

# HELITRONIC MINI PLUS

FLEXIBLY PRODUCE AND RE-SHARPEN TOOLS  
WITH SMALL AND MEDIUM DIAMETERS



# HELITRONIC MINI PLUS

## APPLICATION

- Grinding rotationally symmetrical tools for a variety of industrial sectors
- For production and/or regrinding
- Fully automated, complete machining in a single clamping cycle
- Materials include HSS, carbide, cermet, ceramic

## MACHINE

- Low vibration, solid grey cast iron, gantry type construction
- X, Y, Z linear axes with ball-type linear drive
- A, C rotating axes with worm drives or optional torque motors
- Glass scales (option)
- Belt-driven spindle with two HSK-spindle ends (standard) for up to six grinding wheels
- Automatic grinding wheel changer with 6 places (option)
- 24" Full HD multitouch display
- FANUC, the global standard for control equipment
- Various loading systems
- Numerous efficiency options

## SOFTWARE

- C.O.R.E. OS operating system
- HELITRONIC TOOL STUDIO, CAD/CAM software for design, programming, simulation and production
- Numerous software options to extend the system's performance and to increase its efficiency
- Walter Window Mode (optional)

« This highly flexible configurable machine for the small to medium tool range offers optimum utilisation of the floor space in production thanks to its compact design. »

SIEGFRIED HEGELE, PRODUCT MANAGER APPLICATIONS

## YOUR BENEFIT

Production and re-sharpening of rotationally symmetrical tools in one clamping, even with complex geometries. Various loading systems and efficiency options allow the configuration of the machine to suit current and future applications.



HELITRONIC MINI PLUS with the options  
grinding wheel changer (right) and robot loader (left)

## C.O.R.E. – CUSTOMER ORIENTED REVOLUTION

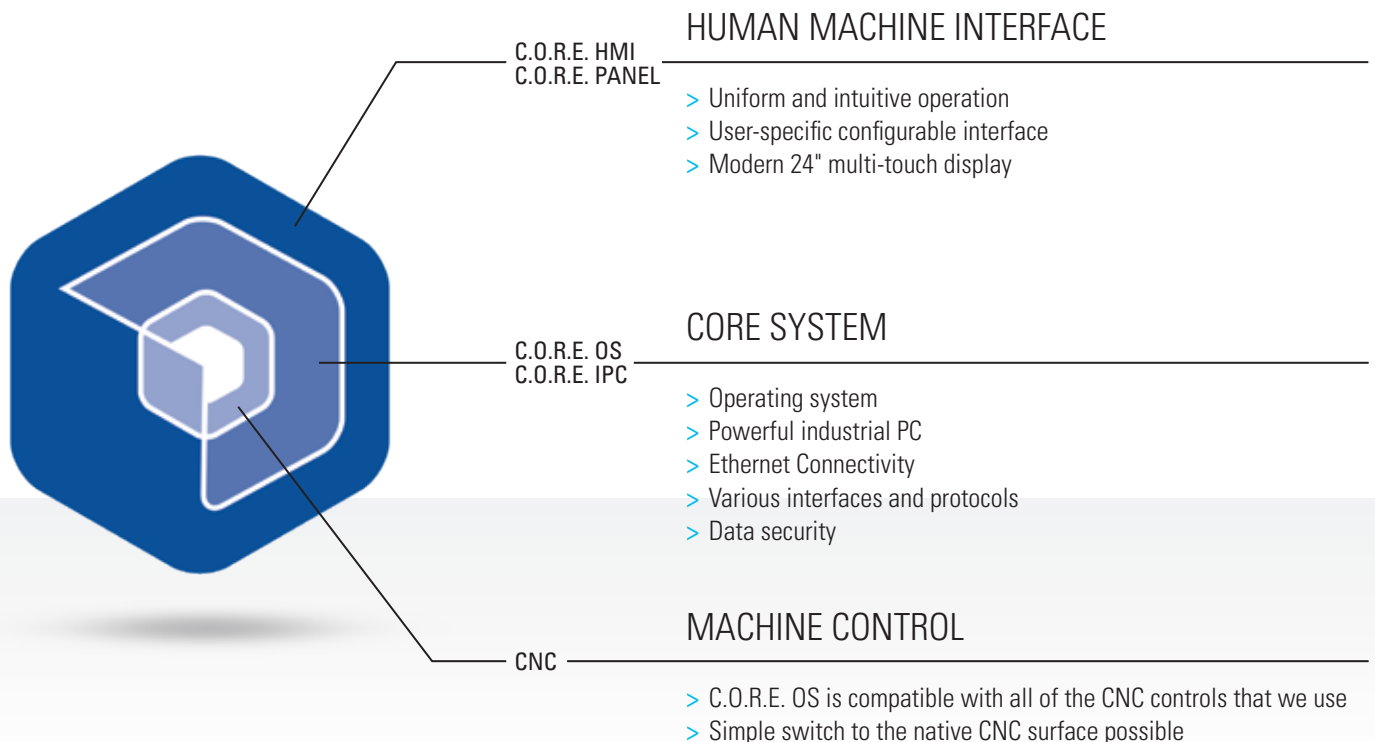
### C.O.R.E. helps us make your production fit for the digital future.

It's based on a new operating system, C.O.R.E. OS, that equips the machine with intelligence. Thanks to the uniform C.O.R.E. software architecture, exchanging data between UNITED GRINDING machines is easy. The integrated umati API can be used to communicate with third-party systems as well. It also offers access to UNITED GRINDING Digital Solutions™ products directly on the machine. C.O.R.E. not only establishes the technical foundation for this and other IoT and data applications, it also forms the basis of revolutionary yet uniform operation.

### What does this mean for you?

- The user-friendly, intuitive, and uniform operation makes work easier for machine setters, machine operators, and maintenance staff
- Standardized data collection and intelligent processing of data creates transparency and supports process optimization
- The uncomplicated and consistent use of modern digital software solutions is guaranteed – directly on the machine
- The technical platform for the use of modern IoT and data applications has been established

## C.O.R.E. ELEMENTS



# C.O.R.E. PANEL – THE FUTURE OF OPERATION

## Intuitive

Thanks to intuitive design with self-explanatory icons, navigation through the machine menu and process steps is quick and easy. Instead of buttons, the user is presented with a modern and clearly arranged multi-touch display.

## User-friendly

Each user configures their own user interface individually. This is called up automatically with the RFID chip after logging in. When the user leaves the machine, the panel switches to "Dark Factory Mode." Production progress and the machine state are also clearly visible from

a distance. And thanks to the ergonomic design, the panel can be tilted and individually adjusted easily.

## Efficient

The uniform and intuitive operating philosophy reduces training time. The configurable and role-specific interface helps prevent errors and increases the efficiency and quality of programming. Information can be exchanged quickly and in real-time via the front camera and Bluetooth headset. UNITED GRINDING Digital Solutions™ products can be used directly on the panel.

