

TRACTO

Further information
on GRUNDODRILL

[TRACTO.COM/NEW-GRUNDODRILL](https://tracto.com/new-grundodrill)



GRUNDODRILL ACS300 ROCK DRILLING HDD RIG PREMIER LEAGUE



ADVANCED TRENCHLESS TECHNOLOGY

GRUNDODRILL ACS300

THE NEW GENERATION

Horizontal directional drilling (HDD) is a complex process that places equally complex demands on machine technology. The intensive study of these requirements from the user's point of view led to a unique development process in which every detail was questioned and every component rethought. The result is the new generation of GRUNDODRILL with a groundbreaking concept that enables maximum flexibility and productivity in steerable trenchless pipe installation. Thanks to the forward-looking combination of innova-

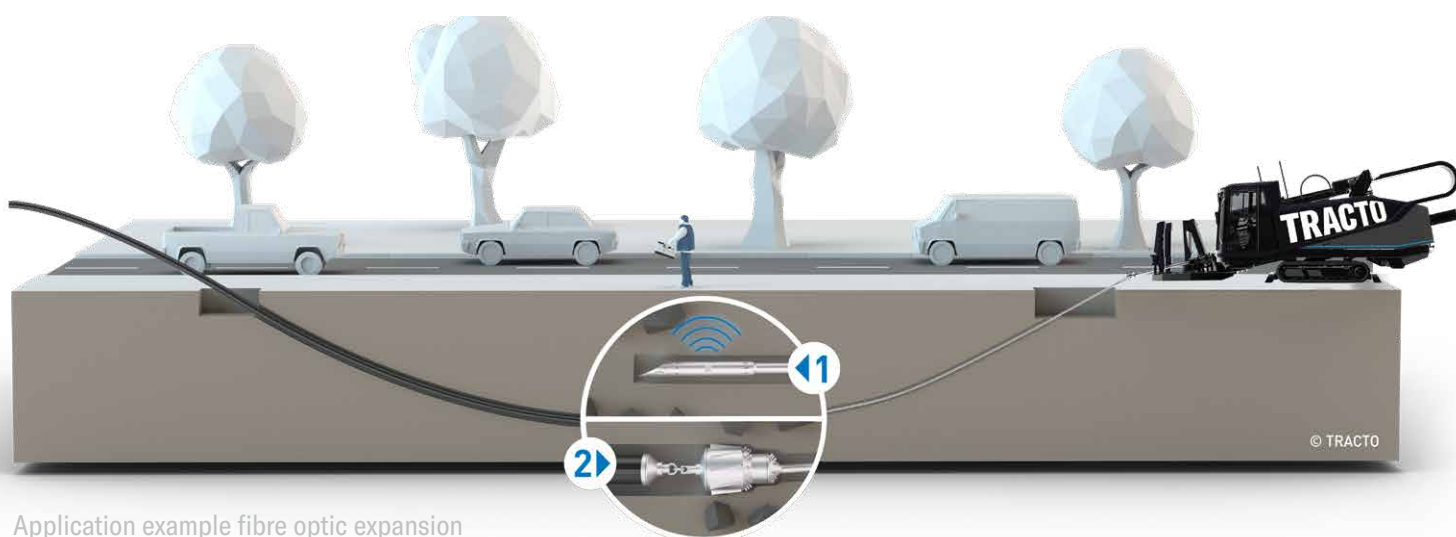
tive technology and maximum digitisation, this is easier than you might think. The new GRUNDODRILL JCS130 / ACS130 is the first in the product range to offer all these possibilities.

