

# HELITRONIC VISION DIAMOND 400 L

TWO-IN-ONE, HIGH-PERFORMANCE ERODING AND GRINDING MACHINE



C.O.R.E.®



# HELITRONIC VISION DIAMOND 400 L

## APPLICATION

- Eroding and grinding of rotationally symmetrical tools for a wide range of industries
- For production and/or regrinding
- Fully automated, complete machining in a single clamping cycle
- Materials include PCD, CBN, HSS, carbide, cermet, ceramic

## MACHINE

- Optimised low-vibration solid mineral cast, gantry-type construction
- Linear X, Y, Z axes with linear drives
- Rotating A, C axes with high torque motors
- Glass scales
- Belt-driven spindle with two ends or motor spindle with one end
- Up to three rotation electrodes on one spindle end and up to three grinding wheels on the other spindle end or a total of six grinding wheels
- FINE PULSE TECHNOLOGY for highest surface quality
- 24" Full HD multitouch display
- FANUC, the global standard for control equipment
- Various loading systems
- Numerous efficiency options

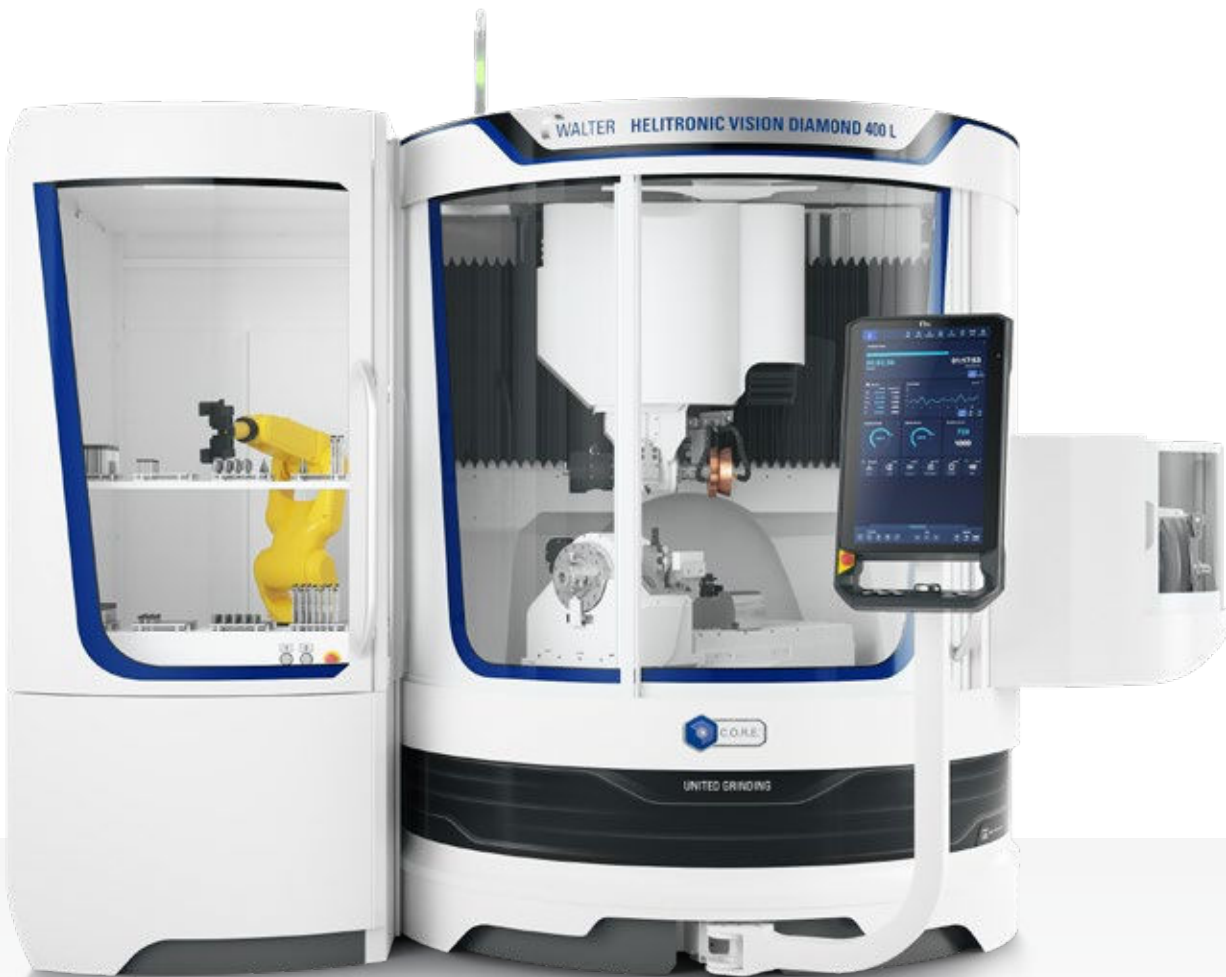
## SOFTWARE

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

"The right machine for high requirements in terms of volume production of tools. This is where the advantage of linear and rotary eroding technology come together in one machine. And thanks to our Two-in-One principle, which has been successful worldwide for more than 20 years, this machine can be used for only eroding or grinding, or for combining both machining methods without time-consuming reclamping"

## YOUR BENEFIT

Eroding of PCD/CBN tools and grinding of HSS/carbide tools, switching as you wish. A variety of loading systems and efficiency options make it possible to configure the machine as needed for today's and tomorrow's applications.



