

INSPIRING TRENCHLESS TECHNOLOGIES



**P THE
PIONEER**

■ MADE
■ IN
■ GERMANY

GRUNDOMAT^P
Soil displacement hammers



Versatile add-on accessories for a multitude of applications

The housing is chrome-plated inside and out which guarantees long-lasting peak performance

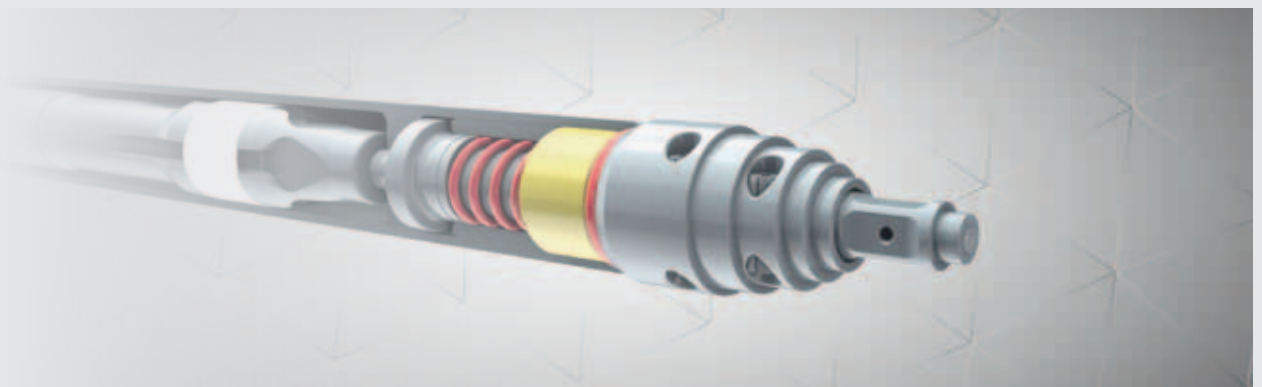
Optional **toothed casing** for ideal support in the ground

