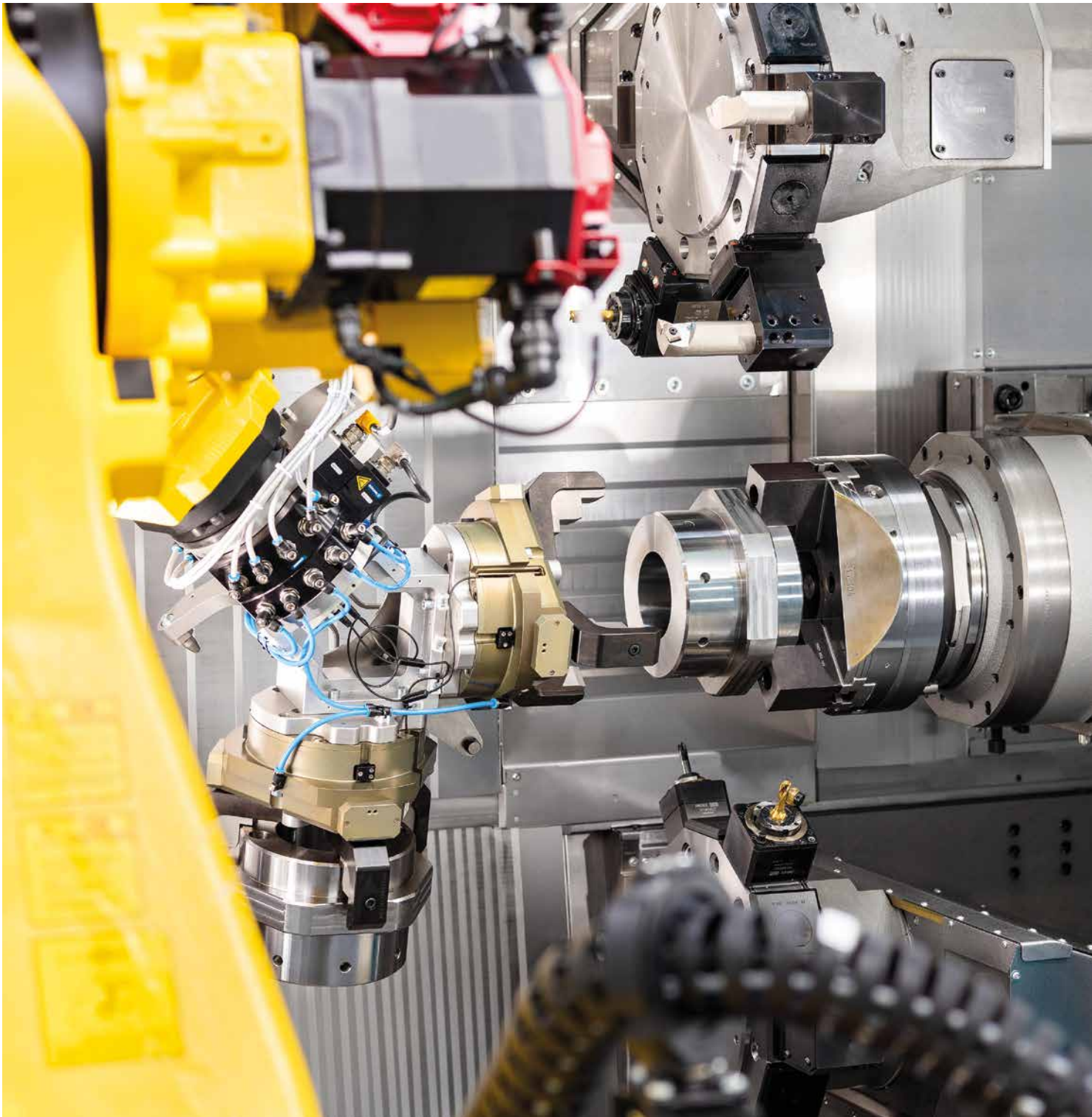


**INDEX**

# **AUTOMATION SOLUTIONS**

SMART AND FLEXIBLE AUTOMATION SOLUTIONS  
FOR MAXIMUM PERFORMANCE



*better.parts.faster.*



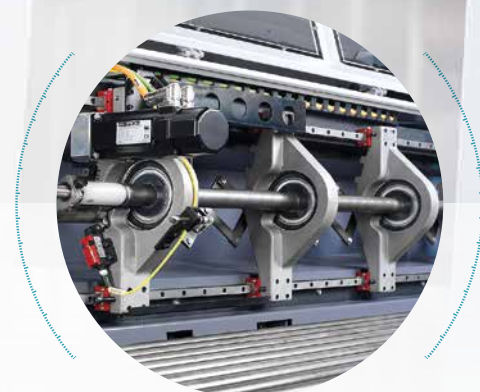
# ALWAYS THE BEST SOLUTION

ENTIRELY FROM A SINGLE SOURCE

## Even more flexibility and efficiency

Automation solutions “Made by INDEX” ensure intelligent handling of your workpieces. We offer a wide range of options for our complete machine range, from bar loading magazines to machine-integrated or robot automation, all the way to customized, application-specific solutions.

- Everything from a single source—from planning to service
- Continuous operation with minimal use of personnel
- Compact installation
- Ongoing improvement of the processes
- Ergonomic design
- Flexible standard modular system
- Individual expansion and integration options
- Comprehensive iXservices
- “Made in Germany” engineering excellence



### Bar loading magazines [p. 04 – 07]

Perfect match for single-spindle and multi-spindle turning



### Machine-integrated automation [p. 08 – 11]

Many methods for workpiece removal, as well as for the insertion of chuck and forged parts—quick, safe, and gentle



### Robot automation [p. 12 – 17]

With our integrated and modular expandable robot cell iXcenter, blanks and/or finished parts can be supplied and discharged quickly, safely, and flexibly



### Customized automation [p. 18 – 19]

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





# BAR LOADING MAGAZINES

FOR SINGLE-SPINDLE LATHES

## Unrelenting precision

The bar loading magazines are a perfect match for single-spindle turning on INDEX and TRAUB CNC lathes. They feature short setup times and fast bar changes. Low-vibration bar guidance ensures optimal surface quality and dimensional accuracy.

## Highlights:

- Backlash-free guidance of the bar stock in rolling bearings, with diameter-specific plastic sleeves
- Precise alignment of the bar stock to the spindle center