GRUNDODRILL
Application
video at



TRACTO.COM/
APPLICATIONS

APPLICATION



Application example fibre optic expansion

INSTALLATION METHOD



BORE DIAMETER



165 - 1.000 MM*

MAIN APPLICATIONS

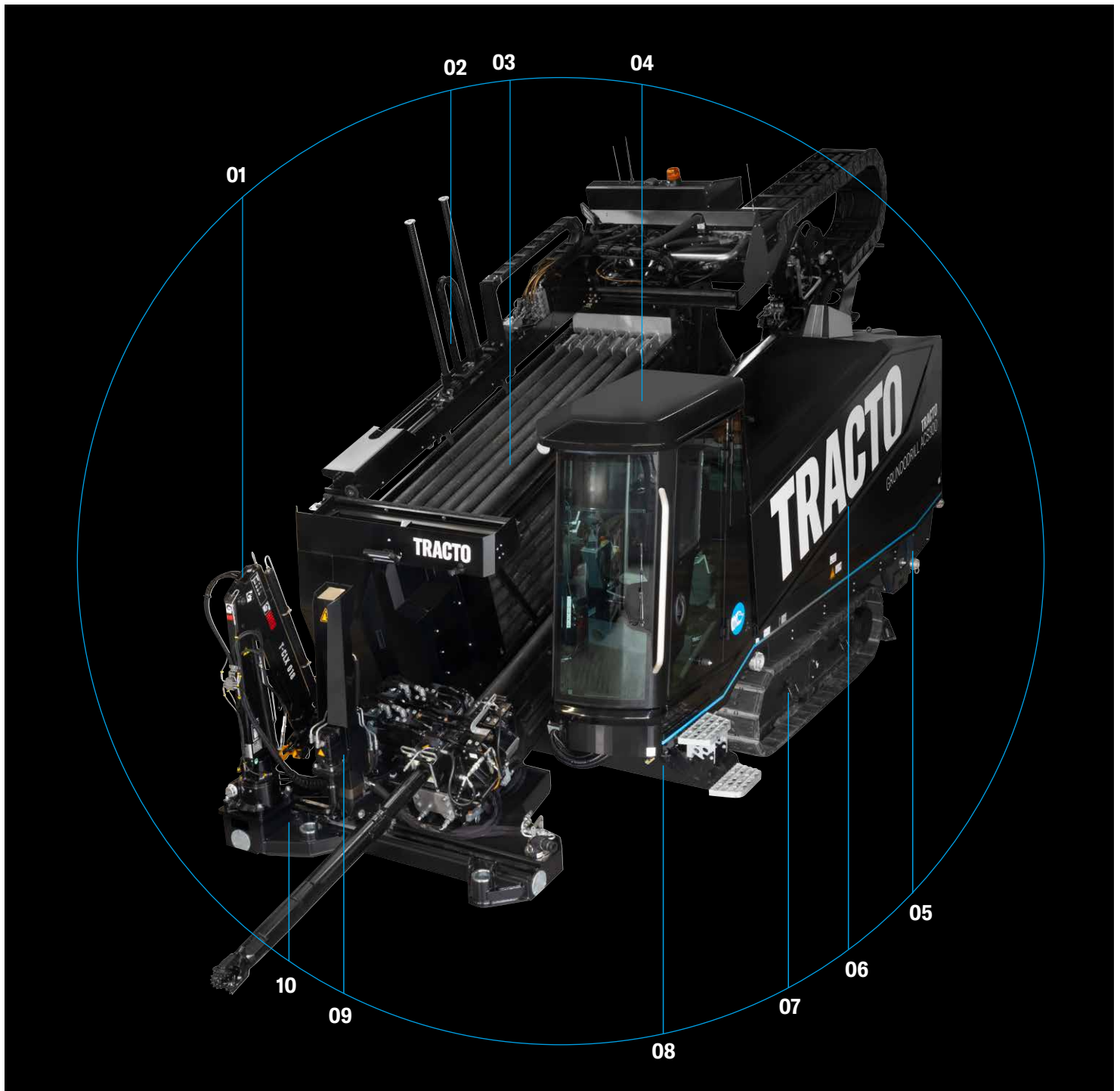


SPECIAL APPLICATIONS



*depending on soil conditions

OVERVIEW



01 Hydraulic loading crane for self-sufficient handling of additional drill rod boxes, drill rods and drilling accessories

02 Optimum drill rod handling with crane and fully automatic drill rod loading system for Jetbore and twin-tube rods. Quick connection of an additional drill rod box with automatic rod retrieval by crane

03 Largest rod magazine in this performance class with 210 m of rods on board

04 Vibration-damped comfort cab with a range of features such as automatic air conditioning and an electric swivelling mechanism

05 Fresh water tank with high-pressure cleaner for cleaning drill rods and drill rig

06 Significantly increased rotation and rinsing capacities in combination with the highest drive power in this class enable significant increases in productivity in any geology

07 Broad undercarriage with rubberised steel tracks

08 Stabilisers for perfect alignment and positioning of the drill rig on site

09 Anchoring system for perfect anchoring of the drill rig on site the jobsite

10 Anchor plate with mud pump as Bentonite collecting tray for a clean jobsite

REVOLUTIONARY IN ALL PERFORMANCE CLASSES

Innovation down to the smallest detail

The well thought-out sophisticated combines numerous innovative individual solutions into a future-oriented and unique overall concept. All future models in the range will have the same outstanding features, ensuring that maximum power for thrust, rotation and drilling fluid is always available.

An intelligent control concept ensures the optimum transfer of the total power to the individual components as required. This makes the new GRUNDODRILL generation the most efficient and most productive drilling rig in its class on the market.

Powerful rotary drive

- Variable torque control significantly increases rig productivity. Torque and speed can be optimally adapted to the geology and the drilling tools.
- Compared to conventional drilling rigs, the new concept results in a significantly higher power output over the entire speed range.



Central lubrication (optional)

- Automatic lubrication of all greasing points after a set time or via the operating terminal.

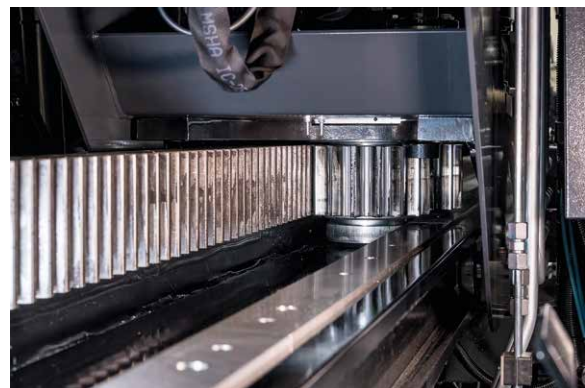
Maximum drilling fluid output

- Depending on the power class, different pump options are available, each of which delivers the maximum drilling fluid volume at the highest possible pressure.
- This extra high drilling fluid capacity ensures fast drilling progress and maximum drilling capacity.



