

**FROM A SINGLE SOURCE:
MACHINES, TOOLS AND SERVICES
AROUND DEEP HOLE DRILLING**



WORLDWIDE PRESENCE – EXPORT-ORIENTED WITH DOWN-TO-EARTH, LOCAL BASE



TBT, Dettingen, a. d. Erms, Germany



Shanxi Nagel, China



Kadia, Nürtingen, Germany



Nagel, India



Nagel, Metzingen, Germany



Nagel, Nürtingen, Germany



Nagel, USA



Gehring, Ostfildern, Germany



Nagel, Brasil

COMPANY – A STRONG DEEP HOLE DRILLING SPECIALIST WITH GLOBAL PRESENCE

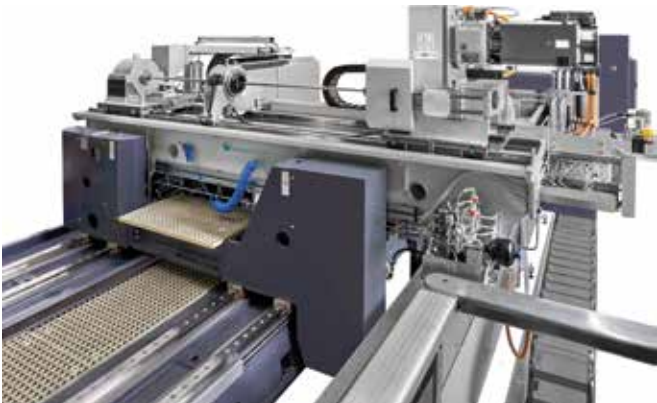
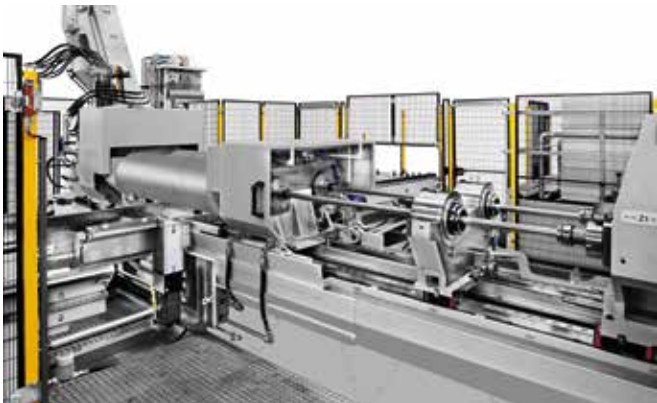
TBT Tiefbohrtechnik GmbH + Co combines the flexibility, the commitment and the customer orientation of an innovative medium-sized company with a global presence.

The company, founded in 1966, is part of the international Nagel machine tool group.

TBT has specialized in deep hole drilling from the very beginning.

TBT's focus is delivering machines, tools and services competently from one source. This strategy is valued by our customers – as they have regularly confirmed.





DEEP HOLE DRILLING SOLUTIONS FOR HIGH PRECISION APPLICATIONS

Our strength are customer-specific high-end solutions in the following industries:

- AUTOMOTIVE
- RAILWAY ENGINEERING
- CONSTRUCTION MACHINES
- AEROSPACE
- HYDRAULICS AND PNEUMATICS
- MEDICAL TECHNOLOGY
- OIL AND GAS INDUSTRY
- ENERGY TECHNOLOGY
- TOOL AND MOULD MAKING
- FEED INDUSTRY
- DEFENCE INDUSTRY
- SEMI-FINISHED PRODUCTS