- Fast bar change through intelligent process flow and fast axis movements
- Automated measurement of bar length
- Mineral cast body for high rigidity and excellent damping properties
- Quick-change guide bushings

## Advantages:

- Short setup times
- Ergonomic loading height
- Top machining results in terms of surface and tolerances—even with profiled material
- Outstanding smoothness and accuracy
- Energy-efficient and fast
- Compact design

## INDEX MBL76

Bar loading magazines for single-spindle lathes with machine-independent controller

- Bar length: 1,700 mm – 4,200 mm
- Bar diameter: 10 – 76 mm
- Traversing speeds: up to 50 m/min



## INDEX LMI

Bar loading magazine for optimal turning results for INDEX ABC

- Bar length: 3,200 mm – 4,200 mm
- Bar diameter: 8 – 52 mm







# BAR LOADING MAGAZINES

FOR INDEX MULTI-SPINDLE AUTOMATIC LATHES

## Extremely productive solutions for large-scale production

Our MBL bar loading magazines are perfectly tailored to our multi-spindle automatic lathes. Fast and low vibration for optimal manufacturing results.

## Basic configuration & guiding principle

- The channels are adapted to the bar diameter with plastic reducers (bearing half shells)
- Simple clip fasteners facilitate the setup of the bearing half shells
- Optimized guidance of the bar stock
- Fast bar change through intelligent process flow and fast axis movements
- Precise alignment of the bar stock to the spindle center
- Automated measurement of bar length
- The guiding principle is also suitable for polygon bars

## Bundle loader

- Bundle loader with storage capacity of 2,000 kg and bundle diameter of 300 mm
- Fast loading procedure with crane or forklift



## Rack loader

- Rack loader with a storage area of 700 mm
- Manual loading by operator
- No aids such as cranes or forklifts required



## Bar loading magazines for multi-spindle automatic lathes: MBL22-8/24-6/32-6/40-6/40-8

- Bar length: 1,500 mm – 4,300 mm
- Bar diameter: 6 – 40 mm
- Traversing speeds: up to 50 m/min
- Max. speed: 10,000 rpm



