

**INDEX**

**PRODUCTS  
AND SERVICES**



*better.parts.faster.*

## TRUST IN PRECISION

For more than 100 years, the INDEX Group, with its INDEX and TRAUB brands, has been among the world's leading manufacturers of CNC lathes, single and multi-spindle production lathes, sliding headstock automatic lathes, turn-mill centers, and also provides a full range of machine services. With five production sites, seven sales and service companies, and a network of dealers, we are directly and fully represented on every continent.

Quality, reliability, outstanding innovation and the forward-looking mindset our experts espouse are all reflected in our products and extensive services – our slogan is our mission: **better.parts.faster**

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# DEVELOPED FOR TOP PERFORMANCE

Our products and solutions are at home in all industries because we speak your language. Whether it's the accuracy and precision of your clockwork, maximum levels of safety for your aerospace component, exacting finish criteria in medical technology or highly productive, multi-variant production in the automotive industry, our expertise is your advantage.

## MECHANICAL ENGINEERING

## MOBILITY SOLUTIONS

## AEROSPACE SOLUTIONS

## FITTINGS | FLUIDS

## OPTICS | MICRO MECHANICS

## MEDICAL SOLUTIONS



Turret head  
Steel  
Ø 273 mm x 76 mm



Drive shaft  
Steel  
Ø 60 mm x 510 mm



Rotor holder  
Steel  
Ø 140 mm x 285 mm



Nozzle screw  
Steel  
Ø 25 mm x 90 mm



Watch housing  
Steel  
Ø 52 mm x 45 mm



Bone screw  
Titanium  
Ø 11 mm x 64 mm



Flange  
Steel  
Ø 178 mm x 120 mm



Drive shaft  
Steel  
Ø 18 mm x 148 mm



Connector  
Aluminum  
Ø 180 mm x 240 mm



Piston  
Steel  
Ø 18 mm x 65 mm



Connector housing  
Aluminum  
Ø 40 mm x 38 mm



Acetabular cup  
Titanium  
Ø 54 mm x 30 mm



Core bit  
Steel  
Ø 60 mm x 178 mm



Planetary pinion  
Steel  
Ø 35 mm x 43 mm



Eye end upper  
Steel  
Ø 52 mm x 235 mm



Fitting  
Brass  
Ø 19 mm x 29 mm



Worm gear  
Stainless steel  
Ø 10 mm x 20 mm



Dental abutment  
Titanium  
Ø 2.5 mm x 12 mm

# EFFICIENT USE OF TOP TECHNOLOGIES

For decades, INDEX has been involved in the process integration of a wide range of technologies, such as grinding, multi-edge turning, high-speed whirling, deep-hole drilling, polygon turning, gear cutting, deburring, marking, and measuring. Together with our customers, we work to systematically evolve our products and technologies. It all comes down to the right use, as the technological diversity that can be deployed on INDEX and TRAUB machines is often greater than you might imagine. Just speak to our engineers. We'll be happy to advise – on any matter, from your sub-process to your overall production.

**Internal thread whirling**  
e.g., M1.4 x 0.3 with fluid spindle

**High-speed whirling**  
Multi-start thread whirling and external turning in one operation with time-savings of up to 40%

**3D contour deburring with "Deburring Pro"**

**Deep-hole drilling**  
with internal cooling up to 140 bar

**Grinding**  
Complete machining with turning and grinding in one setup, with  $\mu$ -accurate results, e.g., in thread grinding, eccentric grinding, external, internal, or flat grinding.

**Milling with "Torx Pro"**

**Fly cutting**

**Gear broaching**

**Threading**

**Milling**

**Polygon milling**

**Power skiving**

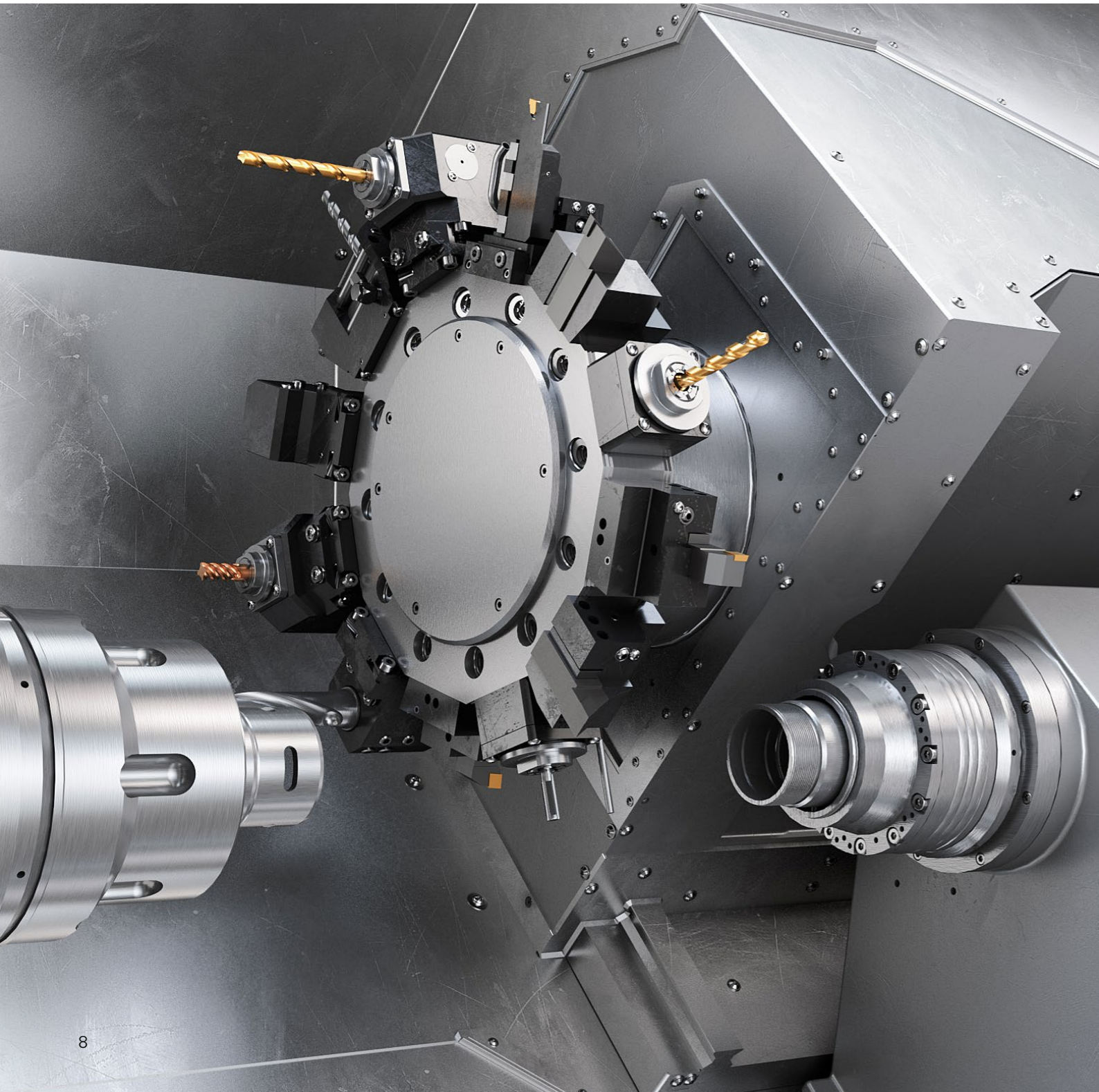
**INDEX ChipMaster**  
Optimum chipping for greater productivity and process reliability  
**Other useful software packages are available – ask us about them.**

**Polygon turning**  
Internal or external polygons, e.g., for reliable shaft/hub connections in drive components

# UNIVERSAL TURNING MACHINES

Our universal lathes for machining large chuck or bar parts are very highly regarded throughout the world. These machines set standards in their class with precision, efficiency, short setup times, and intuitive operation. Starting from a basic configuration, they can be customized to the individual machining task – in prototype construction, tool and mold making, for small and medium batch production, as well as for use in production lines.

