

GRUNDOMAT

# THE NEW GENERATION

GRUNDOMAT SOIL DISPLACEMENT HAMMERS



trenchless technology – simple & easy



# THE ORIGINAL

## SIMPLE & EASY



The Original since 1970  
**GRUNDOMAT**  
Made in Germany

### STRIKINGLY SMART

For more than five decades, GRUNDOMAT soil displacement hammers have stood for on-target underground pipe installation. Their exceptional longevity and high precision stem from the smart design, uncompromising quality and consistent development of our „moles“. We never lose track of the requirements of users and the trends in pipeline construction. So that you can tackle your jobs faster and easier, we made the complex technology even more durable, reliable and easy to handle. That's what we call „simple & easy“.

### RELIABILITY REVISITED

The new generation of GRUNDOMAT soil displacement hammers corresponds exactly to this principle. The optimised design combines all the benefits of previous series with new technical solutions. The distinctive characteristics of the GRUNDOMAT, such as the movable head for unbeatable power and pinpoint accuracy and the use of the highest quality materials for long construction site operations, make the GRUNDOMAT a reliable partner on your construction sites. The servo control for small machines is new and an intelligent internal design guarantees a long machine life. For the user this means the highest possible productivity and maximum efficiency for pipe installation.

# SUSTAINED MAXIMUM PERFORMANCE



The design of the new GRUNDOMAT generation is the result of a careful development process focussing on user-friendliness. Combined with the proven reliability of our technology, we can give the user durable technology for trenchless pipe installation that is customised to their construction sites.

- **HIGH PENETRATION FORCE AND POWERFUL THRUST**  
also with maximum load thanks to specially hardened, corrosion-protected pistons
- **MINIMUM AIR CONSUMPTION AT HIGHEST POWER**  
thanks to innovative piston technology and a sophisticated sealing system

- **OPTIMUM PERFORMANCE**  
through regular service with replacement of inexpensive slip belts and sealing rings
- **EXTREMELY LONG SERVICE LIFE OF CHISEL**  
with use of bearing bush
- **RELIABLE AND ON-TARGET THRUST IN TWO-STROKE CYCLE**  
thanks to movable head with unique seal

# EASY SHIFTING SERVO OR THRUST CONTROL



- **SERVO CONTROL**  
Our servo control simplifies shifting between forward and reverse gear with a simple flip of the lever (1-gear). The integrated oil-fog lubricator supplies the machine with GRUND-OIL and at the same time guarantees maximum power and penetration force.



- **THRUST CONTROL**  
Our GRUNDOMAT with the proven thrust control is switched from forward to reverse gear by simply turning the compressed air hose. The soil displacement hammer is supplied with oil by the oil-fog lubricator. This machine type is available with 1- or 2-gear control (gear change also done by turning at the hose).



01 The **crowned or stepped head with two-stroke cycle** displaces the soil in three steps with **maximum precision and high running stability.**

02 The **concentration of impact energy** in thrust direction onto the sharp cutting edges guarantees a **high penetration force**

03 **No front machine seal** – enormous **longevity** and **optimal energy transfer.**

04 The **inner and outer chrome-plated** housing, which is honed on the inside, is **low-wear and low-maintenance**, highly durable and ensures **sustained maximum performance.**

05 The smooth outer housing has an **easy-to-read wear indicator.**

06 **Various mounting options** for a **variety of applications** beyond the standard, e.g. immediate piping, pile foundations or driving out steel pipes.

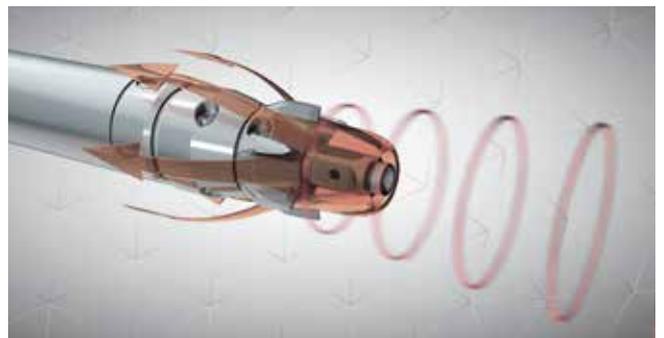


## ALL IN THE HEAD CROWNED OR STEPPED HEAD

For optimum adaptation to various soil conditions, the GRUNDOMAT soil displacement hammers can be equipped with movable crowned or stepped heads. Both versions operate with equal precision, stability and efficiency, each in their own way.

