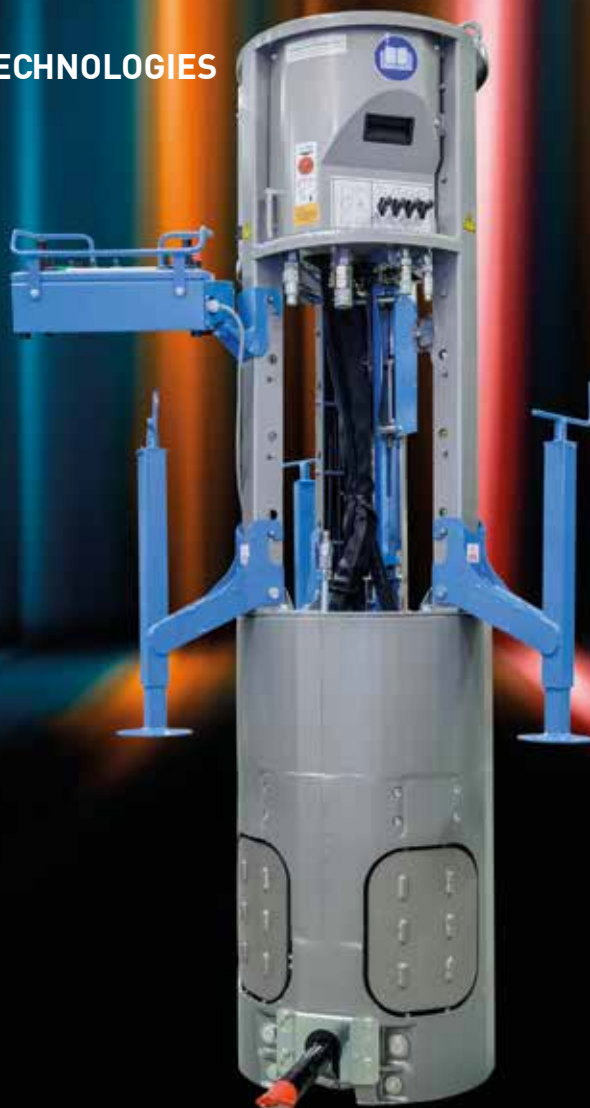


INSPIRING TRENCHLESS TECHNOLOGIES



TRACTO-TECHNIK



# KEYHOLE MINIMALLY INVASIVE

■ MADE  
■ IN  
■ GERMANY

GRUNDOPIT<sup>K</sup>  
Fluid-assisted mini drill rig



# KEYHOLE

Mini drilling technology

Integrated machine control – **bore automatics**

Minimally invasive drilling from out of **the smallest possible working pits Ø 650 mm “Keyhole”**