- Robust engineering
- Flexible use
- Powerful machining



## INDEX B400

- 82 mm spindle clearance
- 315 mm chuck diameter
- 750 mm turning length
- Tool turret with 12 fixed or live tool stations



## INDEX B500

- 102 mm spindle clearance
- 400 mm chuck diameter
- 750 / 1.200 mm turning length
- Tool turret with up to 18 fixed or live tool stations



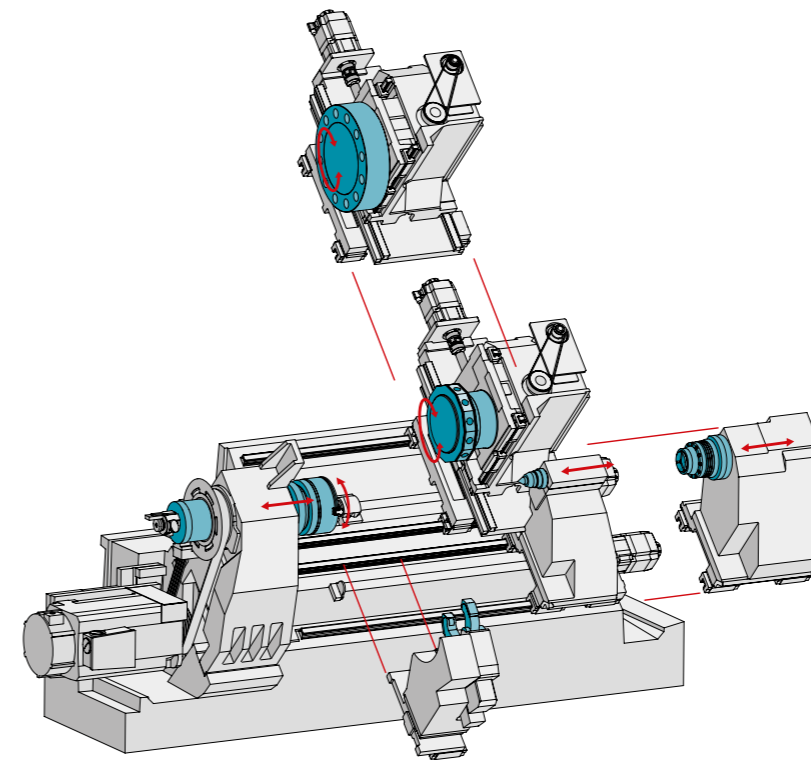
## TRAUB TNA400

- 82 mm spindle clearance
- 315 mm chuck diameter
- 750 mm turning length
- Tool turret with 12 fixed or live tool stations



## TRAUB TNA500

- 102 mm spindle clearance
- 400 mm chuck diameter
- 750 / 1.200 mm turning length
- Tool turret with up to 18 fixed or live tool stations



INDEX B400, B500  
TRAUB TNA400, TNA500

# TURNING CENTERS | TURN-MILL CENTERS

Our turning and turn-mill centers set standards in economical complete machining. With up to 4 tools in simultaneous use, powerful motorized milling spindles for 5-axis machining, to large tool magazines and numerous configuration options for the machine and automation system, INDEX and TRAUB solutions leave no requirement unfulfilled.

- Economical complete machining
- Wide range of applications:  
Automotive | Aerospace | Mechanical engineering
- Flexible modular system



## TURNING CENTERS | TURN-MILL CENTERS



### INDEX G200.2

- 65 mm spindle clearance
- 165 mm chuck diameter
- 660 mm turning length
- Turret / integrated milling spindle



### INDEX G200.3, G220

- 76 mm spindle clearance
- 160/230 mm chuck diameter
- 900 mm turning length
- Up to 3 tool carriers
- G220 with motorized milling spindle



### INDEX G300, G320

- 102 mm spindle clearance
- 250 / 315 mm chuck diameter
- 1,400 mm turning length
- Up to 3 tool carriers
- G320 with motorized milling spindle



### INDEX G400, G420

- 120 mm spindle clearance
- 400 mm chuck diameter
- 1,600 / 2,300 mm turning length
- Up to 3 tool carriers
- G420 with motorized milling spindle



### INDEX G500, G520

- 120 mm spindle clearance
- 500 mm chuck diameter
- 1,600 / 2,300 mm turning length
- Up to 3 tool carriers
- G520 with motorized milling spindle



### TRAUB TNX200, TNX220

- 76 mm spindle clearance
- 160/230 mm chuck diameter
- 900 mm turning length
- Up to 3 tool carriers
- TNX220 with motorized milling spindle



### INDEX R200

- 65 mm spindle clearance
- 175 mm chuck diameter
- 300 mm turning length
- 2 motorized milling spindles



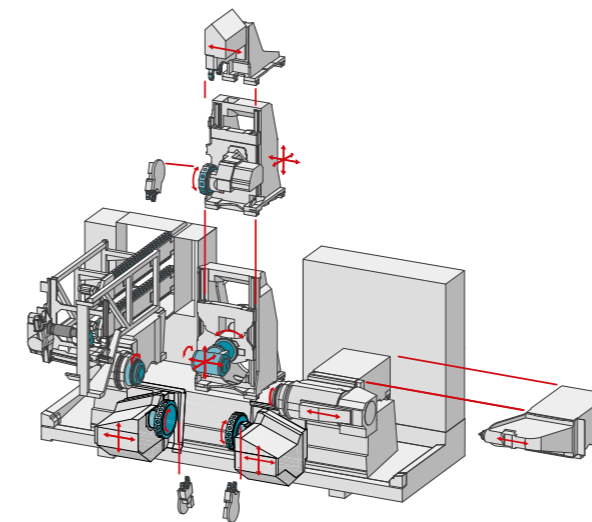
### INDEX R300

- 102 mm spindle clearance
- 315 mm chuck diameter
- 590 mm turning length
- 2 motorized milling spindles

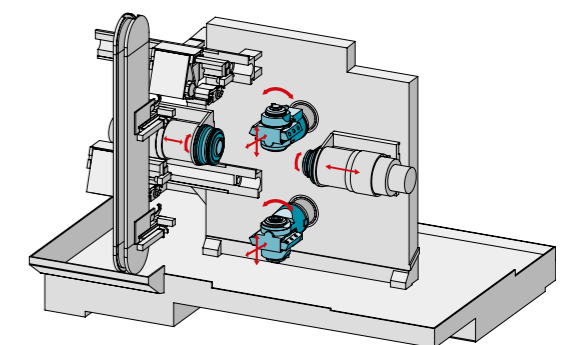


### TRAUB TNX65

- 65 mm spindle clearance
- 175 mm chuck diameter
- 650 mm turning length
- Milling unit or up to 4 turrets selectable