HELITRONIC VISION DIAMOND 400 L with the optional electrode/grinding wheel changer (right) and robot loader (left)

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

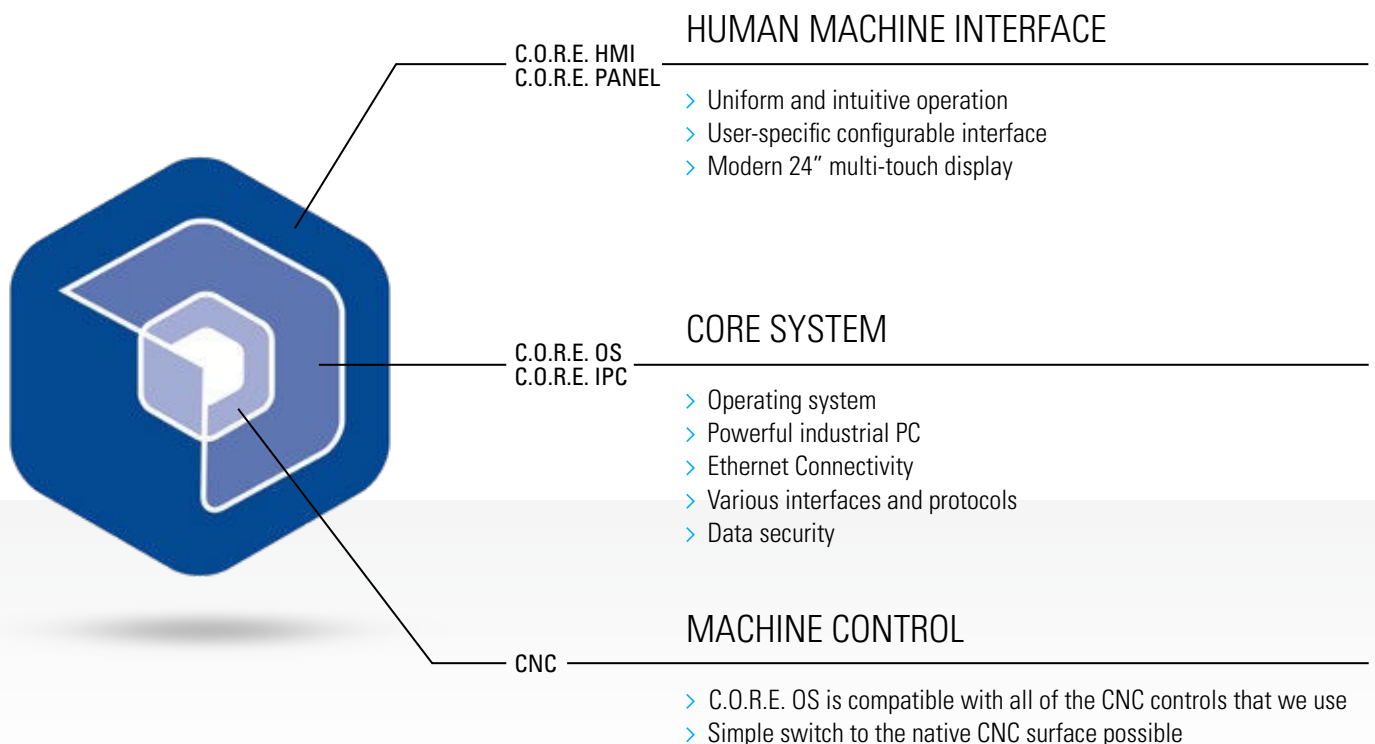
### C.O.R.E. helps us make your production fit for the digital future.

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

With FINE PULSE TECHNOLOGY, HELITRONIC VISION DIAMOND 400 L is at the forefront when it comes to quality for PCD tools. It is an economic investment for both the production and resharping of PCD/CBN tools in the diameter range of up to 315 mm.

It is possible to save time by machining complex geometries in a single clamping cycle. The combination of rotary eroding & grinding provides a real step forward in terms of flexibility and quality. Furthermore, thanks to its Two-in-One principle, the HELITRONIC VISION DIAMOND 400 L can be used as a grinding machine for the production and resharping of carbide tools. The changeover from PCD to carbide tools is "on the fly", since it is possible to automatically change between PCD and carbide tools and back again.

Example tools (from top left to bottom right):

PCD end mill, PCD reamer, PCD stepped drill bit, rim drill, 2 x PCD multi-step tool, PCD drill, shaped lathe tool, ball nose tool, thread milling drill, drill, corner radius mill, fir tree tool, shaping tool



