Gundrilling machines

Solid drilling up to Ø 80 mm
Counter boring up to Ø 100 mm
Drill depth up to 4.500 mm

BTA/STS-deep hole drilling machines

Solid drilling up to Ø 250 mm
Counter boring up to Ø 500 mm
Drill depth up to 8.000 mm

B125-6000 and B160-6000 at stage of final assembly
BTA/STS-deep hole drilling machines

Solid drilling up to Ø 250 mm
Counter boring up to Ø 500 mm
Drill depth up to 8.000 mm

Advantages:

• max. torque at low speed (see table)
• the size of the spindle heads according to the customer (replaceable)
• programmable chip breaking (e.g. at Inconel)
• drill tube change possible to the back side through the drill spindle
• adjustable backlash measurement in gearbox
• at drilling operation the feed spindle is on tension
• chip discharge with wear part
• protection of mechanical heading at feed axis, to make sure that the forces will be eliminated free of torsion at an accidentally overriding
• failure position approachable by rapid traverse
• hydraulic operated coolant pressure head (BOZA) slide (stroke 250 mm) can be moved in the whole range between tailstock and drill slide (B250-8m: Workpiece length 10.000 mm, max. drill depth 6.000 mm from one side or rather 10.000 mm from both sides)
• spindle supports can be dismantled for maintenance without dismantling the feed spindle
• worldwide the best BOZA (coolant pressure head):
  • big drill range with one BOZA size (see table)
  • drill bush elastically adjustable, conversion kit for front sealing disc and jaw chuck are standard
  • non rotating drill bush for the least possible deviation (run out)
  • device plates for cubic workpieces
• very good cost-performance ratio
• short delivery times as all components are kept in stock

Oil pressure heads (BOZA)

<table>
<thead>
<tr>
<th>size</th>
<th>drill range</th>
<th>reception Ø</th>
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</thead>
<tbody>
<tr>
<td>500</td>
<td>100,00 - 500,00</td>
<td>600</td>
</tr>
<tr>
<td>400</td>
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<td>250</td>
<td>50,00 - 250,00</td>
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<td>180</td>
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<tr>
<td>50</td>
<td>12,50 - 50,00</td>
<td>140</td>
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</table>

All BTA/STS - deep hole drilling machines are also available with following technologies: Trepanning / Skiving / Roller Burnishing / Pullboring / Bottle Boring.
The simple and brilliant modular concept of the single- and multispindle deep hole drilling machines is defined by an array of 10 spindle and drive sizes and 10 different drill depths. A state of the art machine concept with linear guideways offers almost unlimited configurations, from a universal standard machine to part specific special machine. TIBO’s 45 years experience in deep hole drilling as well as a multitude of enhanced details provide for significantly simplified handling, lower set-up costs at extended machining options. So the movable drill bush support allows machining of extra-long workpieces. The use of Siemens spindle and feed motors with high torque in combination with the generous mechanical dimensioning allows the usage of the latest tooling. All components on stock - short delivery times!

Single and multispindle deep hole drilling machines Type E08, E12, E15, E25, E30, E40, E80

The drill bush support or pressure head carriage of each machine can be moved 1/3 in direction of the drill spindle. This allows reception of longer workpieces which can then be drilled with a reduced drill depth or from both sides. Doing so e.g. on a machine with drill depth 1,500 mm, workpieces with a total length of 2,000 mm can be drilled with a depth of 1,000 mm from one side or 2,000 mm from both sides.

Solid drill-Ø in mm

<table>
<thead>
<tr>
<th>Type</th>
<th>1-spindle</th>
<th>2-spindles</th>
<th>3-spindles</th>
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</table>

Drill depth
Choose from 10 different drill depths: 375, 750, 1,000, 1,500, 2,000, 2,250, 3,000, 3,750, 4,000, 4,500 mm.

Machine doors
The widely opening machine doors allow loading of workpieces by crane as well as a simplified maintenance and set-up.

Perfect fit for your workpieces
In order to reduce the drift of the drill, a counter rotating clamping tailstock can be mounted on the machine. Or a stationary tailstock, a cross table movable in the x-axis e.g. for plates, a hydraulically landing mounting plate for the reception of your workpiece fixture, a cross carriage for excentrical drills or a rotary table.

Tool steadies
The intermeshing tool steadies minimize the loss of drill travel way. Unused tool steadies can easily be detached from the linear guideways, thus reducing the loss of travel way to zero. Also they can be re-inserted quickly if necessary.

The coolant system
The combination of a digital controlled high pressure coolant pump together with an automated filter system and a chip disposal according to customers preference guarantees permananet perfect drill results.
Modern control solutions

Electrical Control
With the assortment of machine controls TIBO sets the focus on latest technology. In addition to the NC-controls Siemens Touchpanel TP-177, KTP-600 and Multipanel KTP-1000 the customer can choose from the Siemens CNC-controls 802D sl and 840D sl. Siemens high performance spindle motors and feed drives provide infinitely variable spindle speeds and drill feeds for the entire working range of the machine at a high torque.

The advantages in detail
- Programmed chip breaking while processing difficult materials such as Inconel
- Multilingual operation possible
- Transfer of digital working data by computer interface (USB/Ethernet)
- By Operator guidance and fault diagnostic setup and idle time will be reduced and quality will be optimized
- Spindle speed change, feed change and coolant adjustment are infinitely variable adjustable via input at the touchpanel with override during the drill cycle
- Programmable coolant amount, min. and max. coolant pressure can be set and monitored in the control
- Remote maintenance and diagnostic of the software via data line (as an option)

The second life of deep hole drilling machines
Retrofit electrically and mechanically at TIBO or on your site (worldwide)

Equipment:
- Spindle blocks, Boring units, drill bushes, drill bush holders, clamping cones, oil pressure heads, gundrill grinding machines, deep hole drilling oil and much more in stock
- Retrofit of a Heidenreich & Harbeck VDF
- Retrofit of a Hegenscheidt BRS-D
- Retrofit of a special cross table deep hole drilling machine
- New TIBO Boring headstock on a Böhringer B630
- New TIBO Boring headstock on a TBT T120-2000
- Overhauling of a B3SN Heidenreich & Harbeck VDF
- TIBO deep hole drilling unit on a Skoda-center for drilling heat exchanger blocks
We would like to invite you to visit our facility to see by yourself how TIBO works. Discuss your requirements and eventual manufacturing problems with our engineering and maintenance personal.

We are confident that TIBO will have the answer and solution to your questions.

Our company philosophy is based on quality, service and good customer relations. Therefore it is our goal to provide projects to the highest quality based on our customer requirement’s.

Applications:
- Oil and gas sector
- Aerospace
- Medical branches
- Automotive and vehicle
- Hydraulics and pneumatics
- Renewable energies
- Mechanical engineering
- Shipbuilding