

# **B400**

*Universal lathe for  
precise and powerful machining*

# INDEX



*better.parts.faster.*

## INDEX B400: Universal turning at the highest level

The newly developed CNC universal lathe INDEX B400 impresses with its innovative work area concept and raises universal turning to a new dimension.

The stiff and low-vibration machine bed in mineral cast monoblock design ensures best results when machining complex workpieces from batch size 1.

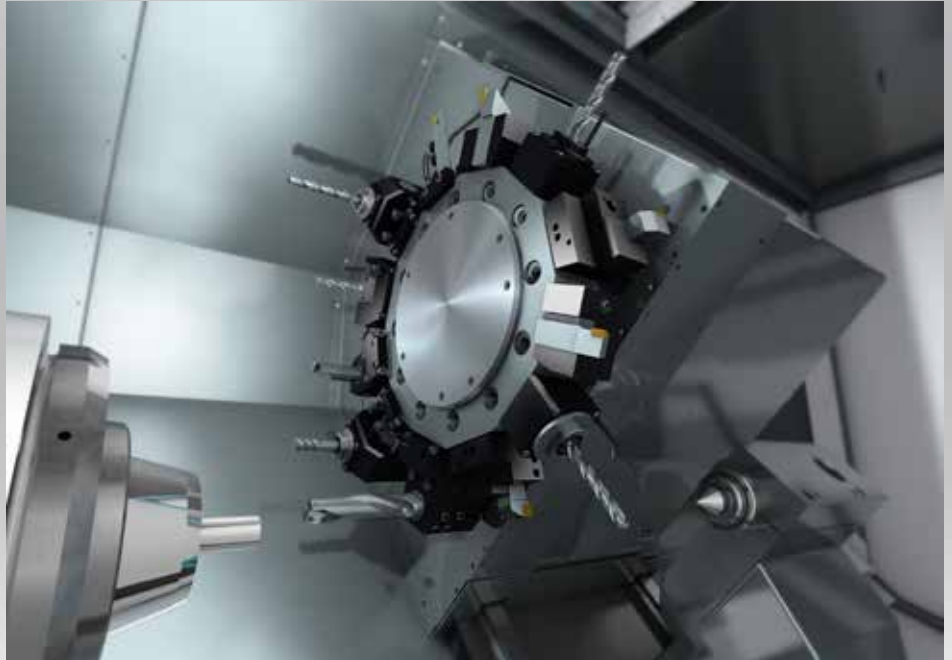
With a high spindle torque up to high spindle speeds, even difficult to cut materials can be machined powerfully and reliably. Special feature of the B400 is the completely newly

designed and clearly structured work area concept for a variety of applications.

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 a networked production.