Our users appreciate the **crowned head** especially in loose, stony and densely packed soils, thanks to its aggressiveness and enormous penetration force in hard ground conditions. Experienced drilling professionals are of the opinion: „This head lets nothing hold it back in achieving its goal“.

The **stepped head**, which has been tried and tested for decades, is universally applicable in all displaceable soils and is the „classic“ among the soil displacement hammers.





## ALWAYS RIGHT ON TIME THE TWO-STROKE PRINCIPLE

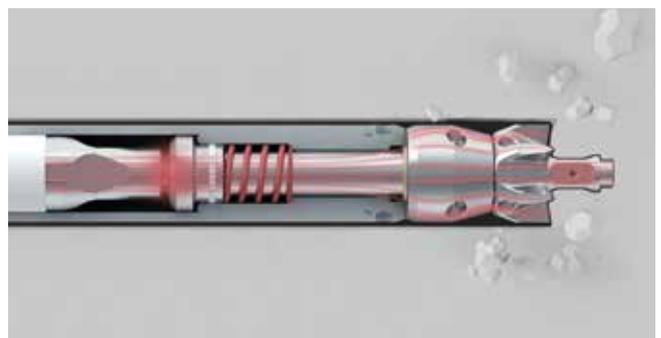
The intelligent 2-stroke principle brings the impact energy to where it is needed. To overcome surface friction or peak resistance. This way the GRUNDOMAT soil displacement hammer achieves its almost legendary precision, even in difficult soils.

### STROKE ONE

During the first stroke, the piston acts on the cutter so that the head cuts the borehole and crushes and removes any obstacles. The impact energy of the piston is concentrated on the cutter and the bore head.

### STROKE TWO

In the second stroke, the drill head moves freely in the borehole and the full impact energy of the piston is transferred to the housing. The entire machine follows up, with a pipe attached as the case may be.



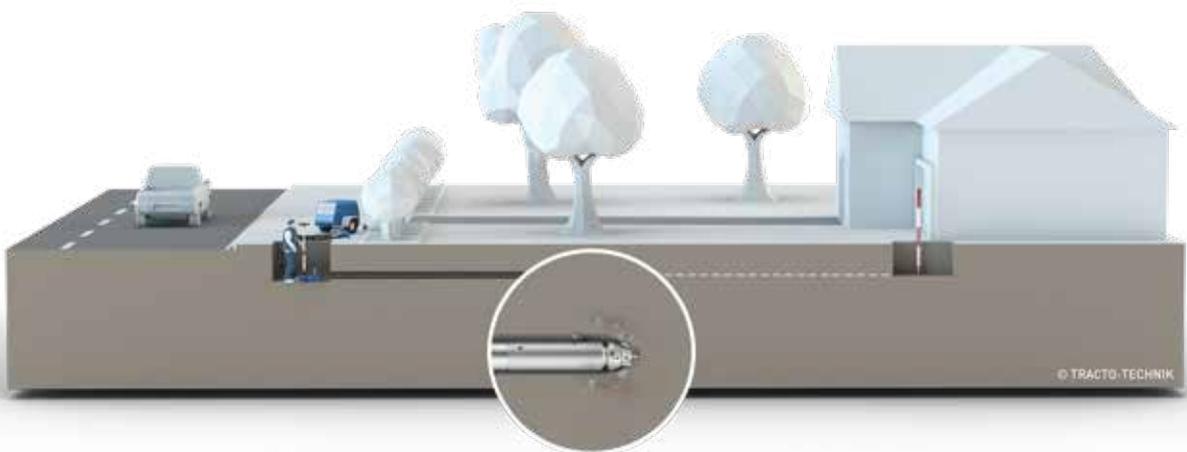
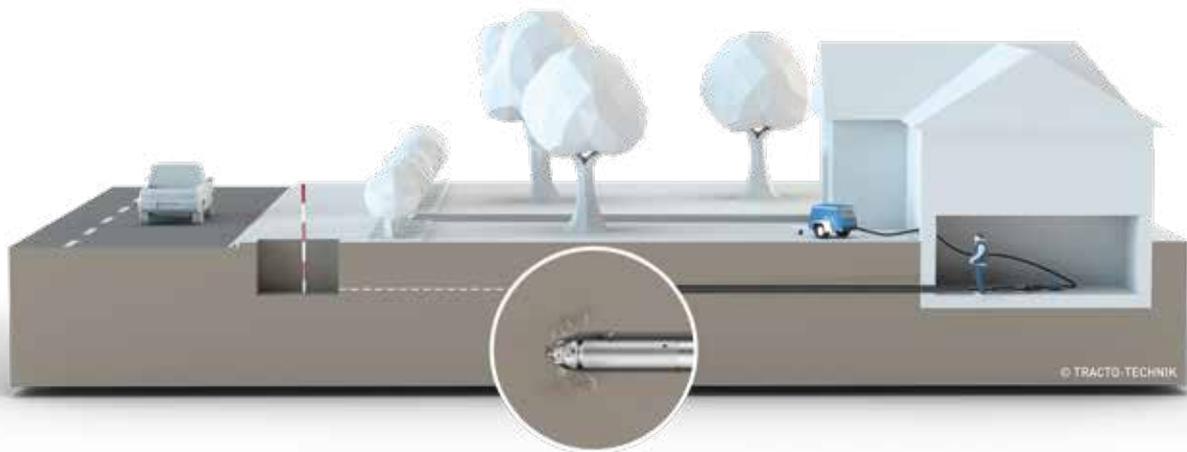
# FLEXIBLE ALL-ROUNDER CAN HANDLE ALMOST ANYTHING