Effective thrust

- The rack and pinion drive with significantly increased idle stroke speeds ensures shorter cycle times in push mode and when changing rods.
- Infinitely variable push and pull force limitation and an anti-stall valve ensure safe, fatigue-free and material-friendly operation.





FAST LOADERS WITH GROWTH POTENTIAL

Largest rod magazine in its class

The new GRUNDODRILL generation's rod magazine combines a large magazine capacity with an innovative and flexible reloading concept. This clever solution guarantees very short cycle times when changing drill rods and minimum effort when reloading or removing drill rods for particularly long bores.

Additional rod box



Intelligent stockkeeping

The magazine concept significantly increases the flexibility and productivity of the drill rig.

- Work in very tight site conditions - the rig is fully operational in the specified transport width.
- Optional loading boxes make loading additional drill rods a breeze.
- A telescopic crane, also available as an option, ensures independent, ergonomic and safe handling of the loading boxes.

- Several loading options are available:
- Individual drill rods can be fed manually from the side and then loaded fully automatically into the drill rod box.
- Automated working directly from the reloading box
- Rods are removed directly from the reload box and transported to the drilling axis.
- Fully automatic loading or unloading of the rod box from the reloading box.
- Automation allows all loading options to be used without an operator in the cabin.

Reliable and fast through all geologies

A new generation of drill rods, which is precisely matched to the GRUNDODRILL rigs, enables significantly lower bending radii with higher performance and maximum drilling fluid output even over long drilling distances.

- A newly designed polygon plug-in connection for the inner rods of the twin-tube rods ensures reliable torque transmission in the tightest of spaces. This ensures high drilling fluid output and productivity, even when using the twin-tube rods. (1)
- One-piece forged drill rods with ELICON threads and bearing mounted inner rods ensure reliability and long service life. (2)



MOBILE COMMAND CENTRE

Innovation down to the last detail

The unique and innovative operating concept of the new GRUNDODRILL generation is the result of a thorough and in-depth development process in close cooperation with drilling engineers and experts in ergonomics and biomechanics. By combining state-of-the-art control technology with intelligent software and a high degree of automation, the operator can concentrate more than ever on his most important task: drilling.

Simple Operation

- The entire operating concept is self-explanatory and intuitive - comparable to modern smartphones or tablets.
- The automation of all processes and operations increases productivity and reduces operator fatigue.
- All central functions of the rig can also be controlled manually.

Total overview

- An integrated camera concept automatically provides the operator with an optimal overview of all relevant areas of the rig at all times.

This modern and intuitive operating concept plays a key role in increasing the productivity of the HDD and greatly facilitates the training of new drillers.

Comfort operator cabin – the perfect workplace

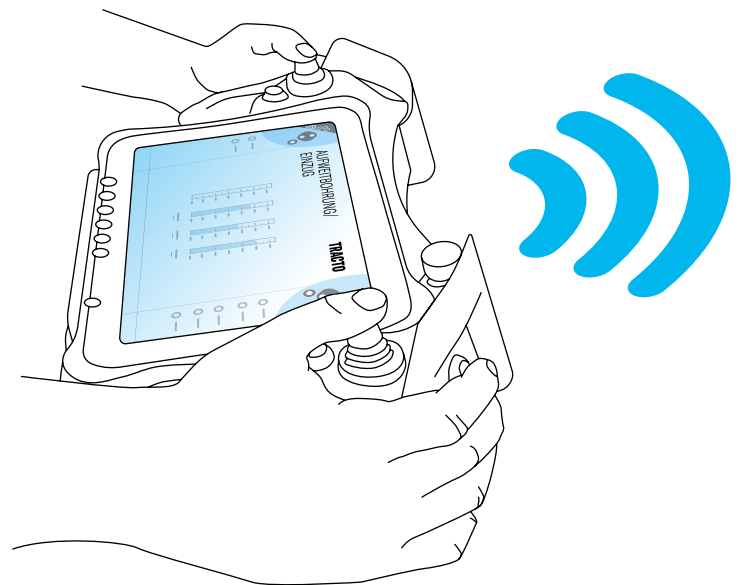
The design and features of the comfortable cabin are tailored to the needs of the operator. In combination with the camera concept, large panoramic windows provide optimum all-round vision. The significantly enlarged cabin, together with optimised cabin suspension and an ergonomic seat with optional air suspension, provides the perfect workplace.

Further features

- Central locking, electronic immobiliser, plenty of storage and charging sockets, bottle cooler, radio with Bluetooth hands-free kit
- Optional: air conditioning or automatic climate control, swivel mechanism



Innovative, detachable remote control for remote-controlled drilling



NEW PERSPECTIVES

Remote controlled drilling

The new generation of GRUNDODRILL rigs can be operated completely by remote control, even in drilling mode. Thanks to the intelligent operating concept, all functions of the drilling rig can be conveniently controlled and monitored from outside the operator's cabin using a specially designed remote control unit.

This heavy-duty, site-friendly unit combines the same controls as in the cab with an outdoor tablet that acts as the central control unit for the machine.

- All functions of the drill rig can be controlled via the remote control.
- Combined with the new camera and sensor concept, full control of the entire drill rig is always guaranteed, even when operating with the remote control.