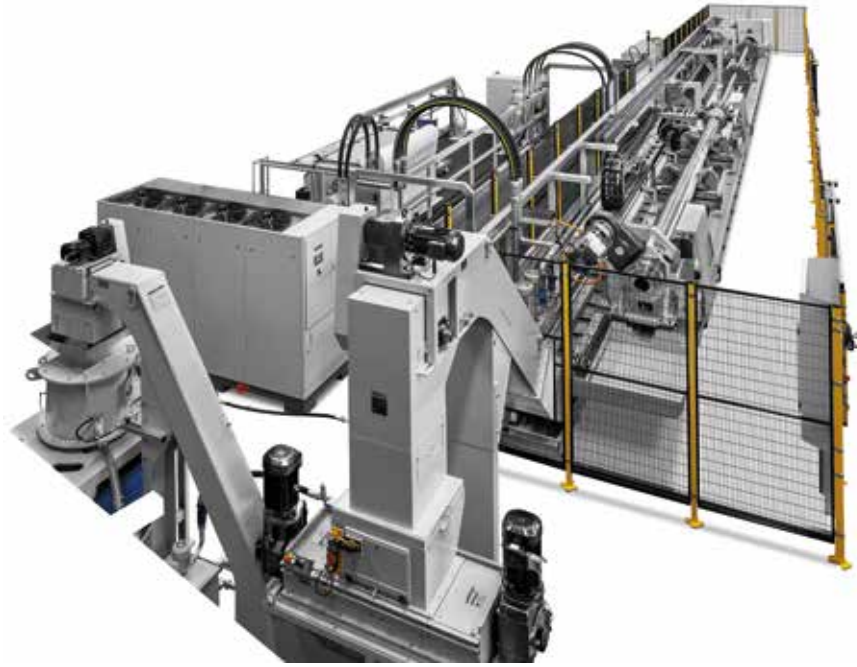
DEEP HOLE DRILLING – DIFFERENT METHODS

TBT produces machines and tools for single-lip drilling (ELB; left) and deep hole drilling with external supply of cooling lubricant (BTA/STS). In addition to these two most important processes, we also master ejector drilling, skiving, roller burnishing, bottle boring and rifling.

DEEP HOLE DRILLING CENTRES – DEVELOPED FOR COMPLETE MACHINING

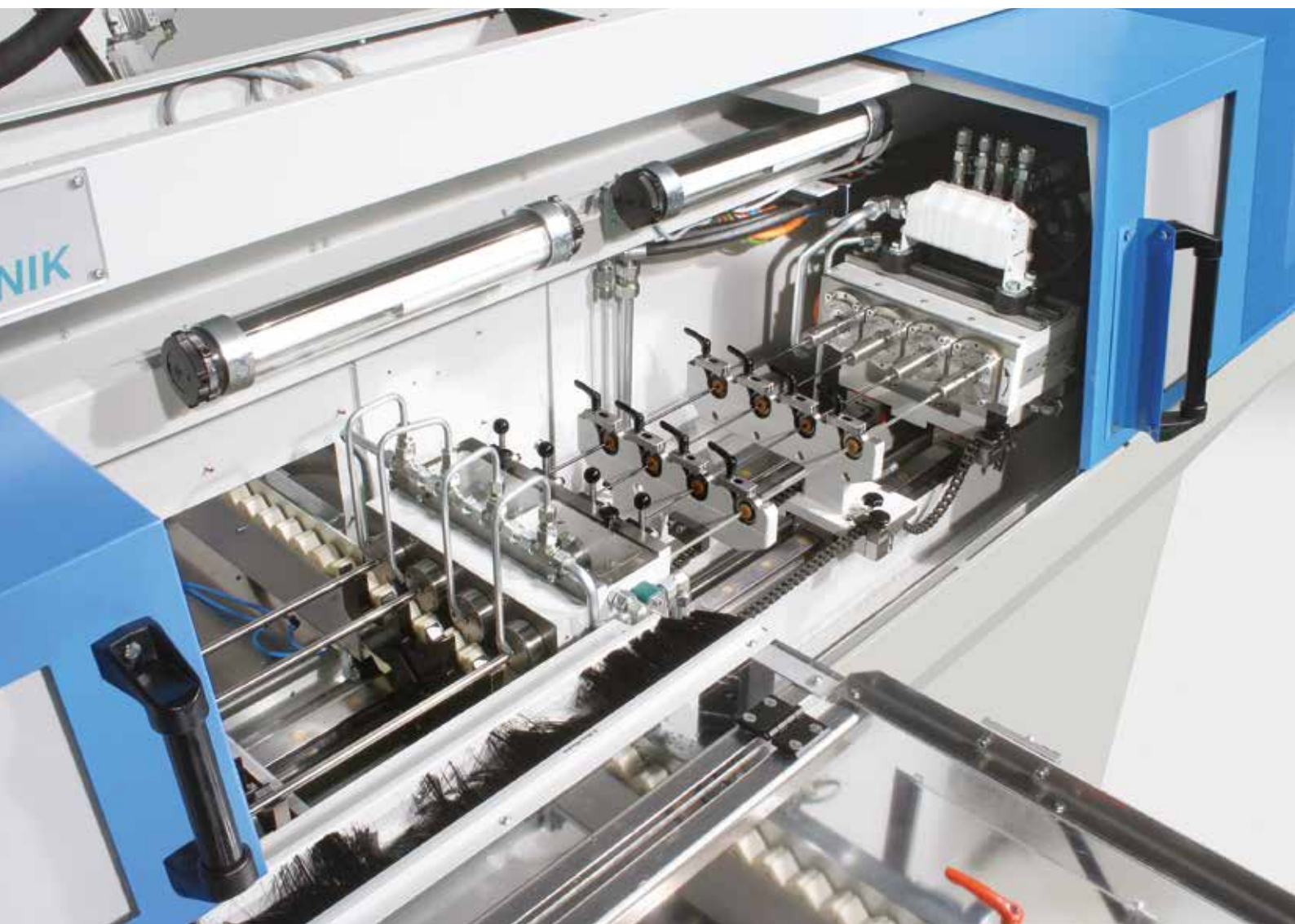
Deep hole drilling with single-lip (ELB) or STS process, twist drilling, thread cutting or milling.

