B400

Universal lathe for precise and powerful cutting
INDEX B400

INDEX B400: Universal turning at the highest level

The universal lathe INDEX B400 impresses with its innovative machine layout and raises universal turning to a new dimension.

The stiff and vibration-damping machine bed in mineral cast monoblock design ensures best results when machining complex workpieces from batch size 1. With a high spindle torque up to high spindle speeds, even difficult-to-cut materials can be machined powerfully and reliably. Special feature of the INDEX B400 is the completely newly designed and clearly structured work area for a variety of applications.

With the optionally available counter spindle, rear-end machining can be carried out with high precision.

The ergonomic design ensures quick setup and easy control of the machine.

The proven INDEX iXpanel operating concept and the 18.5” touch monitor provide the operator at any time with all relevant data for economical production and access to networked production.
The machine concept

• Clearly structured and ergonomically mature work area concept
• Rigid mineral cast bed in 45° monoblock design for high accuracy
• Work spindle A8 with belt drive for high torques
• Spindle clearance dia. 82 mm, chuck up to dia. 315 mm
• Generously dimensioned bed guides
• Radial turret for 12 tools with VDI 30 mounting and W-serration for high process reliability
• Orthogonal, linear Y-axis for high accuracy
• Large axis travels X 255 mm / Y ±60 mm / Z 750 mm

Options
- Counter spindle with A6 interface
- NC tailstock with electrically controlled axis
- Steady rest, electronically positionable
- Bar package with short bar loader
- INDEX EcoFluid
- Workpiece handling system
Clearly structured machine design and versatile applications

The INDEX B400 represents a logical further development of proven manufacturing solutions within the INDEX Group. Individually equipped, this very flexible universal lathe takes its place both in tooling and prototyping, but also in medium and large series production. Decades of know-how is reflected in numerous design details, such as in a pocket in the panel above the main spindle which ensures collision-free use of long boring bars.

INDEX B400 component system

Ideal for a wide range of parts

With the INDEX B400, it is possible to machine a wide variety of workpieces from bars up to 82 mm and in the chuck up to 315 mm.

C45
Shaft dia. 65 x 400 mm

25CrMo4
Sleeve dia. 250 x 230 mm

20NiCrMo2-2
Ball screw nut dia. 78 mm
The components

Main spindle
- Spindle clearance dia. 82 mm, chuck up to dia. 315 mm
- Max. speed 4,000 rpm
- Spindle power 24 kW (40% duty cycle)
- Torque 550 Nm (40% duty cycle)
- Holding brake for indexing the axis

Counter spindle
- Spindle clearance dia. 65 mm, chuck up to dia. 175 mm
- Speed max. 4,000 rpm
- Spindle power 12 kW (40% duty cycle)
- Torque 119 Nm (40% duty cycle)
- Holding brake for indexing the axis

Steady rest (option)
- Electronically positionable
- NC-programmable
- Clamping range 12 – 152 mm

Removal device (option)
- Diameter Ø max. 82 mm
- Length max. 200 mm
- Mass max. 8 kg

Radial turret
- 12 live tool stations
- VDI 30 according to DIN 69880 with patented W-serration
- X 255 mm / Y ±60 mm / turning length Z up to max. 750 mm
- Machining possible up to 70 mm below center of rotation *
- 6,000 rpm, 5.5 kW, 19.5 Nm (25% duty cycle)

NC tailstock
- Electronically freely positionable
- Generously dimensioned roller guides
- Electronically adjustable pressing force up to 10,000 N
- Cone center SK 30 or MK 5
- Rapid traverse rate 8.5 m/min

* (on main spindle)
The generous dimensioned work area ensures best accessibility for setup of the INDEX B400. Main spindle and tool turret can be accessed easily allowing fast setup and changeover. The sophisticated work area concept with steep-sloping and smooth covers provides for an ideal chip flow and prevents chip nests.

**Highlights**
- Fast setup
- Excellent access to the work area
- Optimized chip flow

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**The principle of W-slots**

The patented INDEX W-serration on the tool holders and turret ensures high repeatability when changing tools.
- Tool mounting VDI 30
- Short tooling/setting-up times
- High change accuracy by long fixing grooves
- Extended life of cutting inserts
- DIN 69880-compatible
- Suitable for stationary and live tools
Work area
INDEX B400
with main spindle, tailstock, and radial turret

Work area
INDEX B400
with main spindle, counter spindle, and radial turret
**Focus on production and control – Industry 4.0 included.**
The iXpanel operating concept provides access to networked production. With iXpanel, your staff always has all relevant information for efficient production right at the machine. iXpanel is already included in the standard and can be individually extended. You can use iXpanel as you want it for your business organization – that’s Industry 4.0 tailored to your needs.

**Future-proof.**
iXpanel integrates the latest control generation SIEMENS S840D sl. Use iXpanel intuitively through an 18.5” touch monitor.

**ShopTurn.** (option)
The Siemens ShopTurn operation and programming software enables you to program demanding turning and milling operations simply.

**Intelligent.**
The machine always starts with the control home screen. Other functions can always be displayed on a second screen, and the operator enjoys direct, activity-related assistance already in the standard version, such as workpiece drawings, setup lists, programming tools, documentations.

