



Machines, Tools, Services and Solutions for Deep Hole Drilling

TBT Tiefbohrtechnik – Solution from one source

COMPANY



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AGAINST SOME TRENDS



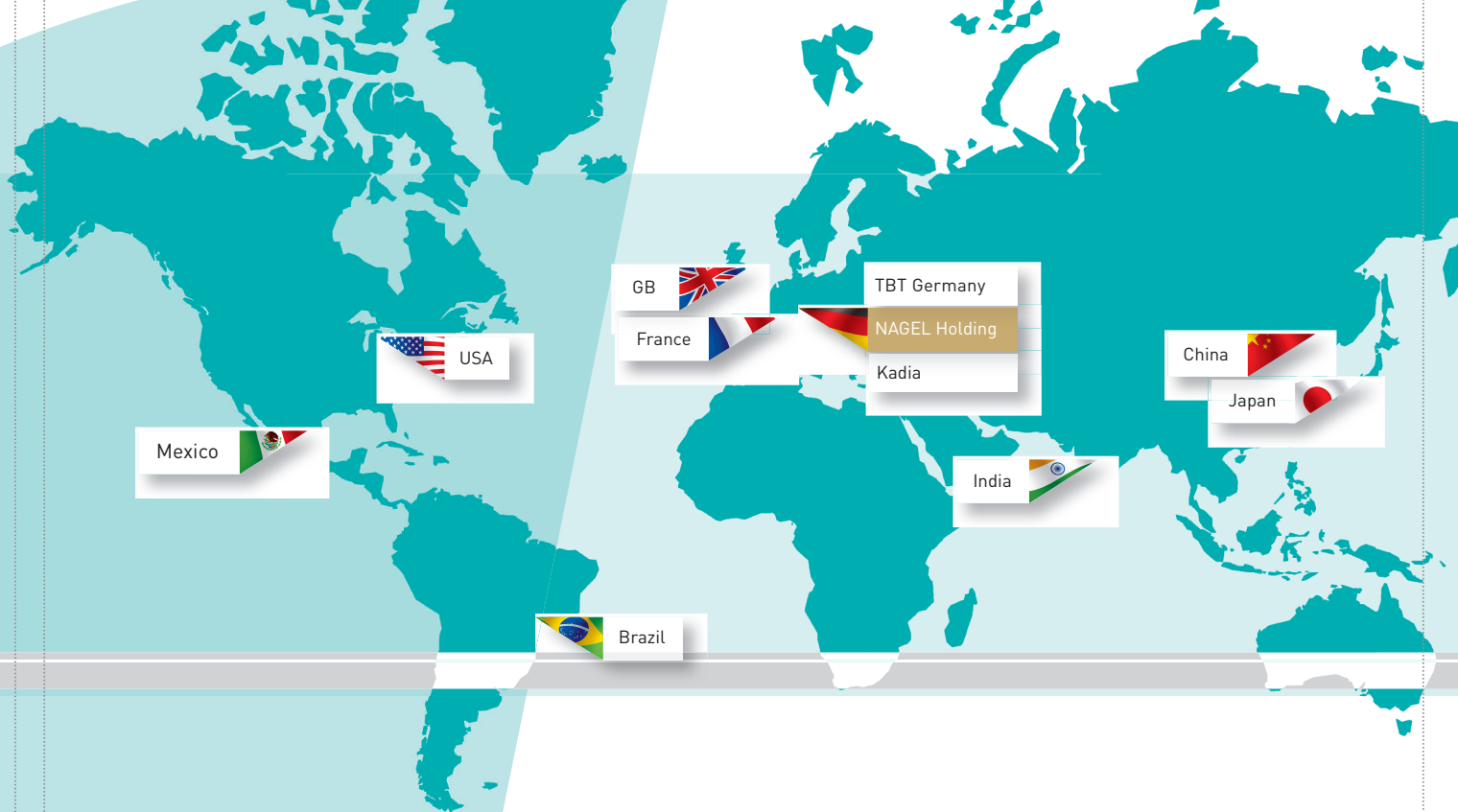
The company **TBT** is a family owned company, enveloped within the multi-national **Nagel Group**.

Founded in **1966 in Dettingen a. d. Erms**, the company specialised right from the outset in the manufacturing technology of deep hole drilling. The company's prime goal has always been to supply **machines, tools, service and professional expertise** from one source.

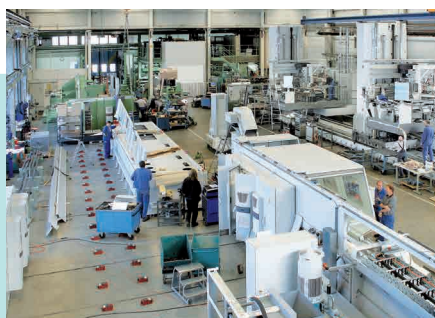
The company's rise to **market leader** confirms that our customers appreciate this corporate policy. TBT combines the **flexibility, dedication** and **customer-oriented** approach of a streamlined medium-sized company with global presence.