TBT integrates these techniques with the aim of four-sided complete machining.



MODULAR CONCEPTS – FOCUSSED ON THE APPLICATION

We supply modular deep hole drilling solutions, which can be ideally adapted to suit the customer's application.





CAPABILITY PROFILE ML-SERIES

Drilling range	0.8 to 150 mm
Spindles	1 to 6
Drilling methods	single-lip drilling, BTA/STS, High-Speed-ELB
Applications	injection technology, hydraulic cylinders, medical technology, fuel rails, high-pressure lines, gear shafts, etc.



ML-SERIES – multifaceted, precise and durable: horizontal multi-spindle deep hole drilling machines – 4.0-ready. With optional automatic workpiece handling, automatic tool changer and cooling lubricant systems.



B-SERIES – process-safe, stable and low-vibration:
drilling of large horizontal workpieces on a rigid steel
machine bed with reinforced concrete.



CAPABILITY PROFILE B-SERIES

Drilling range	50 to 1,000 mm
Spindles	1
Drilling method	BTA/STS
Applications	hydraulic cylinders, landing gears, moulds, turbine rotors, high-pressure lines



BW-SERIES – efficient, universal and complete:
with a deep hole drilling centre as an all-rounder,
completely machining components in one clamping.
Numerous special applications.

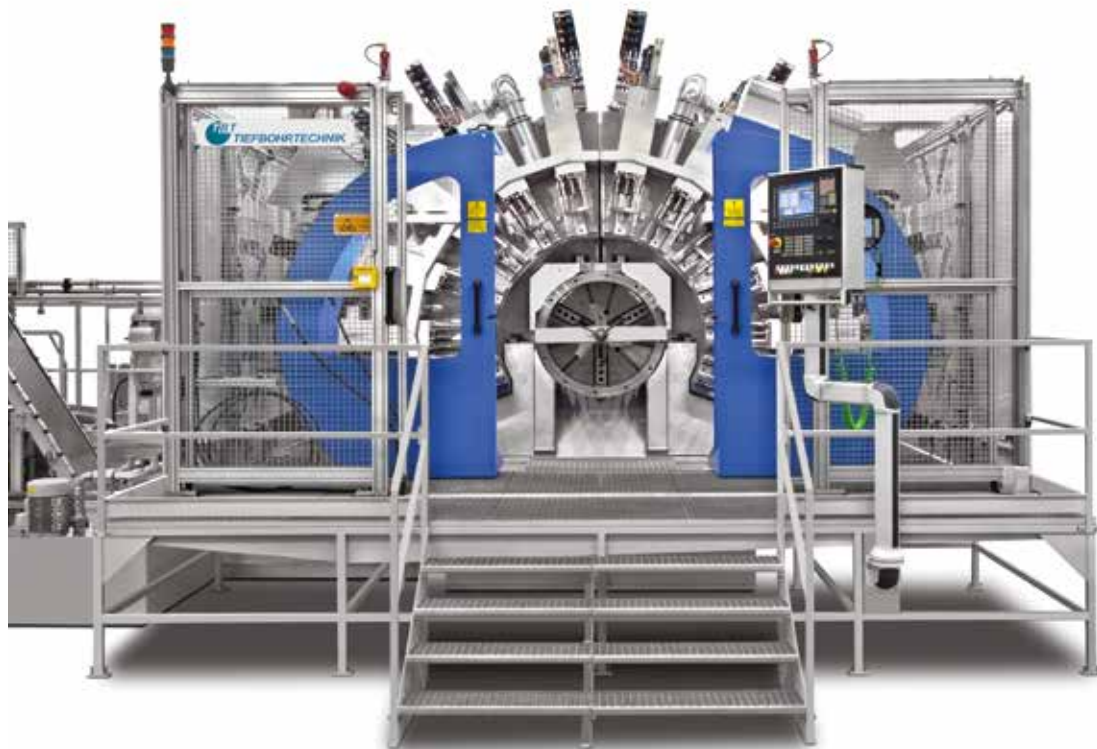


CAPABILITY PROFILE BW-SERIES

Drilling range	up to 65 mm
Spindles	1 to 3
Drilling methods	single-lip drilling, BTA/STS, milling, drilling, thread cutting
Applications	heat exchanger plates, tool and mould making, oil and gas components and mechanical engineering



PELLET DIE MACHINES – highly productive,
optimized for HS-ELB, to drill high-quality dies with
the shortest possible throughput time.



CAPABILITY PROFILE PELLET DIE MACHINES

Drilling range	1 to 25 mm
Spindles	3 to 12
Drilling method	single-lip drilling
Applications	dies for the production of pellets made of wood, animal feed, waste, plastic

DEEP HOLE DRILLING TOOLS – MACHINING OPTIMIZED FOR SPEED, PROCESS RELIABILITY AND EFFICIENCY

Quality, functionality and innovation for optimal tool solutions for
your individual deep hole drilling tasks.



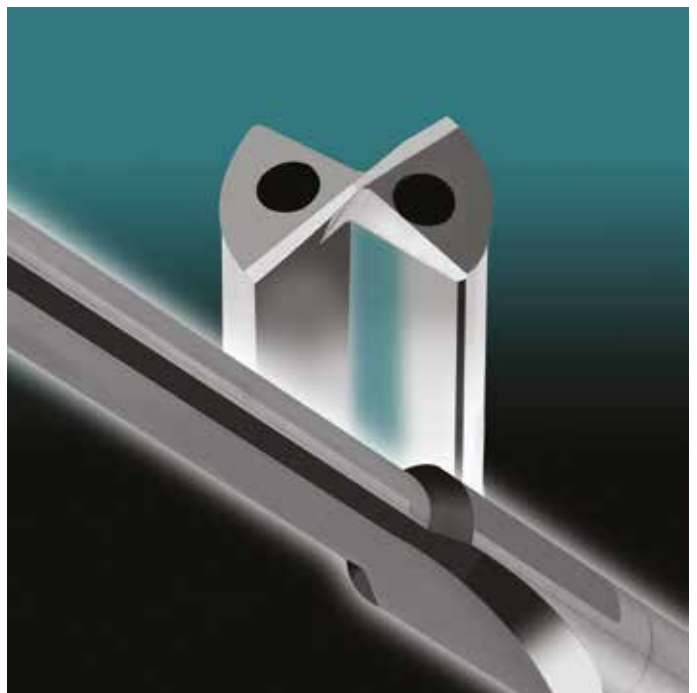
SINGLE-LIP DRILLS offer variety – the classic, cost-effective all-rounder with brazed drill heads, various geometries, uncoated or coated.