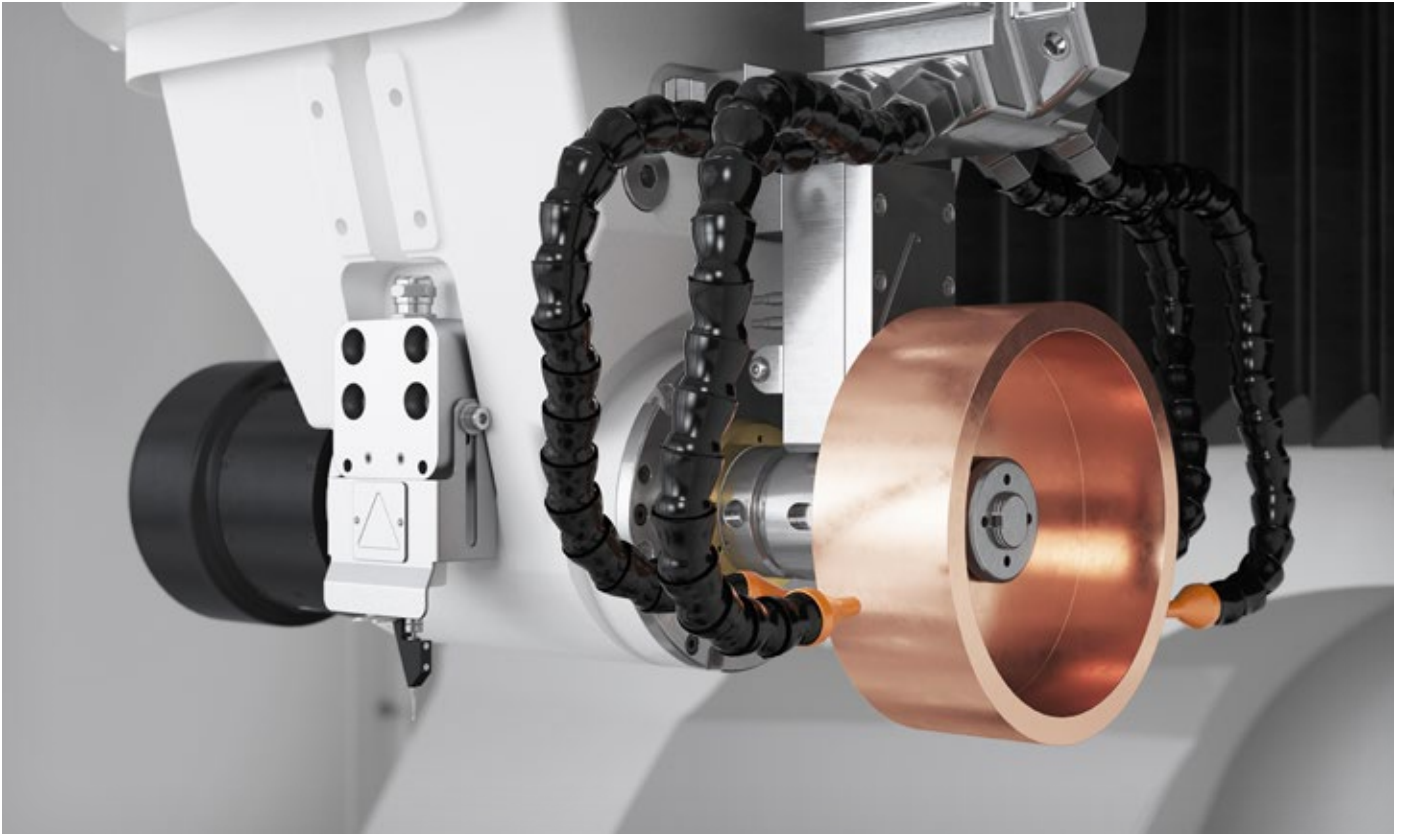


## INNOVATIVE WALTER GRINDING AND ERODING TECHNOLOGY

### **Belt-driven spindle with two HSK50 spindle ends (standard)**

The powerful belt-driven spindle with two spindle ends can be equipped with up to 3 electrodes or 6 grinding wheels and has a peak power of max. 30 kW. In this configuration, both complex and customary tool geometries can be manufactured economically in medium-sized batches (automation option is required). The different electrode/grinding wheel sets are allocated to the relevant spindle along with all data.



**Directly driven motor spindle (option)**

The powerful single-ended directly driven motor spindle is equipped with a liquid cooling system. Up to three electrodes/grinding wheels can be mounted per holder. In combination with the electrode/grinding wheel changer, up to 24 holders (72 electrodes/grinding wheels) can be used in the grinding process. The result is the highest levels of efficiency and productivity. Optionally available (upon request only) also as **motor spindle with 24,000 rpm**.

**Electrode/grinding wheel changer  
4 x or 8 x (options)**

Affordable, compact, and flexible too. With a capacity of up to 24 electrode/grinding wheels, it quadruples the grinding wheel capacity of the HELITRONIC VISION DIAMOND 400 L. The max. grinding wheel diameter is 200 mm. The coolant supply and the grinding set form a single unit. This ensures reliable wheel set replacement and optimum coolant delivery.

## ROBOT LOADER AUTOMATION OPTION



### **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.

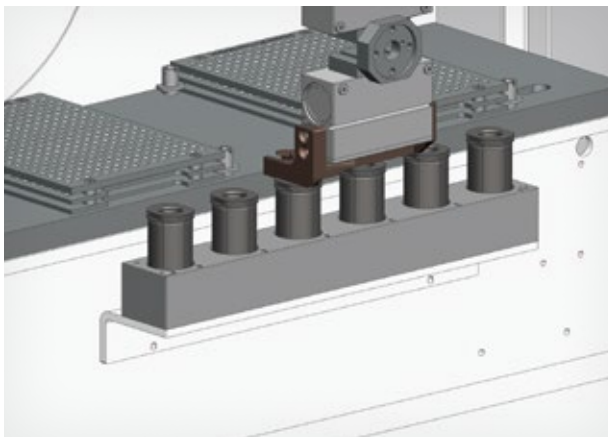


### **“Combi” equipment package for robot loaders**

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.