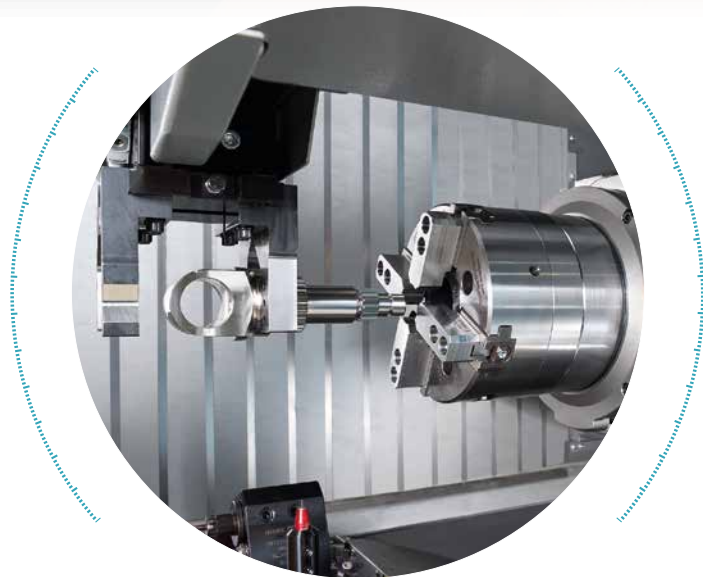
# MACHINE-INTEGRATED AUTOMATION

FOR SINGLE-SPINDLE MACHINES

## The right solution for every machine

Our machines offer different methods for integrated workpiece removal, as well as for the insertion of chuck and forged parts—quick, safe, and gentle.

- Discharging or flushing through counter spindle or turret
- Gantry system for discharging workpieces onto a belt
- Flexible feed and discharge with single or double gripper
- Expandable with conveyor systems, robot, pallet station



## Gantry-type removal unit and conveyor belt

- Gantry-type removal unit (in Z axis direction) with NC drive
- Automatic removal of machined workpiece from the main or counter spindle and subsequent placement on a conveyor or belt or into a container
- Removal of the remnant from the main spindle and separate placement into a remnant container

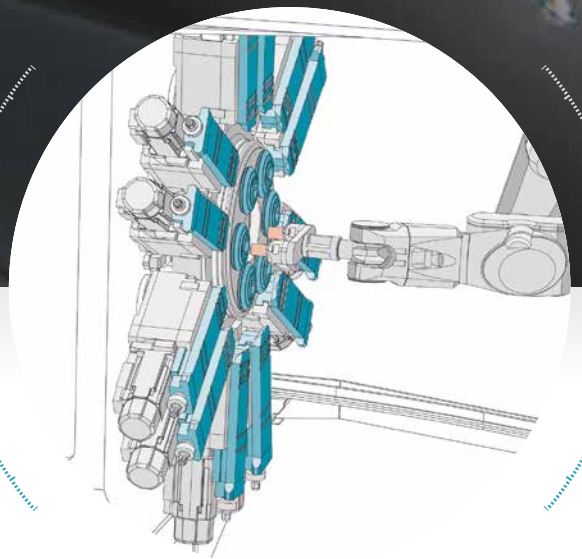
## Workpiece handling unit WHU / WH1 / WH2

- Integrated handling using one or two workpiece grippers
- Feeding of blanks by means of conveyor belt or pallet
- Removal of the machined workpiece from the counter spindle
- Integrated space-saving solution
- For shaft or flange parts weighing up to 25 kg with a diameter up to 120 mm
- Allows for flexible expansion, e.g. with circulating pallet conveyors