INDUSTRIAL MULTI-TOUCH DISPLAY

INTEGRATED FRONT CAMERA

SELF-EXPLANATORY ICONS

USER-CONFIGURABLE DISPLAY

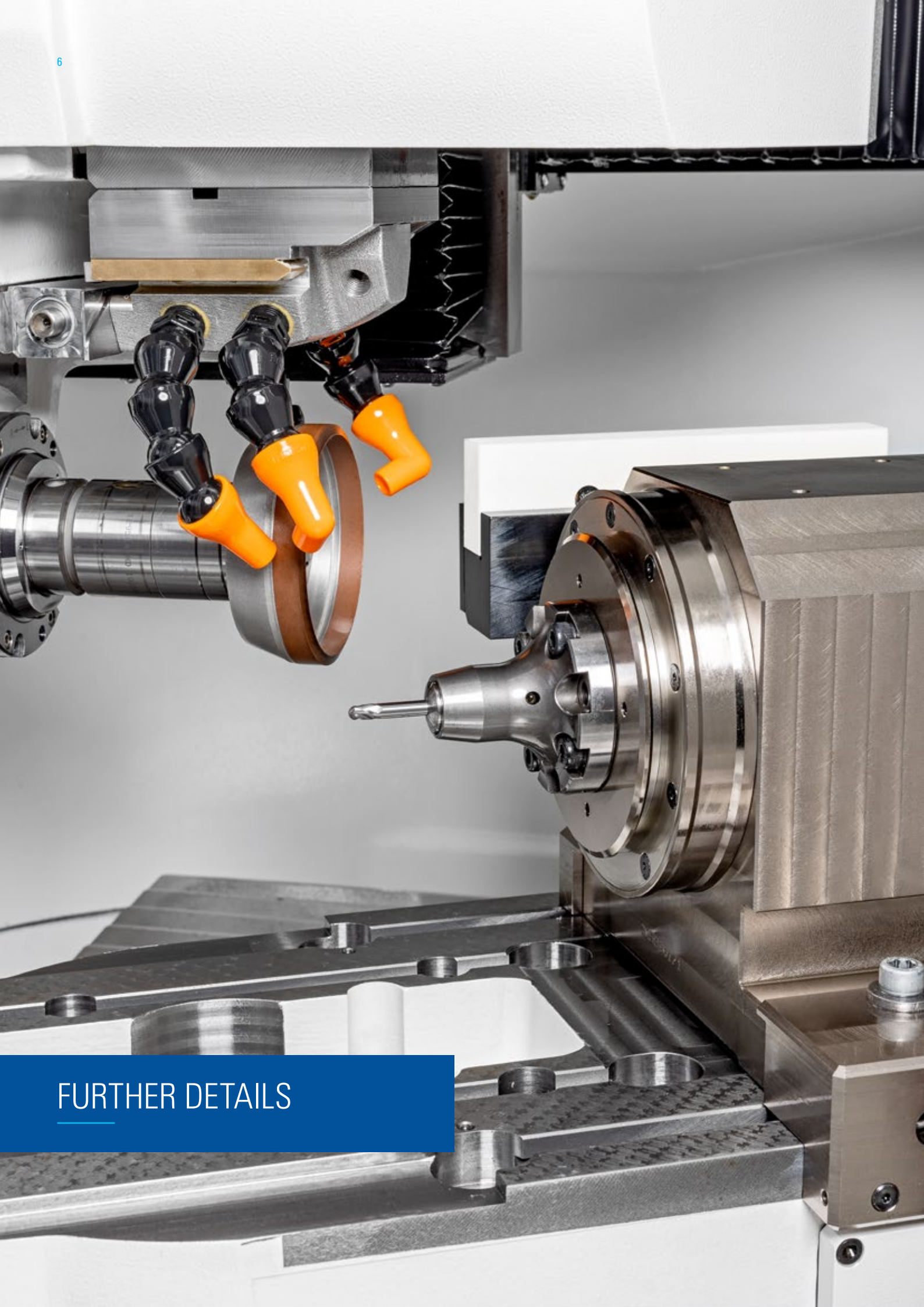
STANDARDIZED FUNCTION KEYS

ERGONOMIC OVERRIDE SWITCH



## Technical Specifications

- 24" Full HD multi-touch display
- 16-position rotary override switch
- Electronic key switch (RFID)
- Integrated front camera
- Bluetooth V4.0 for headset connection
- 2x USB 3.0 ports
- Adjustable tilt



FURTHER DETAILS

## EFFICIENT AND EASY TO USE

For the production and re-sharpening of rotationally symmetrical tools in one clamping, even with complex geometries. Together with various options, the HELITRONIC MINI PLUS sets standards in productivity and flexibility. Diameter range 1 to 16 mm for production and 3 to 100 mm for re-sharpening, machining length up to 255 mm, weight up to 30 kg.

Example tools (from top left to bottom right):

Hinge hole drill, Thread milling drill, dowel hole drill, stepped drill bit, carbide reamer, carbide twist drill, medicinal drill, deep medicinal drill, rotary milling cutter, micro milling cutter





## INNOVATIVE WALTER GRINDING TECHNOLOGY

### **Belt-driven spindle with two spindle ends (standard)**

The powerful belt-driven spindle with two spindle ends can be equipped with up to six grinding wheels and has a peak power of max. 9 kW. In this configuration, both complex and common tool geometries can be produced economically in medium batch sizes (automation option is required). The various grinding wheel sets are allocated to the relevant spindle along with all data.

### **Torque increase option (only for machines with grinding wheel changer)**

With this option, the torque and thus the removal rate at the spindle is increased by approx. 60 % (compared to the standard) at a max. speed of 7.800 min<sup>-1</sup>. This makes it possible to cut tools up to a diameter of 25 mm.

The dimensions of the grinding wheel packs remain unchanged.

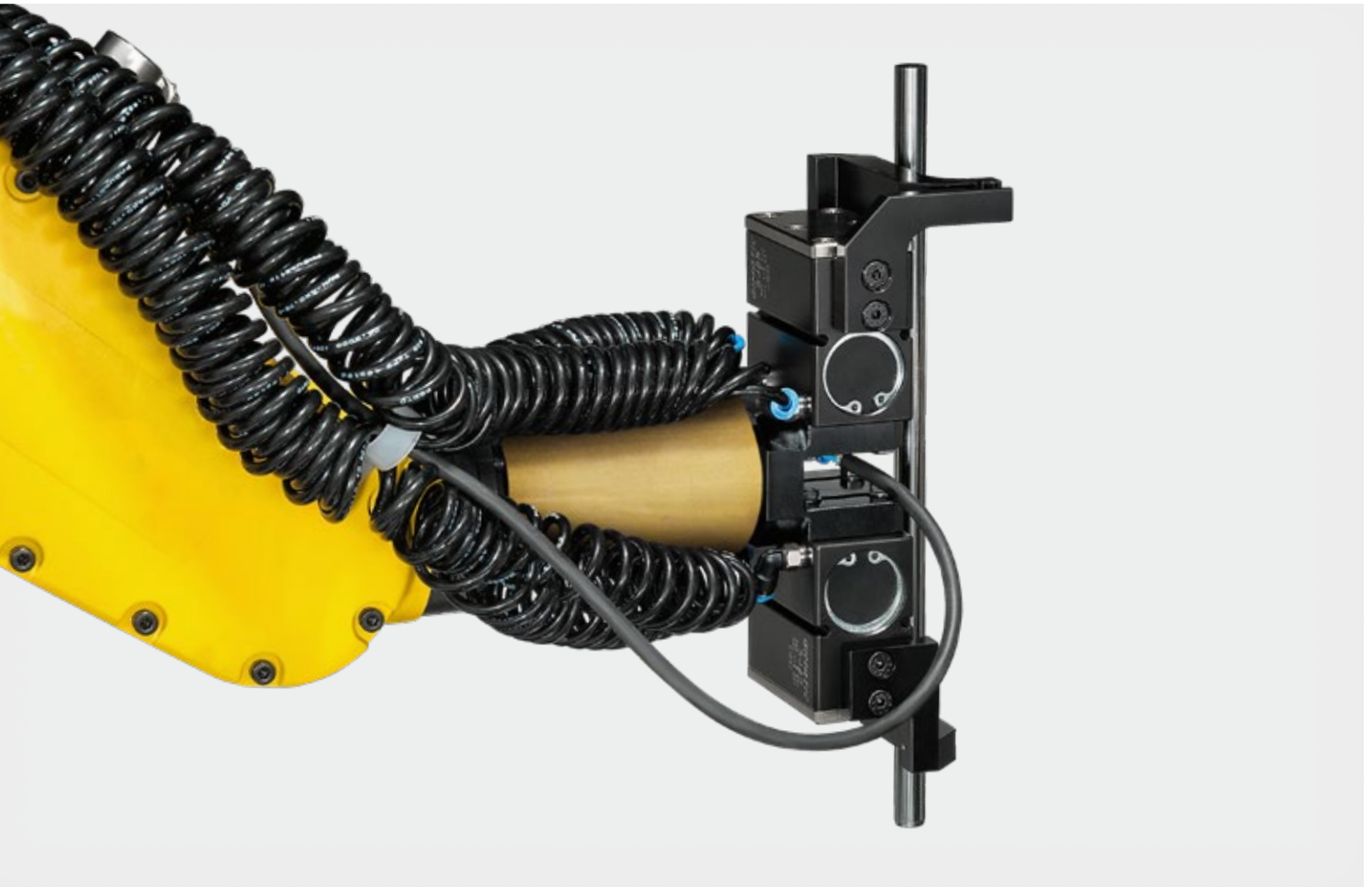
**Automatic grinding wheel changer with 6 places (option).**

Affordable, compact and flexible, too. With a capacity of up to 6 grinding wheel packs with 3 grinding wheels each. The max. grinding wheel diameter is 152.4 mm. Coolant supply and grinding wheel set form one unit. This ensures a safe change of the grinding wheel set and optimum cooling.



