

# TRACTO

Further information  
on GRUNDODRILL  
[TRACTO.COM/EN/PRODUCTS](https://tracto.com/en/products)



GRUNDODRILL  
JCS130E -ELECTRIC  
FLUID-ASSISTED HDD RIG  
SUSTAINABLY EFFICIENT



PROTOTYP



**ADVANCED TRENCHLESS TECHNOLOGY**

# GRUNDODRILL JCS130E

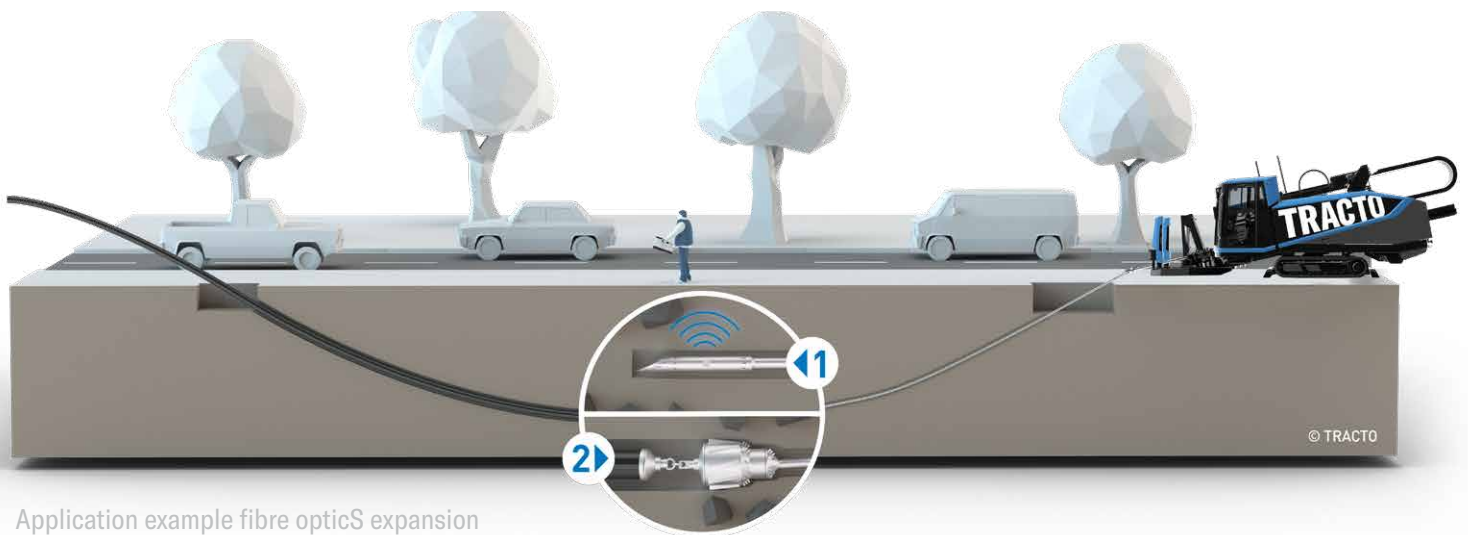
## NEXT LEVEL HDD WITH E-DRIVE

Horizontal Directional Drilling is a complex process, which places equally diverse demands on machine technology. The intensive examination of these requirements from the user's point of view led to a unique development process reviewing every detail and rethought every component. The result is the new GRUNDODRILL generation with a ground-breaking concept, allowing for utmost flexibility and maximum productivity in steerable trenchless pipe installations. Thanks to the trend-setting combination of innovative technology and maximum digitisation, this is easier than you think.

The new GRUNDODRILL JCS130E combines all these innovative features with a powerful electric drive, making HDD pipe and duct installation even more efficient, economical and resource-saving:

- **Significantly reduced noise**, improving the working environment and the health of your crew.
- **Less climate-damaging carbon emissions**, minimising the CO<sub>2</sub> footprint of HDD drilling
- **Increased efficiency** due to smart electrical drive concept