OUR BUSINESS AREAS





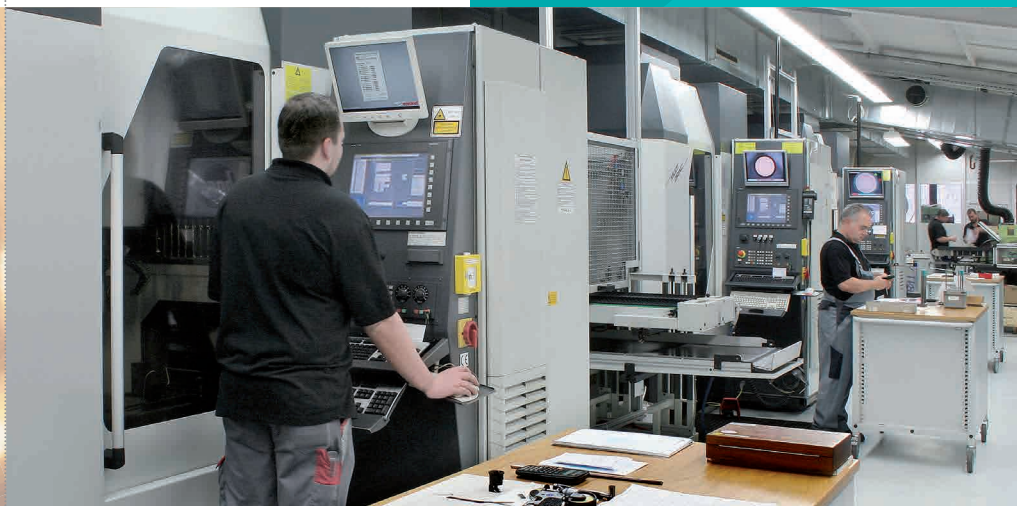
We have subsidiaries or experienced representatives in virtually every major country in the world. Entrusted to our highly-qualified and dedicated staff, you can be assured that your deep hole drilling requirements are in best hands.



OUR MOST IMPORTANT ASSET ARE OUR EMPLOYEES

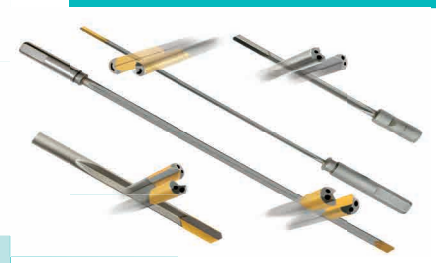
TOOLS

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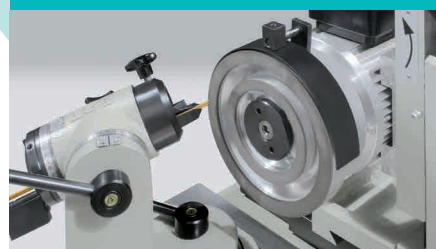
SINGLE-LIP DRILLS 0.5 - 50 MM

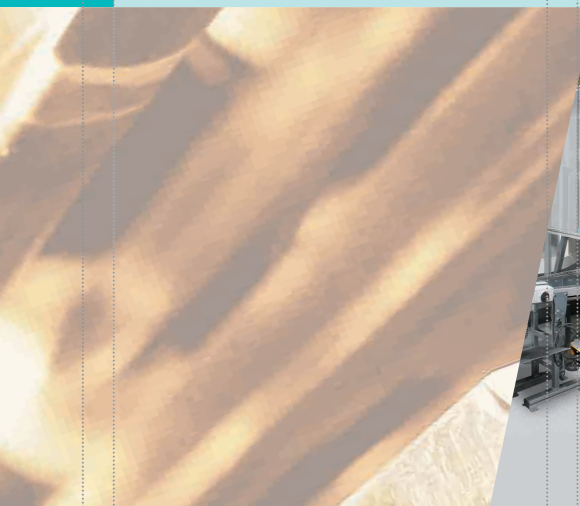
Single-lip drills are available in different designs. The main differences are single-lip drills with brazed-on drill heads, solid carbide single-lip drills and the latest technology: the high speed single-lip drills.



DOUBLE-LIP DRILL 4 - 25 MM

The particular advantage of our double-lip drills are the high feed rates attainable in short-chipping materials, compared to the single-lip tools.





SPECIAL TOOLS

Within our delivery program we also have a wide variety of special tools. The range of tools covers a spectrum ranging from step-drills, counter-boring tools up to changeable/indexable insert drills.