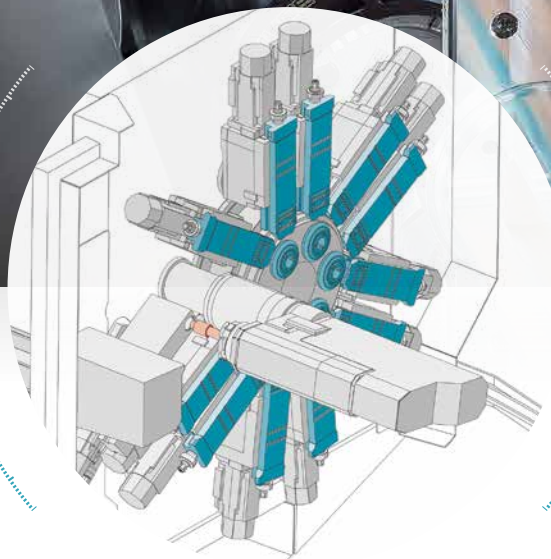


# MACHINE-INTEGRATED SOLUTIONS FOR MULTI-SPINDLE LATHES



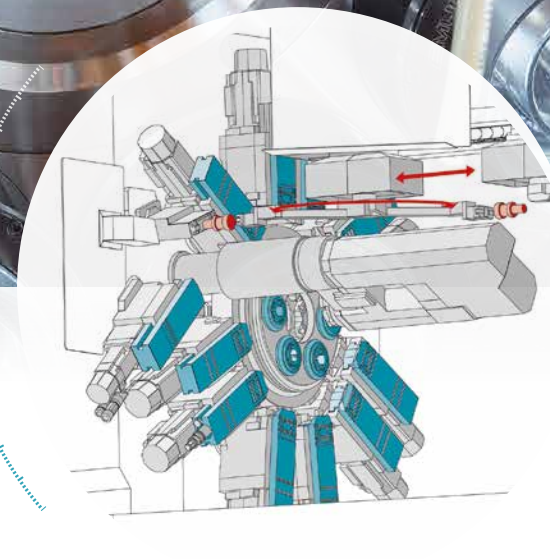
## Workpiece feeding and removal by a 6-axis robot via a swivel disk to the external handling system

The workpiece handling system for chuck parts and bar segments can be used for multi-spindle machining with or without synchronized spindle, as well as for double 3 or 4-spindle machining.



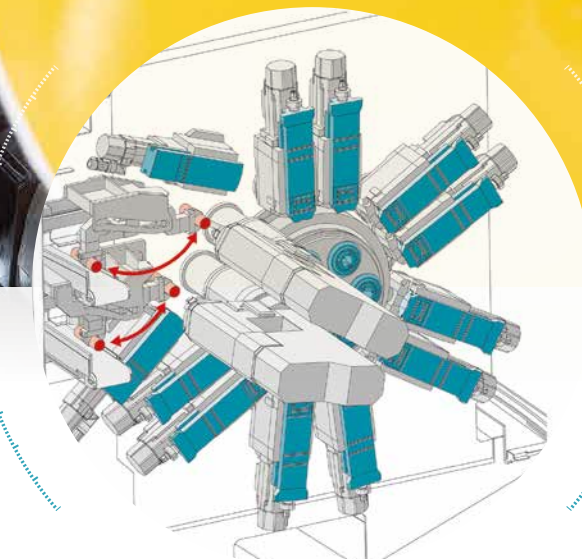
## Stationary workpiece removal via internal chute and conveyor belt

Workpieces removal through a chute onto the internal conveyor belt.