- Reduced site downtime due to increased flexibility. Short-term manpower bottlenecks - for example, when mixing fresh drilling fluid - can be overcome by allowing the operator to operate both the rig and locating system at the same time.
- New perspectives for the operator - for example monitoring the backflow of drilling fluid or the pipe pulling process in the target pit, visual control when bypassing existing pipes and obstacles, etc.

The GRUNDODRILL remote control unit increases safety and flexibility in daily use on the jobsite and efficiency in drilling in a simple way.



PERFECT MATCH



Integrated location solution

The integration of the DCI location display into the control concept of the new GRUNDODRILL generation is a unique feature that sets new standards in the HDD market. By merging drilling equipment and locating technology into a single unit, all relevant data is brought together centrally to further simplify the drilling process.

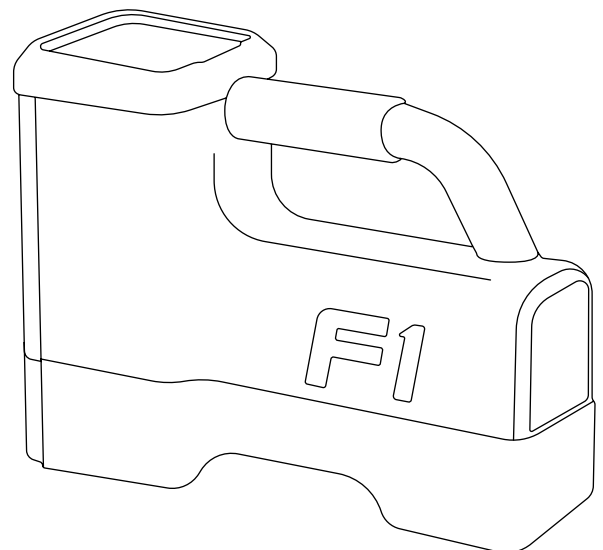
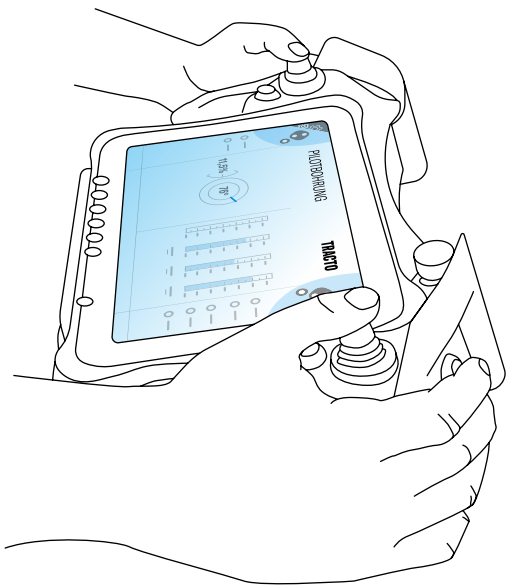
Trend-setting partnership

Reliable and precise locating technology is required for the safe and precise control of the drill head. As the manufacturer of the first detection systems to capture the inclination and roll of the drill head, Digital Control has been setting the standards in this field worldwide for decades. This continuous innovative strength makes DCI the perfect partner for developing the sophisticated location feature. The result of the cooperation is as ingenious in its conception as it is easy to use. A hardware module developed by DCI (AIM – Aurora Interface Module) and an interface jointly developed by DCI and TRACTO are fully compatible with all locating systems of the current DCI F series.

- One central screen for machine data and location information – even with remote drilling.
- Compatible with DCI locating systems F1, F2, F5 and Falcon F1, Falcon F2, Falcon F5.
- The integration of all DCI settings and the adaptation of the look & feel to the TRACTO environment simplifies the introduction and training of new operators.
- Contributes decisively to the fast and more sustainable training of new specialists – drill masters and locating technicians can follow the drill head together. Innovative, detachable remote control from TRACTO Location system from DCI

Safe and on-target steering of the bore head

The location system from DCI transfers all relevant data to the TRACTO operating panel