The versatility of the GRUNDOMAT soil displacement hammers is impressive. The spectrum ranges from the classic application for undercrossings and service connections to steel pipe installation through to pipe renewal. The GRUNDOMAT also impresses in vertical use with penetration force and precision.

## SERVICE CONNECTIONS

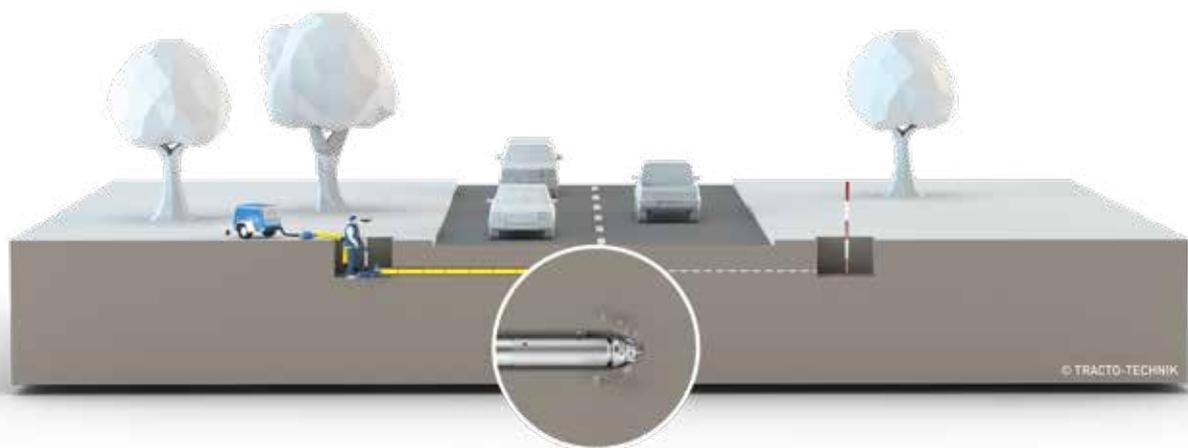
Whether from the pit into the house or from the basement into the pit or keyhole, for fibre optics (FTTH), gas, water, wastewater or electricity, the GRUNDOMAT is the multipur-

pose machine for fast, safe and economical manufacture of all types of service connections, and not even one head access hole is required for the start directly from the house.