INDEX G200.3, G220, G300, G320, G400, G420, G500, G520  
TRAUB TNX200, TNX220

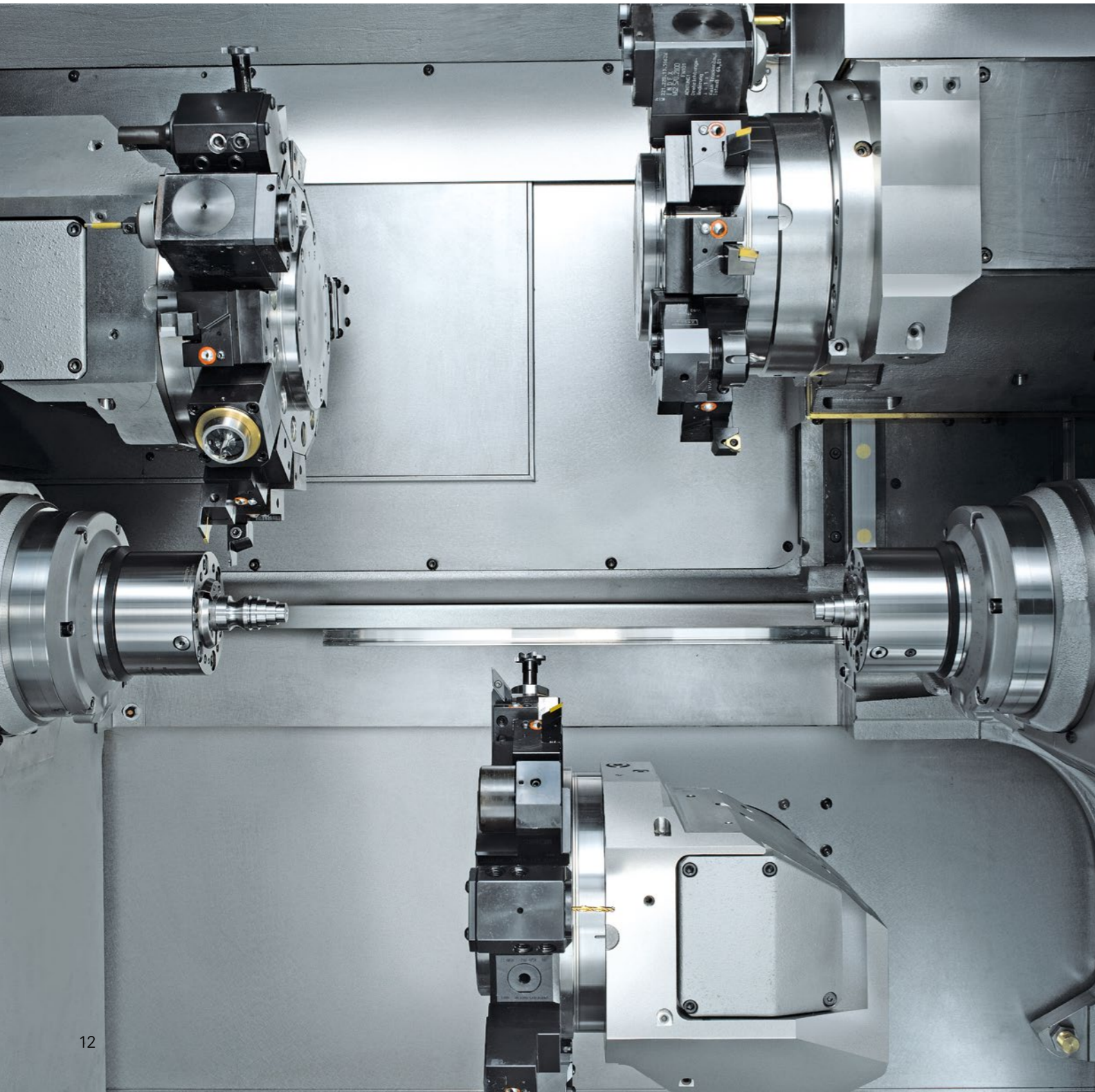


INDEX R200, R300

# PRODUCTION TURNING MACHINES

INDEX production lathes are specially designed for fast, cost-optimized production of typical automatic turned parts and demanding NC turned parts. The flexibility of CNC technology, combined with the speed of traditional automatic machines, enables economical production in small to medium batch sizes.

- Economical complete machining
- Highly productive thanks to simultaneous tool use
- Fast and optimized for bar and chuck machining

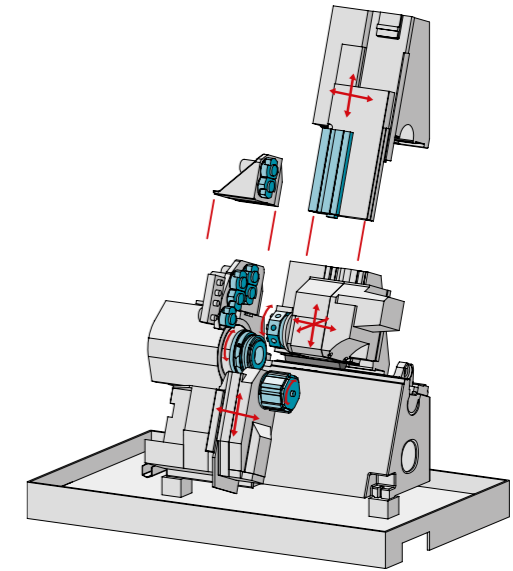


# PRODUCTION TURNING MACHINES



## INDEX ABC

- 65 mm spindle clearance
- 90 mm chuck diameter
- 280 mm turning length
- Up to 18 tool stations and synchronous spindles

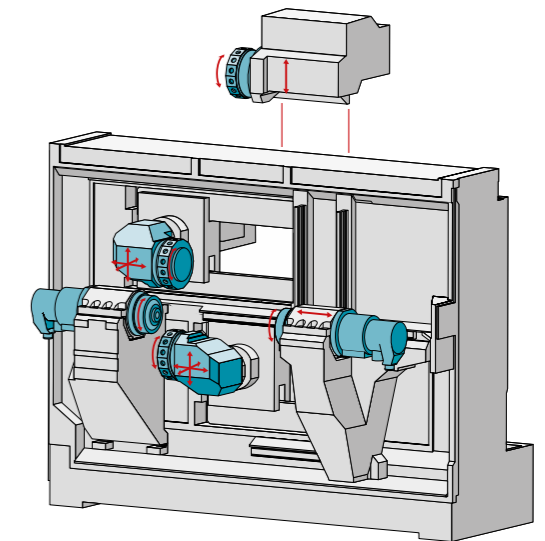


INDEX ABC



## INDEX C100

- 42 mm spindle clearance
- 110 mm chuck diameter
- 400 mm turning length
- 3 tool turrets with up to 42 tool stations



INDEX C100, C200



## INDEX C200

- 65 (90) mm spindle clearance
- 160 mm chuck diameter
- 550 mm turning length
- 3 tool turrets with up to 42 tool stations

# MULTI-SPINDLE AUTOMATICS

INDEX multi-spindle automatic lathes with 6 or 8 turning spindles combine the flexibility of CNC technology with the efficiency of multi-spindle turning technology: Thanks to short setup times, they can be used for volume production of a wide range of precision parts or for smaller batch sizes." In all cases, the multi-spindle machines impress with their cost-effectiveness for the user.