### APPLICATION



Application example fibre opticS expansion

#### INSTALLATION METHOD



#### BORE DIAMETER



#### MAIN APPLICATIONS

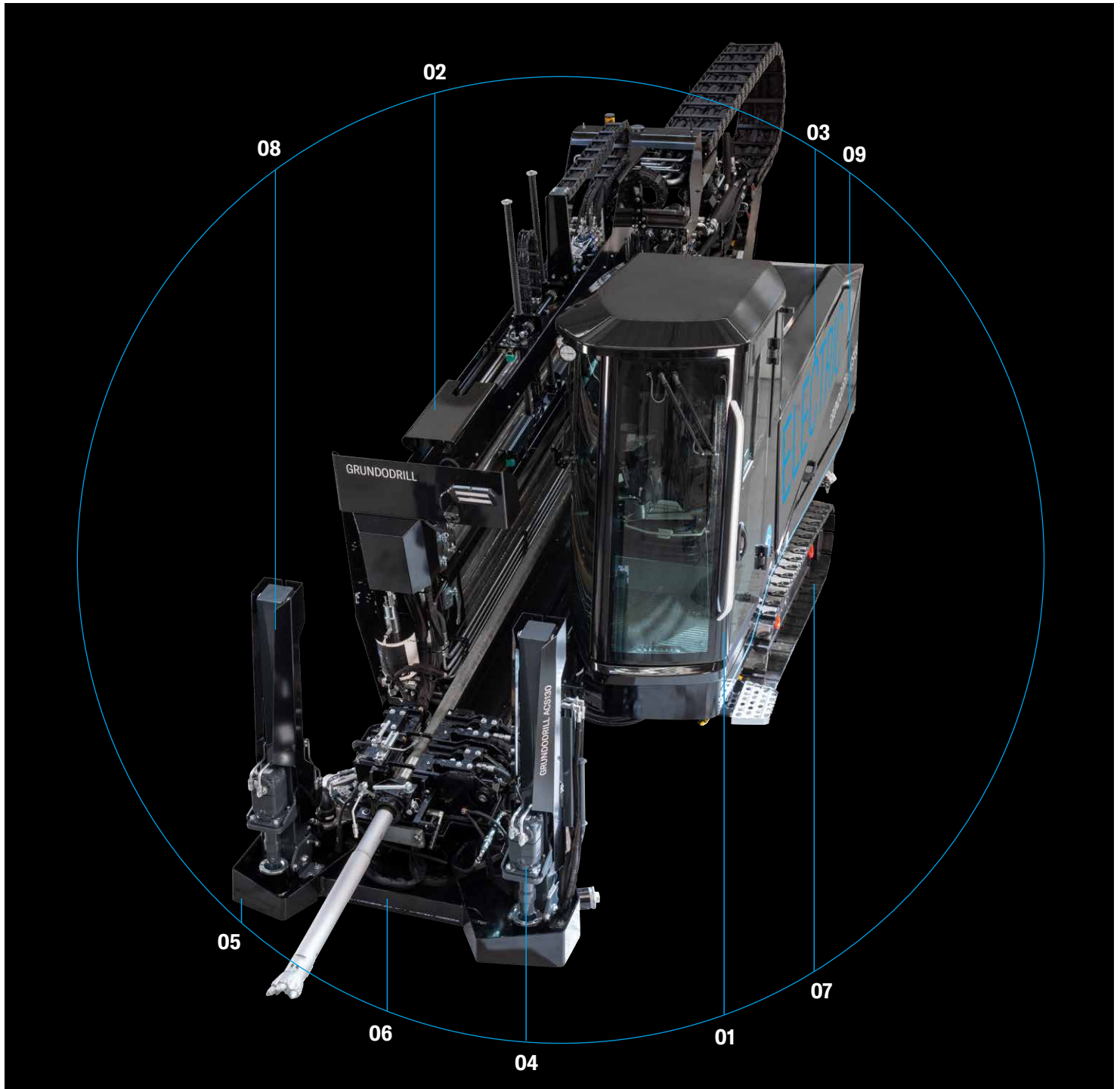


#### SPECIAL APPLICATIONS



\* depending on soil conditions

# OVERVIEW



**01 Suspension Cabin** with various equipment possibilities, such as automatic climate control, various operator seats, an electrical swivel mechanism

**02 Optimal drill rod handling with crane and fully automatic drill rod loading system** for Jetbore and twin-rods. Quick connection of an additional drill rod box with automatic retrieval via the drill rod crane

**03 Significantly increased rotation and flushing capacities** in combination with a matched high drive power enable considerable productivity increases in any geology

**04 Optional anchor bore system** for perfect anchoring of the bore rig at the jobsite

**05 Anchor plate** as drip pan for drilling fluid contributes to a clean jobsite

**06 Stabilisers** for perfect alignment and positioning of the bore rig at the jobsite

**07 Undercarriage options** with a choice of rubber, steel or rubberised steel tracks

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

**09 CEE plug** connection to external electrical power source

**10 40 kWh peak shaving buffer battery** providing additional energy for high operating loads

# THE DRIVE IT NEEDS POWER APLENTY

## Innovation down to the last detail

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

An intelligent control concept makes sure that the overall power is optimally transferred onto the individual components as required. This makes the new GRUNDODRILL generation the most efficient and productive drilling rig in its class on the market.