TOOL ACCESSORIES

Our range of products is completed by the corresponding tool- and machining accessories. We offer a wide variety of grinding devices and tool length setting instruments as well as shrinking devices.



SUB-CONTRACT DRILLING



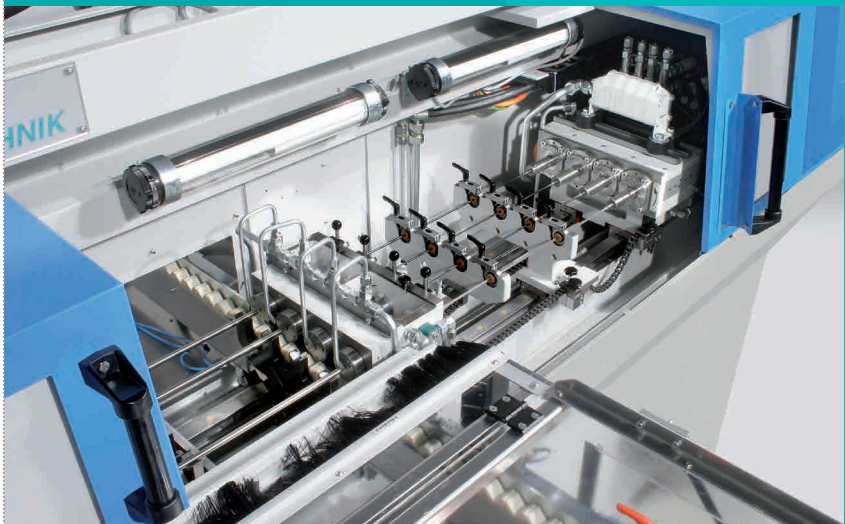
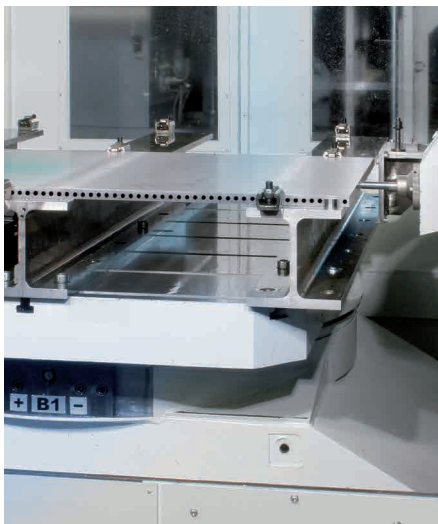
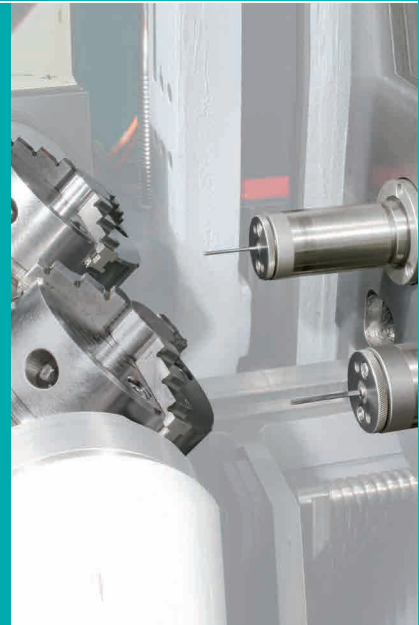
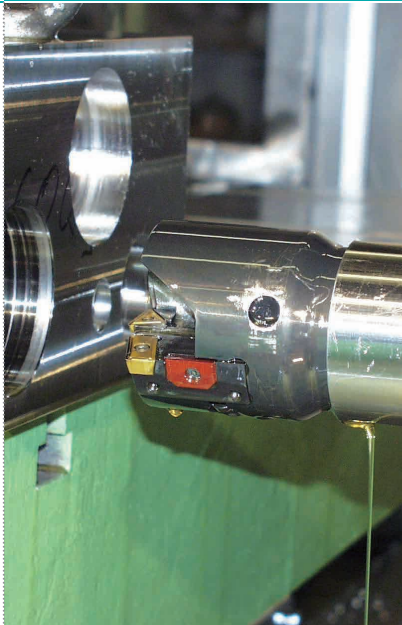
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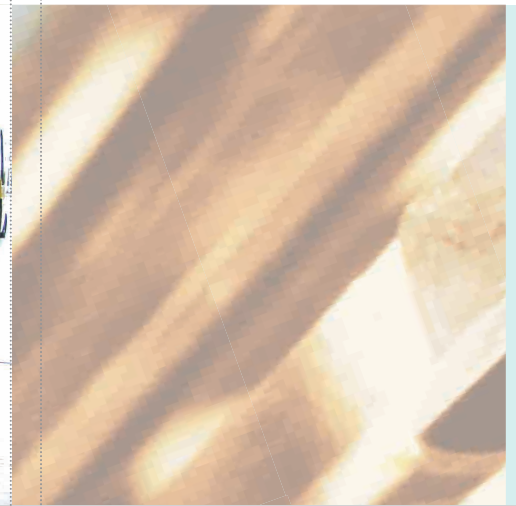
PRECISION

With several locations the sub-contract drilling is an important factor of our success.