## Position-aligned workpiece removal with intermediate gripper and linear shuttle

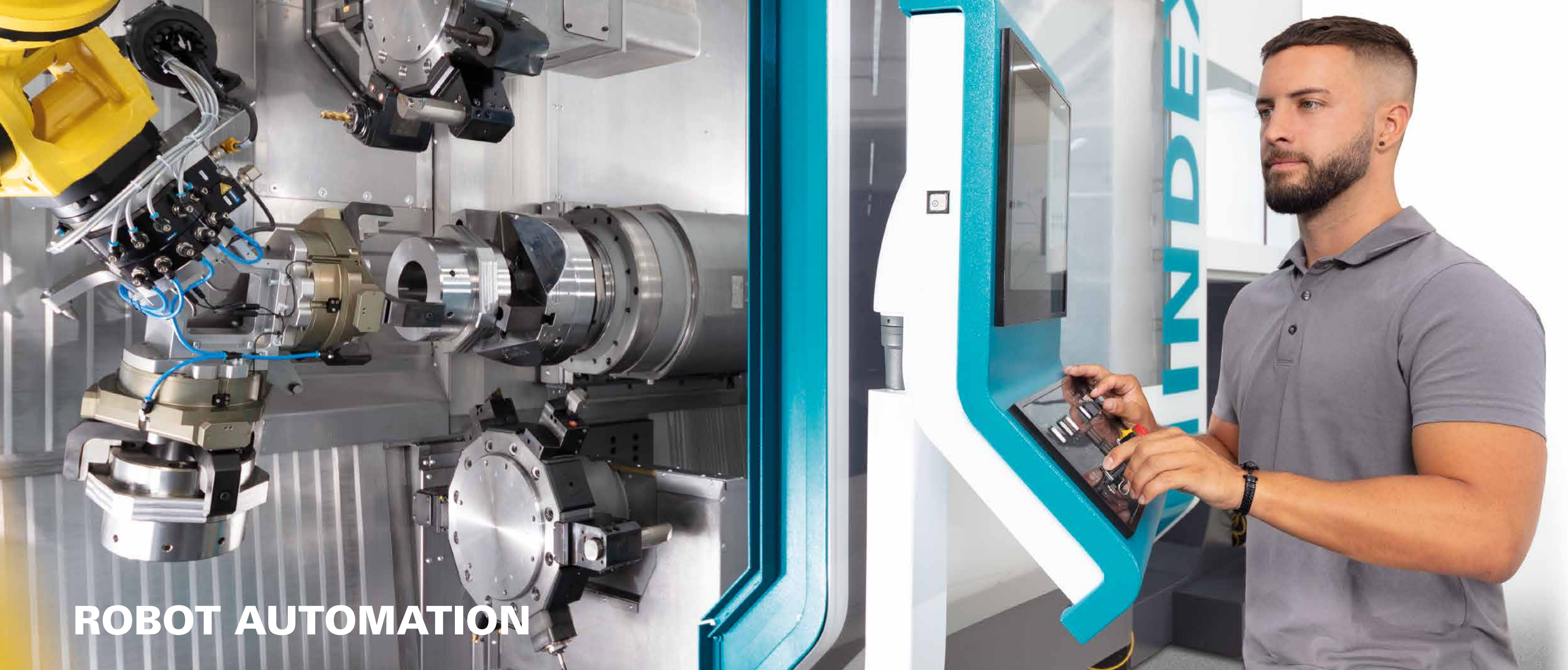
Rapid, damage-free, position-oriented removal by a linear and rotary motion. Workpieces are first transferred from the synchronous spindle to the intermediate gripper. The linear shuttle then transfers the workpieces to the external handling system during non-productive times.



## Position-aligned workpiece removal with integrated parts conveyor

Workpieces are removed from the synchronous spindle and are aligned in position to the internal conveyor belt (for parts that may not be ejected).





# ROBOT AUTOMATION

## Quality under control

With the iXcenter robot cell, blanks and finished parts can be fed and discharged quickly, safely, and flexibly. Depending on the type and size of machine, the robot cell is ergonomically integrated and allows for flexible modular expansion based on your requirements.

## Highlights:

- Automatic and ergonomic workpiece feeding and removal
- Continuous operation with minimal use of personnel
- Optimal access and view inside the machine
- Compact design
- No separate installation and commissioning required
- System can easily be relocated at the production site
- Integration of downstream processes such as cleaning, measuring, deburring, testing, etc.
- Modern INDEX machine design
- Entire system from a single source



iXcenter – size S

- Design: integrated
- Robot capacity: 7 kg
- Pallet size: 300 x 400 mm
- Machine compatibility:
  - TRAUB TNL20
  - TRAUB TNL32compact



iXcenter – size M

- Design: integrated
- Robot capacity: 7-12 kg
- Pallet size: 400 x 600 mm
- Machine compatibility:
  - INDEX B400/B500
  - INDEX G200
  - INDEX C100/C200
  - TRAUB TNA400/TNA500



iXcenter – size L

- Design: modular
- Robot capacity: 35-70 kg
- Max. pallet size: 800 x 1200 mm
- Machine compatibility:
  - INDEX B400/B500
  - INDEX G200/G220
  - INDEX G300/G320
  - TRAUB TNA400/TNA500
  - TRAUB TNX200/TNX220



iXcenter – size XL

- Design: modular
- Robot capacity: 165 kg–270 kg
- Pallet size: 800 x 1200 mm
- Machine compatibility:
  - INDEX B500 DL1200
  - INDEX G200/220 DL 1200 mm
  - INDEX G300/G320
  - INDEX G400/G420
  - INDEX G500/G520
  - TRAUB TNA500 DL1200



# INTEGRATED iXCENTER



## Integrated automation

iXcenter S and M robot cells are docked ergonomically to the machine. They can easily be moved to the right or left during the setup process. This provides easy access to the machine's work area. During production, the iXcenter is secured in front of the machine's work area. The robot then accesses the work area via the machine's work area door, which opens automatically behind the robot cell. As an alternative, parts can be transferred from the robot to the machine through an automatically controlled hatch located behind the work area door. Fastest parts handling without opening the working area door. Upstream or downstream processes, such as cleaning, measuring, and deburring, etc. can also be integrated in the robot cell.