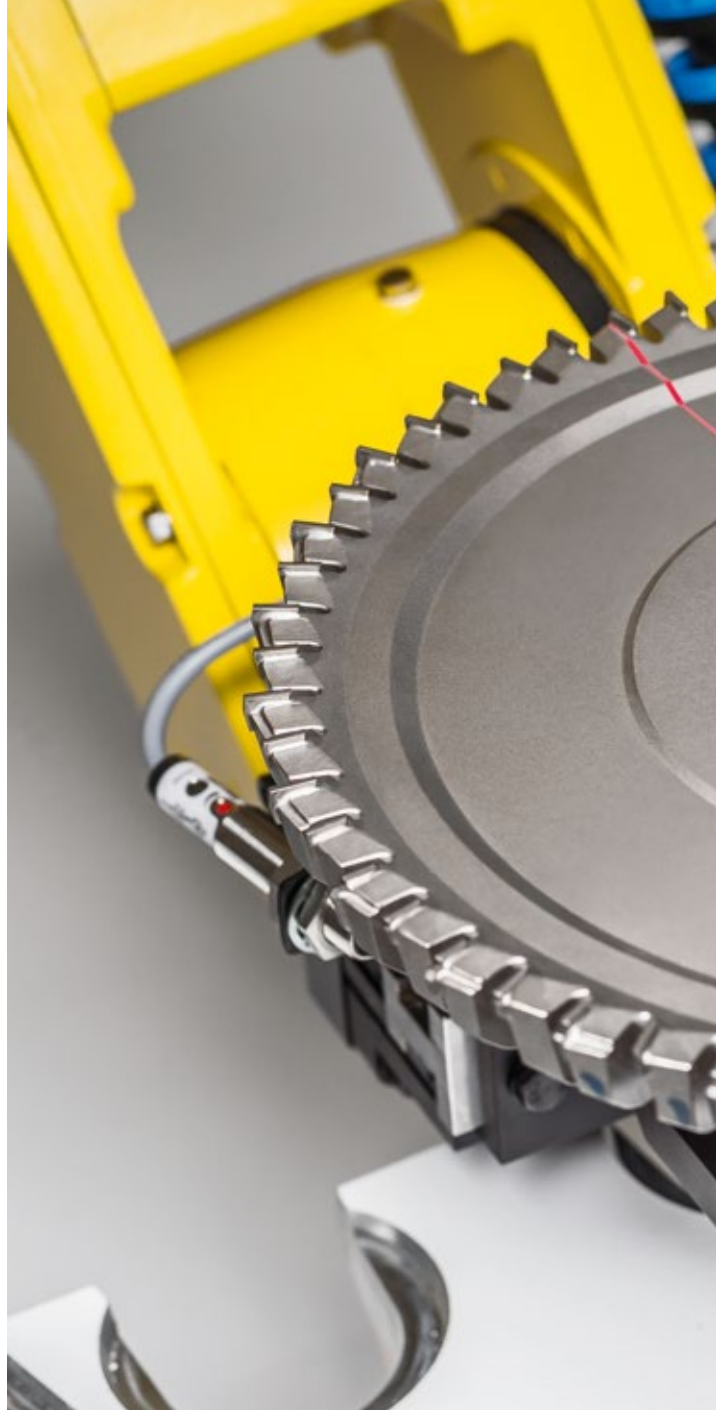
## ROBOT LOADER 25 AUTOMATION OPTION

### Robot loader 25

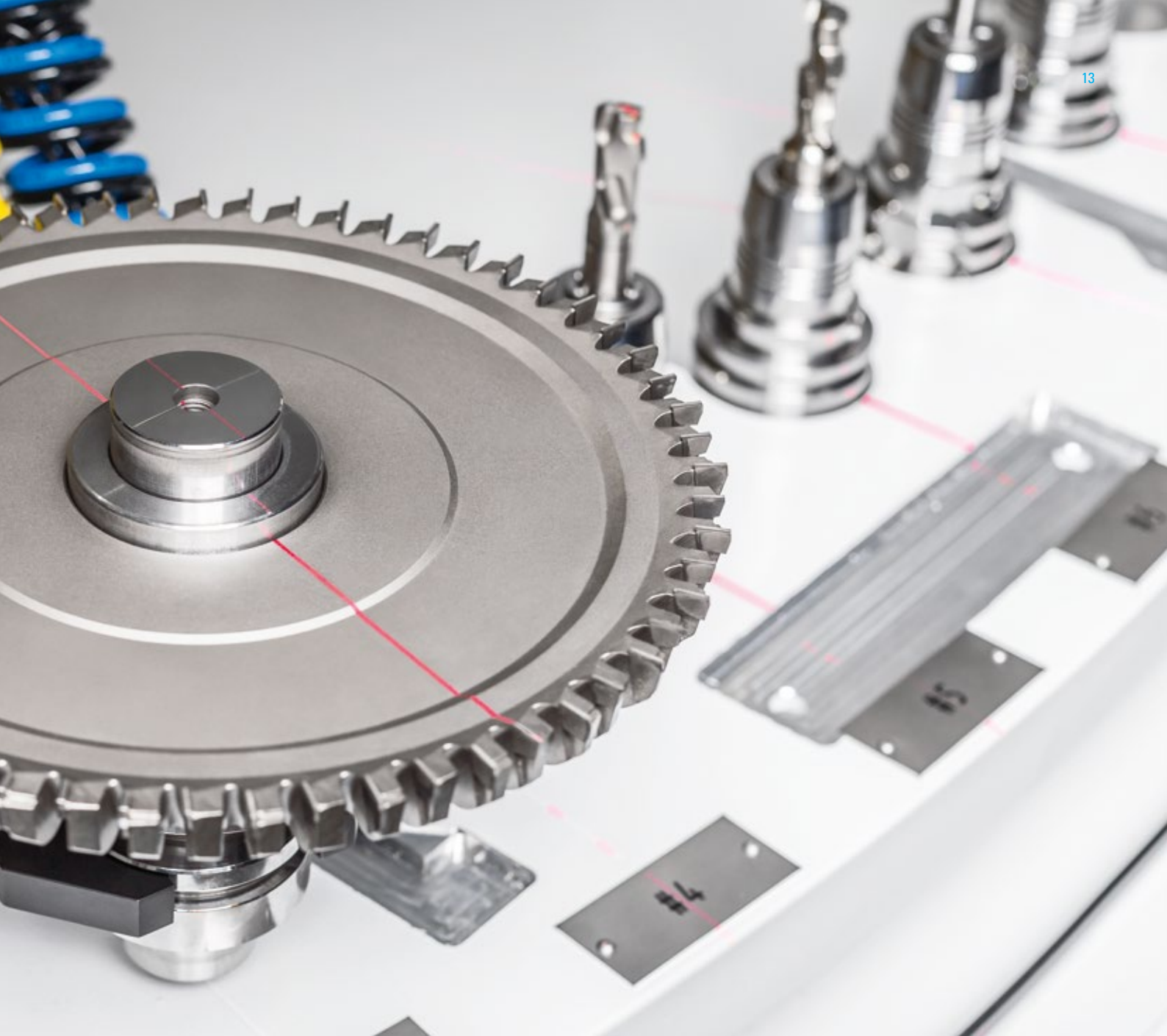
For tools in an HSK holder with a total weight of up to 20 kg and a tool diameter of up to 315 mm in combination with the HELITRONIC VISION DIAMOND 400 L. Thanks to the innovative, recently developed "Process Manager" loader software, "chaotic" loading on up to 7 pallet levels is now possible. An automatic diameter determination is also optionally available and ensures a smooth, automated and flexible production sequence.

Capacity of the available pallets:

- 21 tools, max. diameter 315 mm
- 28 tools, max. diameter 220 mm
- 70 tools, max. diameter 105 mm