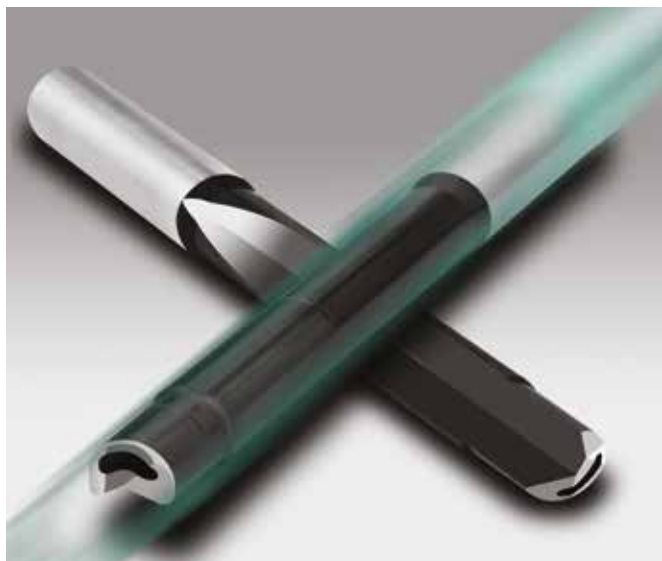
Diameter range: 1.9 to 50 mm.



TWIN-LIP DRILLS – giving the highest feed rates in short-chipping materials with brazed drill heads or completely made of solid carbide.

Diameter range: 4 to 25 mm.





SOLID CARBIDE SINGLE-LIP DRILLS

machining in one step – reliable, efficient and low vibration. This is a more productive alternative to the classic single-lip drill for serial production.

Diameter range: 0.8 to 12 mm.



HIGH-SPEED-TOOLS – specially inserted chip formers result in maximum productivity.

Suitable for the smallest drill tolerances as well as for hard-to-machine materials.

Diameter range: 0.8 to 12 mm.

INDEXABLE INSERT SINGLE-LIP DRILLS

with special cutting geometry – impressive machining performance with high surface quality. Also suitable for machining centres giving high process stability.

Diameter range: from 12 mm.



TSTS-TOOLS – developed for solid drilling and counterboring in accordance with BTA/STS system, versatile and compatible with the discontinued Sandvik series.





SPECIAL TOOLS for very special cases – from stepped drilling or counterboring tools to specialised forming of step transitions or blind hole geometries.

ACCESSORIES make life easy – from grinding fixtures and tool length setting to shrink fit units.





AUTOMATION – TAILOR-MADE MODULAR SOLUTIONS

From simple robot handling to flexible manufacturing systems with multiple deep hole drilling machines and spindles.





Systems from Siemens, Heidenhain and Fanuc are used to control our equipment.



SERVICES: SPARE PARTS, SERVICE, RETROFIT AND USED MACHINERY

Spare parts

The most important wear and spare parts are always in stock, all others are procured or manufactured by our CIC-4, our Customer Innovation Center 4.

Service

Service plays a very important role at [TBT](#): our CIC-4 experts support customers worldwide in person or by teleservice.

Retrofit

When it comes to general overhauls, we rely on the highest quality. [TBT](#) offers full warranty for all parts and services. Optionally, we also carry out statistical inspections.

Used machines

We buy used [TBT](#) deep hole drilling machines and retrofit them according to the customer's individual requirements – including CE marking.



COST EFFECTIVE SUB CONTRACT DRILLING IF YOU NEED ADDITIONAL CAPACITY ...