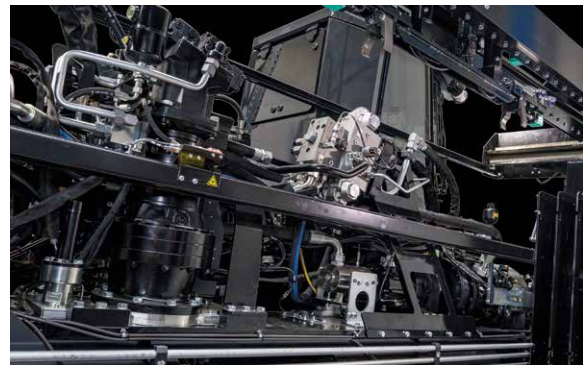
## Maximum drilling fluid output

- Depending on the performance class, different pump options are available, each providing the maximum drilling fluid volume at highest possible pressure at the same time.
- This particularly high drilling fluid performance guarantees fast drilling progress and maximum clearing capacity.



## Powerful rotary drive

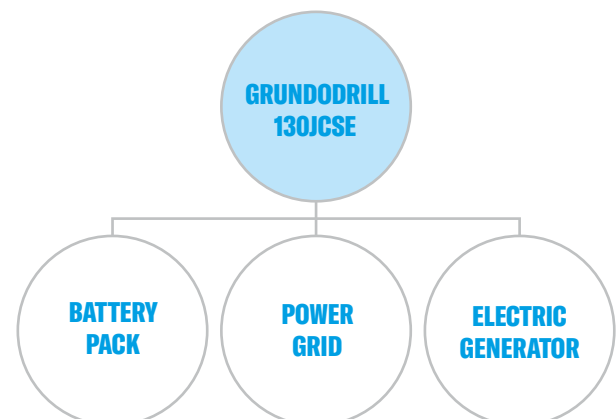
- A variable torque adjustment considerably increases the productivity of the drilling rigs. Torque and rotational speed can be optimally adapted to the respective geology and drilling tools.
- Compared to conventional drilling rigs, the new concept leads to a considerably higher power output over the entire speed range.



## Smart electric drive concept

- Intelligent power supply for drilling and auxiliary operations via a combination of external source and buffer battery
- Peak shaving buffer battery to overcome high operating loads, e.g. when drilling through complex soils
- Buffer battery allows drill rig to be driven and positioned on site without the need for an external power source

## Drive options





# FAST LOADERS WITH GROWTH POTENTIAL

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.



Image similar

## Intelligent stock keeping

The magazine concept significantly increases flexibility and productivity when using the drilling rig.

- Operates space-saving, in very tight site conditions - the drilling rig is fully operational in the specified transport width.
- Optional stack-up boxes make reloading additional drill rods a child's play.
- A telescopic crane, also available as an option, ensures self-sufficient, ergonomic and safe handling of the stack-up boxes.

- Different reloading options are available:

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

## Reliable and fast in 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, in-depth development process in close cooperation with drill masters 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 activity: drilling.

## Simple Operation

- The entire operating concept is self-explanatory and intuitive – comparable to modern smartphones or tablets.
- The automation of all processes and work steps leads to an increase in productivity and to a relief of the operator.
- All central functions of the drilling rig can also be controlled manually as an alternative.

## Total overview

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

This modern and intuitive operating concept makes a central contribution to increasing productivity in the HDD and considerably facilitates the training of new drill masters.

## Comfort operator cabin – the perfect workplace

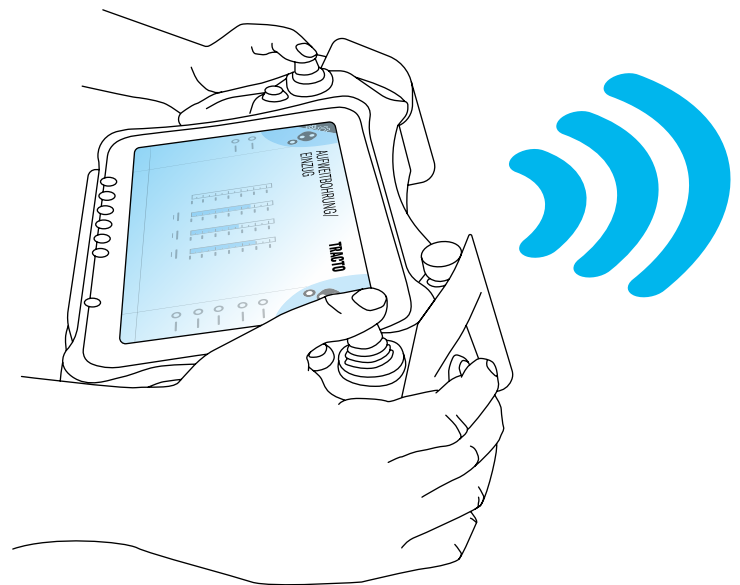
The design and equipment of the comfort operator's cabin have been consistently adapted to the needs of the operator. In combination with the camera concept, large panoramic windows offer an optimum all-round view. The significantly enlarged cabin, in combination with an optimised cabin suspension and an ergonomic and optionally air-suspended seat, becomes the perfect workplace.