## Integrated automation S for TRAUB TNL20, TNL32compact

- Robot with 7 kg load capacity
- Option: Transfer parts between robot and machine-integrated automation through separate hatch
- Vertical storage with up to 14 pallets (400 x 300 mm / minimum pallet height 25.4 mm)
- Loading and unloading during production time
- Easy in-house relocation
- Integration of upstream and downstream processes such as cleaning, measuring, deburring, testing, etc.
- Integrated closed-loop process control available
- SPC parts output and NOK parts output

## Integrated automation M for INDEX B, C, G200, TRAUB TNA, TNX200/220

- Robot with up to 12 kg load capacity
- Option: Transfer parts between robot and machine-integrated automation through separate hatch
- Vertical storage with up to 22 pallets (400 x 600 mm / minimum pallet height 25.4 mm)
- Max. weight in pallet storage unit 500 kg / single pallet 25 kg
- Loading and unloading during production time
- Integration of upstream and downstream processes such as cleaning, measuring, deburring, testing, etc.
- Integrated closed-loop process control available
- SPC parts output and NOK parts output

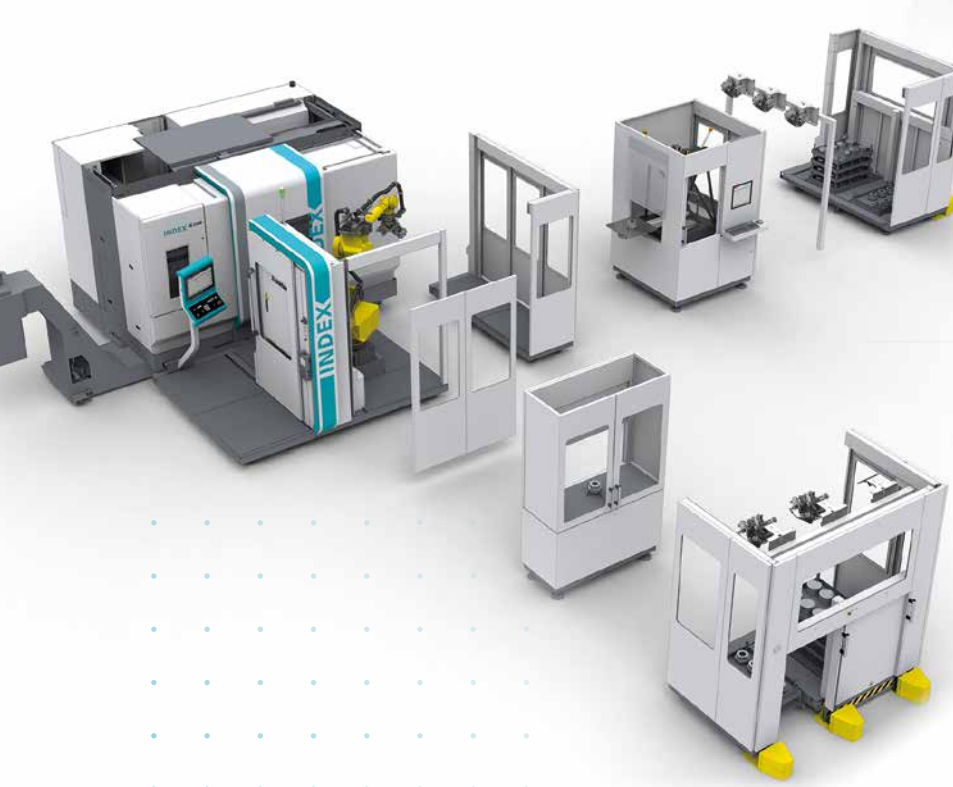


# MODULAR iXCENTER

iXcenter L and XL have a modular design and allow for cost-effective integration of the most diverse processes. As spindles, tool carriers, and tool magazine are ergonomically placed within reach, setup times are guaranteed to be short. The overall sequence between the machine and the robot cell is created using predefined macros in the NC program. The robot accesses the machine's work area through the automatic work area door.