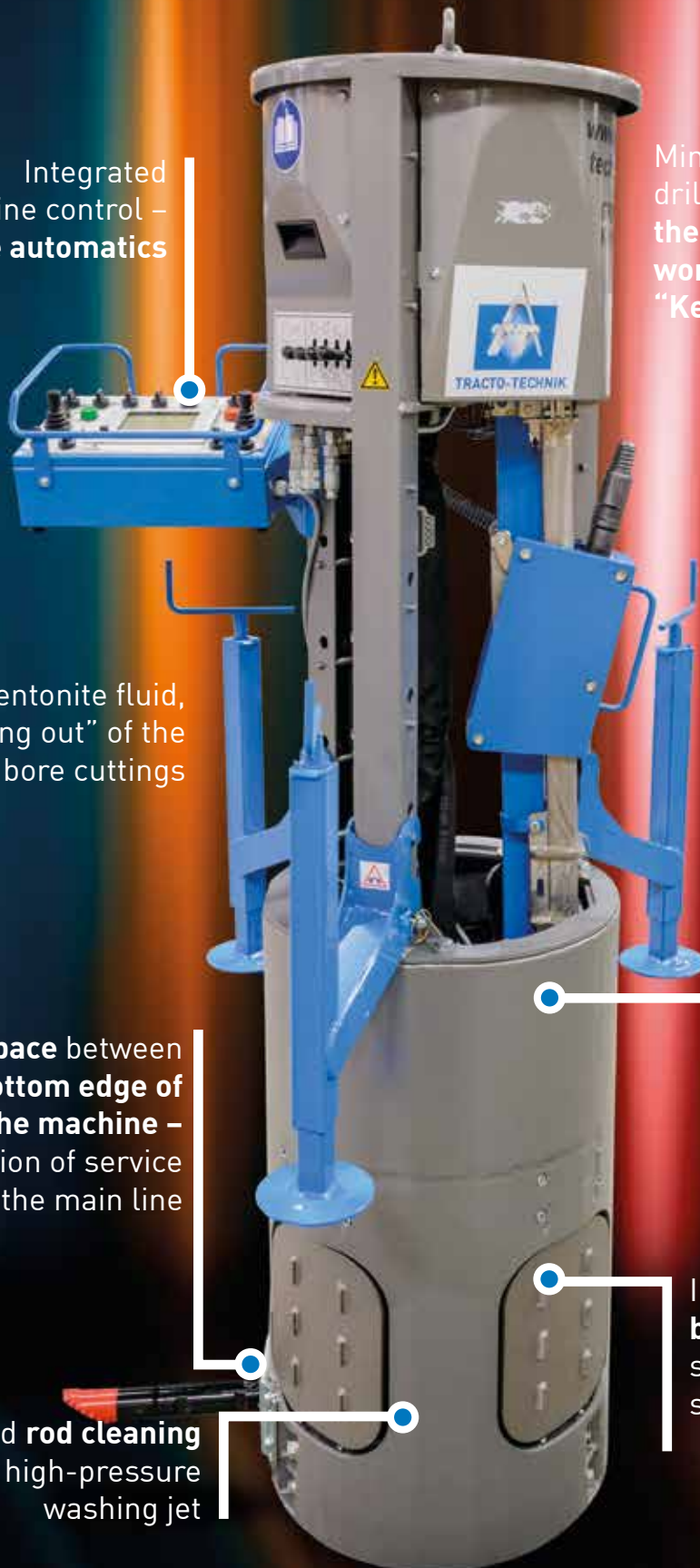
No Bentonite fluid, no “flushing out” of the bore cuttings

Closed **round frame design** – stable, flexibly directional (machine can rotate freely inside the keyhole)

**Small space** between **bore axis** and **bottom edge of the machine** – direct connection of service pipe to the main line

Integrated **rod cleaning** by means of high-pressure washing jet

Integrated **hydraulic bracing system** – short set-up times, safe installation





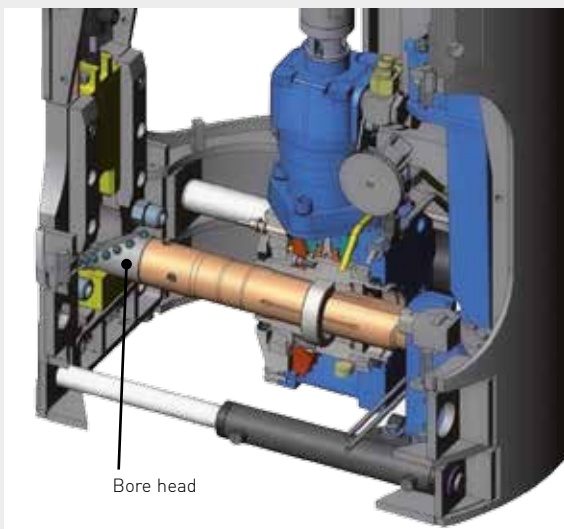
### CONTROL PANEL

- Operation from the surface
- Ergonomic mode of operation according to the latest standards
- Directional detectable bore
- High safety for the operator
- Clearly arranged icon display
- Adjustment of the optimal bore parameters: steplessly adjustable adjustment of torque, rotation number as well as thrust and speed force