## Further features

- Central locking, electronic immobiliser, numerous shelves and charging sockets, bottle cooler, radio with Bluetooth hands-free kit
- Optional: air conditioning or automatic climate control, pivoting mechanism



Innovative, detachable remote control for remote-controlled drilling





# NEW PERSPECTIVES

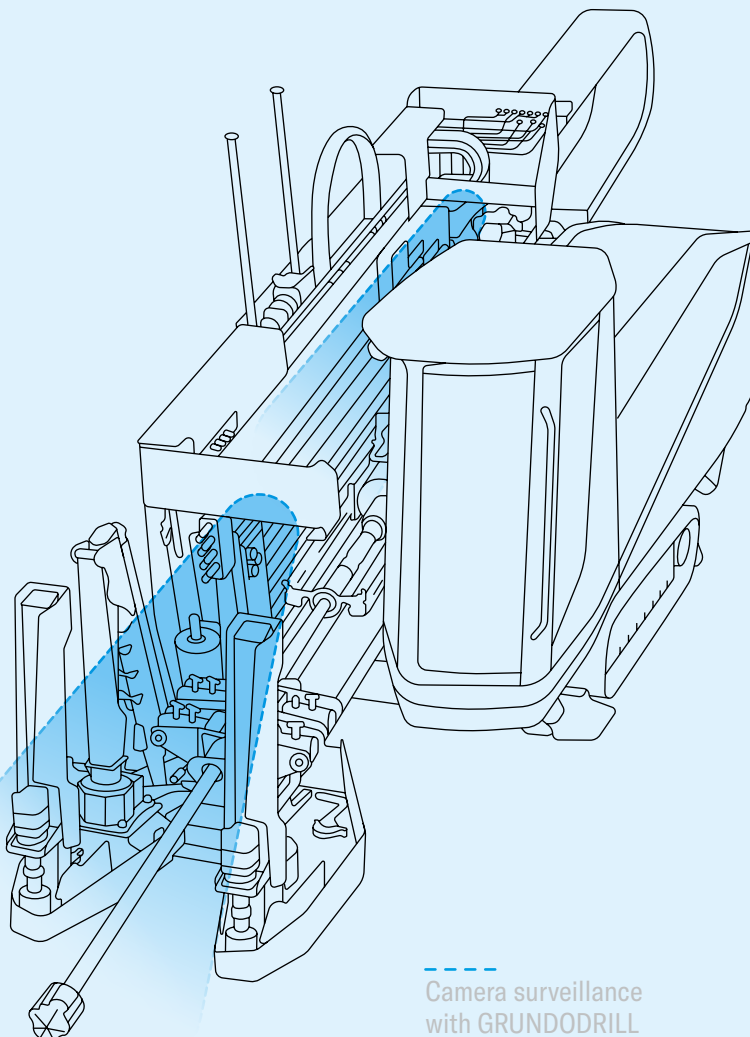
## Remote controlled drilling

The drilling rigs of the new GRUNDODRILL generation can be operated completely by remote control even in drilling mode. Due 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 particularly hard-wearing device, which is suitable for construction sites, combines the same operating elements that are located in the cabin with an outdoor tablet, which is used as the central operating unit of the machine control system.

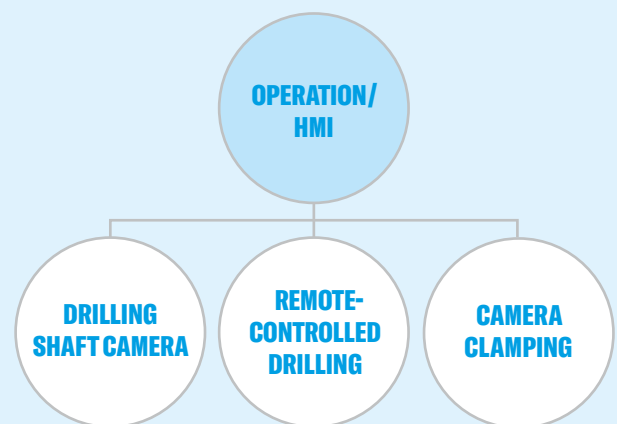
- All functions of the bore rig can be steered via the remote control.
- In combination with the new camera and sensor concept, full control of the entire drilling rig is always guaranteed, even when operating with the remote control.