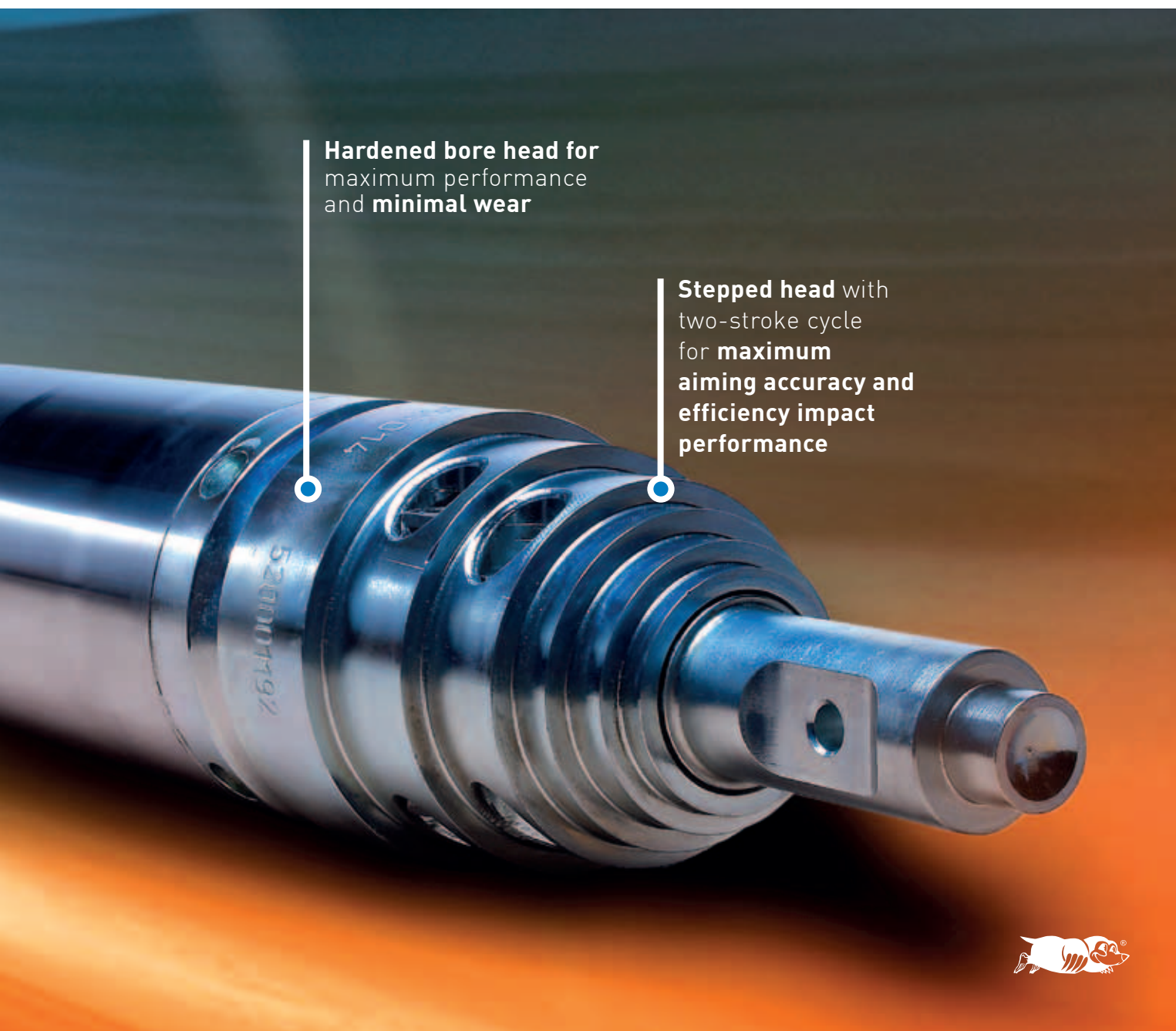
THE MAINSPRING

On target every time

PISTON SEAL, SLIDE BELTS & CUTTING HEAD SEAL

Guarantee great efficiency and low air consumption while preventing dirt from getting inside and causing power to be lost.





Hardened bore head for
maximum performance
and **minimal wear**

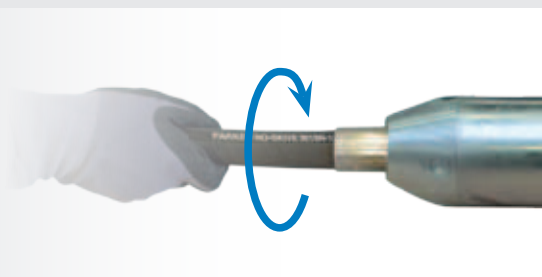
Stepped head with
two-stroke cycle
for **maximum**
aiming accuracy and
efficiency impact
performance



SIMPLE SWITCH-OVER

between forward and reserve gear.

Manual control

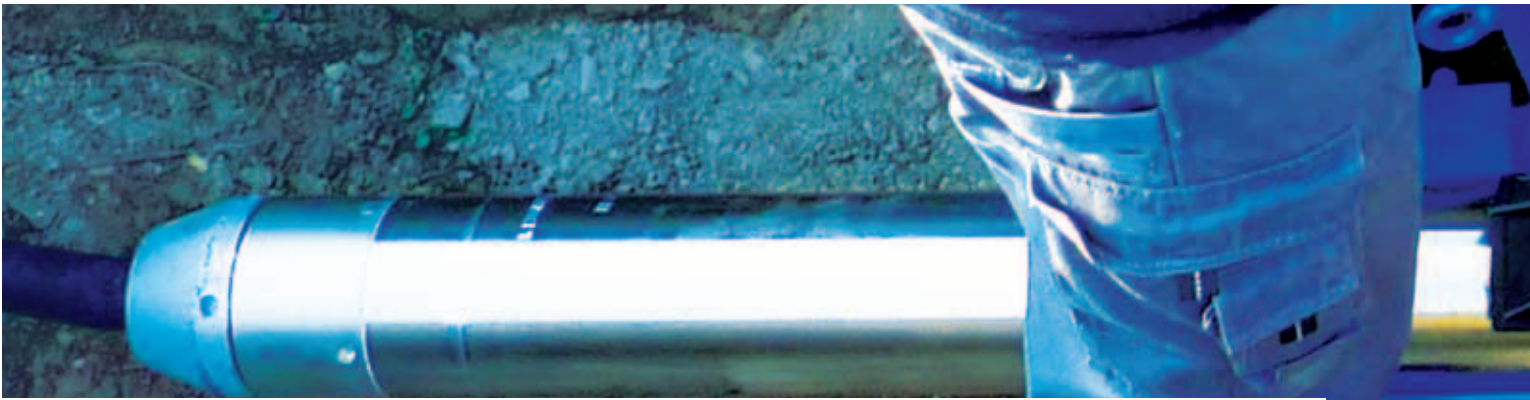


Switching over from one forwards to one reverse gear under operating pressure by 1/4 turn to the left of the compressed air hose.