Our customers value in particular the accuracy and the reliability, with which we work on the sub-contract orders. The basis for which, are our highly qualified employees and our mechanical equipment from our own production.

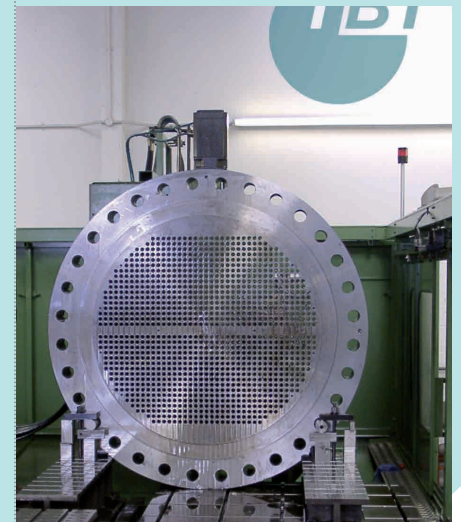
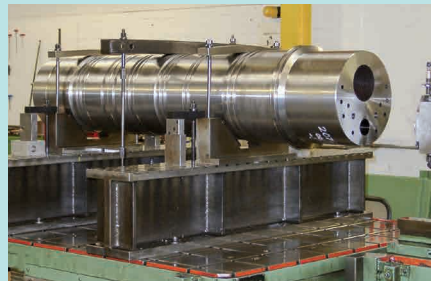
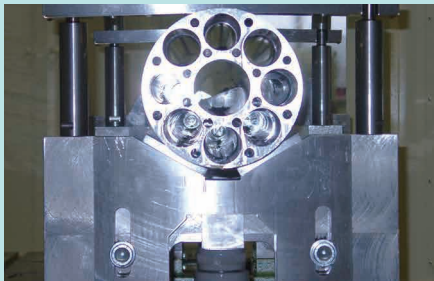
We offer from individual production (low volume) up to serial production (high volume) with automatic loading system.





RELIABILITY

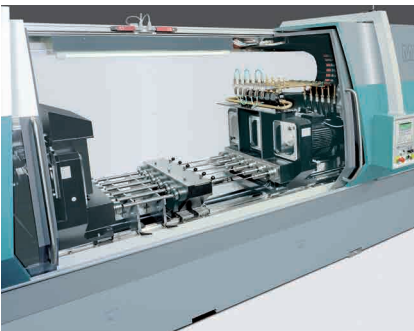
For the machining of complex cubic parts on our deep hole drilling centers utilizing automatically generated NC-data programs are available. Beside the deep hole drilling, we also offer conventional machining with milling and threading on our deep hole drilling centers. We offer specialized experience in machining of stainless steel and other exotic alloys, as used in the medical technology or petro chemical industry for example.

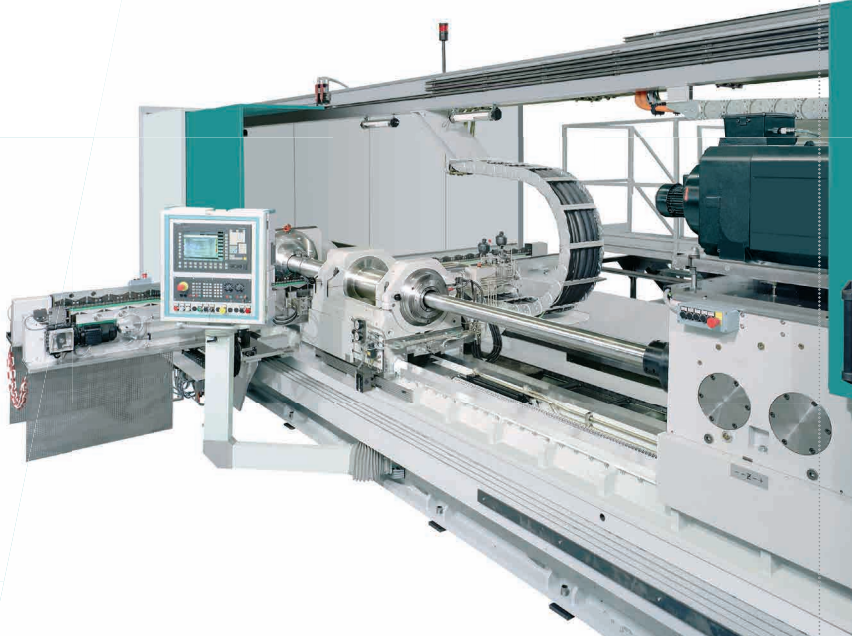
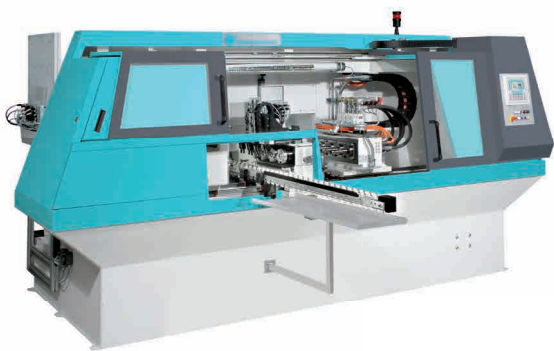




