m, thrust/pull back 100 kN ND ≤ 450, 350 m, thrust/pull back 125 kN



**Grundodrill-HDD system, model: 8 S:** ND ≤ 300, 200 m, thrust/pull back 80 kN



**Grundodrill-HDD systems, models:** 12 GS: ND ≤ 450, 350 m, thrust/pull back 120 kN 20 S: ND ≤ 600, 500 m, thrust/pull back 200 kN



**Prime-Drilling** - large HDD systems ND 1800, 2000 m, thrust/pull back up to 4000 kN



**Föckersperger** - pipe and cable plows sales cooperation for the international market



*The only choice for perfect pipe installation.*

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QuickLock Bursting Rods



QuickLock rods -  
the best connection for  
efficient pipe renewal

QuickLock rods -  
the flexible bursting  
rods with fast click  
shut connection  
By TT - naturally!



TT-GROUP  
of companies

# QuickLock bursting rods -

- reliable
- flexible
- time saving

The QuickLock® bursting rods are applicable for the GRUNDOBURST models 400G, 400S, 800G, 1250G and 2500G.

The static pipe bursting system GRUNDOBURST for the trenchless renewal of pipes from ND 80 to ND 600 offers various innovative features, but the heart of the system is the patented **QuickLock®** rods. GRUNDOBURST is designed so that the **QuickLock®** rods are not double-handled when two-way bursting thus eliminating the need for connection and disconnection each time the **QuickLock®** rods pass laterally through the bursting rig.

The use of these special **QuickLock®** self-aligning rods eliminates the need for an additional hydraulic bursting winch. Thrust and pullback of the rods can be achieved with either manual or automatic rod cycling options. The **QuickLock®** rods are not screwed together in the conventional time consuming and labour intensive way.

### TT QuickLock bursting rods

#### Function

- Ladder shaped, no threads
- Quick coupling: easy to connect and disconnect
- Perfect rod gripping with built-in brake finger
- Dirt and water tolerant

#### Powerful

- Perfectly safe connection
- Rod damage virtually impossible

- Flexible offset joints
- No clamping jaws, minimal wear

- No external wear
- No thread connections
- No lubrication points

#### Quality

- Steel made of one solid piece
- One rod size for all pipe diameters

#### Advantages

- Fast and efficient, saving time and labour costs

#### Tools

- Double roller blade for cutting steel and ductile pipes
- Bursting tool for brittle pipe material

### Round bar friction rods

- Rod thread ends have to be screwed and unscrewed
- Often difficult to unscrew by hand
- Rods slip and slide with no brake control

- Danger of thread joint overload
- High risk of breakage and rod damage, i. e. bent rods = high replacement costs
- Solid rigid inflexible joints
- Extreme wear due to constant clamping of the rods
- Wear on friction drive jaw assembly
- Wear on thread connections
- Constant thread cleaning and lubrication necessary
- Simple round steel, machined threads
- Varying rod diameters

- Tedious, labour intensive, high operational labour costs

The unique design of the **QuickLock®** rods eliminates the need to screw the threaded ends together. The simple click shut of the rods has obvious time and labour saving advantages as there is no interruption of the rod insertion and pullback making pipe bursting a single continuous fast operation.

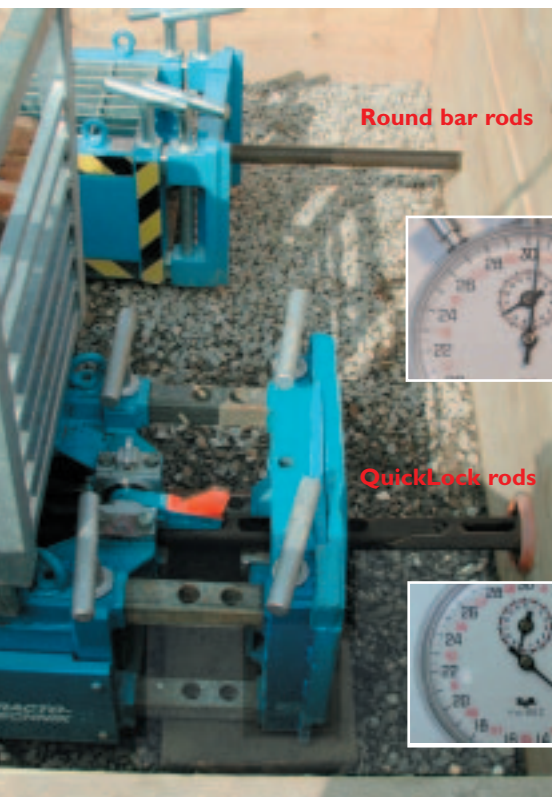
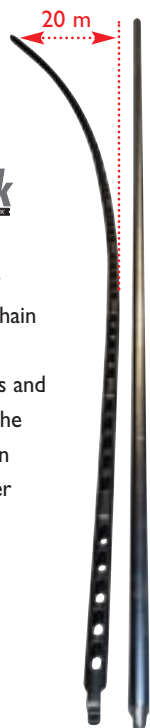
#### Time comparison

Over a distance of 100 m the QuickLock rods are 16 m ahead of the round bar rods, because screwing threaded rods together requires more time than just clipping together.