Servo control



Optional switching over between one forward and reverse gear under operating pressure by throwing the lever.

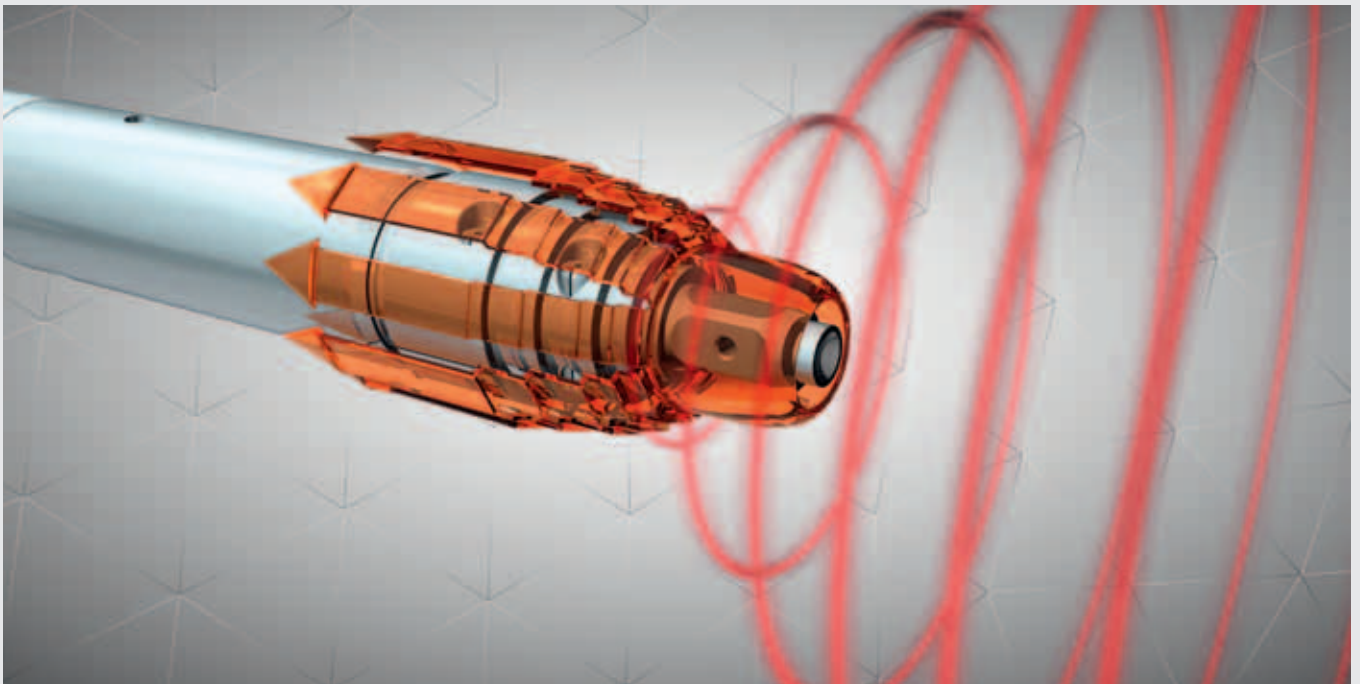


PROVEN THOUSANDS OF TIMES OVER

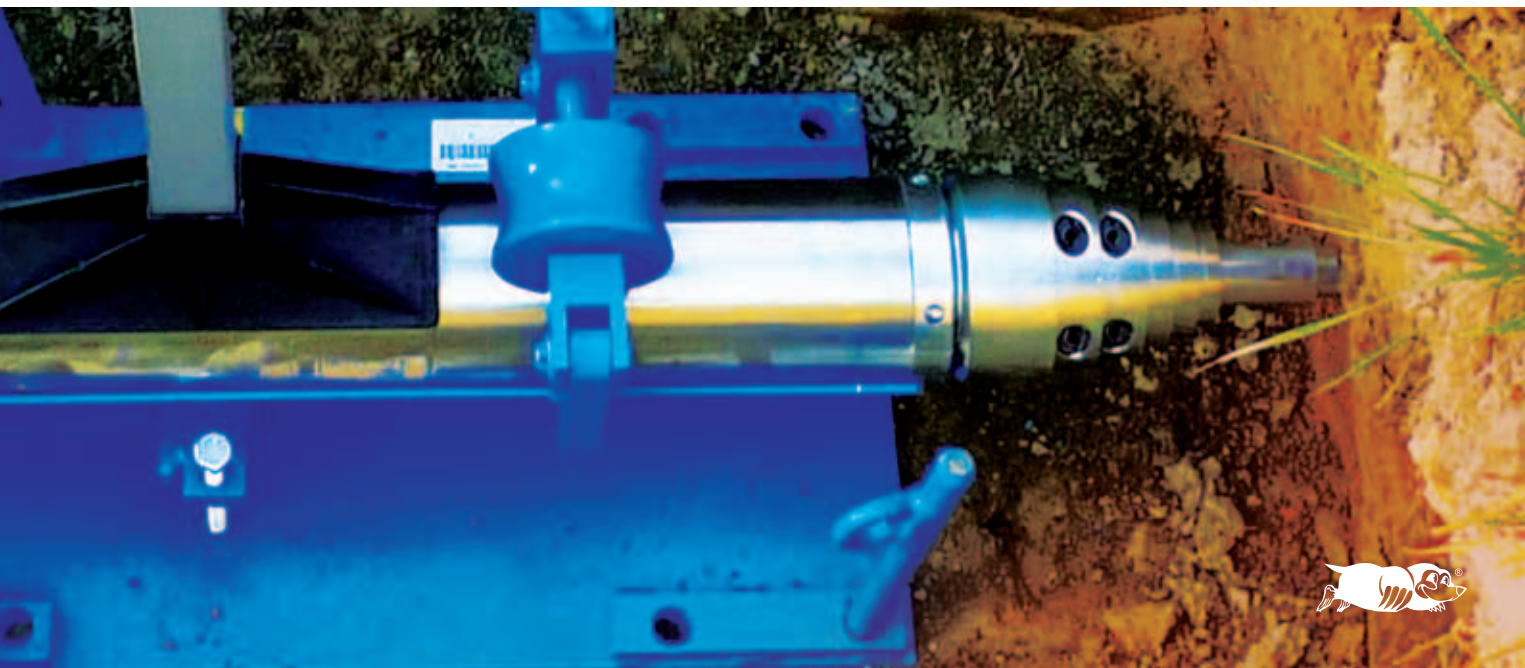
Impressively robust



Working principle stepped head



The stepped head is universally applicable as it can work in every kind of displaceable soil. The tip of the cutter bit starts a preliminary pilot bore and then the soil is gradually displaced to the outside. The steps of the head shatter the obstacles before discharging them. This modus operandi guarantees high running stability and a strong, wide pressure cone is generated in front of the stepped head.



Two-stroke principle with stepped head

STROKE ONE



Stroke one applies impact to the cutter bit with the piston, thus forcing the head to generate the bore hole and eliminate obstacles. The impact energy is concentrated on the cutter bit and the bore head.

STROKE TWO



During the second stroke, the bore head moves freely in the bore hole and the piston aims the impact right up to the casing. The impact power of the piston is concentrated on the casing, the complete machine (with the pipe attached) moves up from behind.

The two-stroke principle helps to overcome peak resistance and coat friction so the highest possible directional stability of the GRUNDOMAT is achieved.

Application

■ UNDERCROSSINGS

Beneath roads, railway tracks, gardens, buildings and other valuable surfaces

■ PROPERTY SERVICE CONNECTIONS

For gas, water, waste-water, electricity, broadband (FTTB) to or directly from the property

■ PIPE RAMMING FROM TYPE 130 ON

Can be used for driving steel pipes by attaching different ramming cones

■ PIPE RENEWAL FROM TYPE 95 ON

With modified displacement hammers using the dynamic pipe bursting method (cracking)