## ROBOT LOADER AUTOMATION OPTION

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### **Robot loader**

The robot improves accessibility to the workpieces and makes special applications possible. Automatic teaching enables short setup times. Depending on the type of workpiece or the workpiece diameter, up to 7,500 workpieces can be loaded using the robot. Maximum workpiece weight 5 kg; maximum workpiece diameter 125 mm.

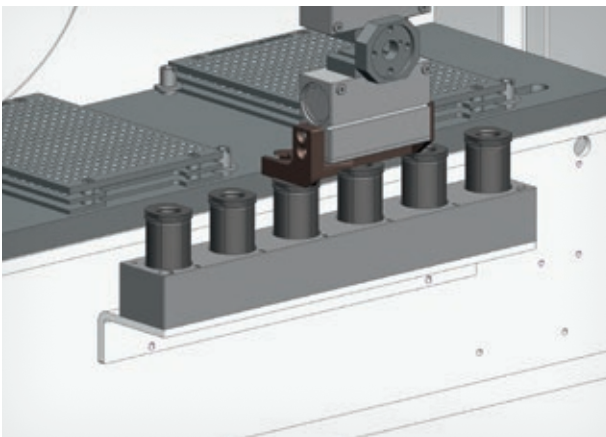


### **“Combi” equipment package for robot loaders**

Gripper rapid replacement system for handling cylindrical tools and tools with HSK-63 mounting shank. The word “Combi” is an exact description of the contents of this equipment package: Namely the two equipment packages “Cylindrical tools” and “HSK” plus the rapid replacement interface for fast, user-friendly retooling.

#### **Advantages of the “Combi” equipment package**

- Rapid replacement sequence thanks to only one cylinder head screw
- Pallets that have already been taught do not need to be taught again when grippers are replaced
- Pneumatics and teaching cable need to be connected only once (installation)
- Retrofitting at existing robots possible (software must be adapted)
- Easy handling
- Ergonomic form



### **“Multi-Range” equipment package for robot loaders**

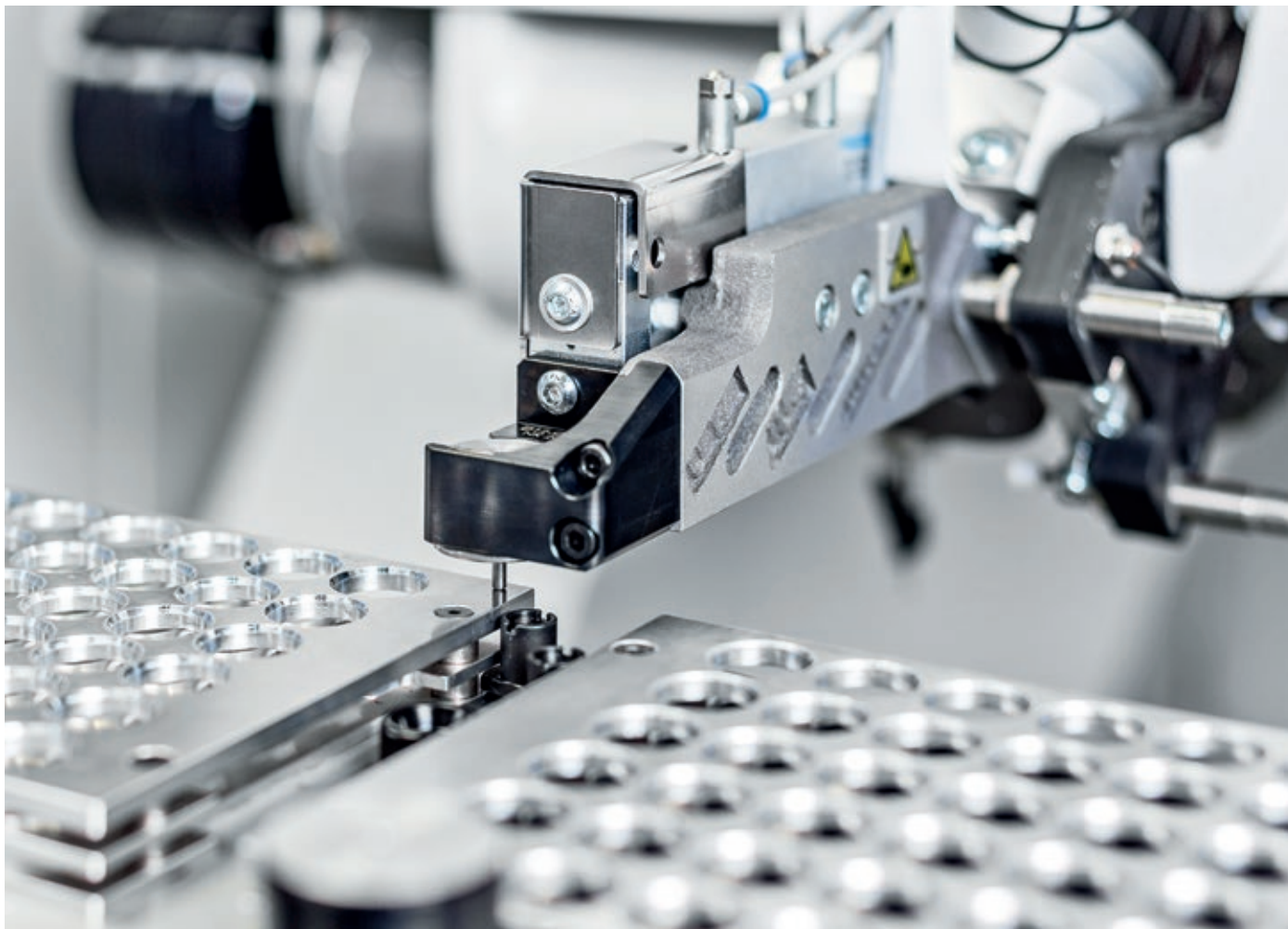
The Multi-Range equipment package sets new standards in terms of flexibility. Large diameter coverages with a pair of gripper fingers and a collet replacement (Schunk bayonet) are possible with this equipment package.

### **“HSK” equipment package for robot loaders (not shown)**

For handling (automatically loading) up to 72 HSK 63A or HSK 63F tools.