HORIZONTAL MACHINES

Since 1966 we have delivered world-wide more than 1000 horizontal deep hole drilling machines. Our customers specially like the precision and the durability of the TBT deep hole drilling machines. The production program covers in the meantime completely all requirements, from smallest drilling diameters below 1 mm up to extremely large diameters.





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ML-MACHINES

For all ML-machines there are standard as well as customer specific solutions for the automatic loading and unloading of the workpieces available.

In addition to the gundrilling and STS deep hole drilling process, the ML-machines offer versions for the use of high speed single-lip tools or twist drills.

Deep hole drilling processes with minimum quantity lubrication are also available.

ML-Series	ML200 MultiPro	ML200	ML250	ML300	ML500	ML700
No. of spindles	1 - 4	1 - 4	1 - 4	1 - 6	1 - 6	1 - 6
Drilling dia. (mm)	0,8 - 12*	0,8 - 12* (15)	1 - 25*	15 - 60* - 90**	15 - 90* - 180**	20 - 150* - 400**
Drilling Method	Gun-drilling	Gun-drilling	Gun-drilling	Gun-drilling STS/BTA	Gun-drilling STS/BTA	STS/BTA

* max. dia. with 1 spindle solid drilling

** max. dia. counter boring

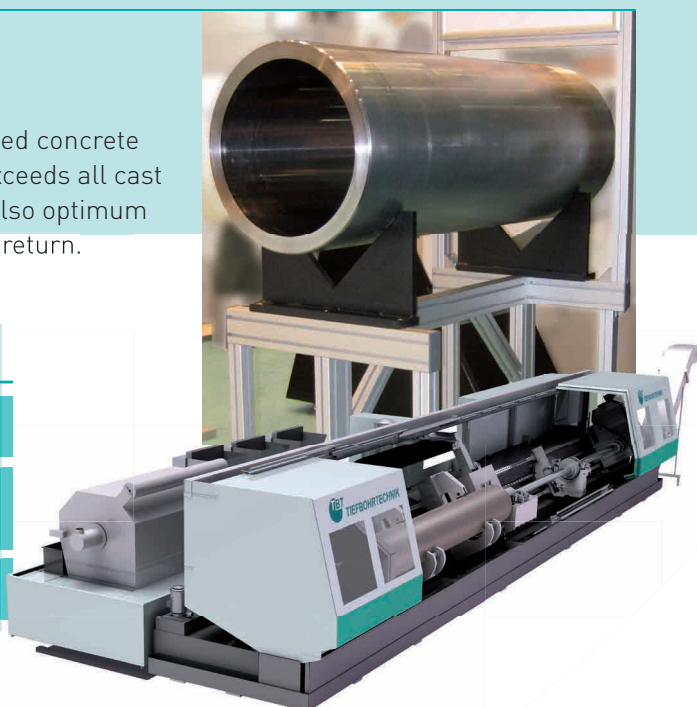
B-MACHINES

The latest generation of machine beds of steel and reinforced concrete offers the highest rigidity and vibration dampening, which exceeds all cast iron designs. The inclined/slant machine bed design offers also optimum accessibility for the operator and an unrestricted oil/coolant return.

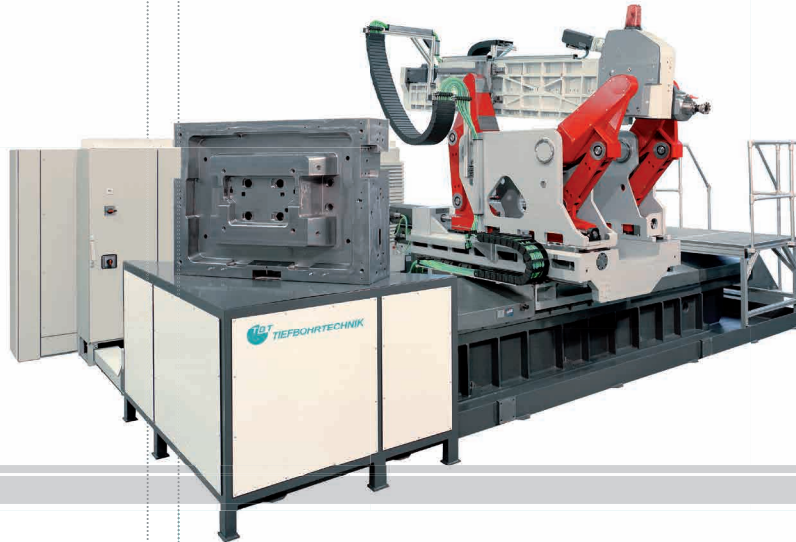
B-Series	B3S	B4S	BX
No. of spindles	1	1	1
Drilling dia. max. (mm)	200*/400**	250*/500**	- 1000**
Drilling Method	STS/BTA	STS/BTA	STS/BTA

