



The crowning glory of soil displacement hammers

The new GRUNDOMAT "N"- Generation



TRACTO-TECHNIK



Unique with crowned head

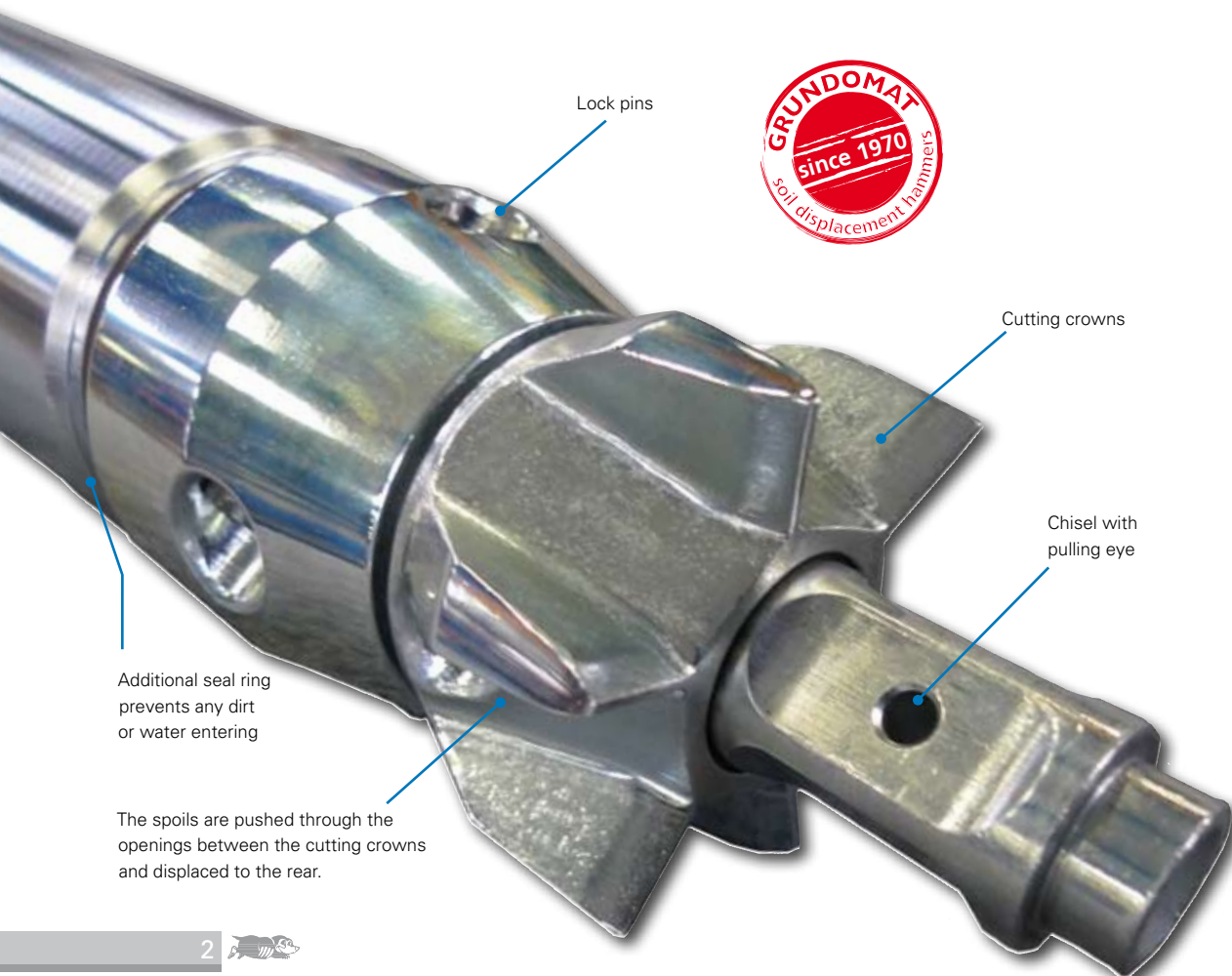
...for even better running stability

Head work

The new N generation is a milestone in the 45 year history of the GRUNDOMAT soil displacement hammers. A strong characteristic of the new Grundomat N is the crowned head, which expands the bore directly to the full bore diameter. The sharp cutting crowns force their way into larger stones to fragment them. Due to the small contact surface of the cutting crowns, the highest possible degree of efficiency is achieved with the same amount of striking energy. The spoils are pushed through the openings between the cutting crowns and displaced to the rear. Then the penetration process starts. The "head work" is carried out in 4 instead of 3 working steps:

→ Pre-stroke → Pulverizing → Relocation → Penetration

The crowned head can be exchanged for the alternative stepped head.



Twin stroke

only with GRUNDOMAT

...precision makes the difference



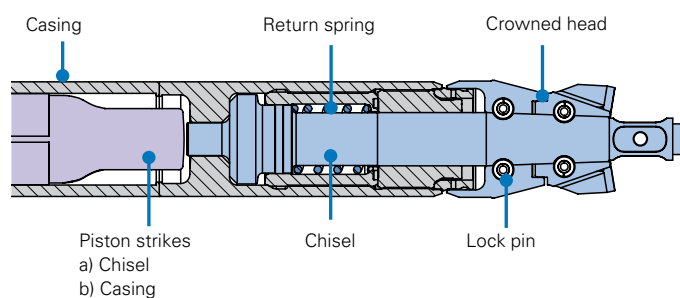
The chisel head arriving right on target.

Right on target

The precise target accuracy as well as the exact alignment and adjustment are achieved through the two stroke impact method. On the first stroke a) the whole moving head assembly is propelled forward as the piston accelerates and impacts against the rear of the chisel driving it forward to create a pilot borehole. As the piston then returns, the second stroke b), the compressed spring in the head further pulls the long cylindrical casing into the previously made pilot borehole.

Should an "obstacle" be encountered and forward propulsion hindered, the chisel/crowned head in the reciprocating head will continue "chiselling" independently until the obstruction is fragmented and displaced.

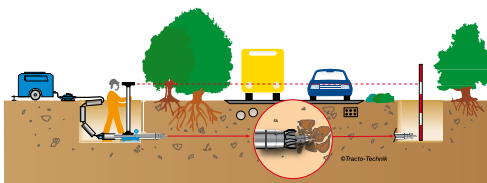
The partially grooved casing increases the friction in softer soils and stabilises the soil displacement hammer.



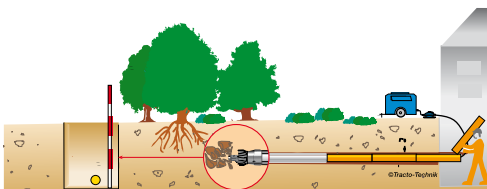


Versatile and reliable

...a systematic operation



Road crossing.



House connection.



House connection: start directly out of the cellar - tested and recommended by E.ON.



Application

The GRUNDOMAT is applied for • Road, railway and river crossings. From type 130 on it is also suitable for • Steel pipe ramming and • Pipe-cracking. • Sewage house connections • blind bore holes • sheet piling etc. are also possible. HDPE and PVC pipes up to ND 160 can be installed.

For house connections the soil displacement hammer can be started out of the cellar to install service lines for • Gas • Water • Sewage • Power • Telecom (FTTX) using a gas and watertight building insertion which is applied from the inside. Thus the usual launch pit on the outer building wall becomes obsolete. Short soil displacement hammers (NK) are preferably applied for short bores or in limited working space.

Using the soil displacement hammer means: no disturbance to gardens, no disruption for the residents, minimal excavation, prevention of traffic jams, diversions and repair work as well as reduced noise, CO₂ and fine dust particle emission.



Building insertion for gas.