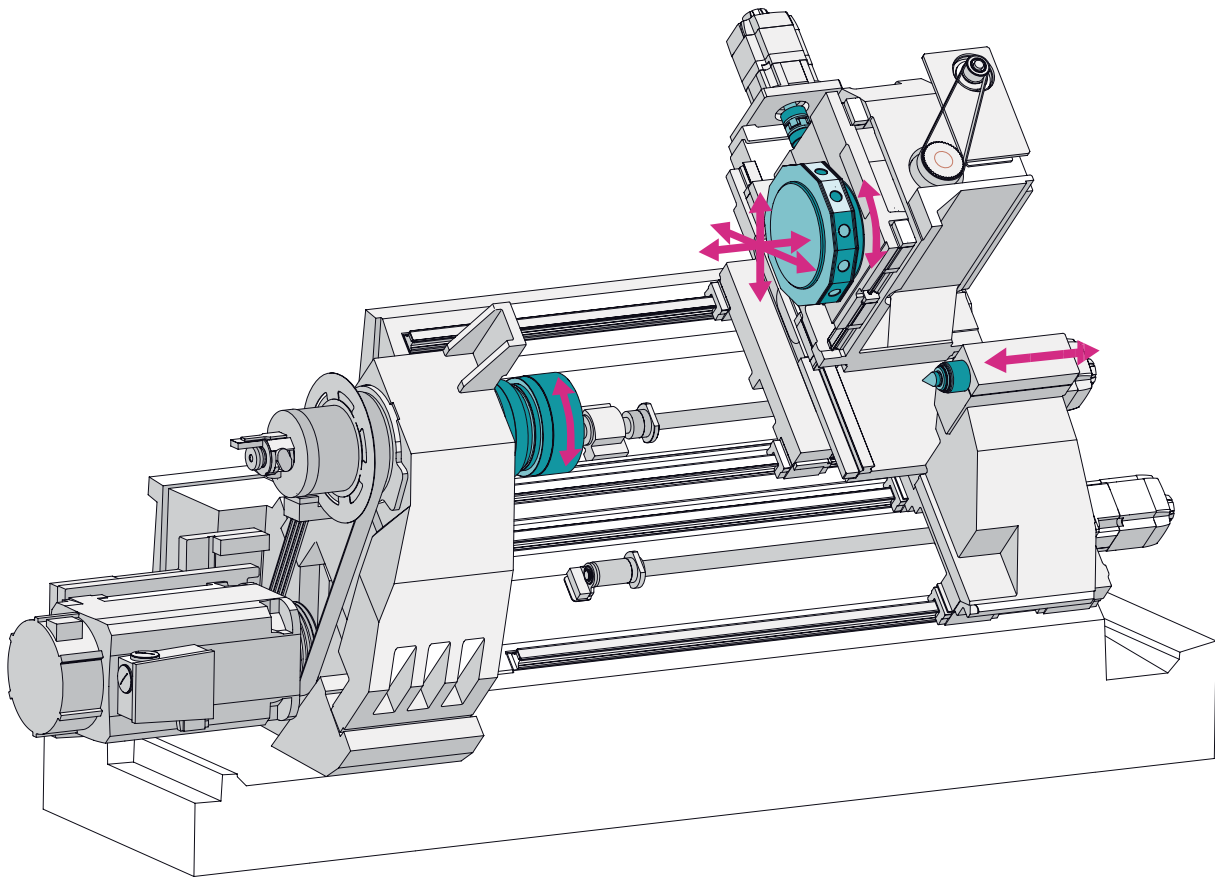
#### **The machine design**

- Clearly structured and ergonomic work area concept
  - Rigid mineral cast bed in 45° monoblock design for high accuracy
  - Work spindle with belt drive for high torques
  - Bar capacity dia. 82 mm, chuck up to dia. 315 mm
  - Generously dimensioned bed guides
  - Star 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= 265 mm / Y=  $\pm 60$  mm / Z = 750 mm)
  - NC tailstock with electrically controlled axis
- 
- Options
    - Steady rest, electronically positionable
    - Bar package with short bar loader
    - INDEX EcoFluid
    - Workpiece handling system

## Clearly structured machine design and versatile applications

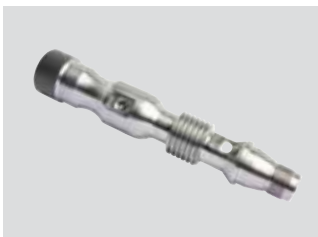
The INDEX B400 represents a logical further development of proven manufacturing solutions within the INDEX Group. Individually equipped, this new flexible universal lathe takes its place both in tooling and prototyping, but also in production.

Decades of accumulated 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.



## Ideal for a wide range of parts

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



C45  
Blank dia. 65 x 400 mm

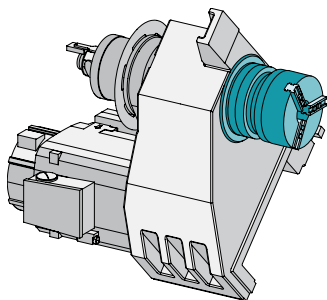


25CrMo4  
Blank dia. 250 x 230 mm



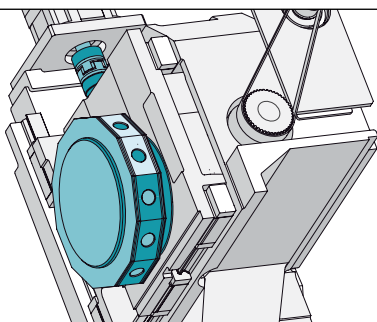
20NiCrMo2-2  
Drawn bar dia. 78 mm

# The components



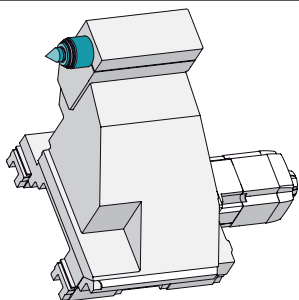
## Main spindle

- Bar capacity dia. 82 mm, chuck up to dia. 315 mm
- Speed 4,000 rpm
- Spindle power 24 kW (40%)
- Torque 550 Nm (40%)
- Holding brake for indexing the axis