Innovative, detachable remote control from TRACTO

Location system from DCI

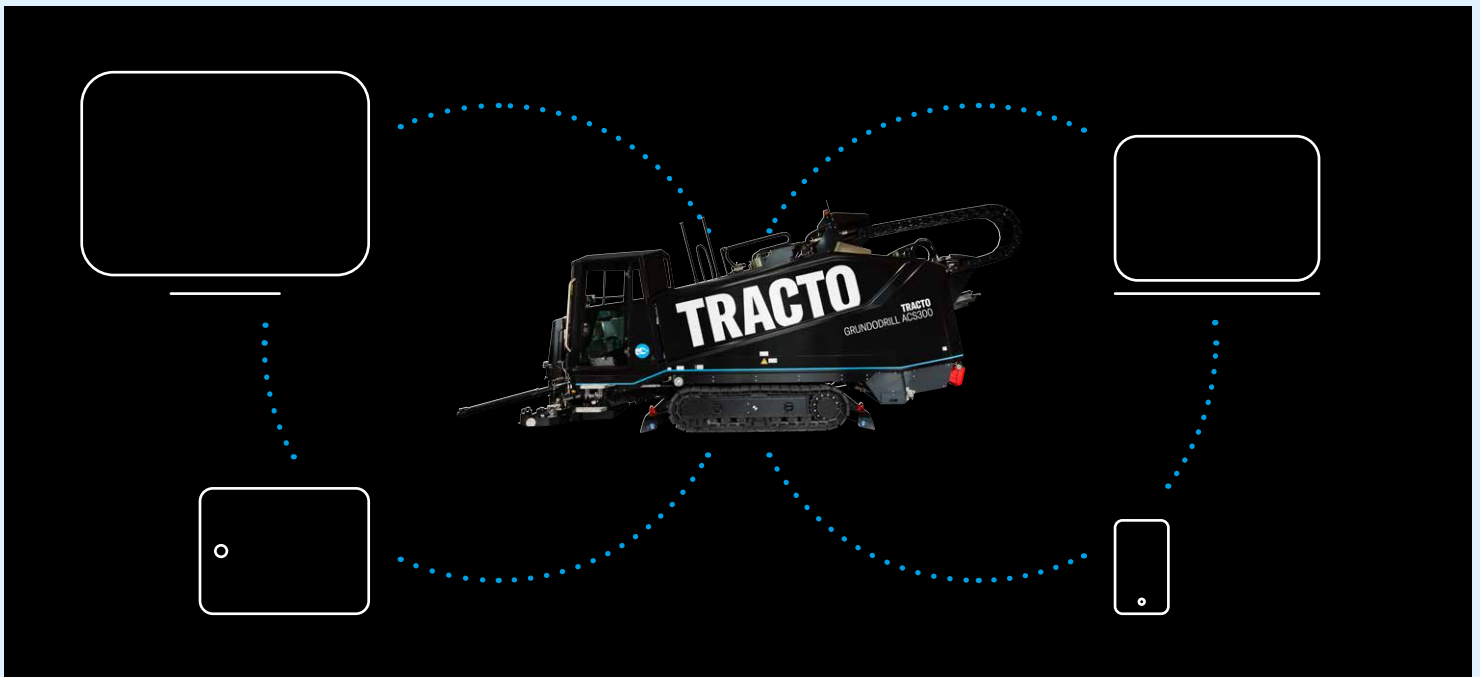
SMART NETWORKING

COMMANDER, QUICKPLANNER3D & eShop

Information
about digital
solutions



TRACTO.COM/EN/
SERVICES/
360-DIGITAL-
SOLUTIONS



360° Digital Solutions

360° stands for a specially developed, integrated platform providing you with digital solutions that make your complex tasks easier and faster in a simple way. Our cloud-based solutions for HDD technology connect planning, execution, documentation and service. This allows you to use your drilling rigs even more efficiently and profitably – conveniently via PC, smartphone or tablet.

Getting started via the modular platform is quick and easy, use is intuitive. The first modules of this 360° experience are COMMANDER and QuickPlanner3D for HDD technology, as well as a tailor-made eShop for ordering accessories and spare parts.

Professional fleet management with COMMANDER*

Locating, managing and analysing - with the digital COMMANDER you have the location, performance and consumption data of your drilling rigs at your fingertips without much effort, anytime, anywhere.

COMMANDER offers you a comprehensive but simple solution to make your fleet management efficient, transparent and cost-effective. The intelligent app is perfectly matched to the GRUNDODRILL rigs* and can manage any number of rigs. It records all relevant data in real time and delivers it as documentation at the touch of a

button. To get the most out of your fleet, all modules of the COMMANDER can be configured according to suit your individual needs.

With COMMANDER you have the perfect tool to save time and resources, reduce the operating costs of your GRUNDODRILL rigs and maximise the productivity of the entire fleet.

On target bores with QUICKPLANNER3D

QUICKPLANNER3D allows you to automatically plan the optimum HDD bore path in the shortest possible time. The intelligent software tool is a self-optimising planner that reliably calculates the shortest bore path based on the given parameters.

- Efficient planning and fast feasibility analysis of the HDD bore path
- Intelligent algorithms calculate the optimum bore path
- Realistic results through three-dimensional calculation and design

Remote Service

Due to the optimised possibilities to analyse and evaluate data from the bore rig, we can offer you an improved remote service and also react quickly to your requirements.