- Reduced downtimes on the construction site due to increased flexibility. Short-term personnel bottlenecks – e.g. when mixing fresh drilling fluid – can be bridged by the equipment operator operating the drilling rig and the locating technology simultaneously.

The GRUNDODRILL remote control unit increases safety and flexibility in daily use on the job site and the efficiency when drilling. As simple as possible.



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Camera surveillance  
with GRUNDODRILL



# 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.

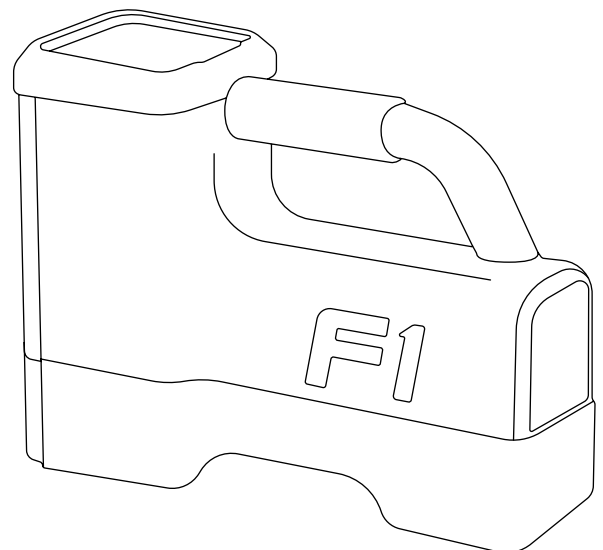
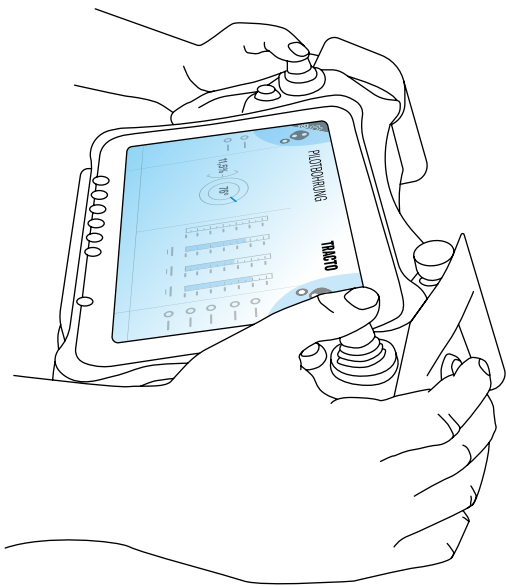
The result of the cooperation is as ingenious in its conception as it is easy to use. A hardware module developed by DCI (AIM –

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.

## Safe and target precise steering of the bore head

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



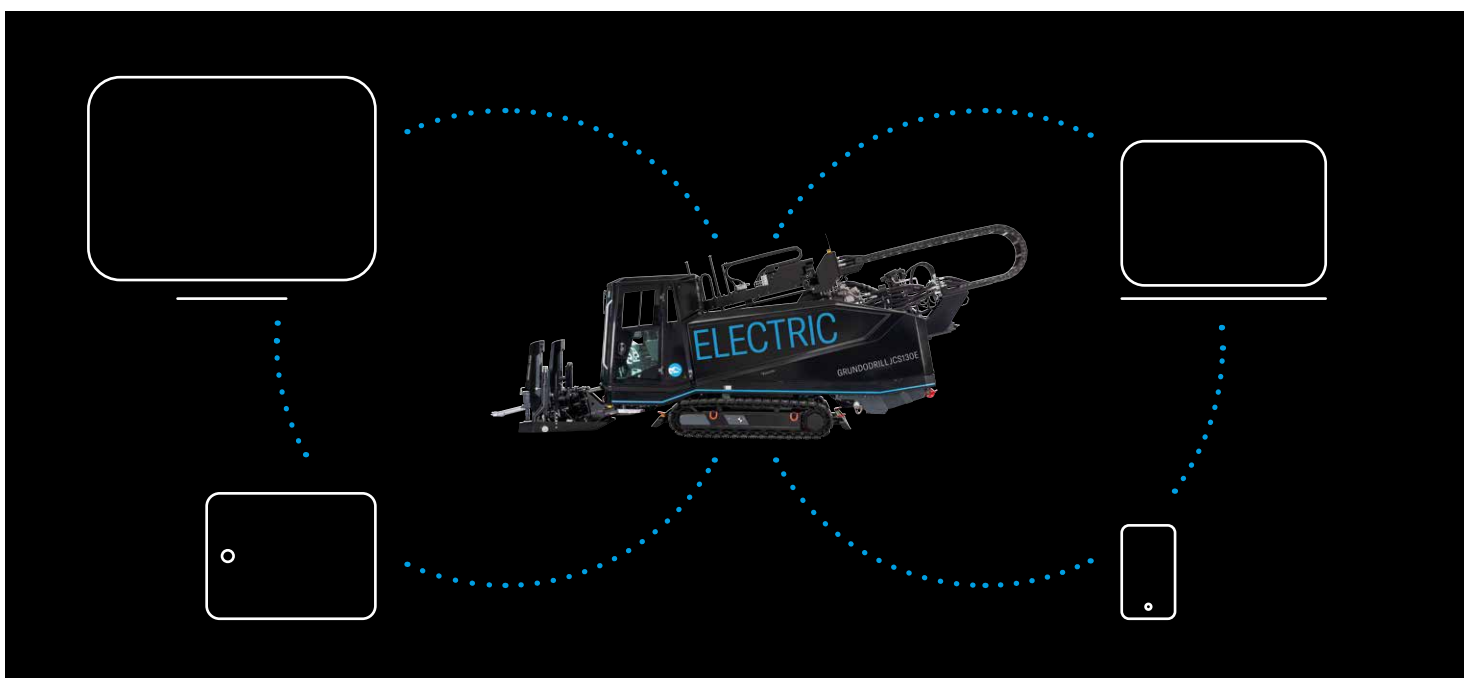
Innovative, detachable remote control from TRACTO