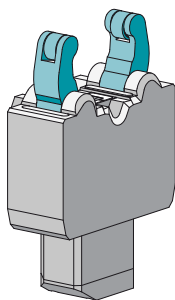
## Star turret and compound slide setup

- 12 live tool stations
- VDI 30 according to DIN 69880 with patented W-serration
- X 265 mm / Y  $\pm 60$  mm / turning length Z up to max. 750 mm
- Machining possible up to 80 mm below turning center
- 6,000 rpm, 5.5 kW, 19.5 Nm (25%)



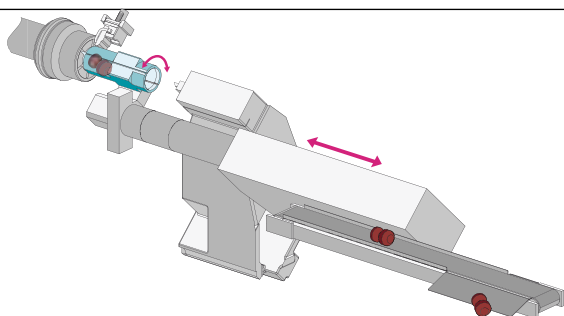
## NC tailstock

- electronically freely positionable
- generously dimensioned roller guides
- electronically adjustable pressure force up to 10,000 N
- Cone center MK 5 or SK 30



## Steady rest (option)

- electronically positionable
- NC-programmable
- Clamping range 12 – 152 mm



## Removal device (option)

- Dia. max. = 82 mm
- Length max. = 200 mm
- Mass max. = 3 kg

## The ergonomic operating concept

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

### Highlights

- Fast setup
- Excellent access to the work area
- Good chip flow



## The principle of W grooves

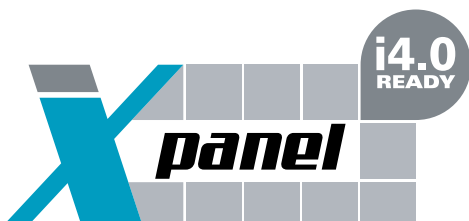
The patented INDEX W-serration for high change and repeat accuracy of the tool.

- 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









The cockpit for easy integration of the machine in your business organization.



#### 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.



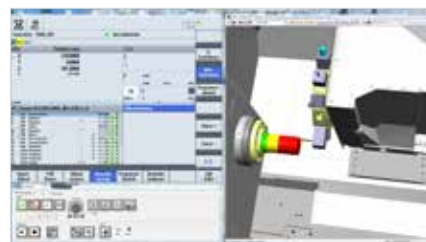
#### ShopTurn. (option)

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.

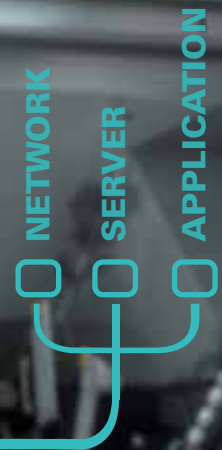
With the optional VPC box (industrial PC), iXpanel opens up the world of Virtual Machine with the 3 operating modes