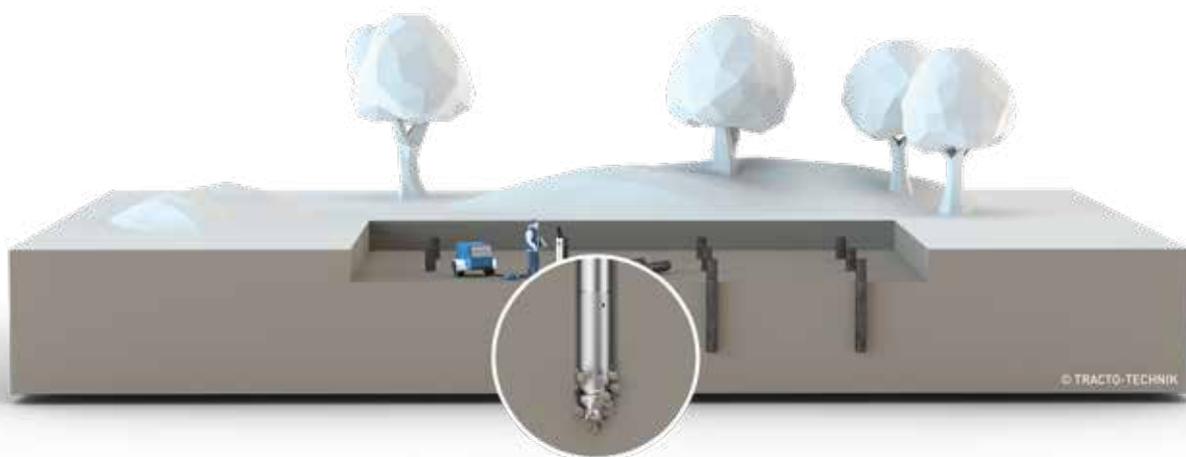
### UNDERCROSSINGS

For undercrossings beneath roads, railway tracks, gardens, buildings and other valuable surfaces, the GRUNDOMAT is unbeatably fast, precise and reliable.



### PILE FOUNDATIONS

Applied vertically the GRUNDOMAT can be used to easily and safely make foundations, e.g. for placing piles and shields.



### OTHER APPLICATIONS

- Pipe ramming from type 130 for driving steel pipes by attaching different ram cones.
- Pipe renewal from type 130 with modified soil displacement hammers using the dynamic pipe bursting method (cracking).
- Driving out steel pipes with attachment mandrel for simultaneous pulling-in of new pipes.



# TECHNICAL SPECIFICATIONS

## GRNDOMAT

Maximum penetration force and on-target precision for all common applications

GRNDOMAT 45



GRNDOMAT 55



GRNDOMAT 65



GRNDOMAT 75



GRNDOMAT 85



GRNDOMAT 95



GRNDOMAT 110



GRNDOMAT 130



GRNDOMAT 145



GRNDOMAT 180



All soil displacement hammers also available with stepped head.

GRNDOMAT TYPE	Ø [mm]	Length [mm]	Weight [kg]	Air consumption [m³/min]	Impact rate [min <sup>-1</sup> ]			Max. pipe Ø [mm]
					Thrust control		Servo control	
					1st gear	2nd gear		
GRNDOMAT 45	45	979	9	0,35	530	615	-	40
GRNDOMAT 55	55	1.108	14,4	0,4	470	565	-	45
GRNDOMAT 65	65	1.328	25	0,7	450	550	460	50
GRNDOMAT 75	75	1.465	34	1,0	385	480	400	63
GRNDOMAT 85*	85	1.540	46	0,9	390	-	-	75
GRNDOMAT 95	95	1.732	65	1,5	325	425	325	85
GRNDOMAT 110	110	1.751	96	1,6	320	380	320	90
GRNDOMAT 130	130	1.740	117	2,6	320	400	320	110
GRNDOMAT 145*	145	1.986	168	3,4	-	-	310	125
GRNDOMAT 180*	180	2.221	260	4,5	-	-	280	160

\* available shortly · Data of the P generation

Subject to change.



## GRUNDOMAT SHORT VERSION

The short soil displacement hammers are ideal for use in confined spaces.



All soil displacement hammers also available with stepped head.



GRUNDOMAT TYPE	Ø [mm]	Length [mm]	Weight [kg]	Air consumption [m <sup>3</sup> /min]	Impact rate [min <sup>-1</sup> ]		Servo control [min <sup>-1</sup> ]	Max. pipe Ø [mm]
					1st gear	2nd gear		
GRUNDOMAT S45	45	894	8	0,35	580	-	-	40
GRUNDOMAT S65	65	1.097	18	0,65	570	-	640	50
GRUNDOMAT S75	75	1.295	28	0,8	490	-	460	63
GRUNDOMAT S95	95	1.532	56	1,3	370	-	370	85
GRUNDOMAT S110	110	1.548	86	1,4	370	-	370	90
GRUNDOMAT S130	130	1.604	107	2,4	370	-	370	110



# ALL ANGLES COVERED

## ACCESSORIES FOR THE GRUNDOMAT

### ON TARGET WITH GRUNDOSCOPE

Aiming at the target point with the GRUNDOSCOPE, a telescopic aiming frame with integrated sight, is a prerequisite for successful pipe jacking. The use of a starting cradle makes the start easier and guarantees precise alignment.