### ROD CHANGE

- Fully automatic rod handling
- Ergonomic
- Quick



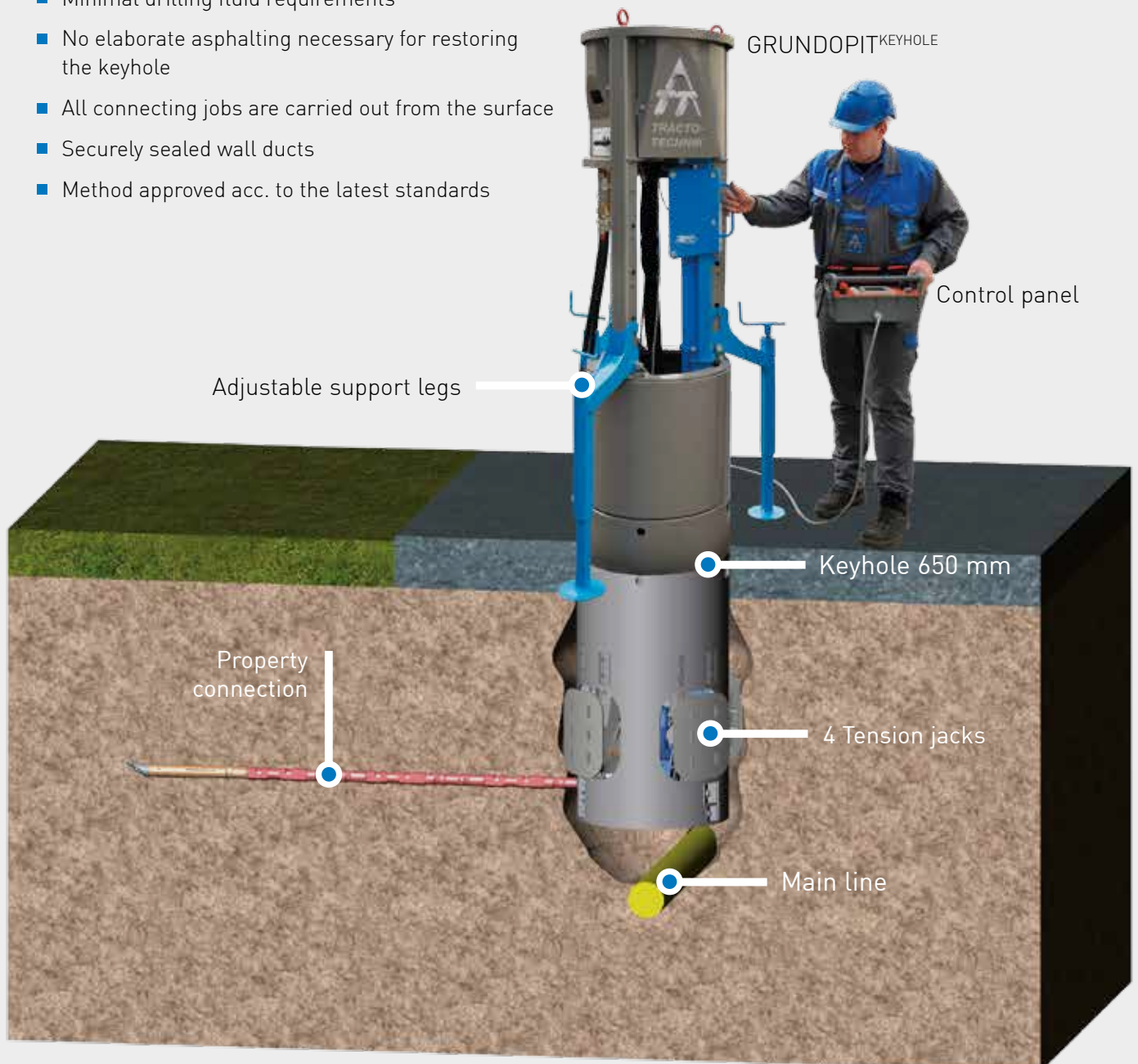
### ROTARY DRIVE

- Rotary drive with hollow shaft – maximal rod length for the smallest installation space
- Positive-fitting rod link – soiling-resistant, material-friendly
- Torque-dependant thrust regulation – optimal utilisation of the machine output

# MINIMAL INTERVENTION

## Maximal effect

- Drilling from out of the smallest round work pit, keyhole Ø 65 cm
- Directional drilling with continuous detection
- Simple operation via control panel
- No pits on private property, the bore hole can be drilled directly to the basement
- Minimal excavating works – the job cannot be done with less
- Eco-friendly and gentle installation method
- Minimal drilling fluid requirements
- No elaborate asphaltting necessary for restoring the keyhole
- All connecting jobs are carried out from the surface
- Securely sealed wall ducts
- Method approved acc. to the latest standards