The QuickLock rods were leading by 1 min. 45 sec. when pushing forward 25 m of bursting rods.

### QuickLock

QuickLock rods clipped together form a flexible chain to work around offset pipe bends and joints, whereas the round rods when screwed together form a rigid, inflexible bar.



Round bar rods

QuickLock rods



### Special features

- Easy and safe connection of the QuickLock rods
- No time consuming screwing/unscrewing of rods
- Easy handling with top loading rod boxes
- Maximum bend radius of 20 m
- Rod insertion speed of 2m/min
- Holding/Fail safe front brake finger, no slippage!
- Front support screw jacks for perfect rod central alignment
- Auto rod cycle

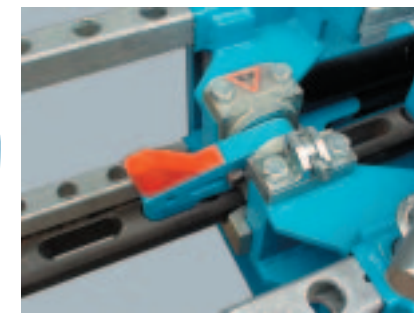
- Rod box
- The QuickLock rods are supplied in a detachable box each containing 35 bursting rods.



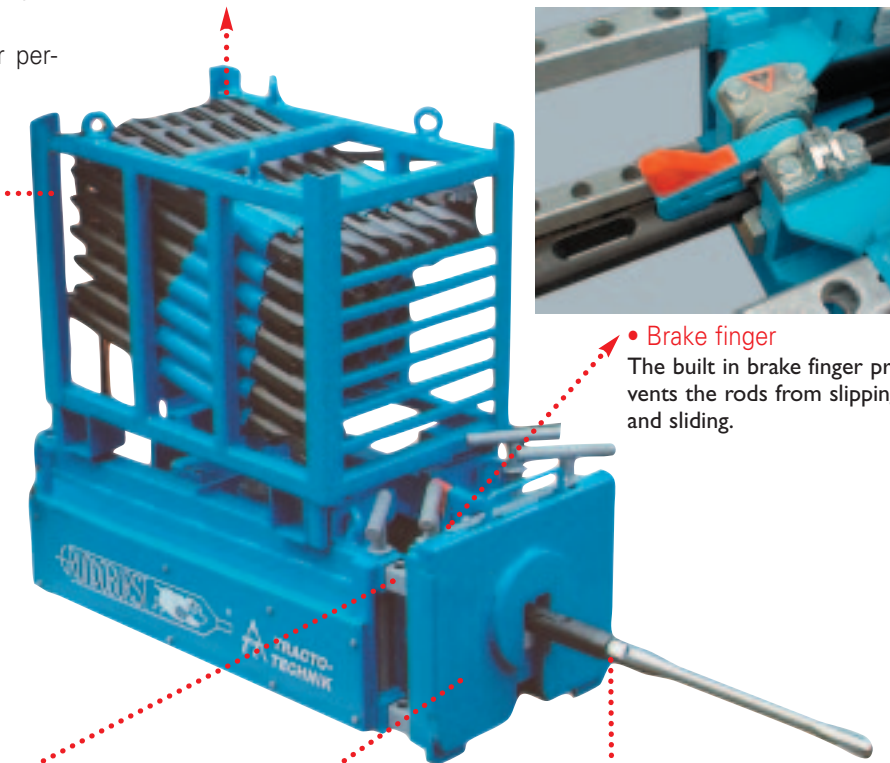
Remote operating panel



Non-slip drive finger



Brake finger  
The built in brake finger prevents the rods from slipping and sliding.



Telescopic support frame

Support plate

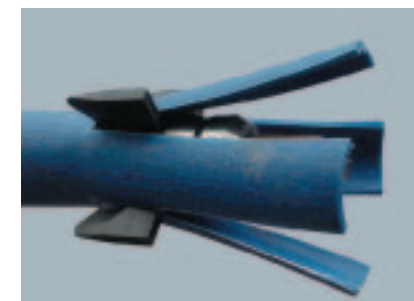
Tools



Adjustable telescopic support frame for safe alignment against the pit walls.



Detachable support plate for easy tool exchange combined with fold-away gate plate.



Various tools are available, e.g ductile and steel pipe roller blades and special PE cutters.