* solid drilling

** counter boring



MILLING-/DEEP HOLE DRILLING CENTERS



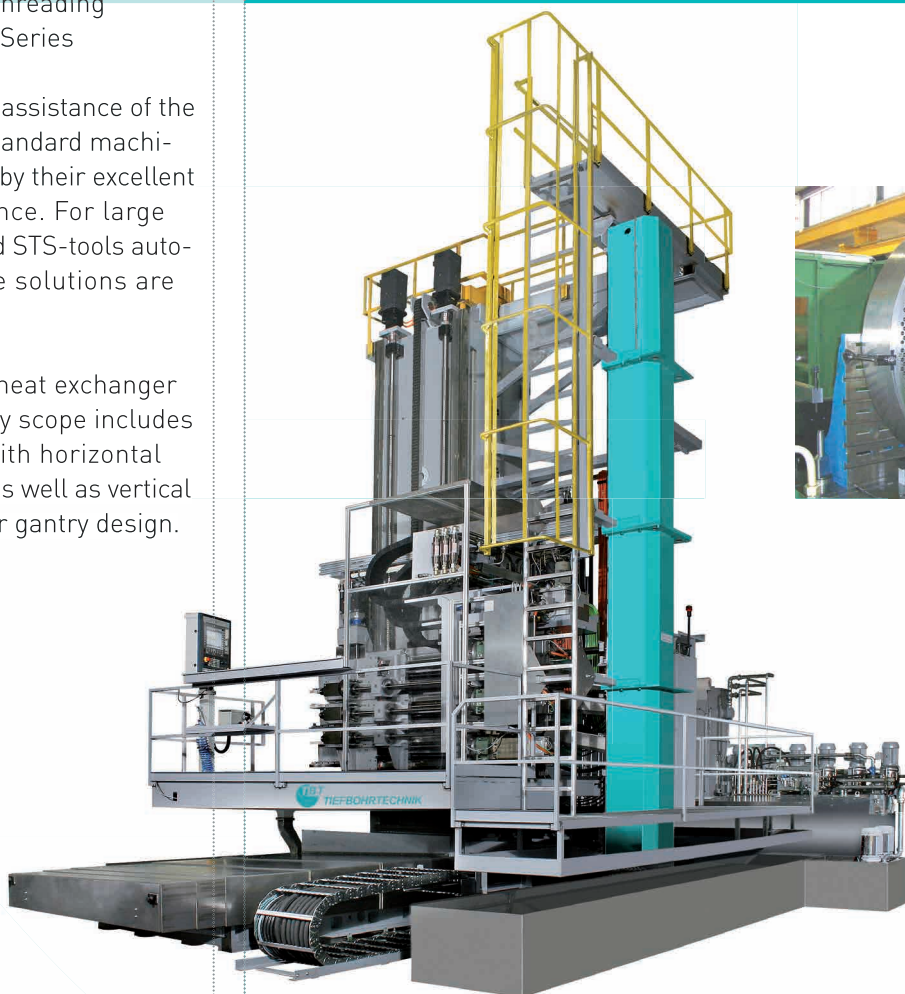
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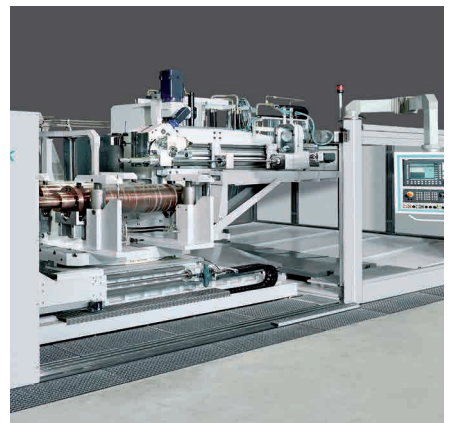
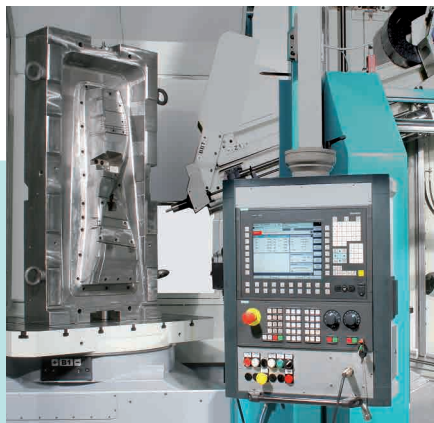
BW-MACHINES