## TOP LOADER AUTOMATION OPTION

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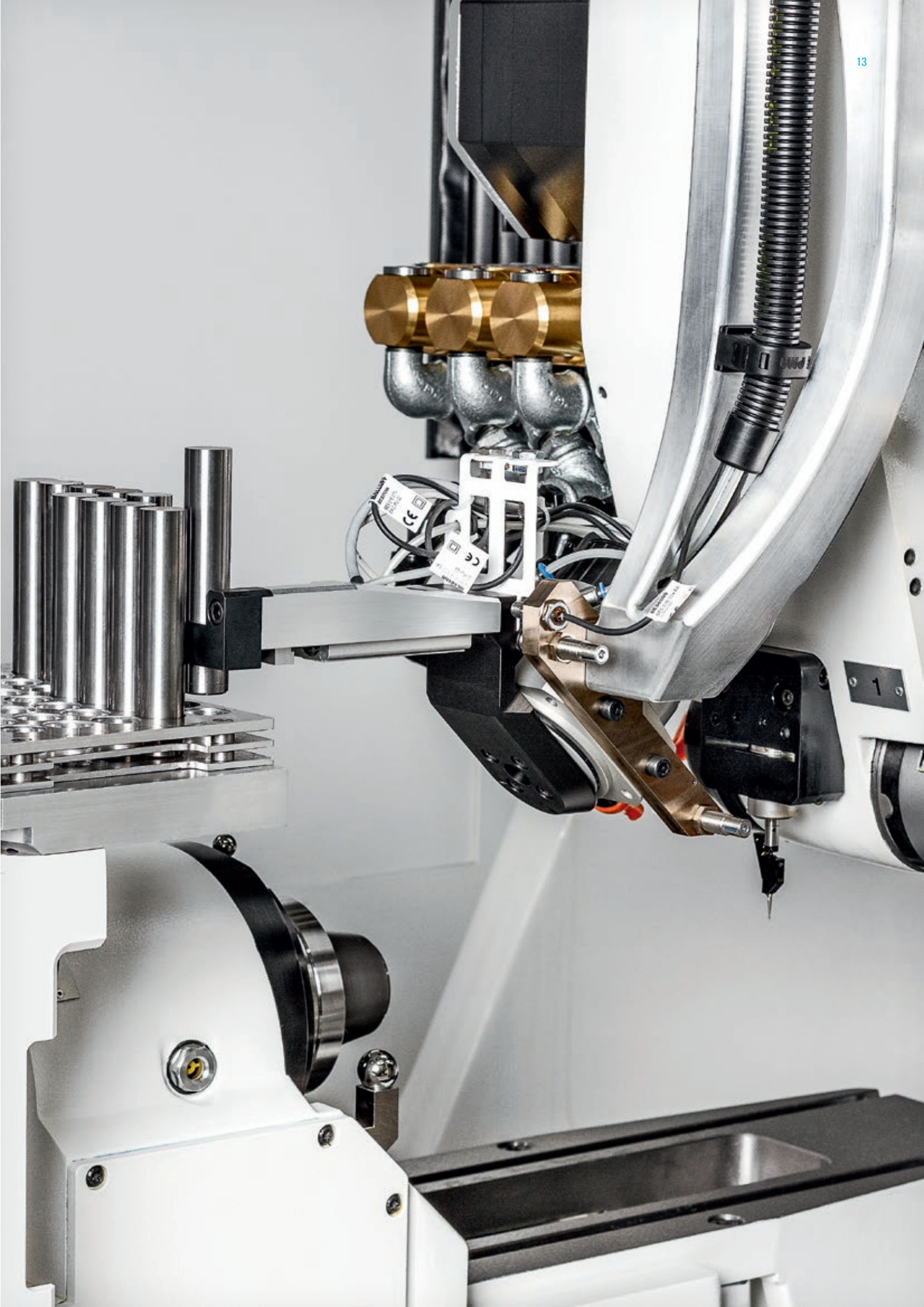


### **Top loader**

This space-saving and inexpensive automation solution is integrated directly into the machine envelope. Automatic teaching enables short setup times. Depending on the tool diameter, the Top loader offers a maximum of 500 places for tools.

Tool capacity, max. (sample diameters):

- 500 tools: diameter 3 mm
- 42 tools: diameter 20 mm
- 20 tools: diameter 32 mm



## OTHER OPTIONS

The HELITRONIC MINI PLUS offers many additional options for optimising your production – from software solutions to hardware adaptations.

### Tool Vision System

Take advantage of the revolutionary benefits of automatic capturing and tool alignment for correct positioning of the tools prior to machining.

Main applications:

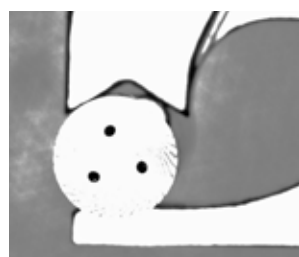
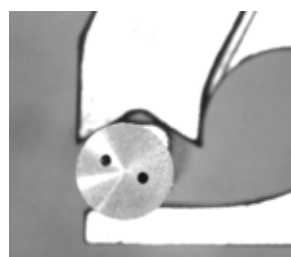
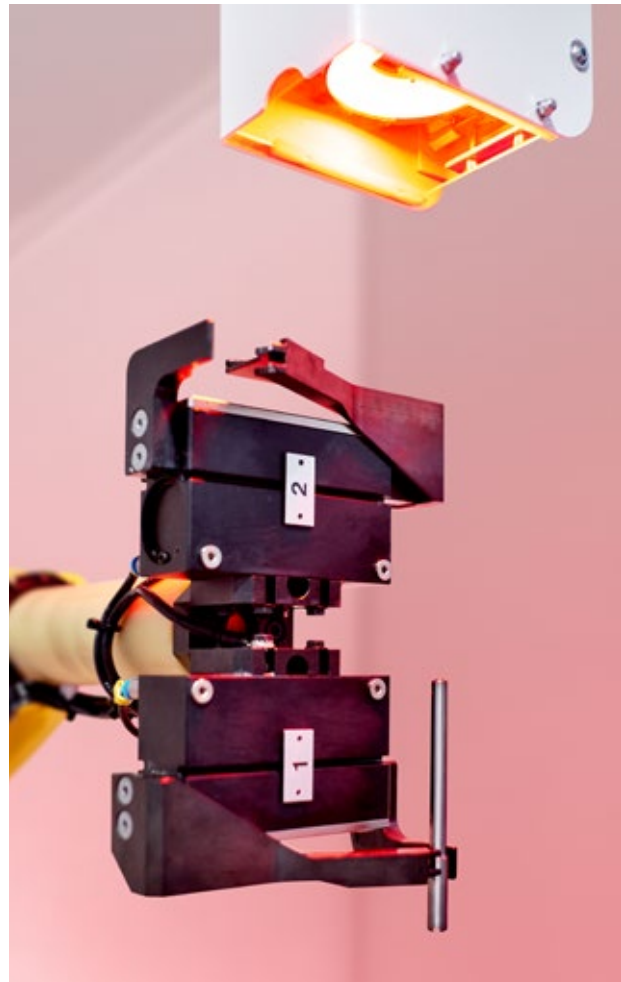
For automated capture of blanks/tools

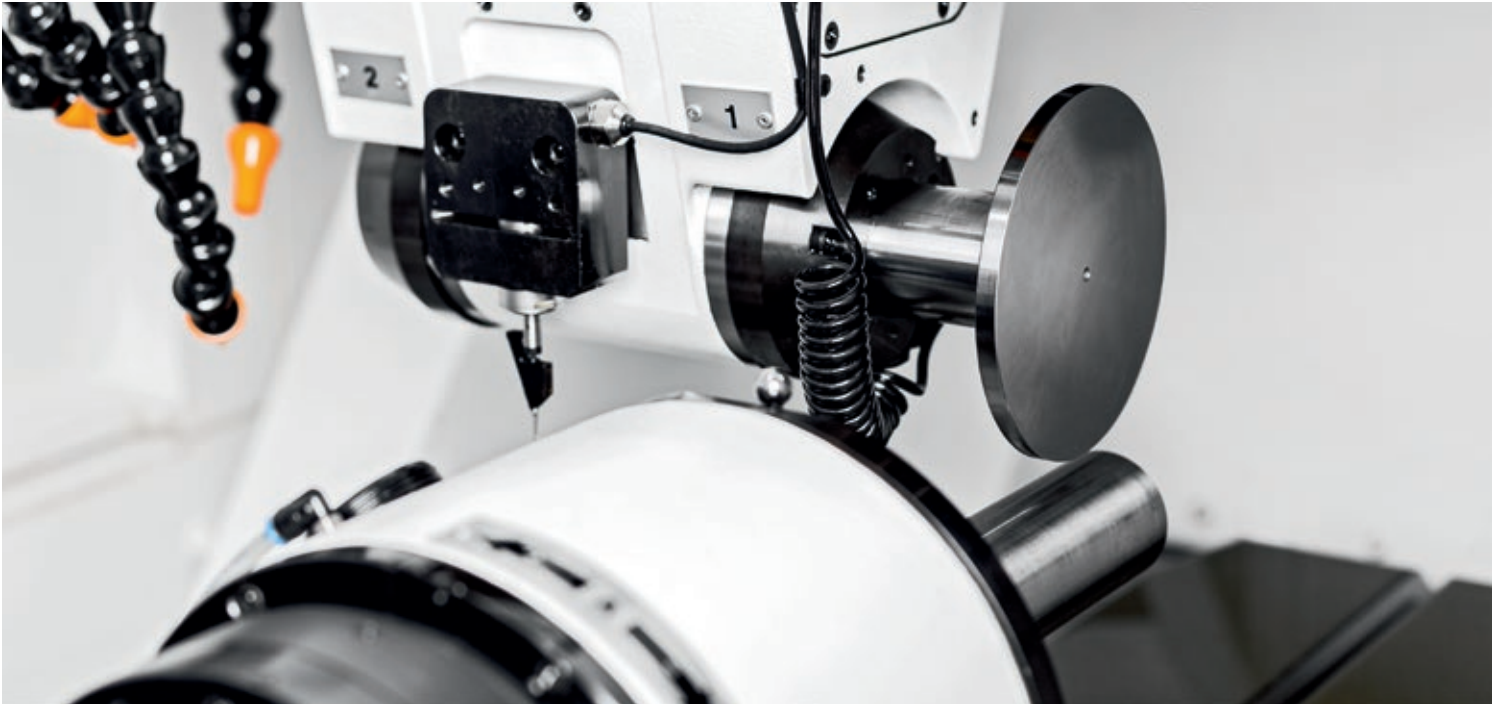
- with cooling channels
- with face cutting
- and others