Fast

simple and safe

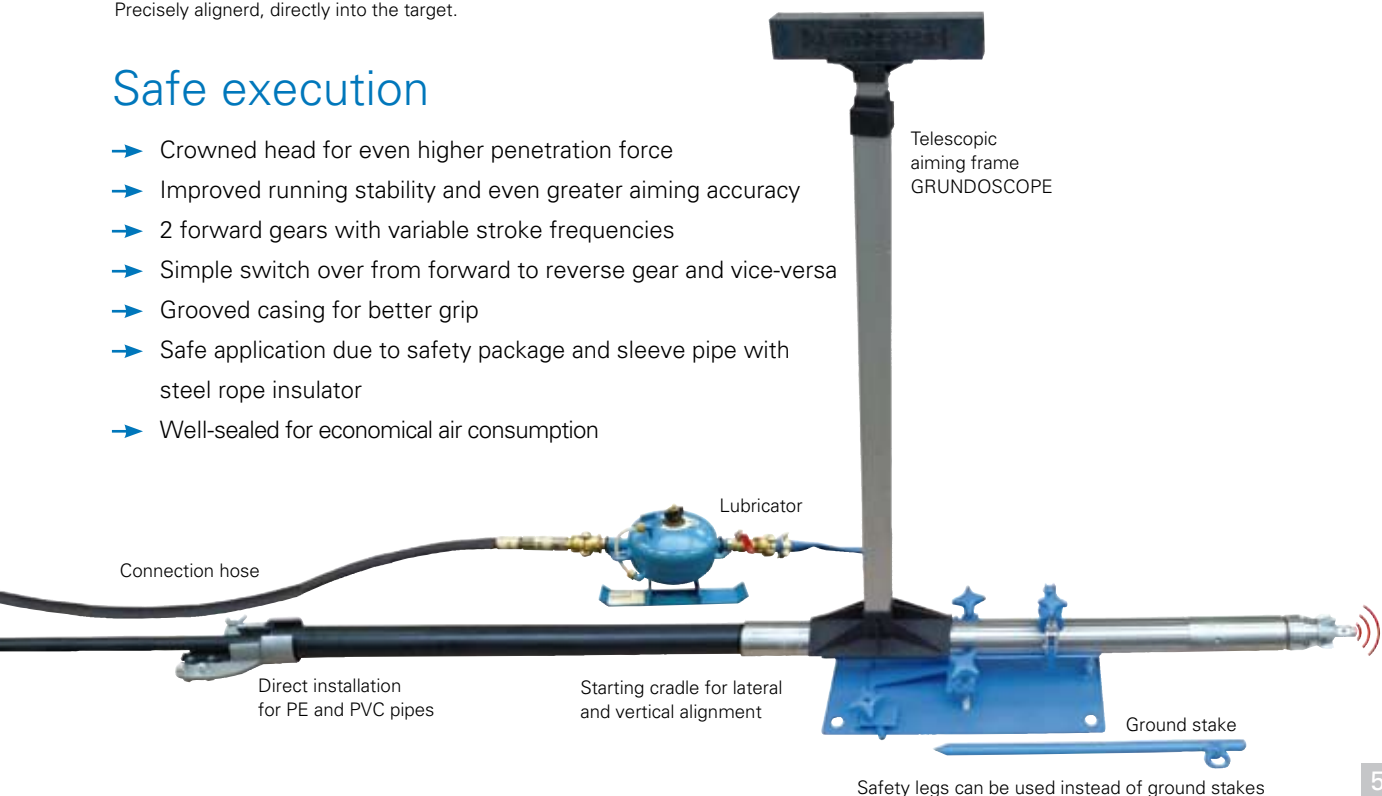
Aligning • Adjusting • Starting

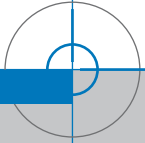


Precisely aligned, directly into the target.

Safe execution

- ➔ Crowned head for even higher penetration force
- ➔ Improved running stability and even greater aiming accuracy
- ➔ 2 forward gears with variable stroke frequencies
- ➔ Simple switch over from forward to reverse gear and vice-versa
- ➔ Grooved casing for better grip
- ➔ Safe application due to safety package and sleeve pipe with steel rope insulator
- ➔ Well-sealed for economical air consumption





...for practical added value



Pulling in accessories. e.g. for protection pipes.