- Highly productive due to two tool slides per spindle
- Efficient rear-end machining
- Short setup times



## MULTI-SPINDLE AUTOMATICS



**INDEX MS16-6**  
**INDEX MS16-6 Plus**

- 16 / 22 mm spindle clearance
- 10,000 rpm max. speed
- 15 kW max. power
- Up to 12 tool carriers



**INDEX MS22-8**

- 22 (24) mm spindle clearance
- 10,000 rpm max. speed
- 15 kW max. power
- Up to 16 tool carriers



**INDEX MS24-6**

- 24 mm spindle clearance
- 10,000 rpm max. speed
- 15 kW max. power
- Up to 12 tool carriers



**INDEX MS32-6**

- 32 mm spindle clearance
- 8,000 rpm max. speed
- 19 kW max. power
- Up to 12 tool carriers



**INDEX MS40-6**

- 40 mm spindle clearance
- 7,000 rpm max. speed
- 24 kW max. power
- Up to 12 tool carriers



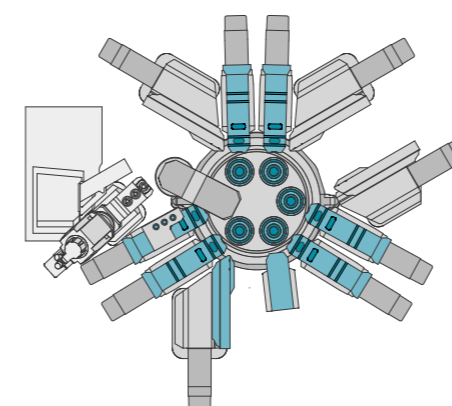
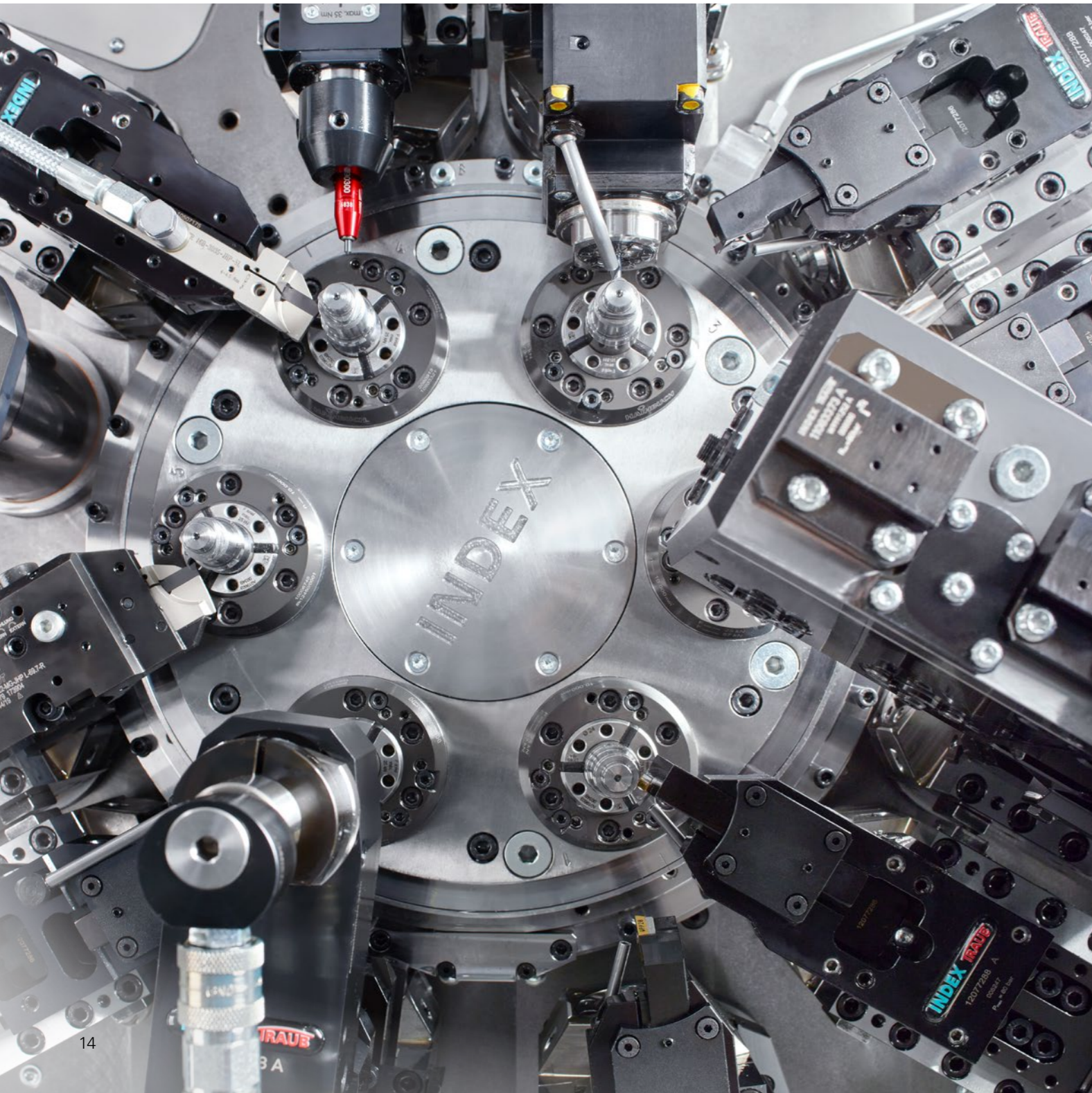
**INDEX MS40-8**

- 40 mm spindle clearance
- 7,000 rpm max. speed
- 24 kW max. power
- Up to 16 tool carriers

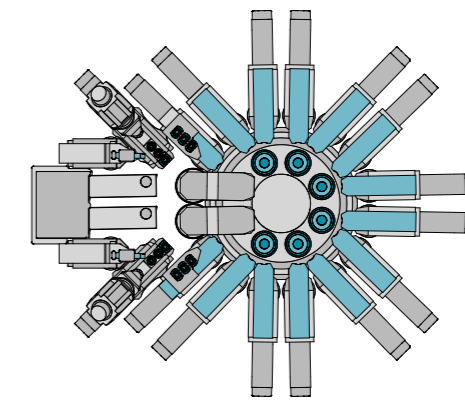


**INDEX MS52-6**

- 52 mm spindle clearance
- 5,000 rpm max. speed
- 30 kW max. power
- Up to 12 tool carriers