**Virtual & open.**
With the optional VPC box (industrial PC), iXpanel opens up the world of Virtual Machine with the 3 operating modes - CrashStop - RealTime mode - Independent simulation (VM on board) directly on the control. Thanks to the VPC box, the machine can be integrated into your IT structure without restrictions.

index-traub.com/ixpanel

The cockpit for easy integration of the machine in your business organization.
18.5” Touch-Monitor

Network
Server
Application

Customer

Virtual Machine
3D simulation

Standard
- Order documents
- Customer data
- Workpiece counter
- Production status
- Drawings
- Setup sheet

Included as standard

Option
- VPC Box
- Virtual Machine 3D simulation
- VirtualPro Programming studio
- Custom applications

Industry 4.0 features
- Notes
- Information center
- Maintenance & care
- User management
- Technology computer
- Programming help

+ many more standard features
Work area
Radial turret with tailstock

Work area
Radial turret with counter spindle

Installation plan
## Technical data

### INDEX B400

<table>
<thead>
<tr>
<th>Working range</th>
<th>mm</th>
<th>750</th>
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<tr>
<td>Turning length</td>
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### Main spindle

<table>
<thead>
<tr>
<th>Spindle clearance</th>
<th>mm</th>
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<tr>
<td>Spindle head DIN 55026</td>
<td>Size</td>
<td>A8</td>
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<tr>
<td>Max. chuck</td>
<td>mm</td>
<td>315</td>
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<tr>
<td>Max. speed</td>
<td>rpm</td>
<td>4,000</td>
</tr>
<tr>
<td>Drive power (100% / 40% DC)</td>
<td>kW</td>
<td>16 /24</td>
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<tr>
<td>Torque (100% / 40% DC)</td>
<td>Nm</td>
<td>375 / 550</td>
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### Counter spindle

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<th>Spindle clearance</th>
<th>mm</th>
<th>65</th>
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<tr>
<td>Spindle head DIN 55026</td>
<td>Size</td>
<td>A6</td>
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<td>Max. chuck</td>
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<td>Max. speed</td>
<td>rpm</td>
<td>4,000</td>
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<tr>
<td>Drive power (100% / 40% DC)</td>
<td>kW</td>
<td>8 /12</td>
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<tr>
<td>Torque (100% / 40% DC)</td>
<td>Nm</td>
<td>79 /119</td>
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### Tool turret

<table>
<thead>
<tr>
<th>Tool mountings DIN 69880, VDI 30</th>
<th>Number</th>
<th>12</th>
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<tr>
<td>Live tools</td>
<td>Number</td>
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<tr>
<td>Max. speed</td>
<td>rpm</td>
<td>6,000</td>
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<tr>
<td>Drive power (100% / 25% DC)</td>
<td>kW</td>
<td>2.75 /5.5</td>
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<tr>
<td>Torque (100% / 25% DC)</td>
<td>Nm</td>
<td>12 /19.5</td>
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<tr>
<td>Slide travel X</td>
<td>mm</td>
<td>256</td>
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<tr>
<td>Slide travel Y</td>
<td>mm</td>
<td>±60</td>
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<tr>
<td>Slide travel Z</td>
<td>mm</td>
<td>750</td>
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<tr>
<td>Feed force X / Y / Z (63% DC)</td>
<td>N</td>
<td>11,900 / 11,700 / 11,900</td>
</tr>
<tr>
<td>Rapid traverse rate X/Y/Z</td>
<td>m/min</td>
<td>40 / 20 / 40</td>
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### Tailstock

<table>
<thead>
<tr>
<th>Mounting</th>
<th>SK 30 or MK5</th>
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<tr>
<td>Max. pressing force</td>
<td>N</td>
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<tr>
<td>Rapid traverse rate</td>
<td>m/min</td>
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### Cooling lubricant unit (basic unit)

<table>
<thead>
<tr>
<th>Pump pressure</th>
<th>bar</th>
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<tr>
<td>Tank capacity</td>
<td>l</td>
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<tr>
<td>Pump capacity 8 / 20 bar</td>
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<td>80 /30</td>
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<tr>
<td>Filter fineness</td>
<td>µm</td>
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### Machine dimensions

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<tr>
<th>Length x width x height</th>
<th>mm</th>
<th>see installation plan</th>
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<tr>
<td>Weight</td>
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<td>Connected power</td>
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<tr>
<td>Brasil</td>
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<td>INDEX Tornos Automaticos Ind. e Com. Ltda.</td>
</tr>
<tr>
<td>China</td>
<td>Shanghai</td>
<td>INDEX Trading (Shanghai) Co., Ltd.</td>
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<tr>
<td>China</td>
<td>Dalian</td>
<td>INDEX DALIAN Machine Tool Ltd.</td>
</tr>
<tr>
<td>Denmark</td>
<td>Langeskov</td>
<td>INDEXTRAUB Danmark</td>
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<tr>
<td>Germany</td>
<td>Esslingen</td>
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<td>INDEXTRAUB Finland</td>
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<td>France</td>
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<td>INDEX France Sarl</td>
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<td>INDEXTRAUB Nordic AB</td>
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**Technical data subject to change.**