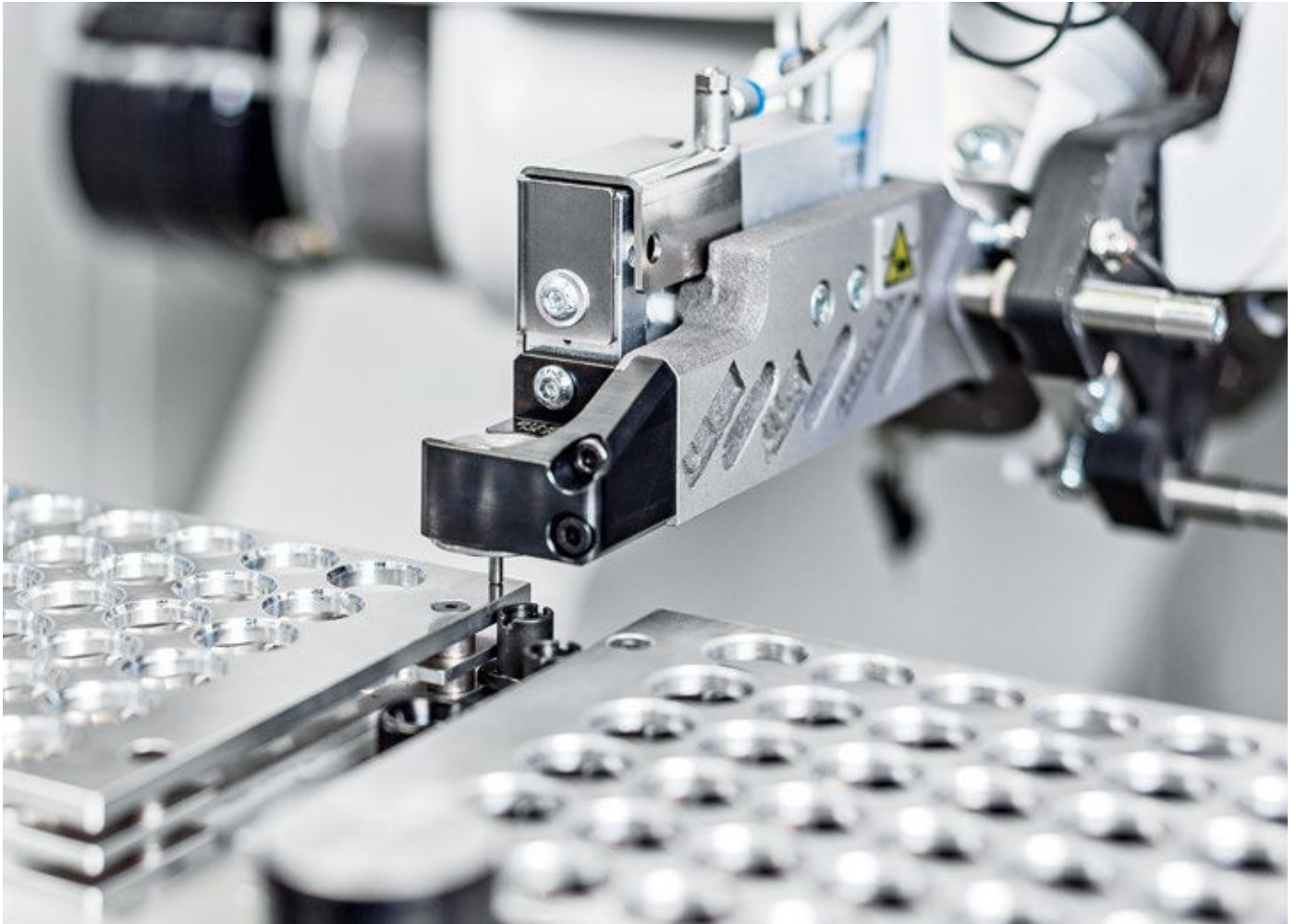






## TOP LOADER AUTOMATION OPTION

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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/ACCESSORIES

The HELITRONIC VISION DIAMOND 400 L offers many additional options for optimizing 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:

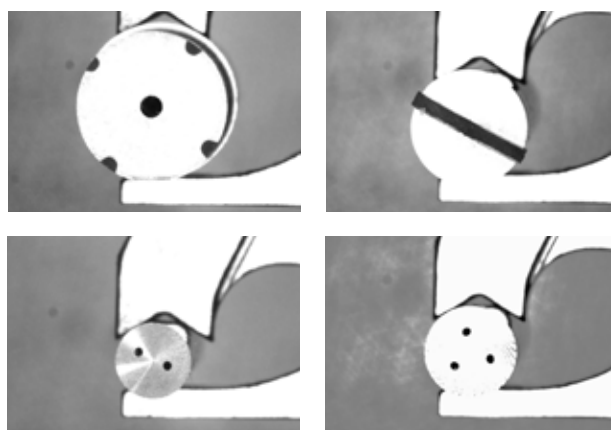
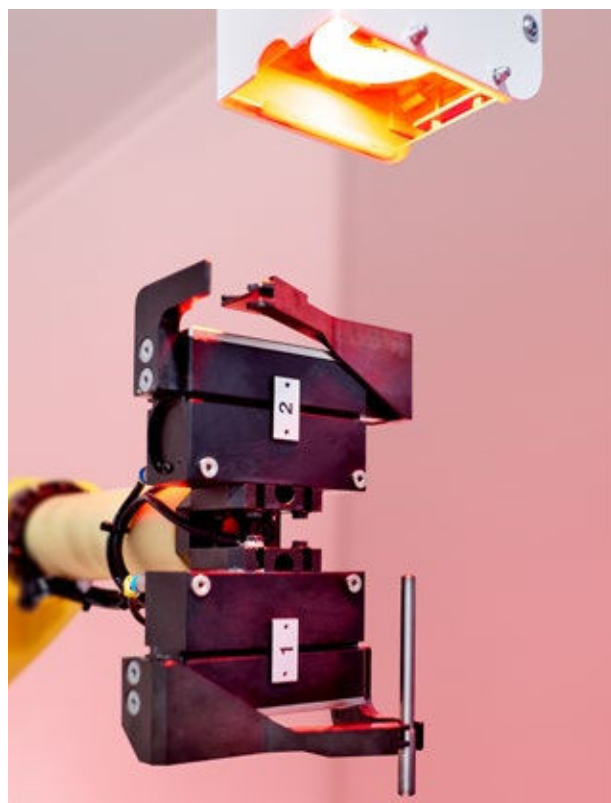
For automated capture of blanks/tools

- With soldered PCD plates on the front
- With sintered PCD veins
- With cooling channels
- 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
- For tools in the diameter range from 1.7 mm to 32 mm
- 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

### **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.



## OTHER OPTIONS/ACCESSORIES

### **“HELISET PLUS” accessory**

Manual device for measuring complex tools before eroding. Optimizing the machining time by means of up-front measurement – save valuable time in the erosion machine and for tool preparation by carrying out measurement operations at the same time in parallel on the HELISET PLUS.

- Fast, easy measurement
- No programming required
- Eliminates errors caused by the human factor
- Data output via XML
- Touch screen operation
- Outstanding operating concept
- Saves valuable machine hours
- Savings potential up to 30 %



### **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.



### **Grinding wheel dresser**

When it comes to the conditioning/dressing of grinding wheels during the production process, with subsequent software-controlled compensation, the high-performance electrical grinding wheel dresser is the perfect solution.