Technical details:

- Camera system permanently installed in the robot cell
- Two lenses available
  - > for tool diameter from 1.7 mm to 12 mm
  - > for tool diameter from 12 mm to 32 mm

- Significant time savings with automated processes in comparison to the manual measurement method
- Valuable working time of the employees can be used for other tasks
- Eliminates errors caused by the human factor
- Teaching of new tool geometries is easy and can be done by trained machine operators themselves
- No damage to the tool, thanks to non-contact method
- Camera system works during off-time





### **Automatic, electrical**

#### **Measurement of the machine reference**

Now use the advantages of the automatic, electrical measurement of the machine reference in the grinding and eroding machines from WALTER.

- Maximum precision of measurement results through exact positioning of the axes via electrical contact
- Automatic mechanical inspection of the dimensional accuracy of the C axis
- Significant time savings with automatic operation in comparison to the manual measurement method
- Valuable working time of the employees can be used for other tasks
- Eliminates errors caused by the human factor
- Short amortisation time for your investment

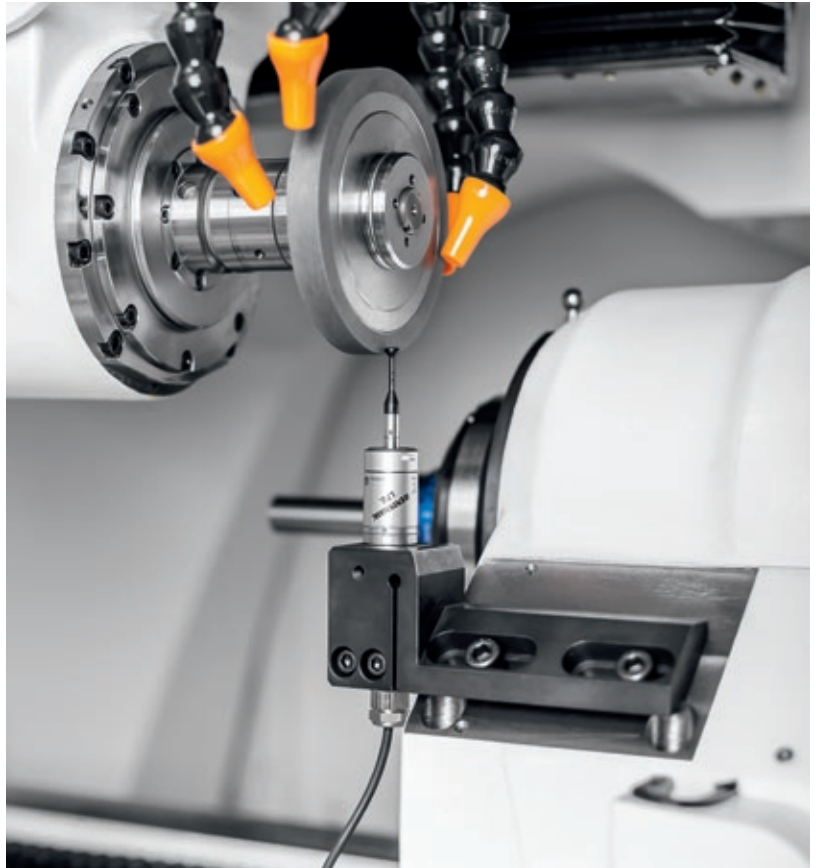
## OTHER OPTIONS

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### Automatic grinding wheel measurement

For even more efficient production. Normally the machine operator corrects the grinding wheel data in the production process manually so that the geometry of the tool can be maintained at its nominal dimension. With the automatic grinding wheel measurement, the wear on the bond of the grinding wheels can be determined automatically via tactile measurement, exactly documented and compensated for. The measurement is carried out during the production process. Diameter and length of the grinding wheel can be measured and compensated for. This means that the operator always has the optimum grinding wheel data at the desired time. Furthermore, the user can monitor the grinding wheel wear and thus influence the production process and optimise it.

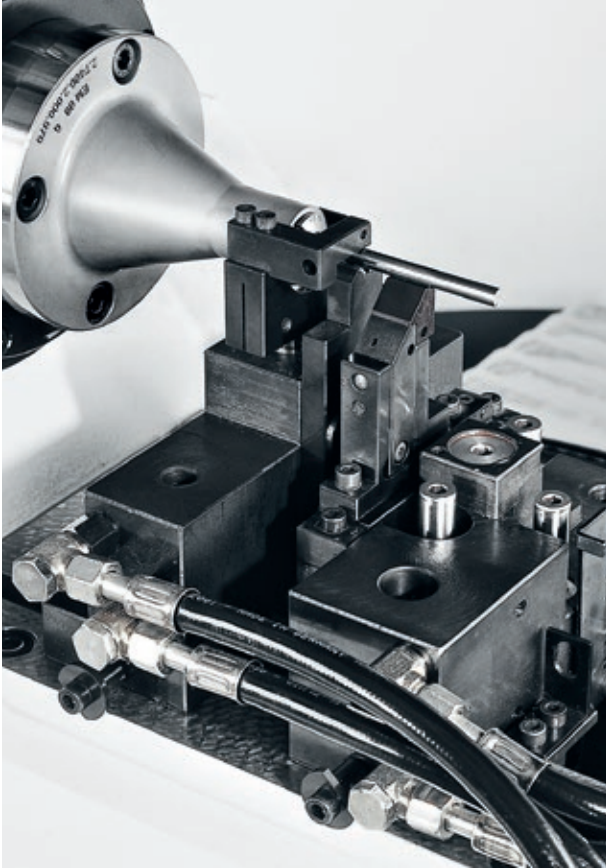
The probe for the tactile measurement is fitted on the tool carrier and is mounted in place of the electrical dresser.



### Sharpening stone holder

With the permanently installed sharpening stone holder, WALTER enables the automatic opening of the wheel bond during production. The HELITRONIC TOOL STUDIO software controls the process and enables the operator to open the bond at the appropriate time according to the grinding wheel condition.





**Option “Automatic Shank Steadyrest” or  
Option “Automatic Support Steadyrest”  
(Illustration shows Shank/Support Steadyrest)**

High precision V blocks and the fine adjustability ensure precise and reliable grinding results for longer tools. Tool deflection during the grinding process is reduced to a minimum.

**Hydraulically operated tailstock  
(not shown)**

For holding and centering the workpiece. The mounting takes place on the upper table. The tailstock can be disengaged automatically.

**Manually operated tailstock (not shown)**

For holding and centering the workpiece. The mounting takes place on the upper table.

**Manual steady rest (not shown)**

For supporting the workpiece during grinding. The mounting takes place on the upper table.