■ PILE FOUNDATIONS

Vertical application for foundations, i.e. for placing sheet and friction piles

■ DRIVING OUT STEEL PIPES

With mandrel attachment for pulling in new pipes simultaneously

■ GEOTHERMAL HEAT

Installation of geothermal heat loops



ON TARGET



TELESCOPIC AIMING



RAMMING



GROUND PILING



UNDERCROSSINGS



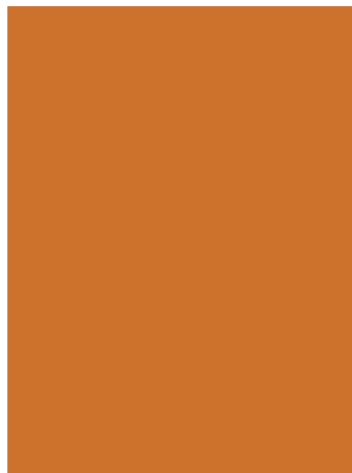
GEO THERMAL HEAT



DRIVING OUT



TRACKING



SWITCH-OVER

ACCESSORIES

For any use

DRIVING OUT STEEL PIPES

Mandrel attachment for driving out old steel pipes up to ND 50 and pulling in new pipes simultaneously.



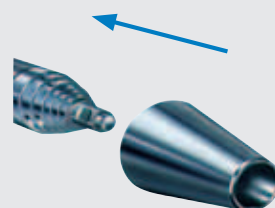
PIPE RENEWAL (CRACKING)

From type 95 on, dynamic pipe bursting method with towing eye and expansion.



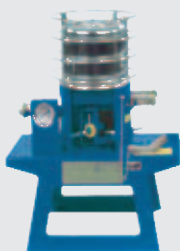
STEEL PIPE DRIVING

Up to ND 400 with attachment ramming cone.