### 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.

- 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



### Calibration (standard)

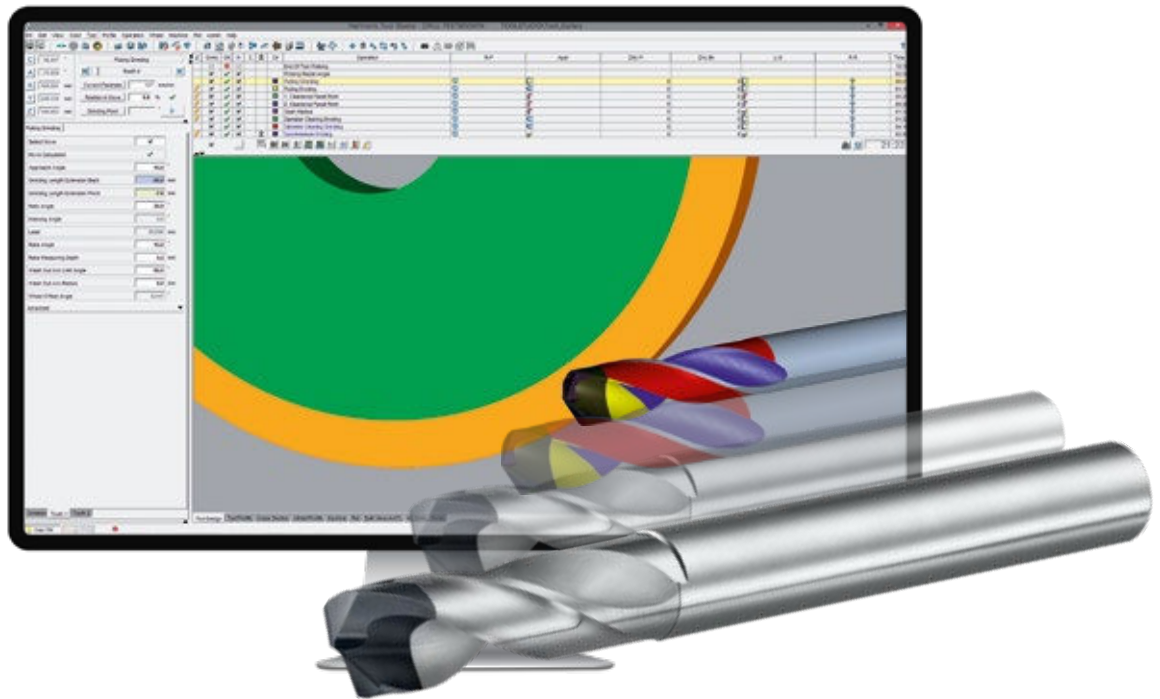
Calibration consists of a calibration ball and software. It is used to automatically calibrate the X, Y and Z axes of the machine with a loader. The calibration frequency can be freely chosen in the loader program. Machines without a loading system can be calibrated manually.



### 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.

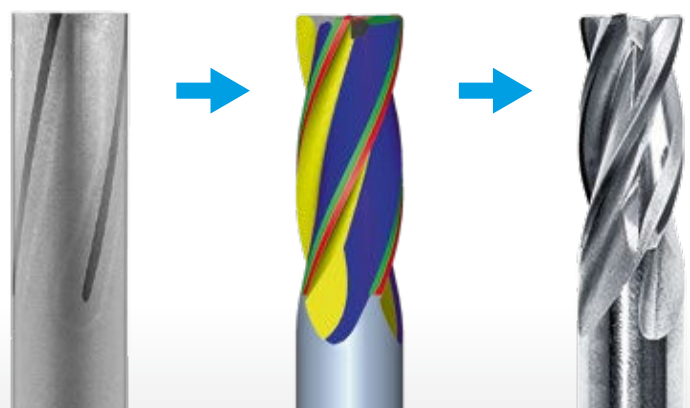
# HELITRONIC TOOL STUDIO WITH EROSION LICENCE



- Time savings through comprehensible and simple operation
- Simulation of grinding and/or eroding operations directly on the machine or at the PC workstation
- High-precision integrated 3D-Live-Simulation – Real-time depiction of all parameter changes
- Click & Edit – simple selection of operations by clicking directly on the simulation model
- Flexible modular system – freely combinable and extendible operations for future further developments

## Easy design of PCD tools with HELITRONIC TOOL STUDIO

"What you see is what you grind" – This is the motto for grinding with the HELITRONIC TOOL STUDIO. If one would like to describe the advantages of Licence Erosion in a single sentence, then the best choice would be: "What you can grind, you can also erode". Thanks to the wizard technology, the operator needs only a few mouse clicks for the production of a perfect PCD tool: Design, programming, simulation and production.





# FINE PULSE TECHNOLOGY

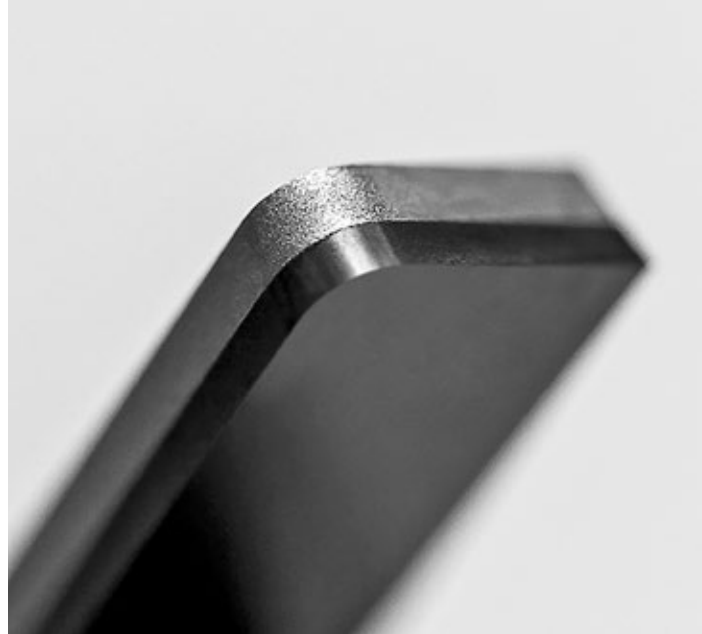
## TOP SURFACE QUALITY – TOP CUTTING EDGE

### **FINE PULSE TECHNOLOGY –**

#### **Visible improvement with the naked eye**

The new "FINE PULSE TECHNOLOGY" sets new standards in terms of the surface quality, cutting edge roughness and process reliability of PCD tools. It is based on a new liquid-cooled generator with an increased pulse frequency. This is now standard equipment in all Two-in-One eroding and grinding machines of WALTER.

The difference to the other tools on the market can even be seen with the naked eye on the most common PCD types with 10 µm grain size. A tool produced with "FINE PULSE TECHNOLOGY" on a WALTER eroding machine shines on its free surface, similar to a polished (ground) tool.