## Modular automation L / XL for INDEX G200/220, G300/320, G400/420, G500/520 and TRAUB TNX200/220

- Ergonomic workpiece feeding and removal
- Modular basic cell that allows flexible expansion
- Continuous operation with minimal use of personnel
- Optimal access and view inside the machine
- Compact design
- Modern INDEX machine design
- Entire system from a single source



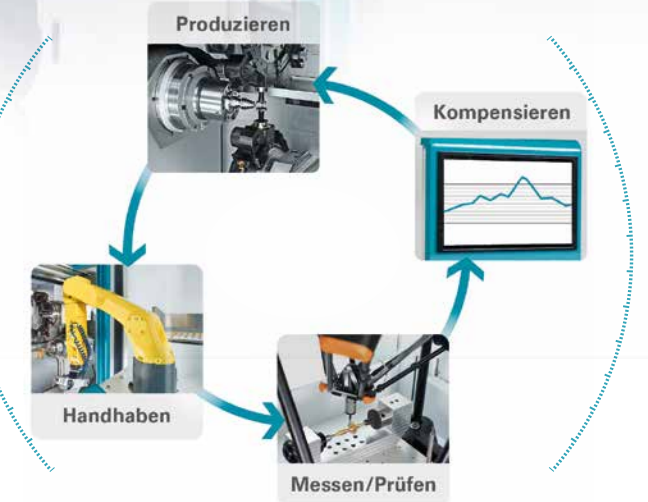
### Unlock more potential with numerous integration options:

- Pallet/rack modules
- Storage systems
- Circulating conveyors
- Measuring units
- Tool storage
- Gripper change
- Clamping system change
- Test modules
- Discharge units
- Cleaning units
- Deburring modules
- Laser marking modules
- Additional customer-specific solutions



### INDEX tool magazine expansion iXtools for turn-mill centers

- Full-fledged extension of the machine's integrated tool magazine
- Unlimited access to up to 392 tools in the additional magazine
- "Advance reading" of the requirements from the NC program
- Quick transfer to the integrated tool magazine



### INDEX Closed Loop

- Process based on measured values
- 100 percent check
- Documentation of quality data
- Measuring equipment based on needs
- Substitution of post-process check
- Separate, independent measuring cell for vibration-free measurement quality