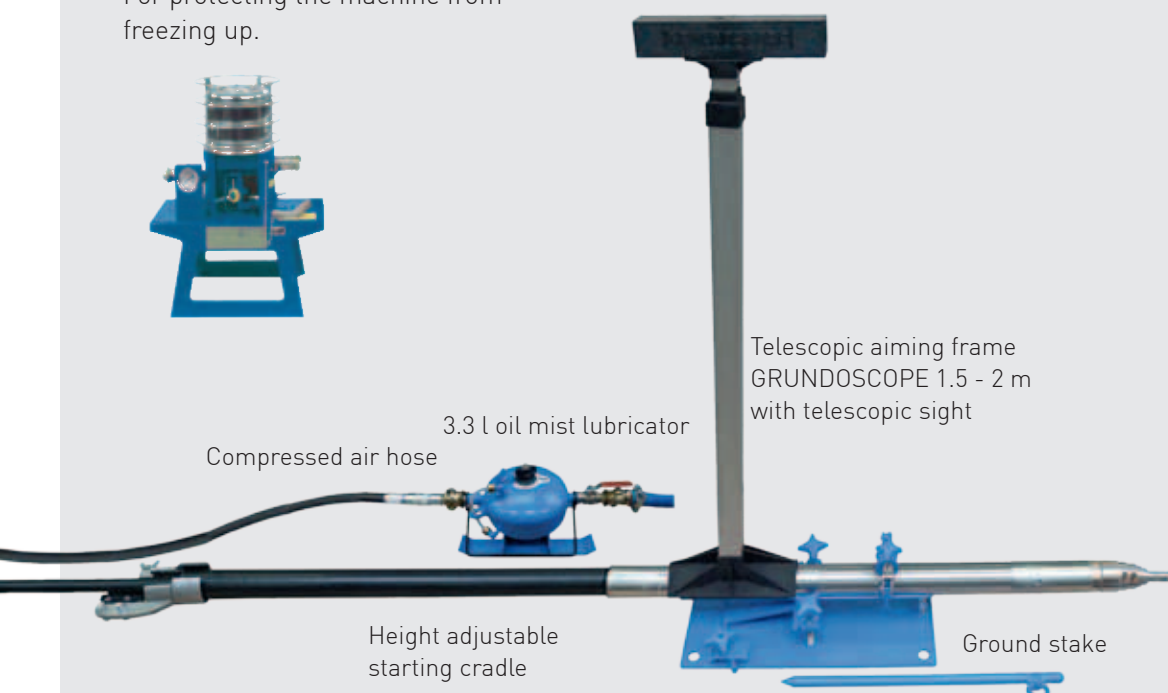
UNITHERM COMPRESSED AIR HEATER

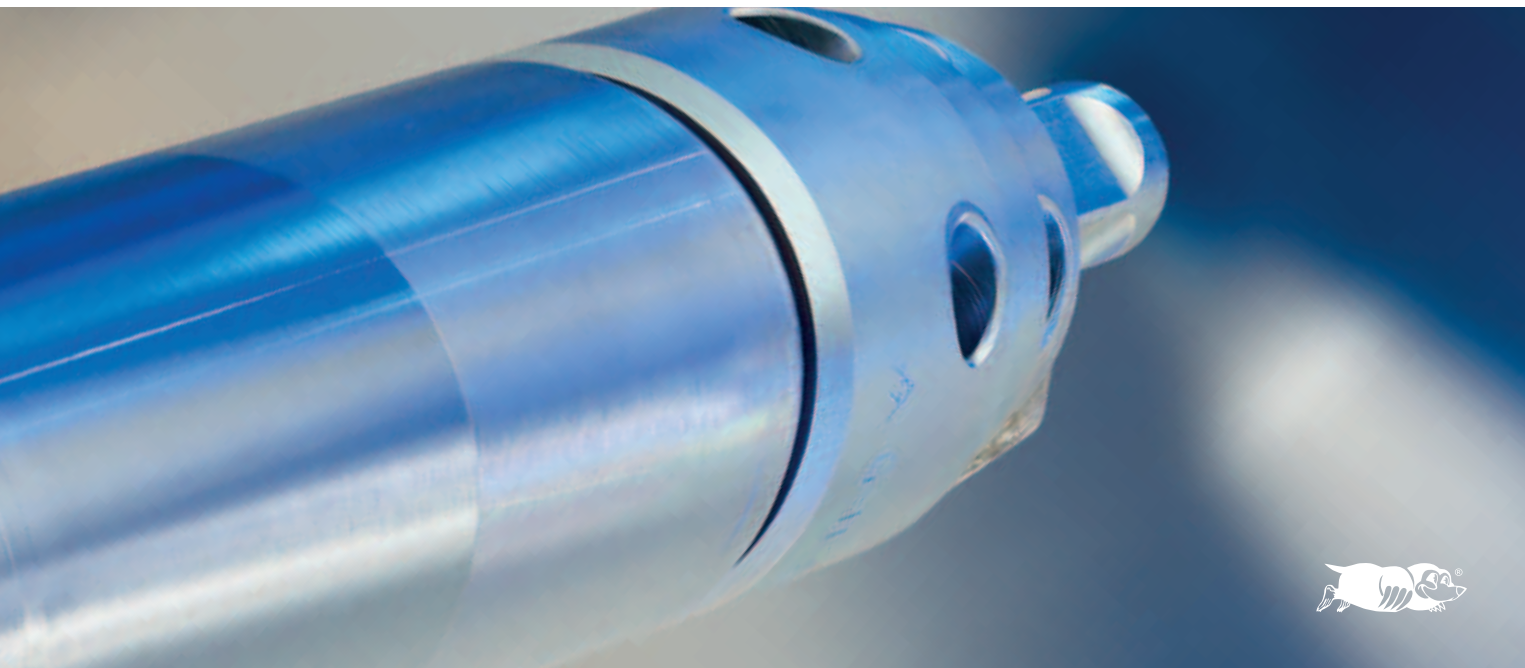
For protecting the machine from freezing up.



PRECISE TRACKING

The bore course can be closely monitored with transmitter and receiver. The tracking system can also be used for the preliminary search of external lines.