- Greatly improved surface quality
- Perfect blade edge quality
- High process reliability even with difficult-to-erode PCD
- Maximum flexibility with different types of tools
- Short machining times
- Latest state-of-the-art technology
- Optimisation possibilities with all generator codes
- Savings potential in the production chain of PCD tools





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



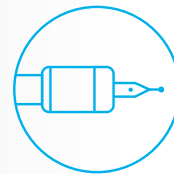
### Service

Customer service  
Customer advice  
Helpline



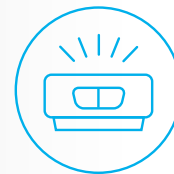
### Digital Solutions

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

|                              |               |
|------------------------------|---------------|
| Total number of axes         | 5             |
| Drive X, Y, Z                | Linear drive  |
| X axis                       | 500 mm        |
| Y-axis                       | 350 mm        |
| Z-axis                       | 700 mm        |
| Rapid traverse speed X, Y, Z | max. 50 m/min |
| Drive C                      | Torque        |
| C axis (swivelling range)    | ± 200°        |
| Travel speed                 | max. 20 rpm   |
| Drive A                      | Torque        |
| A-axis speed                 | 750 rpm       |
| Linear resolution            | 0.0001 mm     |
| Radial resolution            | 0.0001°       |

### GRINDING SPINDLE DRIVE

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

|                              |             |
|------------------------------|-------------|
| Max. grinding wheel diameter | 254 mm      |
| Spindle Diameter             | 100 mm      |
| Clamping                     | HSK 50      |
| Peak power                   | 30 kW       |
| Grinding spindle speed       | 0–7,800 rpm |

#### Motor spindle for use with grinding wheel changer (optional)

|                        |              |
|------------------------|--------------|
| Clamping               | HSK 50       |
| Peak power             | 33 kW        |
| Grinding spindle speed | 0–10,500 rpm |

#### Motor spindle with 24,000 rpm (optional, upon request only)

|                        |              |
|------------------------|--------------|
| Clamping               | HSK 50       |
| Peak power             | 26 kW        |
| Grinding spindle speed | 0–24,000 rpm |

### OTHER

|                   |                  |
|-------------------|------------------|
| Base              | Mineral casting  |
| Gross load weight | approx. 6,300 kg |
| Connected load    | 35 kVA           |

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

|                                       |                 |
|---------------------------------------|-----------------|
| Tool holder                           | ISO 50          |
| Min. / Max. workpiece diameter        | 3 mm / 315 mm   |
| Max. workpiece length <sup>2)</sup>   |                 |
| Peripheral grinding/end face grinding | 420 mm / 390 mm |
| Max. workpiece weight                 | 50 kg           |

### OPTIONS

#### Automation options

Robot loader; Robot loader 25; Top loader; electrode/grinding wheel changer 4/8 x; electrode/grinding wheel changer 12/24 x

#### Software / Efficiency options

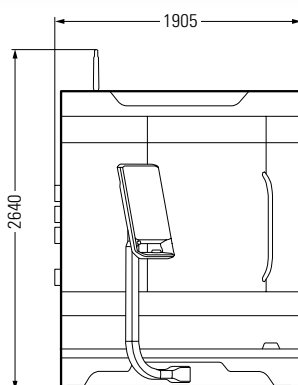
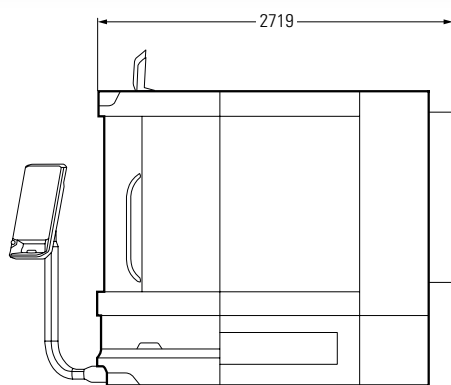
"Sketcher"; "Feedrate Optimizer"; "Quality Assurance"; etc.

#### Coolant system

On request – several types are possible

#### Other options

Automated work table; grinding wheel dresser; sharpening stone holder; automatic grinding wheel measurement; automatic, electrical measurement of the machine reference; integrated measurement system IMS, etc.



### HELITRONIC VISION DIAMOND 400 L

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.

1 The maximum tool dimensions depend on the type of tool and its geometry, as well as the type of machining.

2 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 ESSENTIAL       | P R HSS TC C/C CBN                     | 255 mm / Ø 1 – 100 mm   |
| HELITRONIC MINI POWER      | P R HSS TC C/C CBN                     | 255 mm / Ø 1 – 100 mm   |
| HELITRONIC MINI AUTOMATION | P R HSS TC C/C CBN                     | 255 mm / Ø 1 – 100 mm   |
| HELITRONIC RAPTOR          | P R HSS TC C/C CBN                     | 280 mm / Ø 3 – 320 mm   |
| HELITRONIC POWER 400       | P R HSS TC C/C CBN                     | 520 mm / Ø 3 – 315 mm   |
| HELITRONIC VISION 400 L    | P R HSS TC C/C CBN                     | 420 mm / Ø 3 – 315 mm   |
| HELITRONIC VISION 700 L    | P R HSS TC C/C CBN                     | 700 mm / Ø 3 – 200 mm   |
| HELITRONIC MICRO           | P R HSS TC C/C CBN<br>R HSS TC C/C CBN | 220 mm / Ø 0.1 – 12.7 mm<br>220 mm / Ø 3 – 12.7 mm  |
| COMPACT LINE               | P R HSS TC C/C CBN PCD                 | Indexable insert <sup>1)</sup><br>Inscribed circle/<br>circumscribed circle<br>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 TC C/C CBN PCD | 185/255 mm / Ø 1 – 165 mm   |
| HELITRONIC RAPTOR DIAMOND       | P R HSS TC C/C CBN PCD | 270 mm / Ø 3 – 400 mm   |
| HELITRONIC POWER DIAMOND 400    | P R HSS TC C/C CBN PCD | 520 mm / Ø 3 – 380 mm   |
| HELITRONIC VISION DIAMOND 400 L | P R HSS TC C/C CBN PCD | 420 mm / Ø 3 – 315 mm   |