Location system from DCI



# PRACTICAL TOOLS FOR COMPLEX JOBS

## Commander, QuickPlanner3D & BoreData



### 360° Digital Solutions

360° stands for integrated digital solutions, which allow you to master your complex tasks more easily and quickly due to intelligent linking. Our cloud-based software solutions for HDD technology centrally link planning, execution, billing, documentation and service. That way you can use the machine technology even more efficiently and profitably – conveniently via PC, smartphone or tablet.

Access via the modular platform is quick and easy, use intuitive. The first modules of this 360° experience are the Cockpit and QuickPlanner3D for HDD technology and the BoreData collects the data of each HDD bore online.

### Everything in view with COMMANDER

The digital COMMANDER is the perfect tool for locating, managing and analysing your HDD rig fleet, giving you easy access to the location, performance and consumption data of your rigs, anytime, anywhere.

- Easy and effective HDD fleet management
- Faster planning, monitoring and coordination of HDD construction sites
- Determination of potentials to reduce the operating costs of your GRUNDODRILL rigs
- Optimised service maintains the value of the HDD rigs

### Bore planning with QuickPlanner3D

QuickPlanner3D lets you plan the optimal bore path automatically and quickly. The intelligent software is a self-optimising drill planner that calculates the shortest bore path while reliably taking into account constraint points and limiting into account.

- Efficient planning and rapid feasibility study of a drill path
- Intelligent algorithms used to calculate the optimal drill path
- Realistic results through unique three-dimensional calculation and planning

### Documentation with BOREDATA

The free BOREDATA app automatically records all drilling functions shown on the drill rig's display during operation for paperless documentation according to the latest standards.

### Remote Service

Thanks to the improved analysis and evaluation of data from the drill rig, we are able to offer you improved remote service and respond quickly to your needs.