Pipe installation

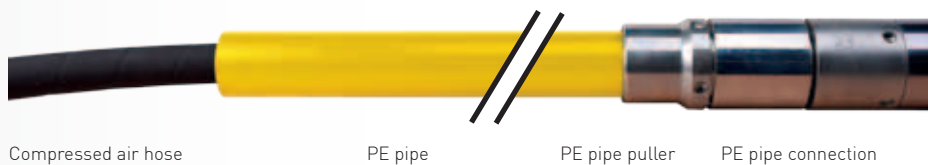
REVERSE PULLING IN VIA PULLING ADAPTER



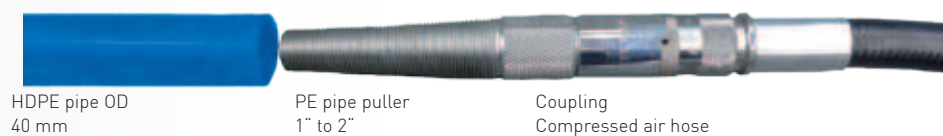
DIRECT INSTALLATION OF SHORT PVC PIPES

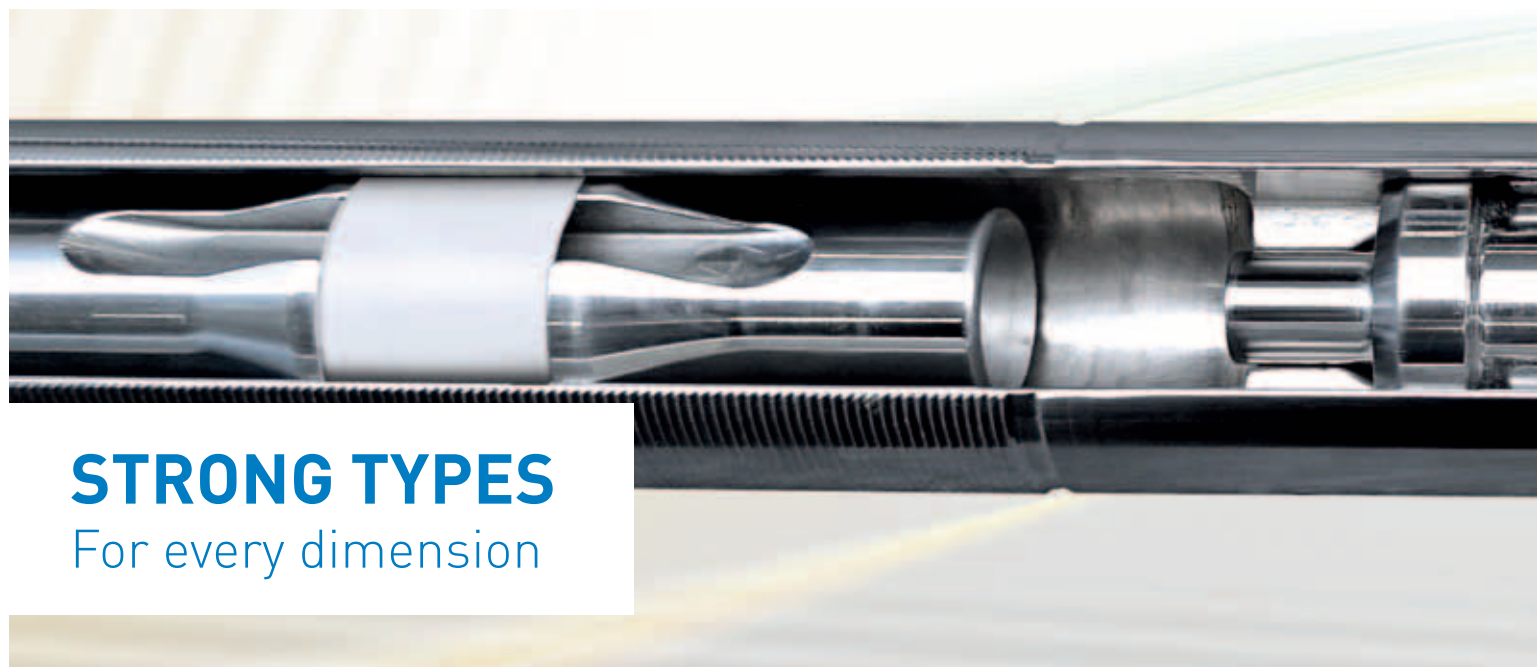


DIRECT INSTALLATION OF LONG PE PIPES



SUBSEQUENT INSTALLATION OF LONG PE PIPES WITH COMPRESSED AIR HOSE





STRONG TYPES

For every dimension

P Standard version





PK Short version

The short displacement hammers are excellent for the application in confined spaces.