## SOFTWARE

The intelligence of tool machining and measuring for production and regrinding



## LASER

Laser machining of indexable inserts and/or rotation-symmetrical tools

| Machines             | Use Materials                   | Tool dimensions <sup>1)</sup><br>max. length <sup>2)</sup> / diameter       |
|----------------------|---------------------------------|---|
| LASER LINE ULTRA     | P R TC C/C CBN PCD CVD-D MCD/ND | 250 mm / Ø 0.1 – 200 mm   |
| LASER LINE PRECISION | P R CBN PCD CVD-D MCD/ND        | 250 mm / Ø 0.1 – 200 mm   |
|                      |                                 | Indexable insert <sup>1)</sup><br>Inscribed circle/<br>circumscribed circle |
| LASER LINE ULTRA     | P R TC C/C CBN PCD CVD-D MCD/ND | Ø 3 mm / Ø 50 mm  |
| LASER LINE PRECISION | P R CBN PCD CVD-D MCD/ND        | Ø 3 mm / Ø 50 mm  |



## MEASURING

Contact-free measurement of tools, workpieces and grinding wheels

| Machines            | Use | E1-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 resp. 1.4 + L/300) µm | 300 mm / Ø 1 – 200 mm   |
| HELICHECK PRO LONG  | M   | (1.2 resp. 1.4 + L/300) µm | 730 mm / Ø 1 – 200 mm   |
| HELICHECK PLUS      | M   | (1.2 resp. 1.4 + L/300) µm | 300 mm / Ø 0.1 – 200 mm   |
| HELICHECK PLUS LONG | M   | (1.2 resp. 1.4 + L/300) µm | 730 mm / Ø 0.1 – 200 mm   |
| HELICHECK 3D        | M   | (1.8 + L/300) µm           | 420 mm / Ø 3 – 80 mm  |



## 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 MCD/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.

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.

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



Grinding



Eroding



Laser



Measuring



Software



Customer Care

## ABOUT US

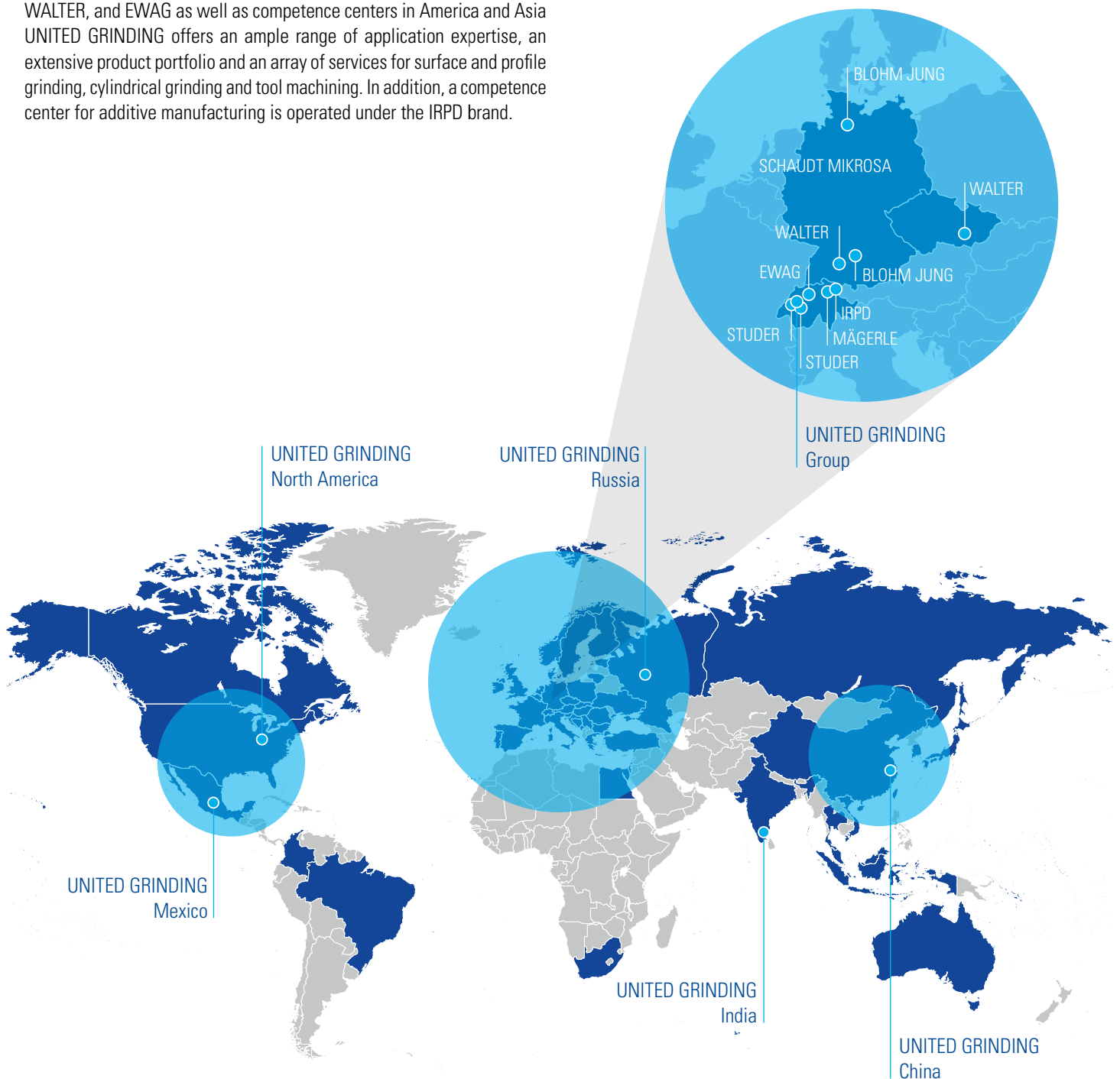


# UNITED GRINDING GROUP

UNITED GRINDING Group is one of the world's leading manufacturers of precision machines for grinding, eroding, laser, measuring and combination machining. With around 2,500 employees at more than 20 production, service and sales sites, the Group is organized in a customer-oriented and efficient way.

With its brands MÄGERLE, BLOHM, JUNG, STUDER, SCHAUDT, MIKROSA, WALTER, and EWAG as well as competence centers in America and Asia UNITED GRINDING offers an ample range of application expertise, an extensive product portfolio and an array of services for surface and profile grinding, cylindrical grinding and tool machining. In addition, a competence center for additive manufacturing is operated under the IRPD brand.

« We want to make our customers even more successful »





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