## OTHER OPTIONS



- Determination of the rake angle, the outer diameter and the core diameter for cylindrical tools
- Tactile measurement system to position the tools fully automatically
- Fully automatic thermal profile compensation for the linear axes

### Integrated Measuring System IMS

With the integrated IMS measurement system, the outside diameter, rake angle and core diameter can be measured using the probe ball without having to unclamp the tool. By setting the tolerances, HELITRONIC TOOL STUDIO can compensate for any deviation of the measured values, e.g. by thermal growth or wheel wear-and-tear, and adjust to the nominal measure and thus prevent scrap. The operator no longer needs to make active adjustments and the dressing cycle of the grinding wheels remains constant. Both increase the efficiency, especially when it comes to large volume production.



#### **Calibration (standard)**

Calibration consists of a calibration ball and software. It is used to automatically calibrate the X, Y and Z axes of the machine with a loader. The calibration frequency can be freely chosen in the loader program. Machines without a loading system can be calibrated manually.



#### **Automatic positioning and measurement system "Heli-Probe" (standard)**

Heli-Probe records important tool parameters for a perfectly positioned tool in the shortest space of time. This is the best precondition for quick and accurate grinding, quality and productivity.

#### **C-axis in torque design**

The advantage of the C-axis in torque design lies in its longevity with dynamic and constantly repeating axis movements.

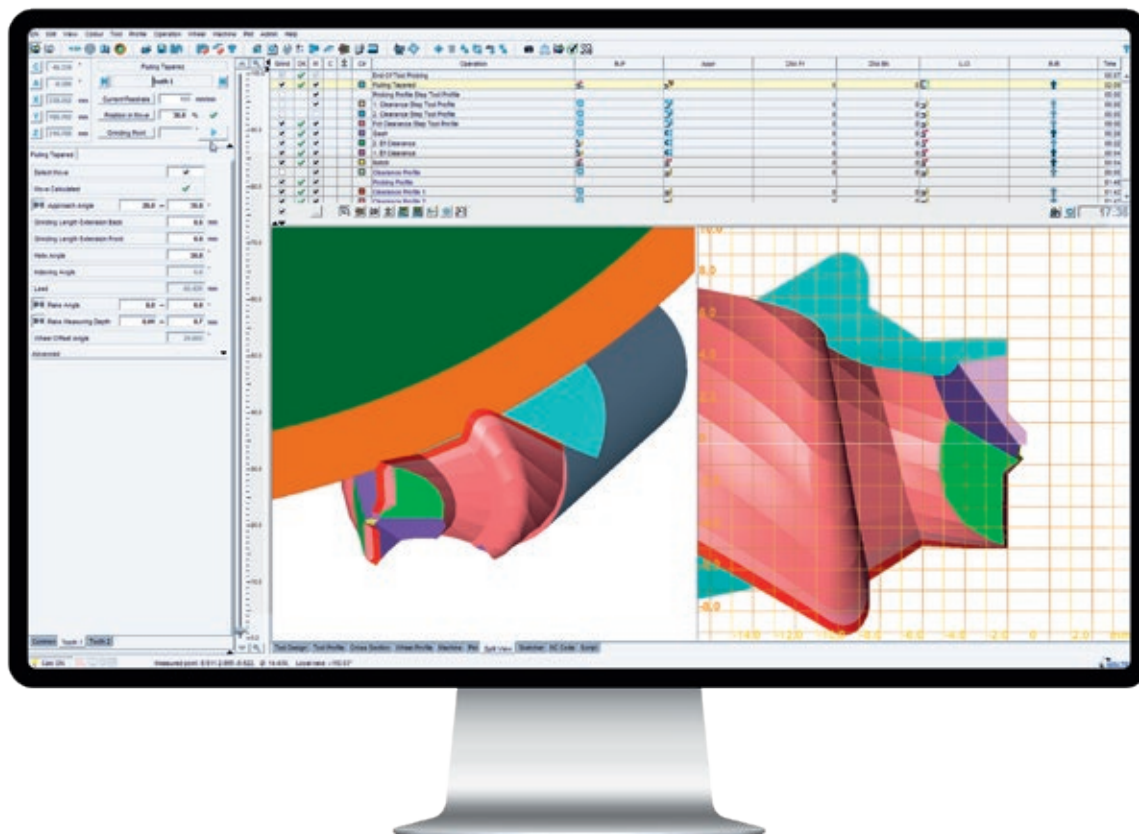
#### **A-axis (workpiece carrier) in torque version with 3,000 min<sup>-1</sup>**

The advantage of the A-axis in torque design lies in its longevity with dynamic and constantly repeating axis movements.

#### **Glass scales**

Glass scales for increased positioning accuracy and higher temperature insensitivity. This leads to an increase in quality in tool production.

# APPLICATION SOFTWARE FOR TOOL MACHINING



## HELITRONIC TOOL STUDIO –

### Operating convenience with all grinding applications

HELITRONIC TOOL STUDIO is the WALTER way to the perfect tool. According to the tried and tested method of “What you see is what you grind”, just a few mouse clicks are all that separate you from producing the perfect precision tool: Design, programming, simulation and production.

HELITRONIC TOOL STUDIO: This combines ease of programming with the greatest possible flexibility. With the HELITRONIC TOOL STUDIO, only a little work is needed by the user to program machining steps and movement sequences for both rotationally symmetrical standard tools and for special tools.

The tool shown on the screen corresponds exactly to the tool which will then be produced. This means that, as early as the design phase, the result can be checked and, if necessary, corrected thanks to the true-to-life 3D simulation.

The operator can quickly find the tool type, the parameters to be entered and the tool by using the assistant. WALTER provides programme packages for all standard tool families, which make handling significantly easier.

# EFFICIENCY OPTIONS

- Drawing and grinding with just one software package
- Import and export of DXF drawings

- Up to 30 % time saved
- Optimum feed rate
- Optimize existing IDNs

- Global production of tools with consistent quality based on a reference model

## “Sketcher”

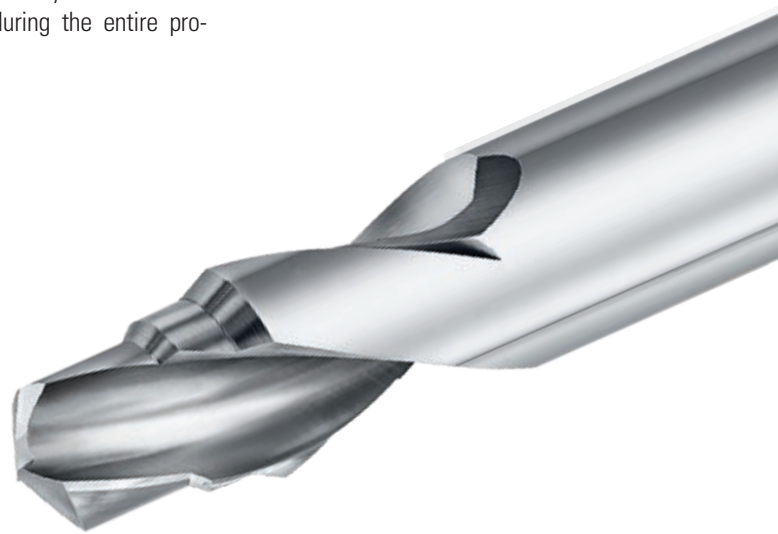
Do you sometimes wonder why you need to draw tools separately in a CAD program and then recreate the desired tool in another software package? Thanks to the “Sketcher” option, this is now a thing of the past. You can now create CAD drawings, program tool ID numbers and grind the desired tool in a single software package thanks to the “Sketcher” option. HELITRONIC TOOL STUDIO includes an integrated CAD system with an intuitive icon-based user interface for creating tool and grinding wheel drawings. The tool simulation and CAD drawing features are linked in HELITRONIC TOOL STUDIO, meaning that each parameter modification is not only reflected in the simulation model but also in the associated CAD drawing. CAD drawings can be re-used for different tools as the CAD elements used for other tool ID numbers attempt to re-connect with the tool simulation model. Users can also import and export DXF drawings, and save drawings as PDF documents. Your benefit: save time and resources through a central software solution!