## VARIANTS

Maximum  
productivity  
in all perfor-  
mance classes

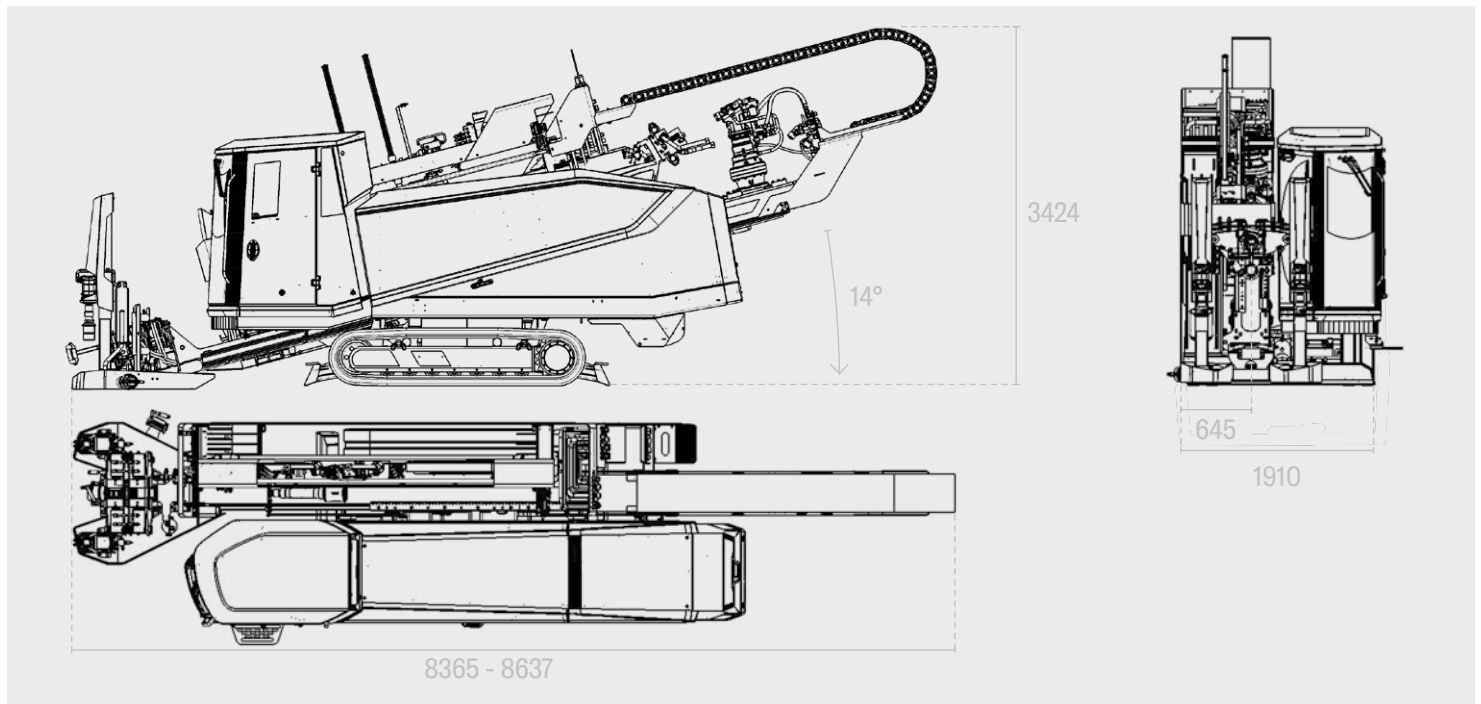


# GRUNDODRILL JCS130E- ELECTRIC THE NEW GENERATION

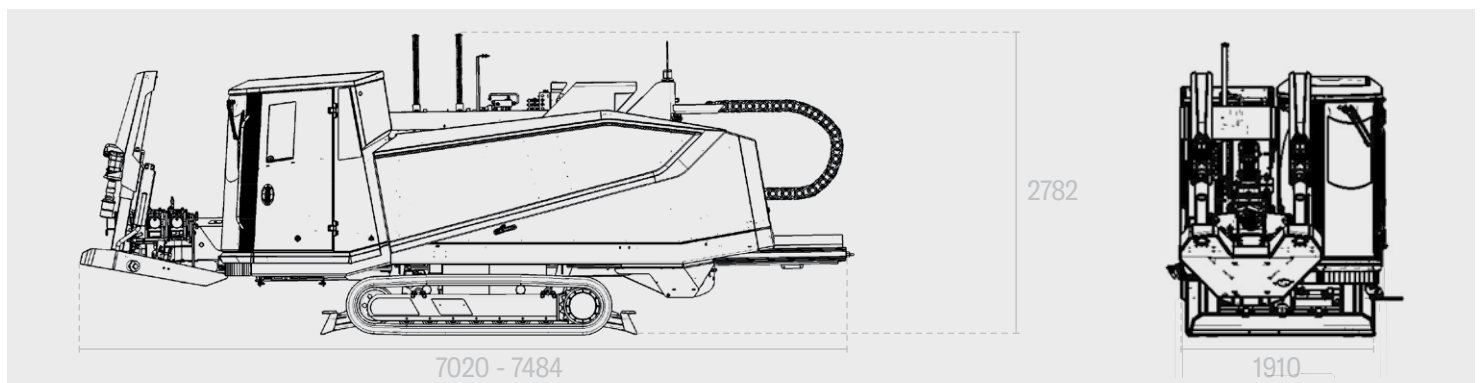
### FEATURES

- JCS - JET CONDITION SYSTEM - for drilling in loose rock
- Powerful and low-emission smart drive technology combining external power supply and buffer battery for peak loads
- Variable torque and speed adjustment for maximum rotational performance and maximum productivity at any speed
- Fully automatic drilling operation incl. drill rod exchange and all other secondary activities
- Comfort operator's cabin<sup>1</sup> incl. Grammer comfort seat (with air suspension<sup>2</sup>), central locking, electronic immobiliser, heating, air conditioning<sup>1</sup> or automatic climate control<sup>1</sup>, radio, hands-free equipment, bottle cooler
- Powerful bentonite HD pumps on board - full flow at maximum pressure for highest productivity
- Innovative and intuitive operating concept, radio remote control for remote-controlled drilling<sup>1</sup>
- Compatible with all digital solutions by TRACTO
- Numerous other options available