**INDEX 6-spindle technology**  
Version with synchronous spindle, grooving slide, and back-boring slide



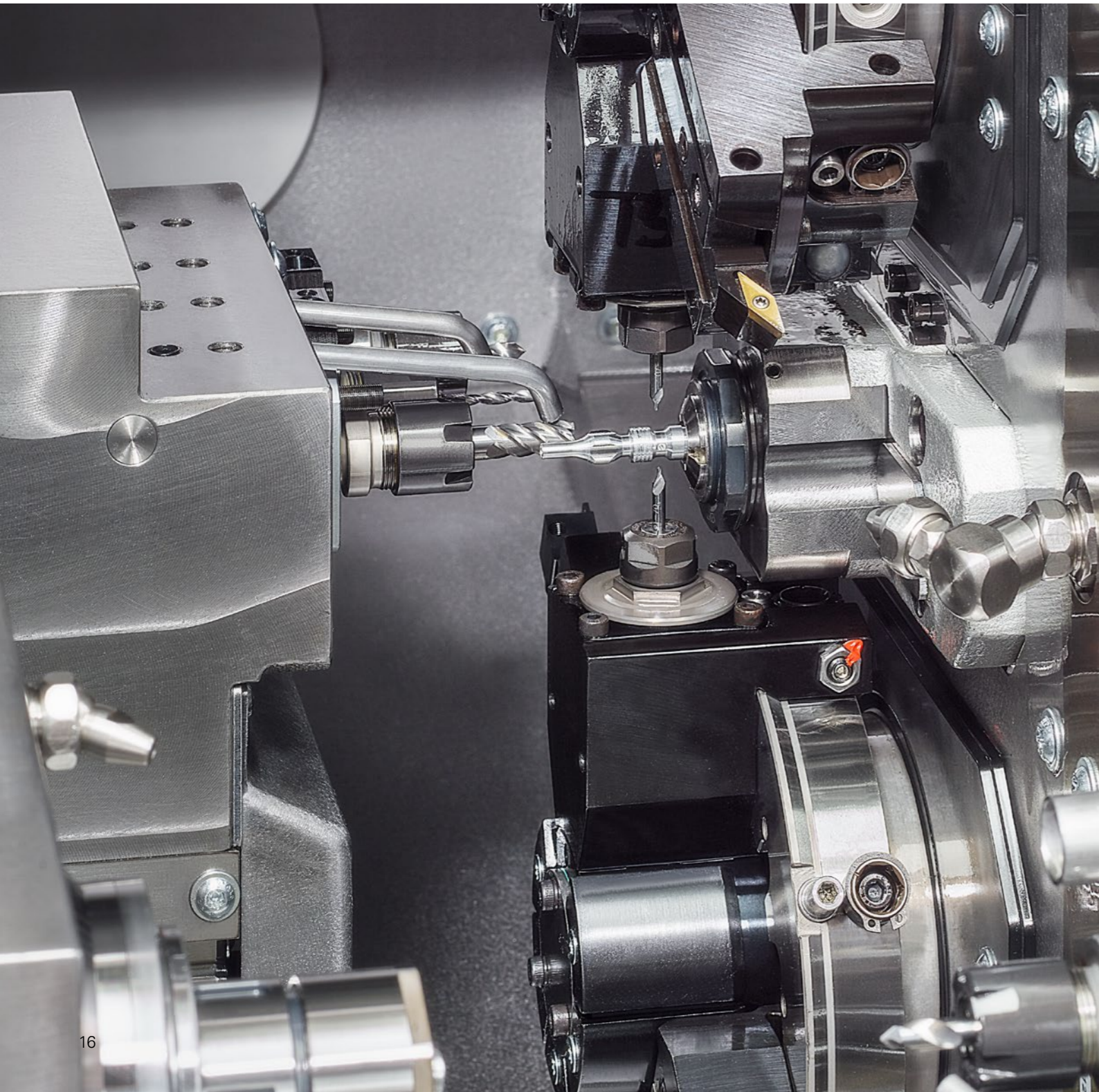
**INDEX 8-spindle technology**  
Version with two swiveling synchronized spindles, compound slide, and back-boring slide



# SLIDING HEADSTOCK AUTOMATIC MACHINES

The variety and precision of the workpieces define the requirements for a modern sliding headstock automatic lathe. TRAUB sliding headstock lathes are designed for precise and productive machining of workpieces up to 32 mm in diameter. They are characterized by top performance in combination with ease of setup and programming.

- Complete machining of complex workpieces
- High level of flexibility with modular expansion levels
- Fast changeover to fixed headstock turning

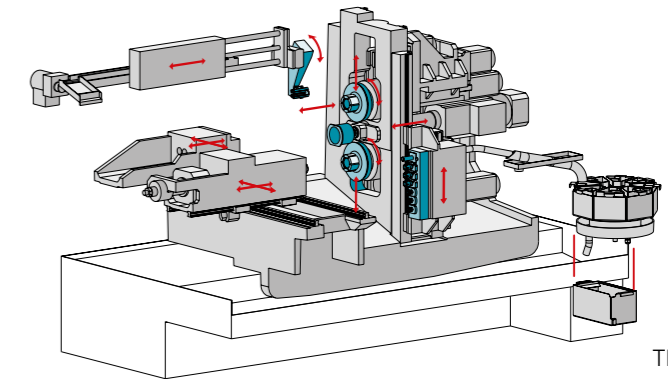


## SLIDING HEADSTOCK AUTOMATIC MACHINES



### TRAUB TNL12

- 13 mm spindle clearance
- 12,000 rpm max. speed
- 130 mm max. Z-travel
- 20 tool stations
- Simultaneous machining with up to 4 tool carriers

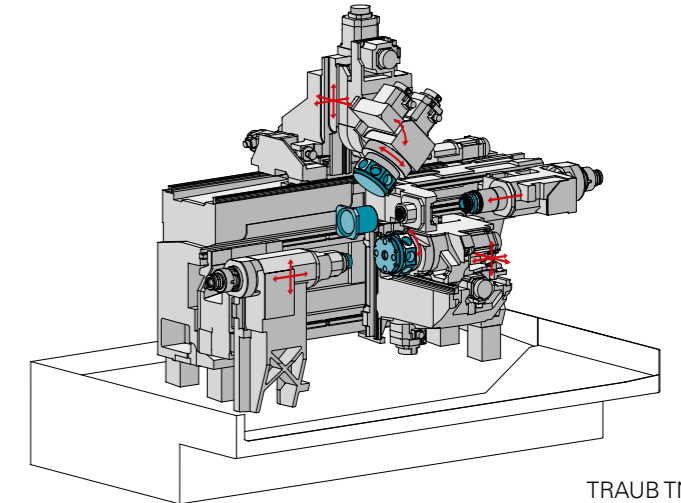


TRAUB TNL12



### TRAUB TNL20

- 20 mm spindle clearance
- 10,000 rpm max. speed
- 205 mm max. Z-travel
- 26 tool stations
- Simultaneous machining with up to 4 tool carriers

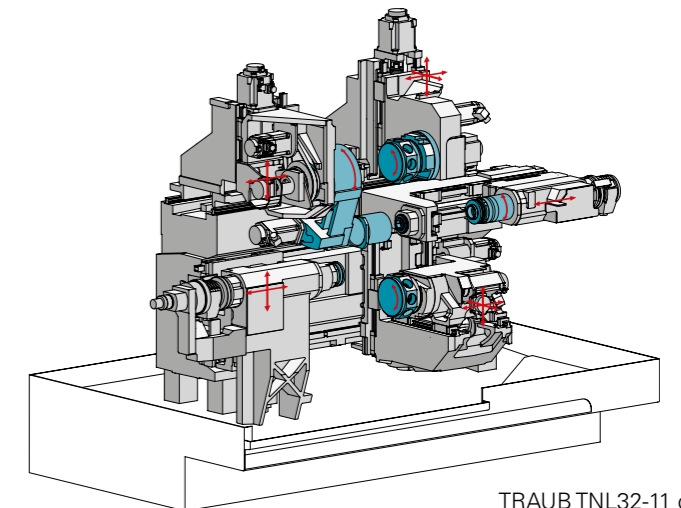


TRAUB TNL20-9B



### TRAUB TNL32 compact

- 32 mm spindle clearance
- 8.000 / 12.000 rpm max. speed
- 220 mm max. Z-travel
- 26 tool stations
- Simultaneous machining with up to 4 tool carriers