## Feedrate Optimizer

This enhancement to the HELITRONIC TOOL STUDIO provides the ideal options for feed control and for monitoring the grinding wheel and machine load. Depending on the tool type, the time savings can be up to 30 %. Feed optimisation uses the findings entered into the HELITRONIC TOOL STUDIO in relation to grinding movements, and the grinding wheel and tool simulation model in order to calculate the current grinding wheel and machine loads and set the optimum feed at any time. Movements with low wheel loads will be accelerated and, this is particularly important, movements where the desired wheel load is exceeded are slowed down. Even existing IDNs can be conveniently optimised with just one click. First, the profile of the grinding wheel load is determined via a progressive simulation analysis. Then, the feed is optimised in such a way that the wheel load remains constant during the entire processing run.

## “Quality Assurance”

Customers worldwide require consistently high tool quality in terms of material and geometry, no matter which production location is concerned. In order to satisfy these customer and market requirements, WALTER has brought the efficiency-boosting “quality assurance” solution onto the market for the established tool grinding software HELITRONIC TOOL STUDIO. By using a reference model as a basis, qualitatively equivalent tools can be produced at different locations around the world. The current model is compared to the fixed reference model at all times and a visual display shows the effect of changing any parameters. This way, deviations in quality can be detected immediately and eliminated.





CUSTOMER CARE

## WE ARE HERE FOR YOU!

WALTER and EWAG deliver systems and solutions worldwide for all areas of tool machining. Our claim is based on ensuring maximum availability of our machines over their entire service life. For this we have thus bundled numerous services in our Customer Care program.

Our products are designed to meet customer demands for as long as possible, they are intended to operate efficiently, reliably, and be available at any time.

From "Start up" through to "Retrofit" – our Customer Care is there for you throughout the working life of your machine. For this reason, you can rely on competent HelpLines worldwide and Service Engineers near you:

- We will provide you with fast, straight-forward support.
- We will help to increase your productivity.
- We work professionally, reliably and transparently.
- We will provide a professional solution to your problems.

## UNITED GRINDING DIGITAL SOLUTIONS™

We develop solutions to support you in simplifying processes, boosting your machines' efficiency and increasing overall productivity under the "UNITED GRINDING Digital Solutions™" brand.

We are continuously expanding our solution portfolio in the key areas of CONNECTIVITY, USABILITY, MONITORING, and PRODUCTIVITY to make your work in the digital age significantly easier.

Find out more about UNITED GRINDING Digital Solutions™ services on our website in the Customer Care section.



### Start up

Commissioning  
Extension of the guarantee



### Qualification

Training  
Product support



### Prevention

Maintenance  
Inspection



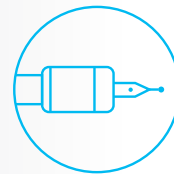
### Service

Customer service  
Customer advice  
Helpline



### Digital Solutions

Remote Service  
Service Monitor  
Production Monitor



### Material

Spare parts  
Replacement parts  
Accessories



### Rebuild

Machine overhauling  
Refurbishing of assemblies



### Retrofit

Conversions  
Retrofitting parts

# TECHNICAL DATA, DIMENSIONS

## MECHANICAL AXES

|                             |               |
|-----------------------------|---------------|
| X axis                      | 320 mm        |
| Y axis                      | 200 mm        |
| Z axis                      | 470 mm        |
| Rapid traverse speed X,Y, Z | max. 15 m/min |
| C axis                      | ± 200°        |
| A axis                      | ∞             |
| Linear resolution           | 0.0001 mm     |
| Radial resolution           | 0.0001°       |

## GRINDING SPINDLE DRIVE

|                              |                              |
|------------------------------|------------------------------|
| Max. grinding wheel diameter | 150 mm                       |
| Grinding spindle speed       | 0 – 10,500 min <sup>-1</sup> |

### HELITRONIC MINI PLUS with belt-driven spindle (standard)

|                  |        |
|------------------|--------|
| Spindle ends     | 2      |
| Tool holder      | HSK 50 |
| Peak power       | 9 kW   |
| Spindle Diameter | 80 mm  |

## OTHER

|                                  |                  |
|----------------------------------|------------------|
| Machine weight                   | approx. 3,300 kg |
| Power consumption at 400 V/50 Hz | approx. 25 kVA   |

## TOOL DATA <sup>1)</sup>

|  |              |
|--|--------------|
| Min. tool diameter                                       | 1 mm         |
| Max. tool diameter                                       | 100 mm       |
| Max. workpiece length, peripheral grinding <sup>2)</sup> | 255 mm       |
| Max. workpiece length, end face grinding <sup>2)</sup>   | 185 (225) mm |
| Max. workpiece weight                                    | 30 kg        |

## OPTIONS

### Coolant system

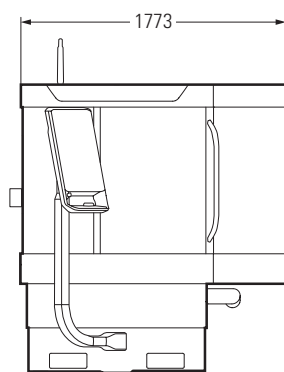
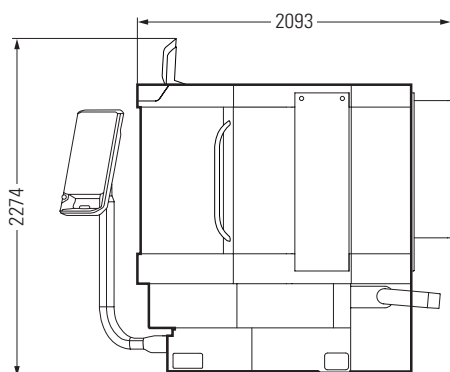
On request – several types are possible

### Loading systems

Top loader, Robot loader

### Others

Torque motor A-Axis 3.000 min<sup>-1</sup>; torque motor C-Axis; shank/support steady rest; tail-stocks; Software Walter Window Mode software; automatic grinding wheel measurement; automatic electrical measurement of the machine reference, etc.



## HELITRONIC MINI PLUS

Dimensions in mm. Options, accessories or open doors can increase the dimensions of the machine. Subject to modifications due to technical progress and errors. No guarantee is provided for this information.

<sup>1)</sup> The maximum tool dimensions depend on the type of tool and its geometry, as well as the type of machining.

<sup>2)</sup> From theoretical taper diameter of the workpiece holder.

# CREATING TOOL PERFORMANCE

We are a global leader among market-oriented technology and service companies, and a system and solution partner for all areas of tool machining. Our range of services is the basis for innovative machining solutions for practically all tool types and materials typical for the market with a high degree of added value in terms of quality, precision, durability and productivity.



## GRINDING

Grinding of rotation-symmetrical tools and workpieces, as well as indexable inserts

| Machines                | Use   Materials    | Tool dimensions <sup>1)</sup><br>max. length <sup>2)</sup> / diameter |
|-------------------------|--------------------|---|
| HELITRONIC G 200        | P R HSS HM C/K     | 235 mm / Ø 1 – 125 mm   |
| HELITRONIC MINI PLUS    | P R HSS HM C/K CBN | 255 mm / Ø 1 – 100 mm   |
| HELITRONIC RAPTOR       | P R HSS HM C/K CBN | 280 mm / Ø 3 – 320 mm   |
| HELITRONIC POWER 400    | P R HSS HM C/K CBN | 520 mm / Ø 3 – 315 mm   |
| HELITRONIC VISION 400 L | P R HSS HM C/K CBN | 420 mm / Ø 3 – 315 mm   |
| HELITRONIC MICRO        | P R HSS HM C/K CBN | 220 mm / Ø 0.1 – 12.7 mm<br>220 mm / Ø 3 – 12.7 mm                    |

| Machines     | Use   Materials        | Indexable insert <sup>1)</sup><br>Inscribed circle/<br>circumscribed circle |
|--------------|------------------------|---|
| COMPACT LINE | P R HSS HM C/K CBN PCD | Ø 3 mm / Ø 50 mm  |