Drilling, Milling, Threading
The Solution: BW-Series

Designed with the assistance of the FE-method, our standard machines are enhanced by their excellent milling performance. For large single-lip tools and STS-tools automatic tool change solutions are also available.

For machining of heat exchanger plates, our delivery scope includes drilling centers with horizontal arranged spindle as well as vertical spindle in portal or gantry design.





BW-Series	BW250	BW500

CRANKSHAFT



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CRANKSHAFT MACHINING

Special applications or workpieces need specific solutions - for example the crankshaft.

Twist drills, gundrills or high-speed gundrills; drill bush or pilot hole; minimum quantity lubrication or coolant lubrication; gantry-, manual or robot loading; with our production program we have always the optimal solution to suit your individual requirements.

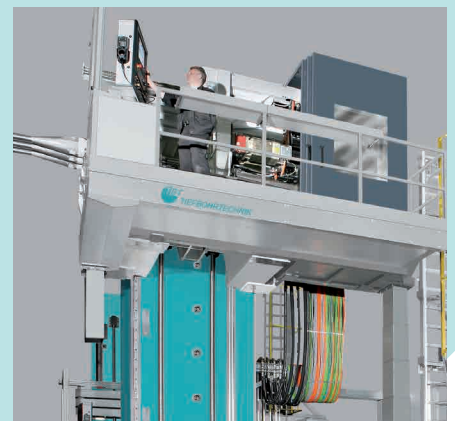
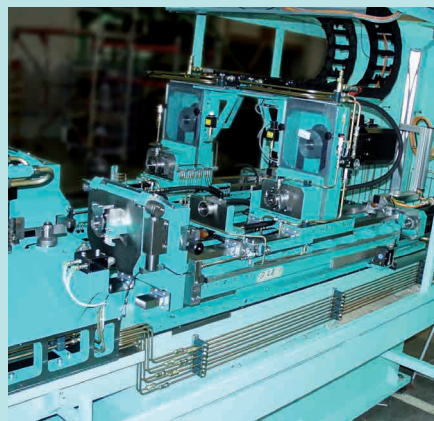
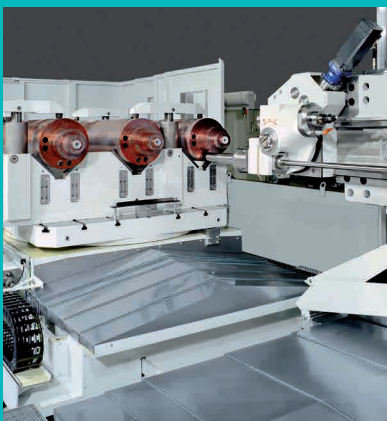
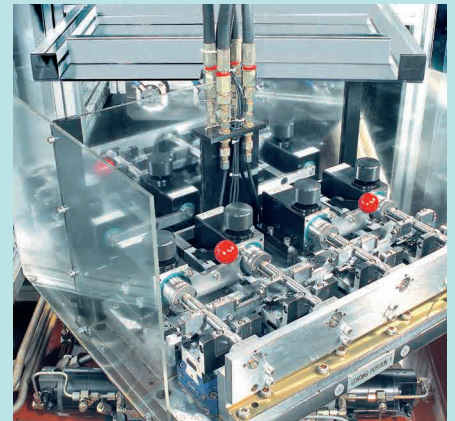
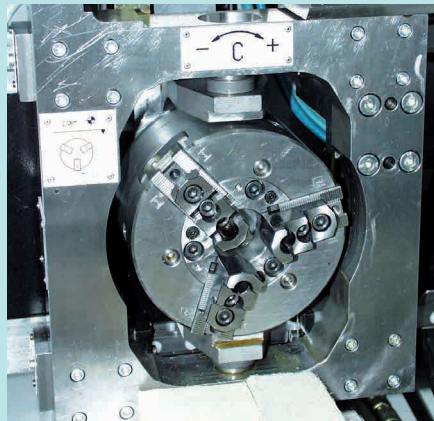


MultiCrank	CX	C	T	BW200-KW	BW250-KW
Spindles	1 - 4	1 - 3	1 - 2	1 - 3	1 - 2 (3)
Drilling Method	pilot drills, chamfering tool, solid carbide single-lip drill, high-speed single-lip drill and twist drill			solid carbide single-lip drill and high-speed single-lip drill	
Workpiece length	500	1000	1600	700	1500