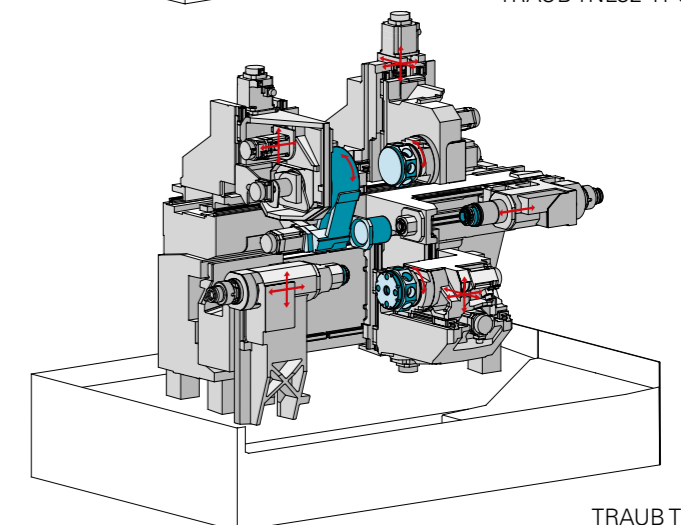


TRAUB TNL32-11 compact



### TRAUB TNL32

- 32 mm spindle clearance
- 8,000 rpm max. speed
- 305 mm max. Z-travel
- 28 tool stations
- Simultaneous machining with up to 3 tool carriers



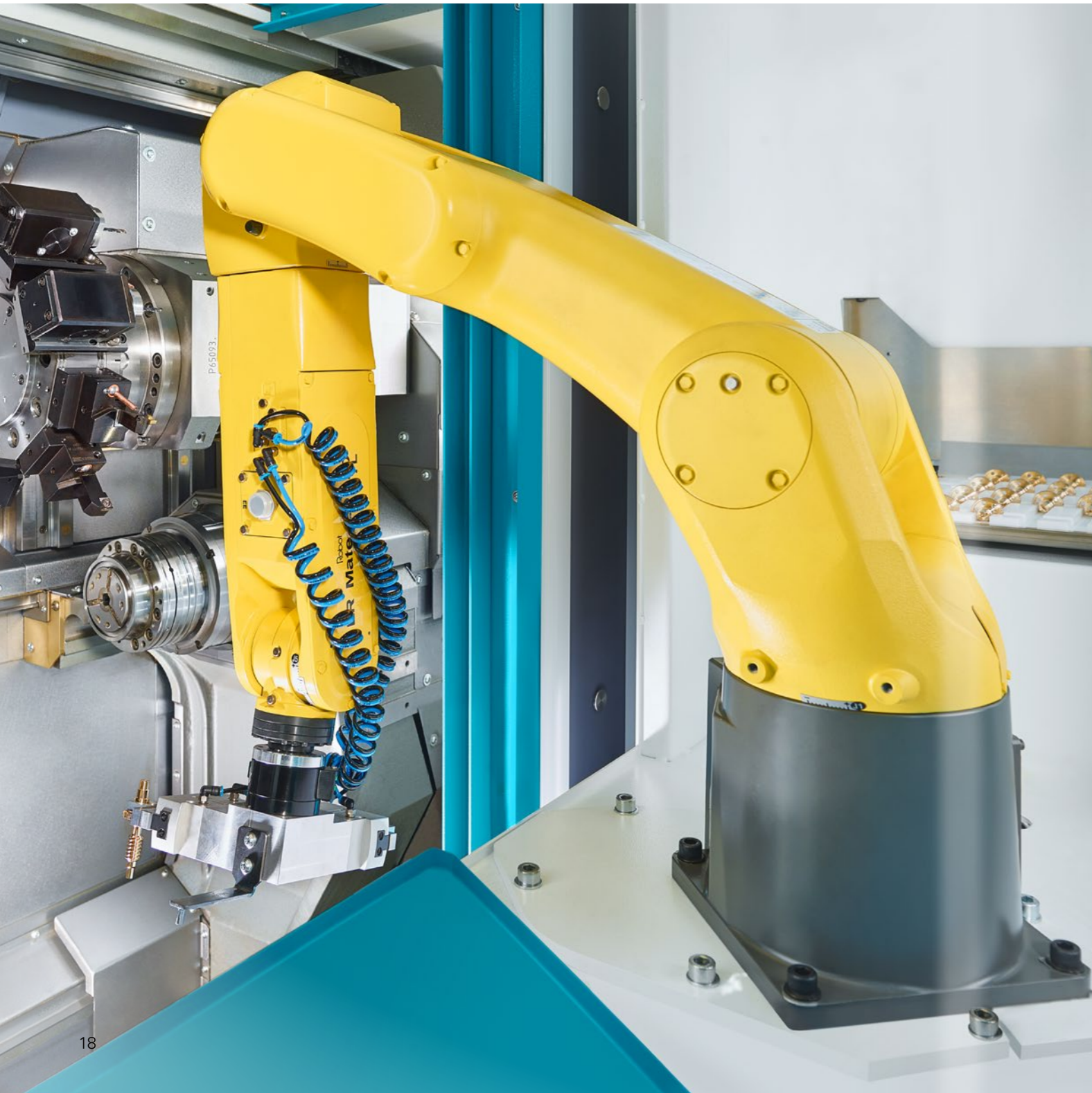
TRAUB TNL32-11

# AUTOMATION SOLUTIONS

Automation solutions “made by INDEX” ensure intelligent handling of your workpieces. We offer a wide range of options for our entire line of machines including bar loading magazines, machine-integrated robotic automation and application-specific solutions.

- › Everything from a single source
- › Flexible standard modular system
- › Custom expansion options

Intelligent automation – even more flexibility and efficiency



## Bar loading magazines



## AUTOMATION

INDEX bar loading magazines are optimally matched to our machines for single-spindle and multi-spindle turning. They feature short setup times, fast bar changes, and a low-vibration bar guide for first-rate surface qualities.

## Machine-integrated solutions



Our machines offer a range of options for quick, safe and gentle workpiece feed and discharge, e.g.:

- Flexible feed and discharge by gantry-type loaders with single or double grippers.
- Gantry systems with conveyor belt for workpiece discharge
- Flushing through counter spindle

## Automated robot solutions



With the iXcenter robot cell, blanks and/or finished parts can be supplied and discharged quickly, safely and flexibly. Depending on the machine type, the robot cell is ergonomically integrated and/or can be flexibly expanded on a modular basis to meet your needs.

## Customized solutions



The right solution for your specific requirements – with many years of experience in a wide range of sectors:

- Conveyor systems/circulating conveyors
- Gripper on turret
- Unloading systems
- Magazine rails
- Gantry loading systems
- Pallet stations
- Robot cells
- and much more

# CONTROLS AND SOFTWARE

We give you the choice: Siemens Sinumerik 840D solution line, TRAUBTX8i-s V8 based on Mitsubishi controls or Fanuc 31i-B. Our controller are built into the iXpanel operating system and ensure you make ideal use of your machine within your business organization. Additional helpful tools can be found in our programming and 3D simulation software products.

- iXpanel – the cockpit solution
- Controllers to match your requirements
- Simulation is better than repair

Focus on production and control – Industry 4.0 included.

## iXpanel – the cockpit solution

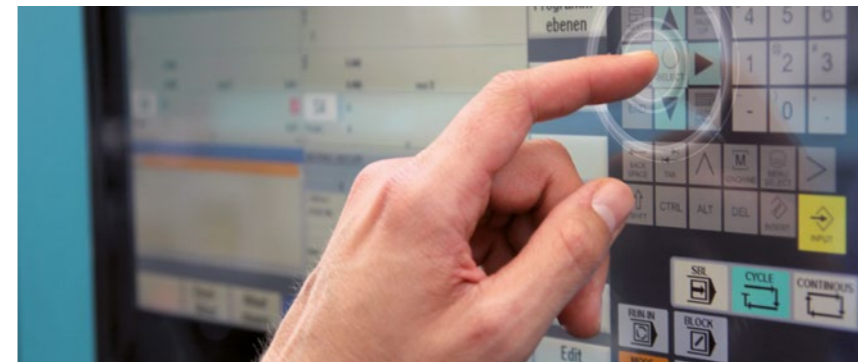


## CONTROLS AND SOFTWARE

The iXpanel operating concept provides access to networked production. With iXpanel, users always have the information they need for efficient production, directly at the machine.