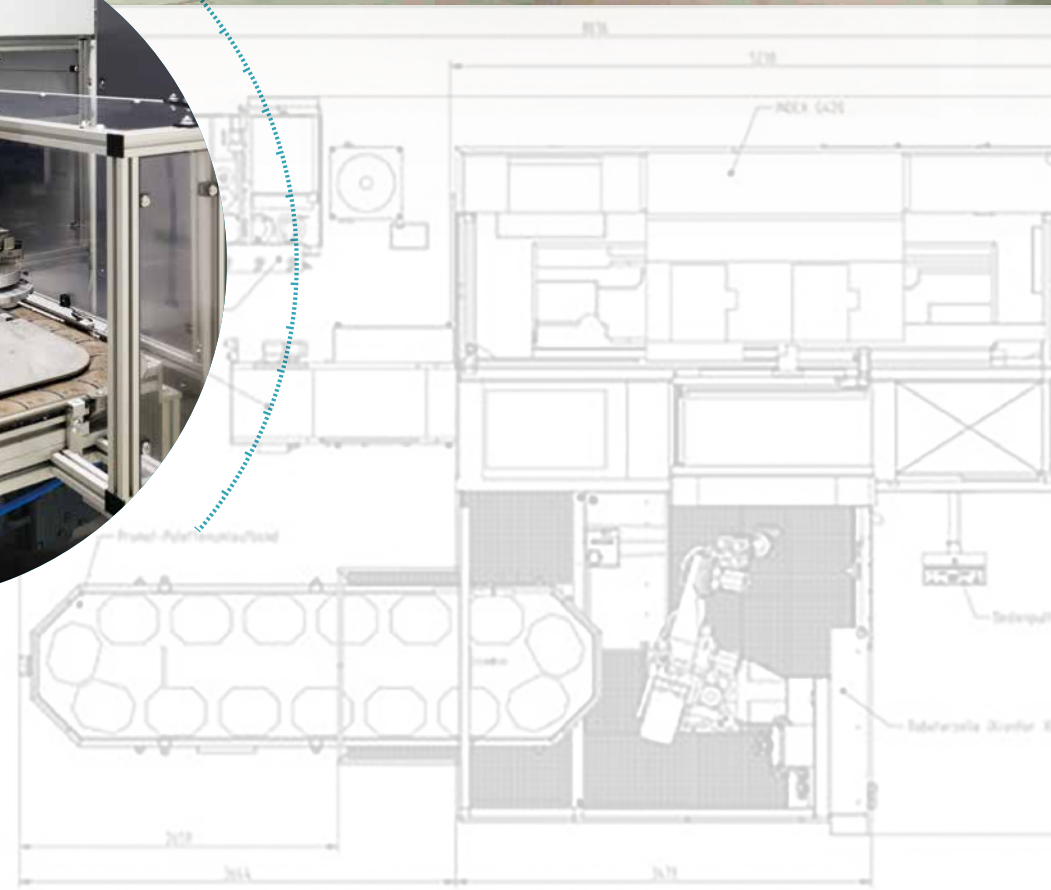




## CUSTOMIZED AUTOMATION

### The right solution for your specific requirements

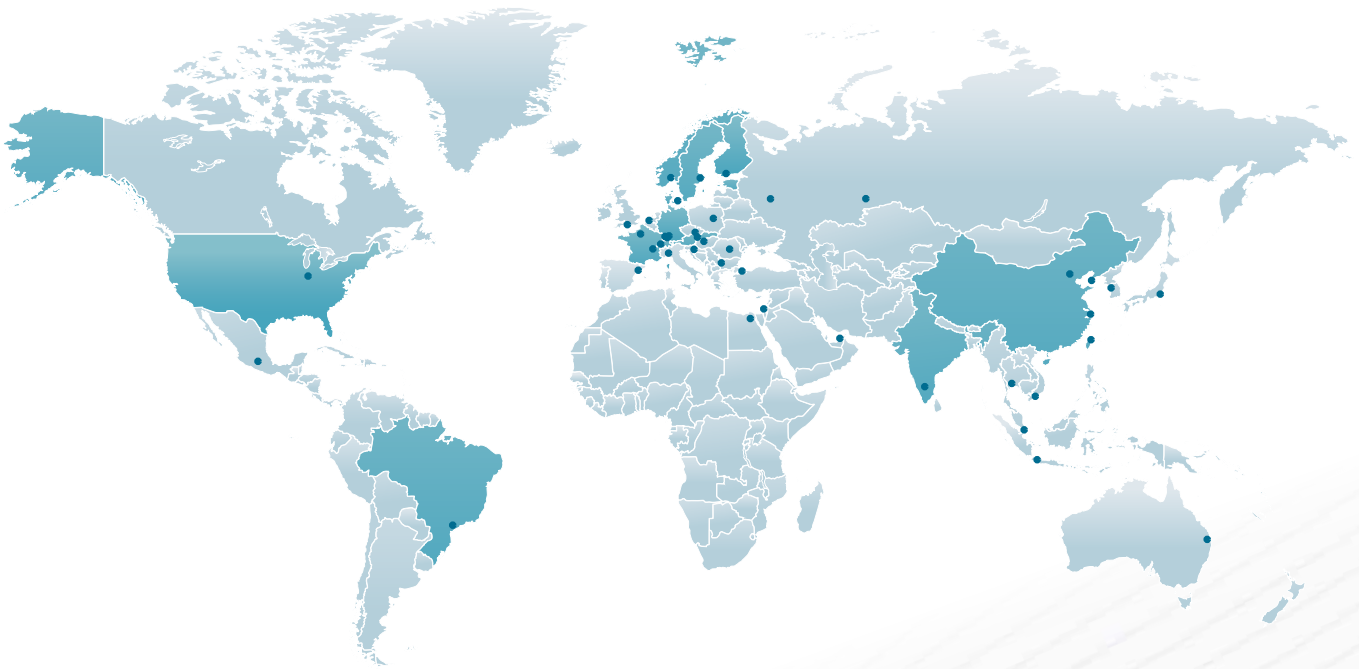
In addition to the extensive configurable INDEX standard solutions, we also offer automation solutions that are tailored to your specific requirements. Entirely in line with the motto "nothing is impossible," together with our experienced design engineers you will be able to implement the solution that meets your needs at best.



### Solutions with many years of experience in a wide range of industries:

- Conveyor systems
- Circulating conveyors
- Gripper on turret
- Unloading systems
- Magazine rails
- Bar loading magazines
- Gantry loading systems
- Pallet stations
- Robot cells
- Automatic gripper and clamping system change etc.





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