### WORKING POSITION



### TRANSPORT POSITION



## VARIANTS



### TECHNICAL DATA

DRILL ROD TYPE EL-D67

Thrust and pullback force	130 kN
Max. feed rate (without load)	70 m/min
Max. torque	4.500 Nm
Max. spindle speed	185 U/min
HP bentonite pump P62   P72	190 l/min   320 l/min
Bentonite pressure P62   P72	85 bar   75 bar
Rod magazine contents	168 m
Effective rod length   Number of rods	3.000 mm   56 pcs.
Pilot bore Ø	100 mm
Min. bore radius	32 m
Length x Width x Height (transport position)*2	7.020 - 7.484 x 1.910 - 2.577 x 2.782 mm
Length x Width x Height (working position 14°)*2	8.365 - 8.637 x 1.910 - 2.577 x 3.424 mm
Length x Width x Height (working position 30°)*2	7.175 - 7.537 x 1.910 - 2.577 x 4.652 mm
Inclination angle	0 - 30°
Engine type	Electrical Motor
Drive Power	100 kW
Battery capacity	40 kWh
Upsizing Ø* ≤ Outer pipe Ø* ≤	500 / 400 mm
Bore length* ≤	300 m

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



# 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



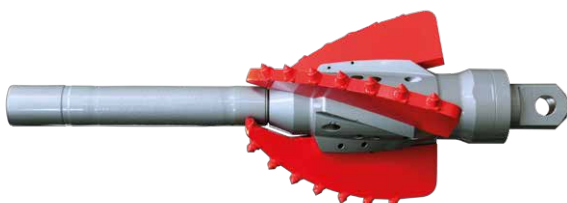
Medium Soil Reamer



Cone Reamer

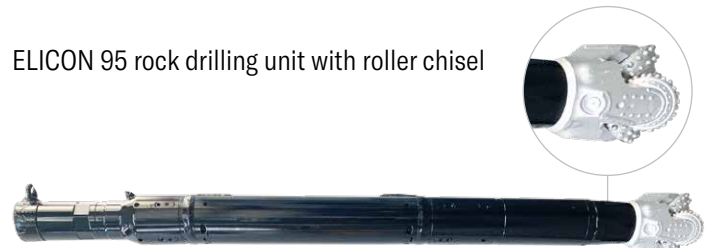


GRUNDREAM

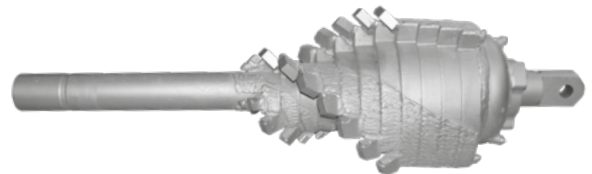


## ROCK DRILLING EQUIPMENT

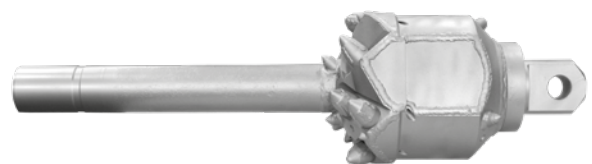
ELICON 95 rock drilling unit with roller chisel



Hard Soil Reamer



Hard Soil Rockreamer



Holeopener



## MIXING SYSTEMS

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

Powerful mixing systems and pumps guarantee high drilling fluid performance. Professional measuring units and drilling

fluid additives are available to ensure a drilling fluid quality, which is well adapted to the soil.

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



### MIXING UNIT MA07 / MA07E

The MA07 is a permanent mixing and supply system for HDD rigs with integrated HP Bentonite pump.

The MA07-E is designed for operation with a power generator, making HDD drilling with the JCS130E even more eco-friendly.



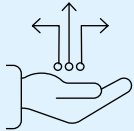
### MIXING SYSTEM MA010

## 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.

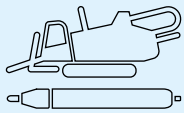
# FULL SERVICE FOR TRENCHLESS TECHNOLOGY

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.



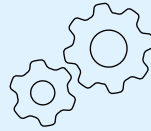
## Financing

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.



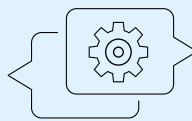
## Geoservice

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  
our service  
solutions**



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