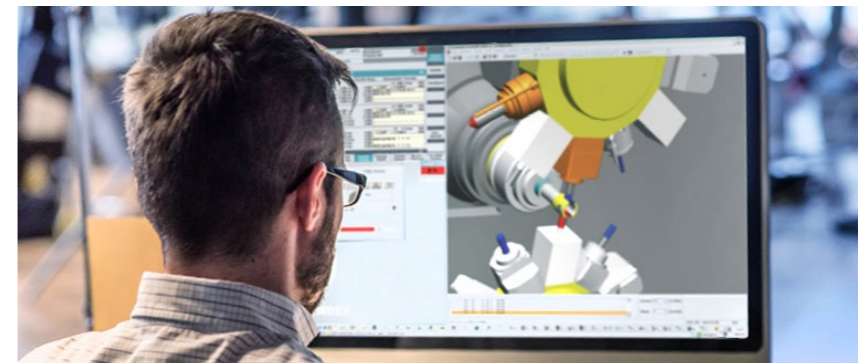
## CNC controls



The performance of a modern machine tool depends not only on a good machine design but also, to a large degree, on the CNC controller. We offer the following controllers to help you get the most out of your machine:

- Siemens Sinumerik 840D solution line
- TRAUB TX8i-s V8
- Fanuc 31i-B

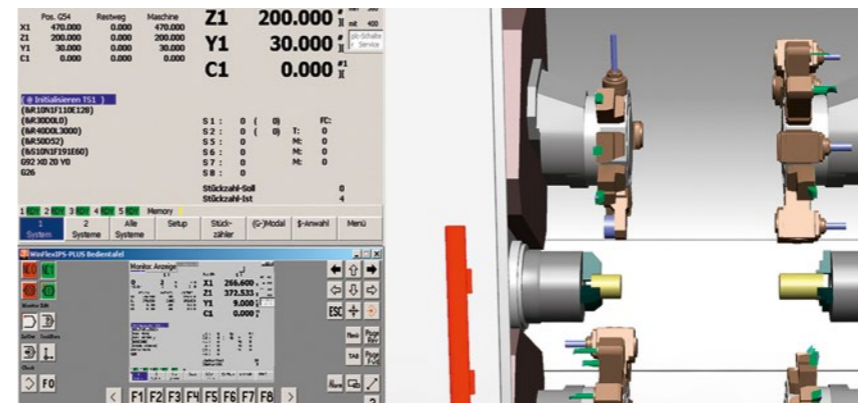
## INDEX Virtual Machine – VMpro



Faster workpieces through easy-to-use programming support and simulation for your INDEX machine:

- Cycle time optimization
- Reduced setup time through easy troubleshooting on the PC
- Collision monitoring
- Identical behavior of the virtual and the real machine

## TRAUB WinFlexIPS<sup>Plus</sup>



In addition to powerful programming, optimization and simulation functions, WinFlexIPS<sup>Plus</sup> offers the "Setup and Automatic Mode" in the 3D model, with all controls and functions. Just like on the real machine – all on a PC.



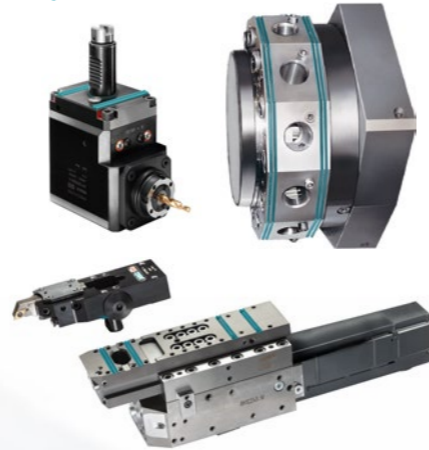
## TOOL HOLDERS AND SPARE PARTS

INDEX is the only machine tool manufacturer in the world to offer its own comprehensive range of tool holders. In fact, you'll find everything you need for your machine in our iXshop: from original spare parts to accessories – all available to order around the clock.

- Standardized or customized tool holders – directly from the machine manufacturer
- High level of spare part availability – even for older machines
- Easy to order online in the iXshop

### Patented W-serration

Thanks to the INDEX W-serration, tool holders for single and multi-spindle machines can be changed in almost no time and without any complex alignment work.



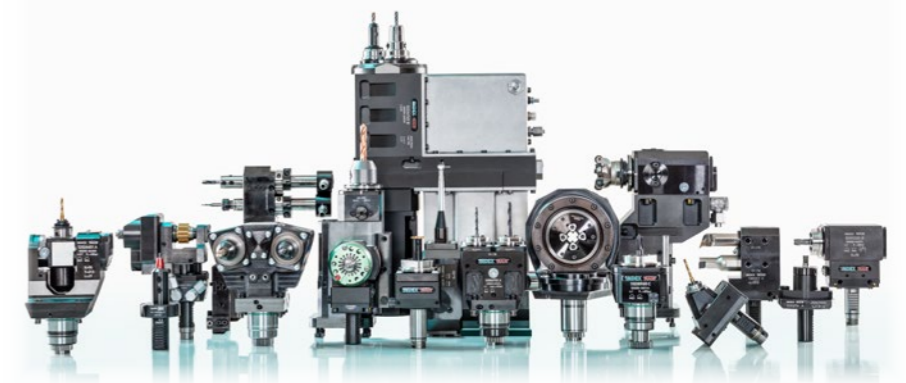
## INDEX tool holders

Tool holders directly from the machine manufacturer. We have the right holders for you and can build the most cost-effective tool holder package for you! To ensure trouble-free production, we offer a fast and comprehensive repair service for tool holders.

## INDEX spare parts and accessories

Keep your production running! When you need spare parts or accessories for your machines, our spare parts team is on hand to provide comprehensive and expert advice. Benefit from our original articles in manufacturer quality and from our high availability of spare parts, even for older machines.

## TOOL HOLDERS AND SPARE PARTS



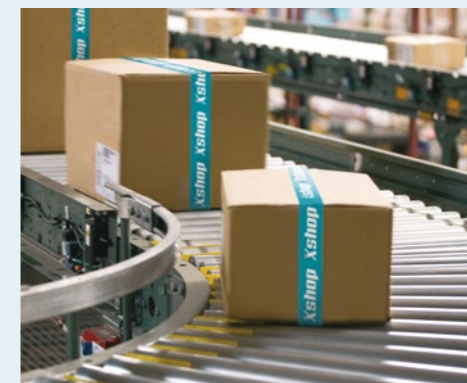
## **Xshop** THE PROCUREMENT PORTAL



Buy what you need online – all from a single source: tool holders, clamping devices, spare parts, raw materials, service fluids, and accessories. If required, with integration into your company's ERP system.