## EROSION

Eroding and grinding of rotation-symmetrical tools

| Machines                        | Use   Materials        | Tool dimensions <sup>1)</sup><br>max. length <sup>2)</sup> / diameter |
|---------------------------------|------------------------|---|
| HELITRONIC DIAMOND EVOLUTION    | P R HSS HM C/K CBN PCD | 185/255 mm / Ø 1 – 165 mm   |
| HELITRONIC RAPTOR DIAMOND       | P R HSS HM C/K CBN PCD | 270 mm / Ø 3 – 400 mm   |
| HELITRONIC POWER DIAMOND 400    | P R HSS HM C/K CBN PCD | 520 mm / Ø 3 – 380 mm   |
| HELITRONIC VISION DIAMOND 400 L | P R HSS HM C/K CBN PCD | 420 mm / Ø 3 – 315 mm   |



## LASER

Production of tools with laser

| Machines     | Use   Materials       |
|--------------|-----------------------|
| VISION LASER | P HM PCD CVD-D MKD/ND |



## MEASURING

Contact-free measurement of tools, workpieces and grinding wheels

| Machines            | Use | E <sub>UX</sub> /MPE-value | Tool dimensions <sup>1)</sup><br>max. length <sup>2)</sup> / diameter |
|---------------------|-----|----------------------------|---|
| HELICHECK ADVANCED  | M   | (1.8 + L/300) µm           | 420 mm / Ø 1 – 320 mm   |
| HELICHECK PRO       | M   | (1.2 + L/300) µm           | 300 mm / Ø 1 – 200 mm   |
| HELICHECK PRO LONG  | M   | (1.2 + L/300) µm           | 730 mm / Ø 1 – 200 mm   |
| HELICHECK PLUS      | M   | (1.2 + L/300) µm           | 300 mm / Ø 0.1 – 200 mm   |
| HELICHECK PLUS LONG | M   | (1.2 + L/300) µm           | 730 mm / Ø 0.1 – 200 mm   |
| HELICHECK NANO      | M   | (1.2 + L/300) µm           | 120 mm / Ø 0.1 – 16 mm  |
| HELICHECK 3D        | M   | (1.8 + L/300) µm           | 420 mm / Ø 3 – 80 mm  |



## AUTOMATION

Solutions for complete tool production: From loading systems that are integrated into the machine's working area to robot loaders and ATP- Automated Tool Production, our innovative solution for networking grinding, eroding and measuring machines from WALTER.



## SOFTWARE

The intelligence of tool machining and measuring for production and regrinding



## CUSTOMER CARE

Comprehensive range of services

<sup>1)</sup> The maximum tool dimensions depend on the type of tool and its geometry, as well as the type of machining.

<sup>2)</sup> From theoretical taper diameter of the workpiece holder.

Use: P Production R Regrinding M Measuring

Materials: HSS High speed steel TC Tungsten carbide C/C Cermet/ceramics CBN Cubic boron nitride PCD Polycrystalline diamond

CVD-D Chemical vapour deposition MKD/ND Monocrystalline diamond/natural diamond

## WALTER MASCHINENBAU GMBH

WALTER has produced tool grinding machines since 1953. Today, our product range is supplemented by tool eroding machines and fully automated CNC measuring machines of the HELICHECK series for contactless complete measurement of tools and production parts.

Our customer focus and our global sales and service network of company-owned locations and employees has been appreciated by our customers for decades.

Walter Maschinenbau GmbH is a company of the UNITED GRINDING Group. Together with EWAG, we consider ourselves to be a supplier of systems and solutions for the complete machining of tools and can offer a wide range of products, including grinding, eroding, laser machining, measurement and software.



Grinding



Eroding



Laser



Measuring



Automation



Software



Customer Care

## ABOUT US

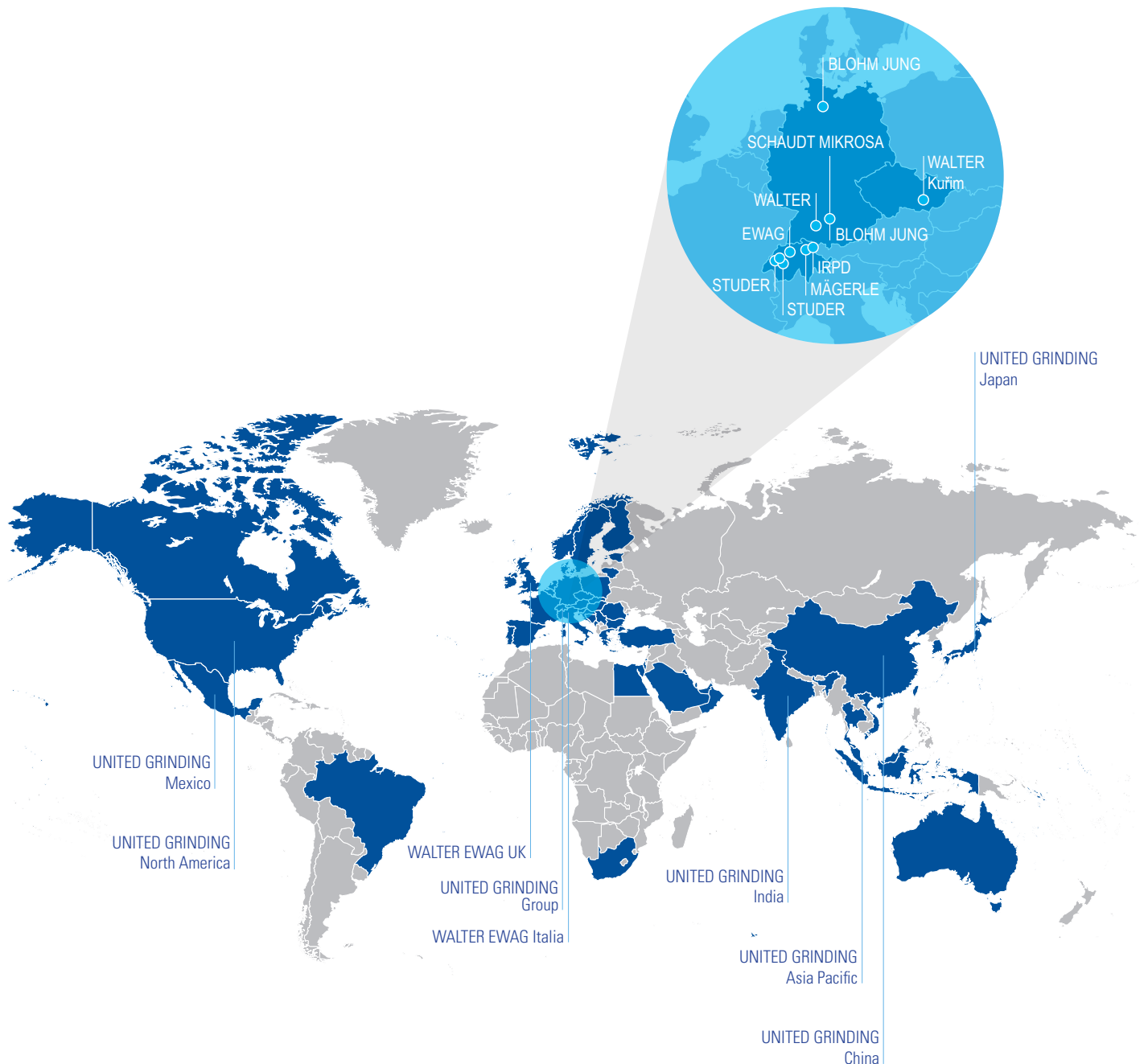


# UNITED GRINDING GROUP

UNITED GRINDING Group is one of the world's leading manufacturers of grinding, eroding, laser, and measuring machines, as well as machine tools for additive manufacturing. With roughly 2.300 employees at more than 20 manufacturing, service, and sales locations, the group is organized in a customer-oriented and efficient way.

Through its MÄGERLE, BLOHM, JUNG, STUDER, SCHAUDT, MIKROSA, WALTER, EWAG, and IRPD brands, as well as competence centers in America and Asia, UNITED GRINDING offers broad application expertise, a large product portfolio, and a full range of services for the production of high-precision components.

“We want to make our customers even more successful – UNITED FOR YOUR SUCCESS”





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