Better with triple gear

The GRUNDOMAT-N has a triple gear control stud*. With the 2 forward gears the stroke frequencies are set. This gives a quick adaption to alternating soils, providing a smooth and consistent forward run. The reverse gear is used for example for blind bores (dead-end bores).

HDPE or PVC pipes are pulled in directly or subsequently by the GRUNDOMAT. The required pulling rope is equipped with an insulation adapter. Together with a non-conductive compressed air hose and advanced safety equipment optimal protection of the operator is guaranteed.

Application tip: With the compressed air heater UNITHERM working is even possible in winter.

*except GRU 145 and GRU 180



Switch over from forward to reverse gear and vice-versa with a ¼ turn of the compressed air hose. Switching from the 1st or 2nd gear to reverse gear is possible during operation. Switching from reverse gear to 1st or 2nd gear is only possible without air pressure.

new



Pull sleeve with insulation adapter.

Service

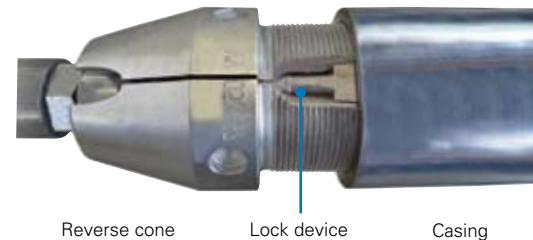
and maintenance friendly

Simple tool exchange and long service life



Simple exchange of the reverse cone for a pull sleeve on site.

new →



Rewarding

The new GRUNDOMAT-N generation is even more service friendly. Maintenance works like for example, replacing of a seal ring or attaching a pull sleeve for direct pipe pulling, can be carried out directly on site. There is no need to glue in any threaded connections of machine parts, cooling down times not necessary. The trick: a tensioning device spreads the thread like a dowel and fixes the casing end inside the casing.

In addition

- head and piston are hardened
- the casing is chromed on the inside and the outside
- the piston rests on slide tapes to avoid metal upon metal friction
- seal rings guarantee low air consumption

All this results in low expenditure on maintenance and a long service life.

The economical application of the GRUNDOMAT N is guaranteed by:

- the efficiency and operating safety of the soil displacement hammer
- the trouble-free and fast installation process
- well-trained, qualified staff
- exchangeability of the different heads
- systematic work cycle for the bore team and assembly crew ensures efficient working

The GRUNDOMAT soil displacement hammer is the preferred tool for every civil engineering company.

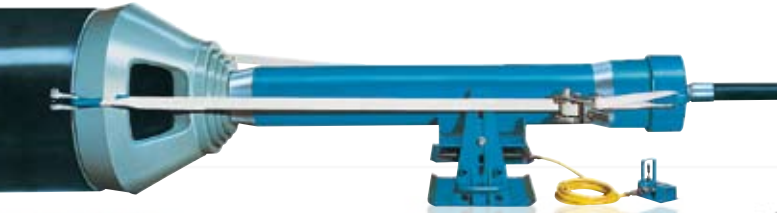


TRACTO-TECHNIK

Product range



GRUNDOMAT - Soil displacement hammers
16 models for installing pipes up to Ø 180 mm
for more than 45 years



GRUNDORAM - Steel pipe rammers
for installation up to Ø 4000 mm
13 models



GRUNDOPIT "P" - Mini steerable bore rigs
4 t pulling force, bores up to Ø 180 mm
Models: Standard, Power, Manhole



GRUNDODRILL - HDD systems
4 - 25 t thrust and pulling force
for installing pipes up to Ø 700 mm
Models: 4X, 10 XP and 15XP, 15N and 25N



GRUNDOBURST - Static pipe bursting systems
Pipe renewal up to Ø 1000 mm
Models: 400 G and S, 800G, 1250G and 2500G



GRUNDOBORE - Auger boring units
pilot-steered, e.g. for gravity pipes
Models: 200S and 400



GEODRILL - Bore rigs for geothermal heat extraction
Model Geodrill 20V for vertical bores
and Geodrill 4R for radial bores

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