- ▶ Over 130,000 quality items
- ▶ Typically same-day shipment
- ▶ Find what you need quickly with intelligent search functions
- ▶ Procurement processes to match your needs
- ▶ Straightforward returns processing

Register free now to enjoy the benefits:  
 ▶ [ixshop.ixworld.com](http://ixshop.ixworld.com)



Our partners in the iXshop:

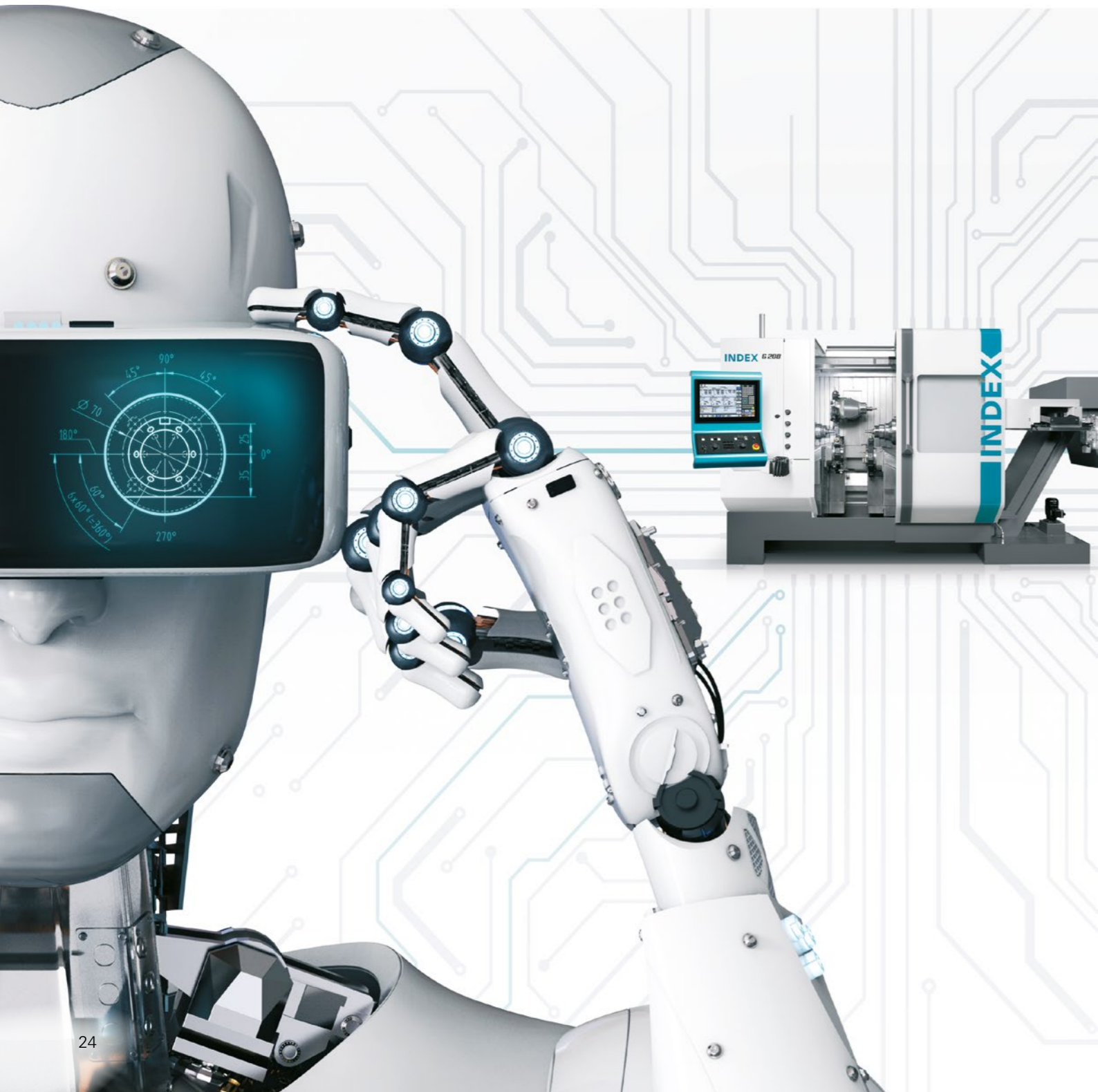


# **xworld** THE WORLD OF DIGITAL INTEGRATION

In addition to our iXshop procurement portal and the iXservices service portal, iXworld also includes iX4.0 – the INDEX IoT platform you can use to integrate all your production machines into the digital world. The iX4.0 apps allow you to make wide-ranging improvements to your ongoing production operations.

- Connectivity for INDEX/TRAUB machines and third-party machines
- Increase utilization and machine availability
- Compliance with standards and full transparency of data usage

Get going now  
and use all the apps  
free of charge for  
12 months with  
**iX4.0 go**



## **iX4.0 – embrace the digital world with us**

iX4.0 apps are the ideal tools to help identify available potential and proactively notify you if any problems occur on a machine – thus avoiding downtimes.

- Use condition monitoring to ensure machine availability.
- Use performance analyses to increase the utilization of your production machines.
- Document machine conditions during a production job and determine the actual costs.



iXworld | iX4.0

### **A secure connection**

The stable and secure connection of all machines to the iX4.0 IoT platform lays the foundation for digitizing your production environment.

- Compliance with standards such as OPC UA, umati, and MQTT.
- Data transmission with 192-bit encryption, complying with the recommendation issued by the German Federal Office for Information Security.
- Data storage in the SAP cloud in Europe.



The iX4.0 apps are  
suitable for any  
device with a standard  
web browser

Owning an INDEX or TRAUB machine means owning a unique quality product. We support you with comprehensive services to ensure long-term production without any problems. Our seasoned experts are on hand to assist you with their expertise, competence and reliability.

- › We're here for you – in person on-site, online via our remote service, or through our hotline
- › Over 150 service engineers in Germany and service locations in over 50 countries around the world
- › Report faults online with the TicketManager

Did you know that more than 50% of all faults can be resolved directly by our hotline?

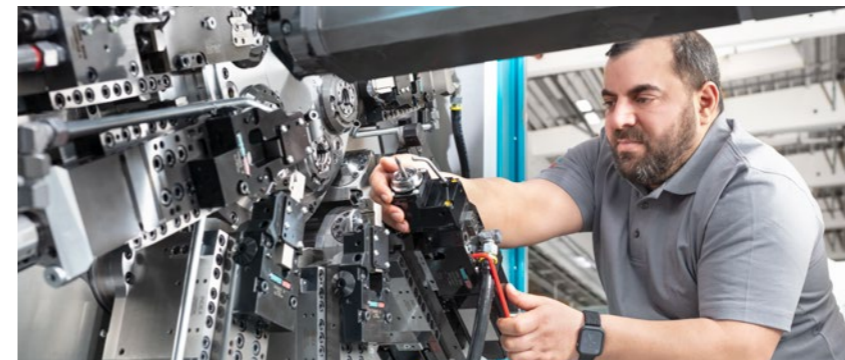


**INDEX Service Products and Refits**



- INDEX Machine Check  
The condition analysis for dependable technical availability.
- INDEX Maintenance  
Proactively prevent downtime.
- INDEX Part Overhaul and INDEX Complete Overhaul  
Professional refit and repairs in original manufacturer quality.

**INDEX Process Support**



- INDEX Setup  
The ideal start for your production.
- INDEX Retooling  
The ideal production process for your new workpiece.
- INDEX Process Optimization  
Boost your productivity with an optimized process.

**INDEX Training**



- INDEX Training  
Highly competent staff thanks to professional, practice-based training. Our training team offers professional training courses to build specific skills of your staff. Your machines will be even more productive if they are operated by well-trained personnel. Now also online.

**INDEX Financing Solutions**



- INDEX Financing  
The custom financing solution ensures flexibility for your company.
- INDEX Performance Rental Model  
We give you maximum flexibility and technical availability.



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