Precision

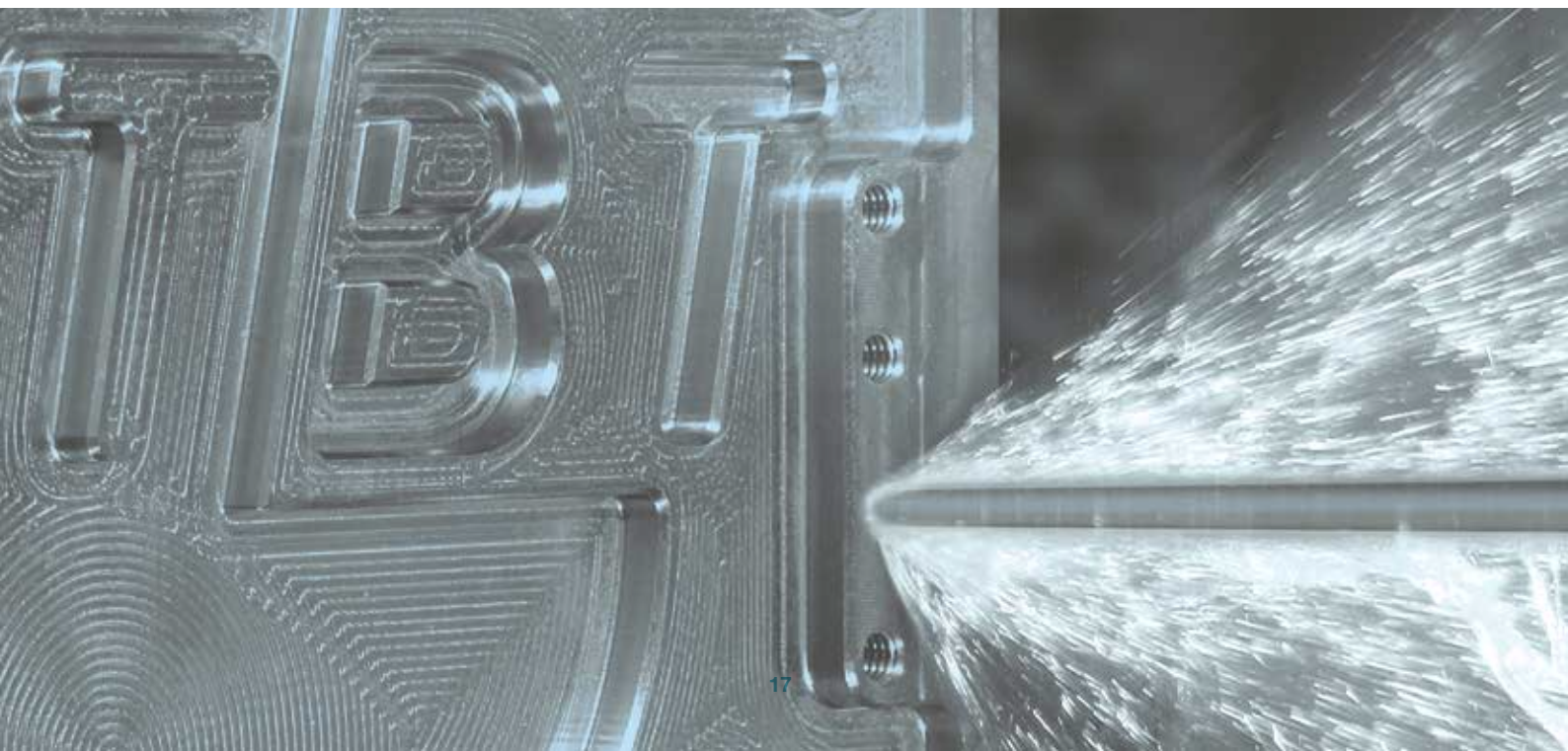
TBT has been drilling on behalf of customers for almost four decades. The enormous spectrum ranges from a single bore to well over 100,000. The drilled components are just as diverse, which are used, for example, in aircraft landing gears, in automobiles or in racing.

The customers primarily appreciate the precision and reliability with which our highly qualified personnel work on contract orders utilizing original TBT machinery – from batch size one jobs to series production with automatic loading systems.

Reliability

NC data generation programs automatically support the machines in drilling complex cubic parts. We can also mill and thread on the deep hole drilling centers at the customer's request.

TBT has particular experience in the machining of stainless steel components, which are used for example in medical technology or the chemical/oil and gas industry.



LOCATION RIEDERICH, GERMANY – SUCCESSFUL SUB-CONTRACT DEEP HOLE DRILLING SHOP WITH EXTENSIVE DRILLING CAPACITY

PRODUCTION

INCOMING AND OUTGOING GOODS

BTA-/STS-DRILLING

SMALL-BATCH PRODUCTION

SERIES PRODUCTION

QUALITY ASSURANCE

3D-MEASURING MACHINE

DRILLING CENTERS



LOCATION COLESHILL, ENGLAND – DEEP HOLE DRILLING SOLUTIONS FOR THE BRITISH MARKET





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