## THROUGH THE KEYHOLE

To the property service connection



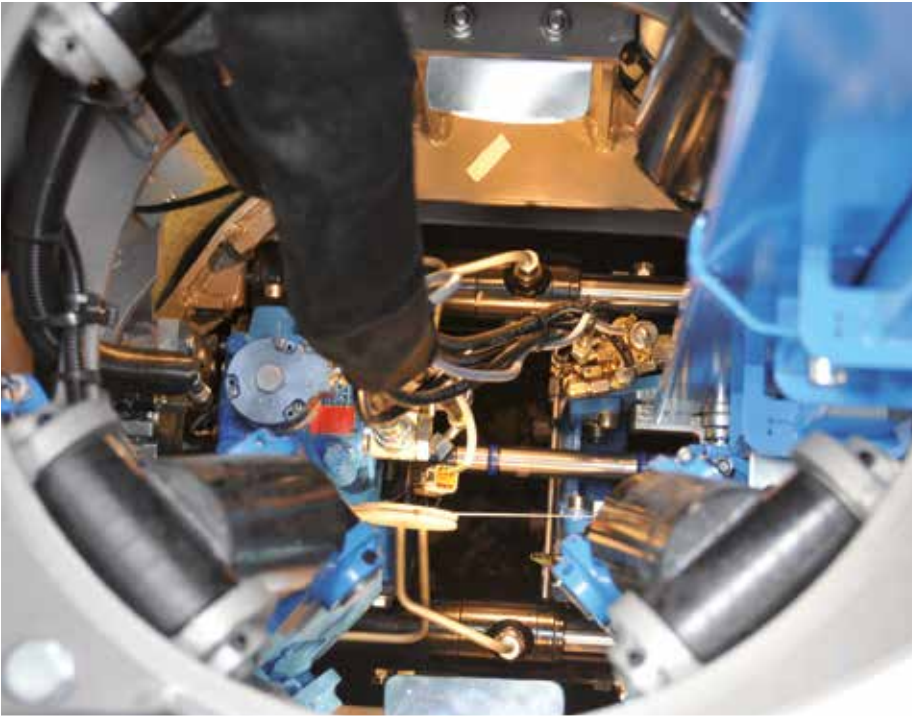
With the “keyhole bore technique”, gas, water, power and FTTH service connections are installed, leading from the main line in the road through the smallest possible round working pit (keyhole with  $\varnothing$  65 cm) directly into the house or a small assembly pit in front of the house.

- **PROPERTY SERVICE CONNECTIONS**

For gas, water electricity and data lines

- **UNDERCROSSINGS**

Directional drilling beneath roads, railway tracks and buildings



BORE CORE

DETECTION



CONNECTION





**MINIMALLY INVASIVE**



**TRANSPORT**



**KEYHOLE**

# ACCESSORIES

For all applications

**RODS WITH BOX**



Very light, resistant thread

**BORE HEAD**



**CORE HOLE DRILL**



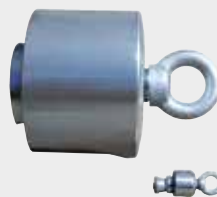
With wall duct

**UPSIZING**



For installing short pipes

**PIPE PULLERS**



For installing long pipes

**TRANSMITTER SYSTEM**



With detection unit

**RETRIEVAL TOOL**



For upsizing





HYDRAULIC POWER UNIT TT HP-031

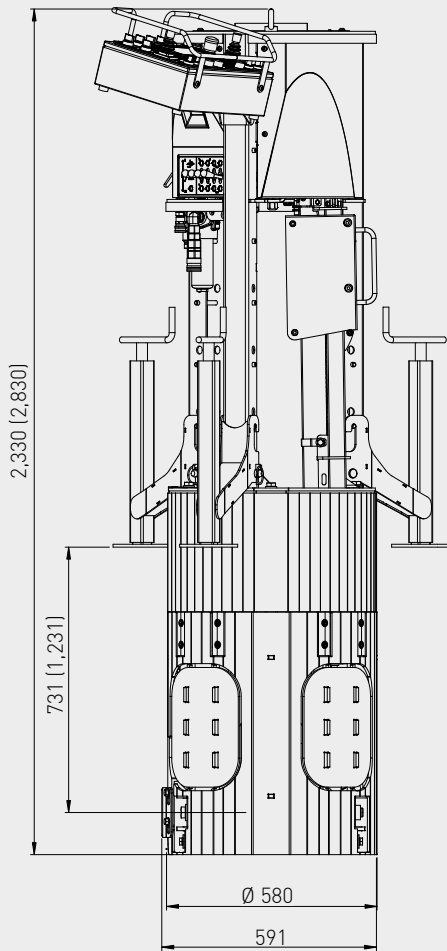


TRUCK PLATFORM (COMPLETE SYSTEM SOLUTION)