*Works with all GRUNDODRILL models from year of manufacture 2018 onwards

VARIANTS

Maximum
productivity
in all perfor-
mance classes



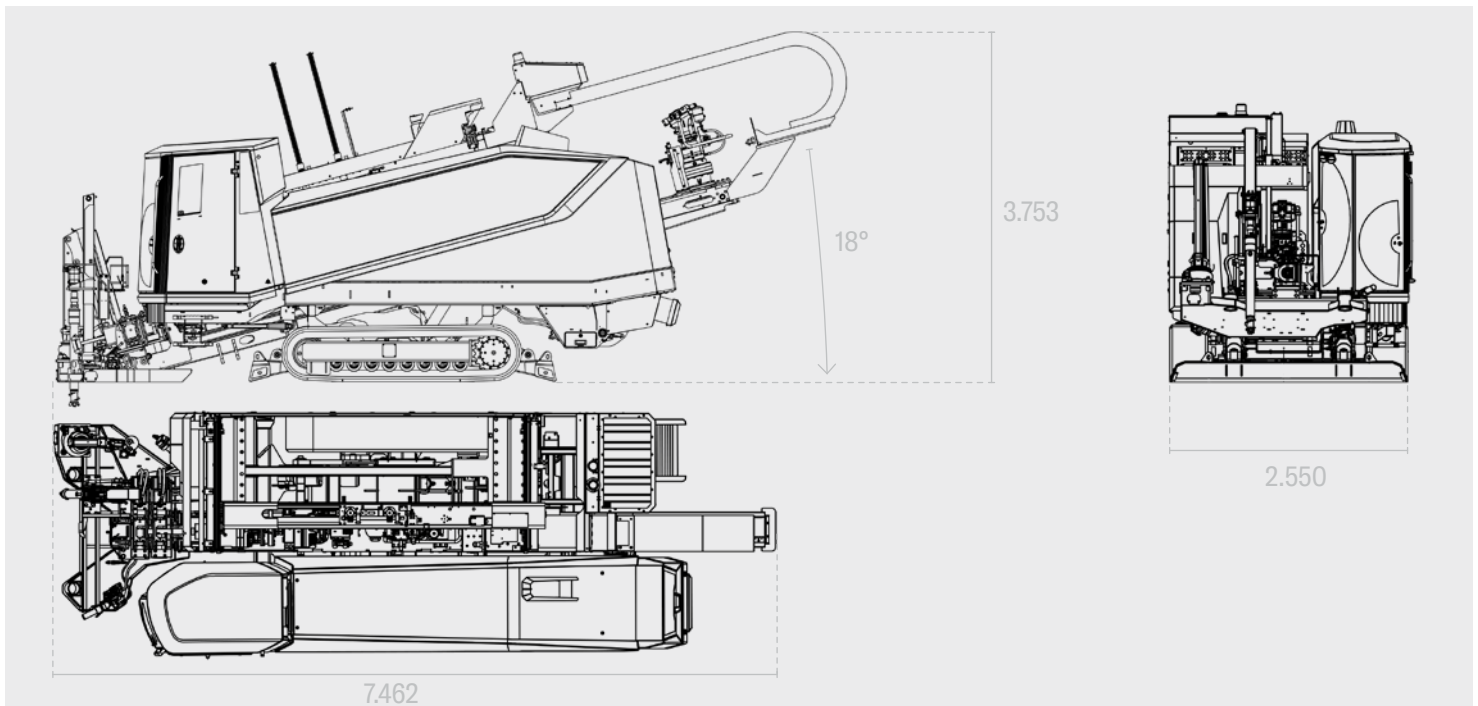
GRUNDODRILL ACS300 THE NEW GENERATION

FEATURES

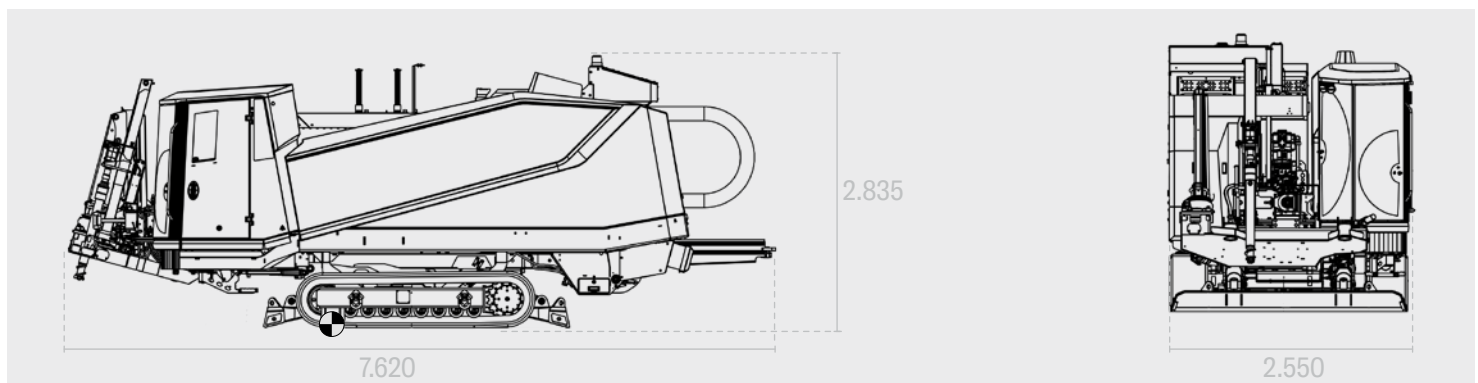
- ACS - ALL CONDITION SYSTEM - for drilling in all geologies including rock/base
- Cummins Tier V engine, 231 kW
- Variable torque and speed control for maximum power and productivity at any speed
- Fully automatic drilling operation including rod change and all other auxiliary operations
- Comfortable operator's cabin*1 with Grammer comfort seat (with air suspension*1), central locking, electronic immobiliser, heating, air conditioning*1 or automatic air conditioning*1, radio, hands-free kit, cool box
- Powerful HD Bentonite pumps on board - full flow at maximum pressure for maximum productivity
- Innovative and intuitive controls, radio remote control for remote drilling*1
- Compatible with all digital TRACTO solutions
- Many other options available