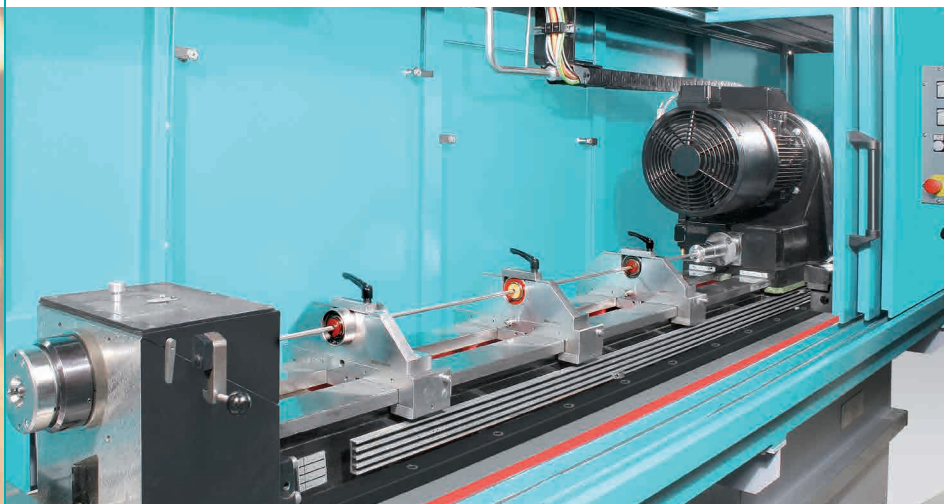


SPECIAL MACHINES

If your requirement cannot be covered by our standard machine program, special adaptations to our standard machines are another option. Using the base modules of our existing standard machines we can offer special purpose machines customised to suit your requirements. Typical examples are the deep hole drilling of cylinder heads, cylinder blocks or pellet dies.



SERVICES



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USED MACHINES

In addition to our new machines we are offering used machines from TBT, NAGEL, GKT, SIG and Heidenreich & Harbeck.

The machines are sometimes available from stock.

We will be glad to present you an offer for the purchase of your deep hole drilling machine, if it is from one of the above mentioned manufacturers.

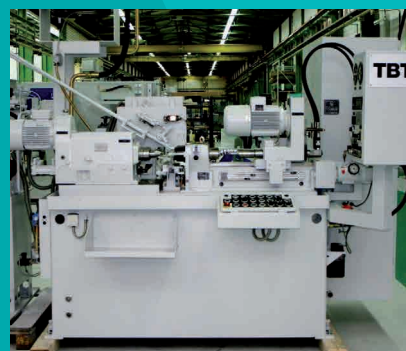


„RETROFIT“

In the case of retrofitting, our name stands for highest quality. At TBT you will get the complete warranty for parts as well as for the work carried out. Optionally we offer also static acceptances.



before

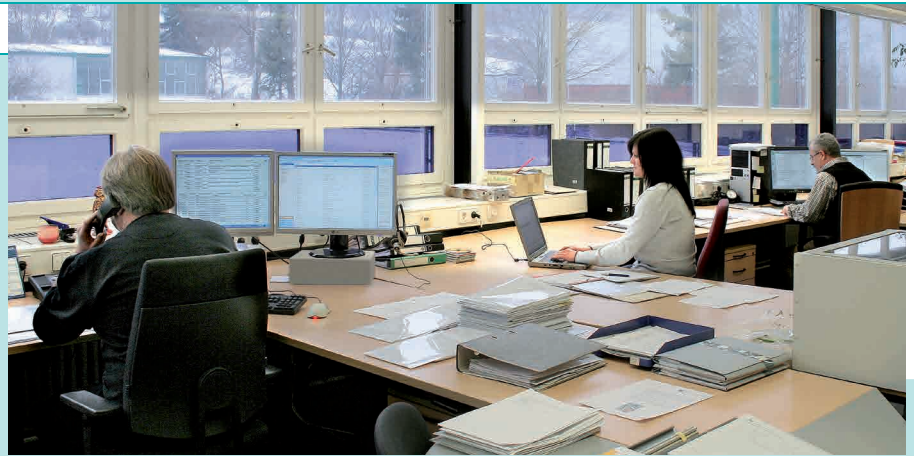


after



SERVICE

„Service“ is an important function at TBT and therefore our qualified and trained service personnel are available on site worldwide or via Teleservice to discuss all aspects of your demands. We offer also service and specific spare parts for deep hole drilling machines, make NAGEL, GKT, SIG and Heidenreich & Harbeck.



TRAINING

Maintenance, operation, control or processes - for all important areas, we offer professional training for the qualified personnel of our customers.





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