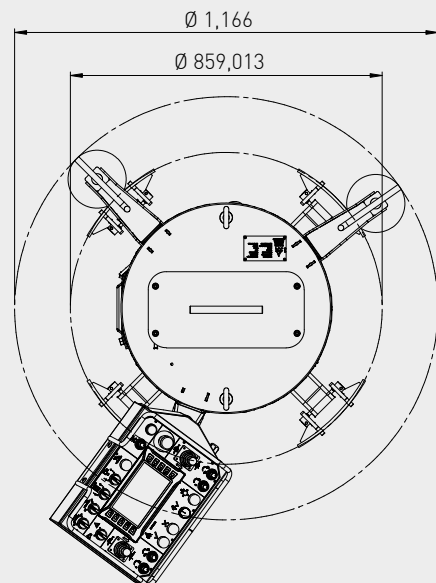
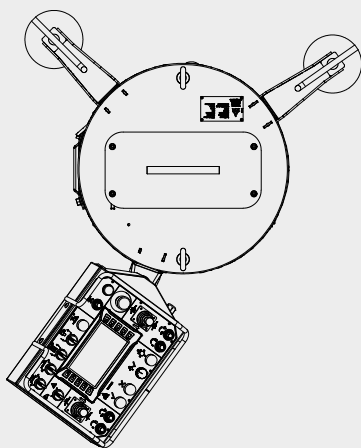
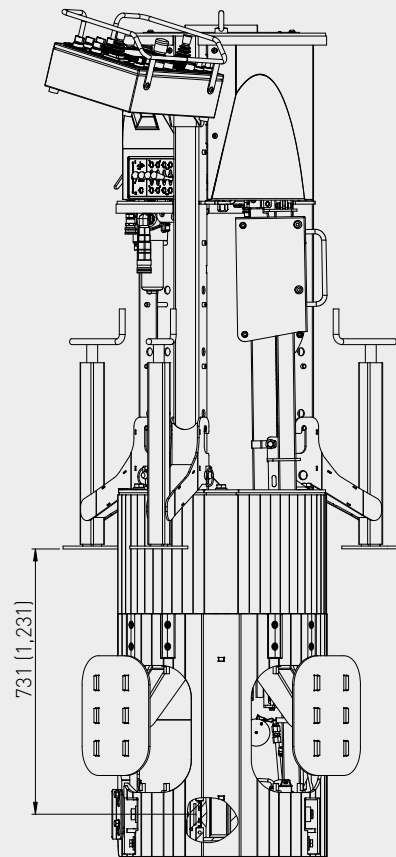