Compressed air hose



3.3 l oil-fog lubricator

Earth stake

GRUNDOSCOPE

Adjustable height and side of starting cradle

Rolled hose

### UNITHERM



Compressed air heaters prevent the impact holes freezing over. This means you can also work in the winter months.

### GRUNDO-OIL

Our biodegradable GRUNDOOIL guarantees optimal running properties and a long life of the soil displacement hammers.

### ATTACHMENT MANDREL



For driving out old steel pipes and simultaneous pulling-in of new pipes.

### EXPANDER AND TOWING EYE



For pipe renewal (cracking) from type 130 and expansion of existing bore-holes.

### ATTACHMENT RAM CONE



For steel pipe driving.

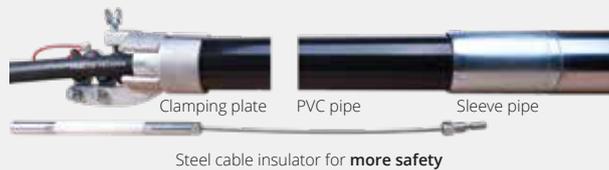


A large selection of accessories for various jobs on the construction site make the GRUNDOMAT versatile and ensures high capacity utilisation. Our original accessories make the application as simple and safe as possible for the operator.

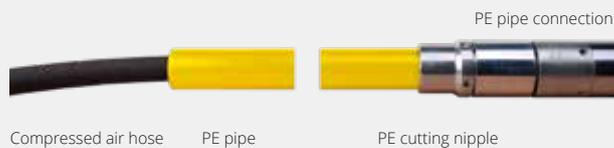
### PIPE INSTALLATION

Several GRUNDOMAT attachments are available for successful pipe installations

- **Sleeve pipe** for the immediate installation of short PVC pipes



- **PE pipe connection** for the immediate installation of long PE pipes



- **Pulling adapter** for pulling in reverse, using compressed air hoses  
Subsequent pulling-in of long PE pipes



- **Return cone** for working in reverse gear in cohesive soils



- **Draw hook** for pulling in reverse, using soil displacement hammers  
Subsequent pulling-in of long PE pipes with pipe puller



Non-cohesive soils

Cohesive soils



## SERVICES ALL AROUND TRENCHLESS TECHNOLOGY INTELLIGENT SOLUTIONS WITH ADDED VALUE

Before or after any purchase either in person or online - we are always at hand with help and advice for you. We can offer you comprehensive services and consultation that are specially tailored to the requirements in trenchless pipeline construction. Our services are as diverse as our range of products so you can concentrate fully on your business.

[www.TRACTO-TECHNIK.com/Services](http://www.TRACTO-TECHNIK.com/Services)

### DIGITAL SOLUTIONS

On our website, you will find important information about our company, our products and their use in digital form. You can view the contents that interest you quickly and easily via the user-friendly, clearly structured navigation. Links to our social media channels can also be found there. For ordering accessories and spare parts for our NODIG technology products there is our **eShop**. You can order merchandising items with the "mole label" there as well.

Our cloud-based solutions for the HDD drilling technology combine planning, execution, billing, documentation and service in one location. With the **Cockpit** you always have the very latest key machine data to review at any time of the day. With the **QuickPlanner3D** function, you can plan the shortest and safest bore path in next to no time. Our digital solutions make trenchless technology even more efficient and profitable, simply via PC, smartphone or tablet.

### FINANCING & WARRANTY

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



# OGY

## USED EQUIPMENT

Your used equipment is in good hands with us. Be it our own or third-party products, be it with new purchase or not - you can rely completely on our full service. We assess the equipment on-site, advise you on purchase or trade-in and carry out the professional repair. With the "Certified Used Equipment" seal of approval, we achieve the best price for you via our use machine website with access to one of the world's largest construction machinery platforms.

## AFTER SALES

Via our worldwide service network, even after your valued purchase we will be there to assist you. Alongside our headquarters in Lennestadt, we have a total of six other TRACTOTECHNIK customer centres in Germany as well as our worldwide sister companies and sales partners guarantee of fast supply of spare parts and immediate availability. Our competent service staff offer fast assistance to make sure that you do not lose any valuable in case of emergency - wherever you may be.