*1 optional

WORKING POSITION



TRANSPORT POSITION





TECHNICAL DATA

DRILL ROD TYPE EL-D104 ACS

Thrust and pullback force	300 kN	
Max. feed rate (without load)	50 m/min	
Max. torque	outer rod 13,000 Nm	inner rod 2,800 Nm
Max. spindle speed	outer rod 210 U/min	inner rod 350 U/min
HP bentonite pump P80	650 l/min	
Bentonite pressure P80	80 bar	
Rod magazine contents	210 m	
Effective rod length Number of rods	3,000 mm 70 pcs.	
Pilot bore Ø	165 mm	
Min. bore radius	75 m	
Max. upsizing diameter	1,000 mm	
Bore length* ≤	500 m	
Lx W x H (transport position)* ²	7,620 x 2,550 x 2,835 mm	
Lx W x H (Working position with cabin swivelled in)* ²	7,462 x 2,550 x 5,030 mm	
Lx W x H (Working position with cabin swivelled out)* ²	7,462 x 3,223 x 5,030 mm	
Max. weight* ²	23,250 kg	
Engine manufacturer	Cummins	
Engine type	B6.7	
Emissions standard	Stage V	
Max. engine output	231 kW	
Tank capacity	268 l	
Inclination angle	0–30 °	
Sound pressure level L_{PA} Sound power level L_{WA}	78 dB 105 dB	
Workplace vibrations	< 0.5 m/s ²	

* depending on soil | ¹ Option | ² depending on configuration | Data subject to change

**Order now
at our
eSHOP**



eSHOP.TRACTO.COM

WELL EQUIPPED IS HALF WAY THERE

Drilling tools, perfectly adapted to the drilling rig, guarantee optimal drilling progress through every type of soil. Robustness and durability of all parts are guaranteed.

STANDARD EQUIPMENT

Transmitter housing with bore head



Medium Soil Reamer



Cone Reamer



GRUNDREAM

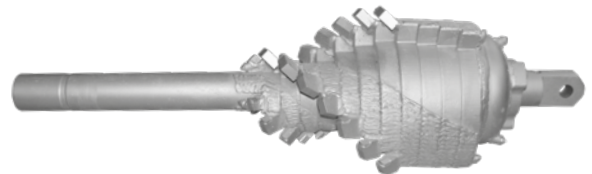


ROCK DRILLING EQUIPMENT

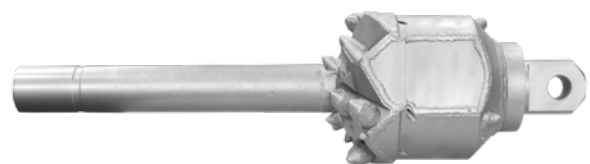
ELICON D104 ACS -rock drilling unit with roller chisel



Hard Soil Reamer



Hard Soil Rockreamer



Holeopener



MIXING SYSTEMS

A first-class drilling fluid technology is an important component for successful drilling. In combination with the drilling rig and drilling tools, TRACTO's drilling fluid technology provides a coherent package for an efficient job completion – even in complex and alternating soils.

Efficient mixing systems and pumps guarantee a high flow rate. To prepare drilling fluids, which are perfectly adapted to the soil, professional measuring equipment and drilling fluid additives are available.

The treatment and reuse of used HDD drilling fluid using efficient recycling systems reduces the consumption of water and Bentonite. The solids removed during the drilling process are almost completely separated. As a result, the treated drilling fluid can be continuously reused in a closed circuit. This accelerates drilling progress, significantly reduces wear and tear on drilling tools and pumps as well as the consumption of water and Bentonite. The multiple use of the drilling fluid and the separation of the solids by means of recycling increase the economic efficiency of an HDD bore.

Learn more in our in-house training courses or ask us for additional information on mixing systems and truck set-ups.



MIXING SYSTEM MA07



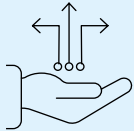
MIXING SYSTEM MRU250HE

TRANSPORT

We are happy to provide assistance with the configuration and choice of your truck including trailer. For details, please contact your local sales representative.

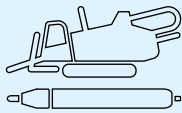
FULL SERVICE FOR TRENCHLESS TECHNOLOGY

Whether its before, during or after the purchase, whether in person or online – we are always at your side with advice and support. Our wide-ranged service is specially tailored to the requirements of trenchless pipe installations, so you can concentrate fully on your core business.



Digital Solutions

Our website offers you the whole world of trenchless technology in digital form. Find out more about our company, our products and their applications. Discover the digital tools for the HDD drilling technology and many other intelligent solutions. Always stay up to date by using the links to our social media channels. Or you can order machines, accessories and spare parts in our eSHOP – easy and conveniently via PC, smartphone or tablet.



Nodig Product Specialists

You can truly rely on our product specialists for all technical questions regarding the function and application of our steerable and non-steerable NODIG-systems. With comprehensive knowledge in each of their special fields, you can be sure they will find the best solution for your trenchless projects and advise you competently on setting up your jobsite.



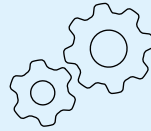
Financing

We offer attractive financing solutions for new and used machines to our customers and sales partners through the TRACTO-TECHNIK Finance GmbH. Be it financing, hire purchase, various types of leasing or insurance: we provide extensive expert advice, individually and personally, in order to find the tailored solution for you. Discretion goes without saying.



Training

Qualified training enables you to apply trenchless technology even more effectively and profitably. Our wide range of training courses for machine operators, construction professionals as well as planners and clients cover all aspects of NODIG technology, including special topics. Certified trainers also instruct you, in theory and practice according to your individual requirements, either at one of our numerous company locations, or directly on your own premises or online, independent of time and place.