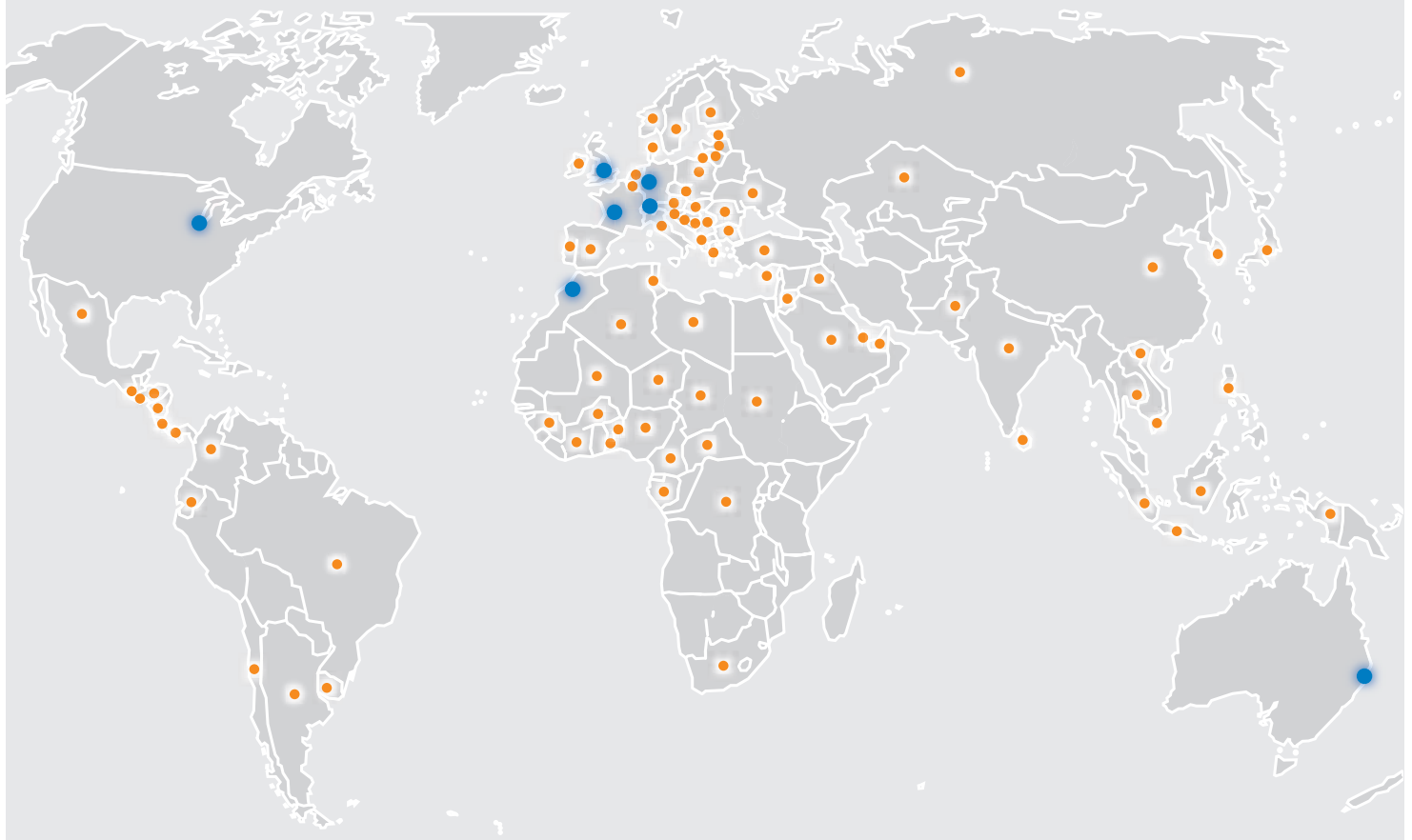


Technical data

Thrust control	Ø (mm)	Length (mm)	Weight (kg)	Air consumption (m³)	Stroke rate min ⁻¹	Pipes (max. outer Ø mm)
45 P	45	979	9	0,35	580	40
55 P	55	1103	14,4	0,5	480	45
65 PK	65	1029	18	0,65	640	50
65 P	65	1323	25	0,7	460	50
75 PK	75	1243	28	0,8	460	63
75 P	75	1443	34	0,9	400	63
85 PK	85	1350	40	0,7	490	75
85 P	85	1540	46	0,9	390	75
95 PK	95	1532	56	1,3	360	85
95 P	95	1732	65	1,5	320	85
110 P	110	1685	96	1,8	325	90
130 PK	130	1300	76	2,4	370	110
130 P	130	1750	117	2,6	340	110
Servo control						
130 PK	130	1300	76	2,4	370	110
130 P	130	1750	117	2,6	340	110
145 P	145	1986	168	3,4	310	125
160 P	160	2002	198	4,5	320	140
180 P	180	2221	260	4,5	280	160

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