- 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 B 400



**CUSTOMER**

**18.5" TOUCH-MONITOR**

**STANDARD** included as standard

**OPTION**

**Industry 4.0 features**



Order documents



Customer data



Workpiece counter



Production status



Drawings



Setup sheet



Notes



Information center



Maintenance & care



User management



Technology computer



Programming help



VPC Box



Virtual Machine 3D simulation



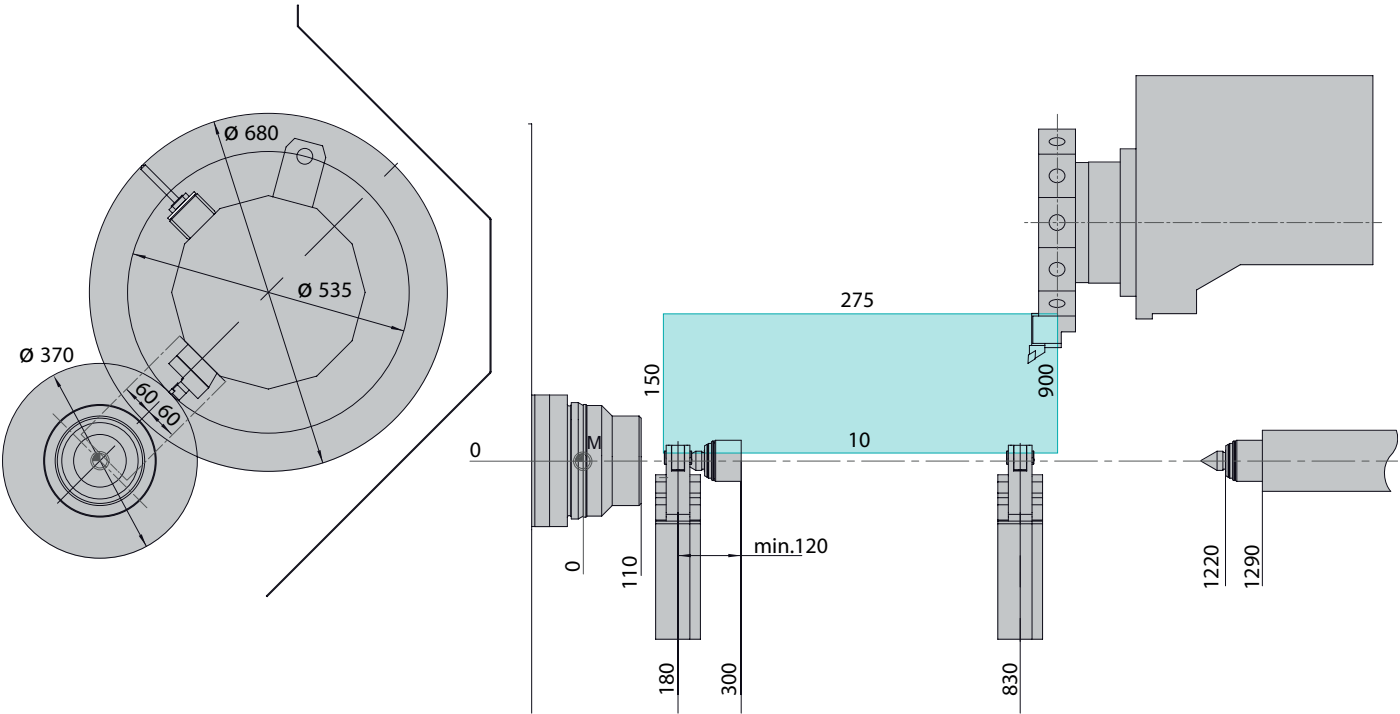
VirtualPro Programming studio



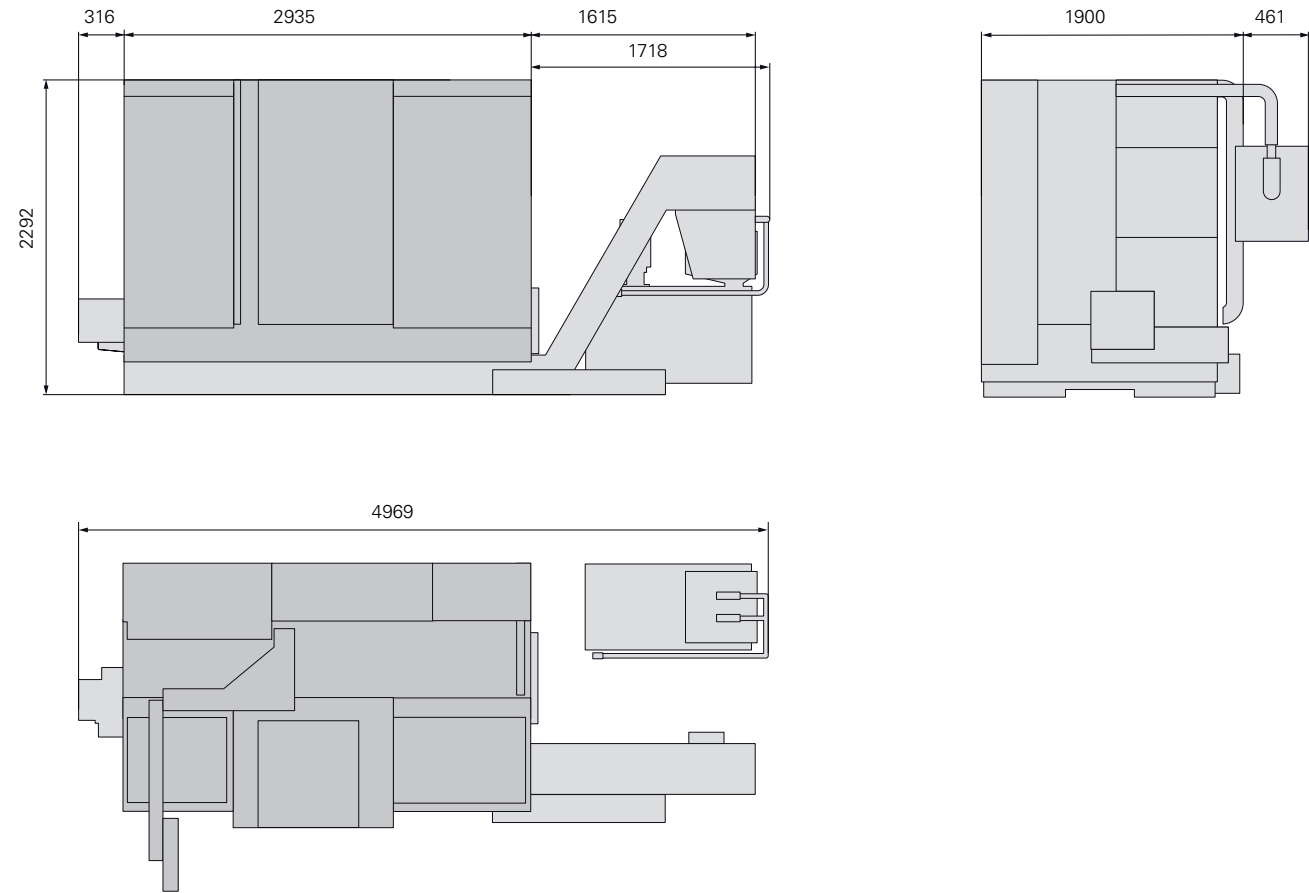
Custom applications

+ many more standard features

Work area



Installation Chart



# Technical data

<b>Working range</b>		
Turning length	mm	750
<b>Main spindle</b>		
Spindle clearance	mm	82
Spindle head DIN 55026	Size	A8
Max. chuck diameter	mm	315
Max. speed	rpm	4,000
Drive power (100%/40%)	kW	16 / 24
Torque (100%/40%)	Nm	375 / 550
<b>Tool turrets</b>		
Tool mountings DIN 69880, VDI 30	Number	12
Live tools	Number	12
Max. speed	rpm	6,000
Drive power (100%/25%)	kW	2.75 / 5.5
Torque (100%/25%)	Nm	12 / 19.5
Slide travel X	mm	265
Slide travel Y	mm	±60
Slide travel Z	mm	750
Feed force X / Y / Z (63%)	N	11,900 / 11,700 / 11,900
Rapid traverse rate X / Y / Z	m/min	40 / 20 / 40
<b>Tailstock</b>		
Mounting		MK 5
Max. pressure force	N	10,000
Rapid traverse rate	m/min	8.5
<b>Cooling lubricant unit (basic unit)</b>		
Pump pressure	bar	20 / 80
Tank capacity	l	300
Pump capacity 8 / 20 bar	l/min	80 / 30
Filter fineness	µm	200
<b>Machine dimensions</b>		
Length x width x height	mm	see installation chart
Weight	kg	7,800
Power rating	kW	57

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