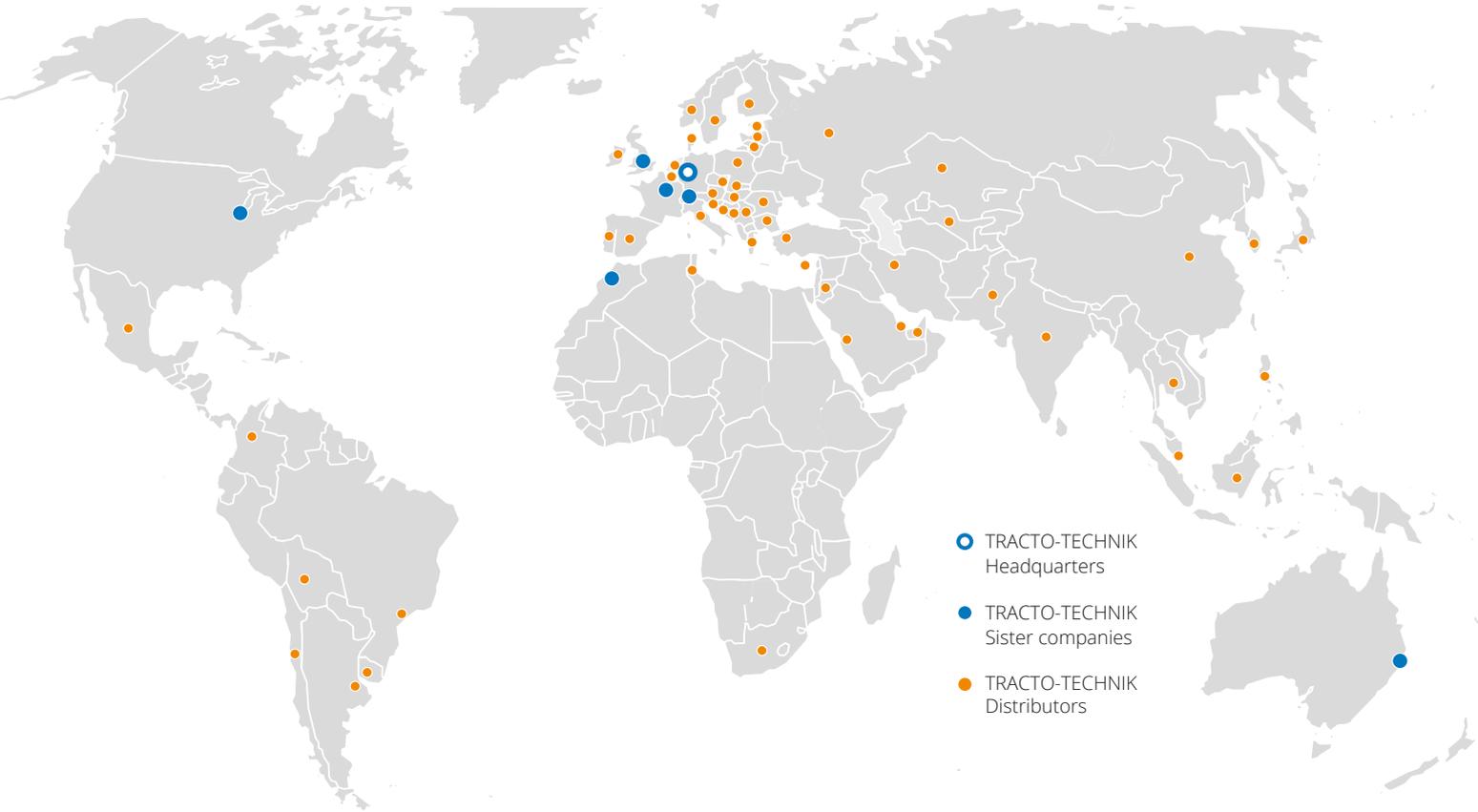
## TRAININGS

Qualified training in theory and practice are a central concern for us to enable users and partners to achieve the greatest possible success with our products. The broad course range does not only address users, machine operators and service technicians, but equally specialists and managers, planners and contractors who would like to learn more about the versatile applications of the various NODIG systems. Our tailor-made training are held at our company locations or individually at your premises by certified trainers. Content, upcoming dates and registration details are on our website.

## GEOSERVICE

In Germany, our Geoservice provides far-reaching geological expertise to support your projects. We offer advice on planning and drilling, for example in the courses of planned bore paths or by submitting queries about building ground. Furthermore, we can write geological assessments, review construction documents to determine the potential for supplements and draw up corresponding statements.

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