# TECHNICAL DATA GRUNDOPIT<sup>K</sup>

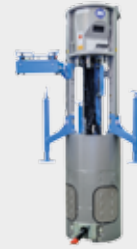
SUPPORTS UP AND DRAWN IN



SUPPORTS EXTENDED



# TECHNICAL DATA



## Model

GRUNDOPIT<sup>K</sup>

## Basic equipment

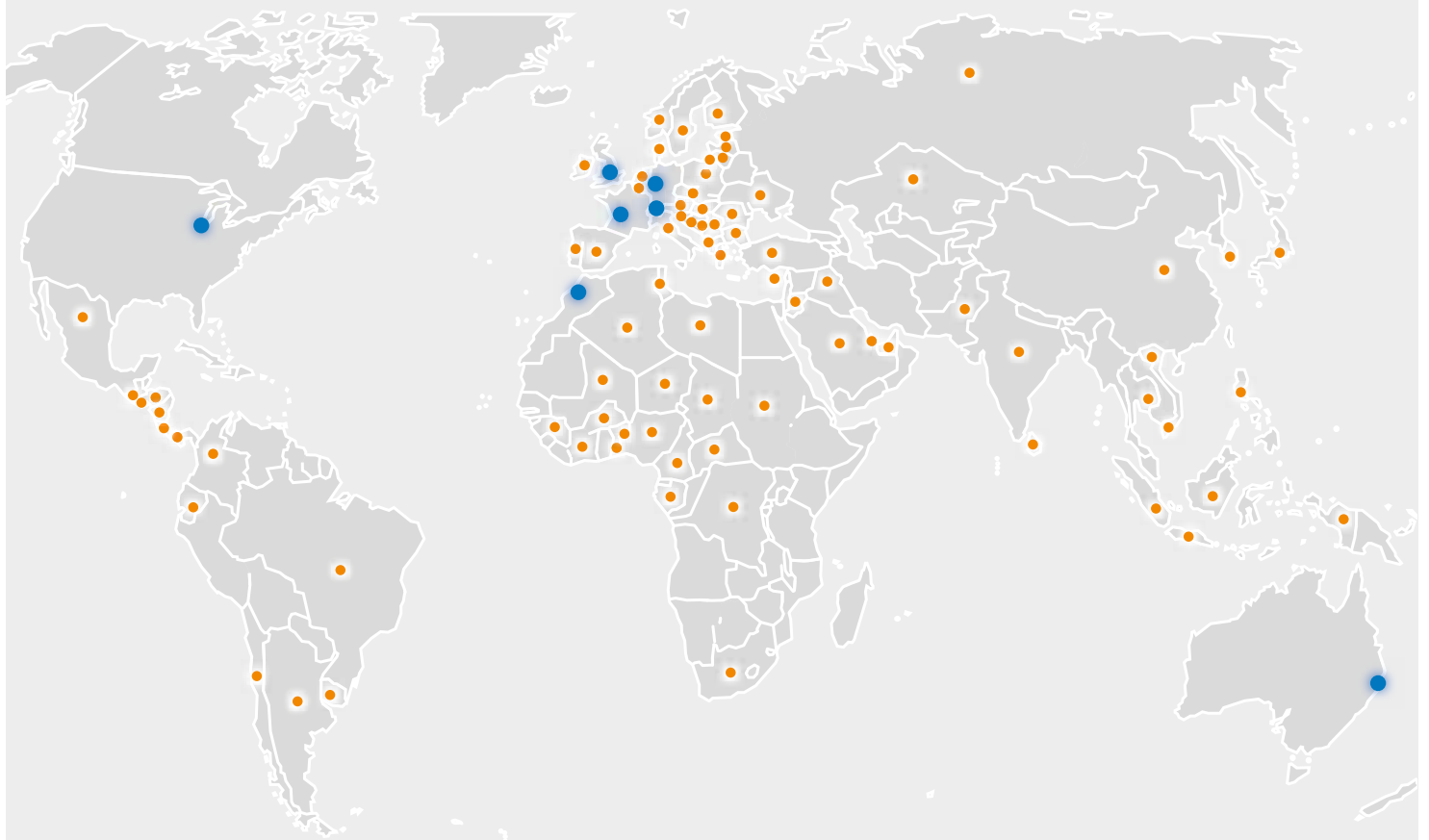
- Drilling out of the smallest possible working pits  
keyhole Ø 650 mm
- Integrated machine control with bore automatics
- Stepless adjustment of drilling parameters
- Fully automatic rod handling
- Closed round frame design
- Clearly arranged icon display
- Rotary drive with hollow shaft
- Torque-dependant thrust regulation
- Integrated rod cleaning system
- Integrated hydraulic bracing system

## Performance data

Height; diameter [mm]	short version: H = 2,330; D = 590 long version: H = 2,830; D = 590
Weight [kg]	short version: approx. 550; long version: approx. 620
Content rod box [m]	100
Thrust and pulling force [kN]	40
Maximum torque [Nm]	900
Max. spindle rotation [rpm]	60
Pilot bore Ø [mm]	58
Drill rod Ø [mm]	50
Effective rod length [mm]	230
Rod weight [kg]	2.4
Upsizing Ø [mm]	80
Pipe OD [mm]	60
Bore length [m]	30
Min. bore radius [m]	50

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