Specialised Civil Engineering Service (Application Technology)

The specialised civil engineering service for application technology provides support for all your trenchless construction sites. Our experts demonstrate the steerable and non-steerable NODIG technology live in practical use, show your drilling teams how to use it or actively assist with special projects.



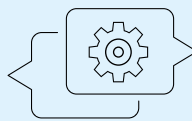
Geoservice

Precise knowledge of the soil is the key to successful trenchless projects. Our Geoservice team provides you with this professional knowledge. Our expertise puts you in a position to master every type of soil. Based on geoscientific maps and existing construction files, we supply information on the soil, which will help you with calculations or supplements.



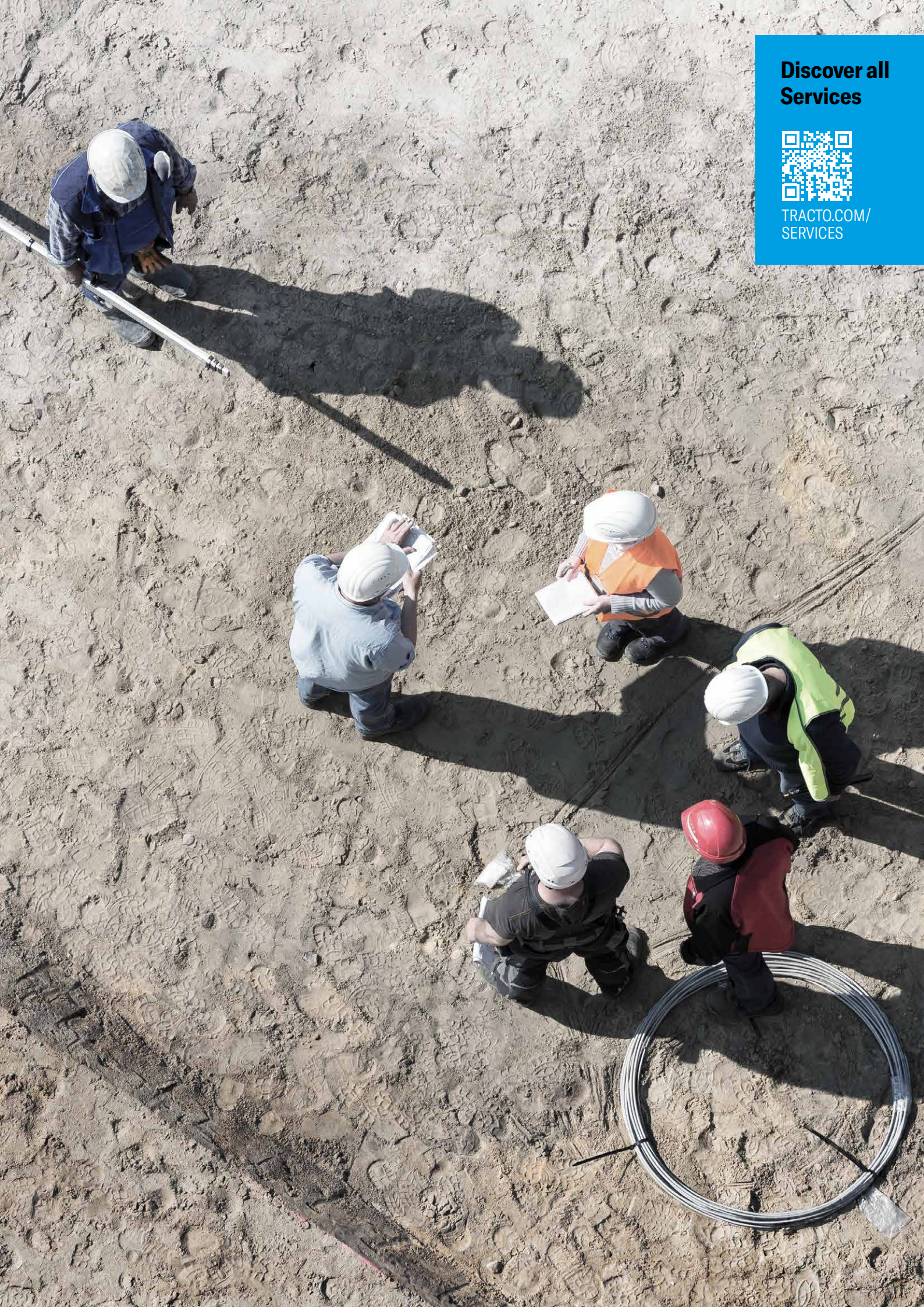
Used Equipment

If you want to sell a used machine at an attractive price or are looking for the right equipment for your tasks, our full service for used NODIG machines will take the workload off your hands – from appraisal and price determination to professional repair and certification, through to achieving the best price for you via our used machine website with access to one of the world's largest construction machinery platforms.



After Sales

Via our worldwide service network we are always there for you, even after the purchase. A total of five TRACTO plants and seven customer centres in Germany, as well as our worldwide sister companies and sales partners guarantee fast supply of spare parts and immediate availability. Our competent service staff offer fast assistance, to ensure you don't lose any time.



**Discover all
Services**



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TRACTO ADVANCED TRENCHLESS TECHNOLOGY

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