

HELITRONIC RAPTOR DIAMOND

THE AFFORDABLE ALLROUND MACHINE FOR ERODING
AND GRINDING OF PCD TOOLS (TWO-IN-ONE)

Now with
C.O.R.E.
technology



HELITRONIC RAPTOR DIAMOND

APPLICATION

- Eroding and grinding of rotationally symmetrical tools for metalworking and wood industries, also with large diameters as well as for saw blades
- Cost-effective production and/or regrinding
- Fully automated, complete machining in a single clamping cycle
- Materials include PCD, CBN, HSS, carbide, cermet, ceramic

MACHINE

- HSK spindle as standard
- 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
- 11.5 kW belt-driven spindle with two ends
- Each spindle end can take up to 3 rotating electrodes/grinding wheels
- Automatic clamping cylinder with clamping device
- 3 stage spark erosion process for highest quality finish
- Cooling on workpiece holder
- Fire-extinguishing system
- Option Top loader: Up to 500³⁾ tools from 3 mm to 32 mm in diameter
- Option Robot loader:
Up to 7,500 workpieces³⁾;
maximum workpiece weight 5 kg;
maximum workpiece diameter 125 mm
- FANUC, the global standard of control technology
- 24" Full HD Multitouch-Display

SOFTWARE

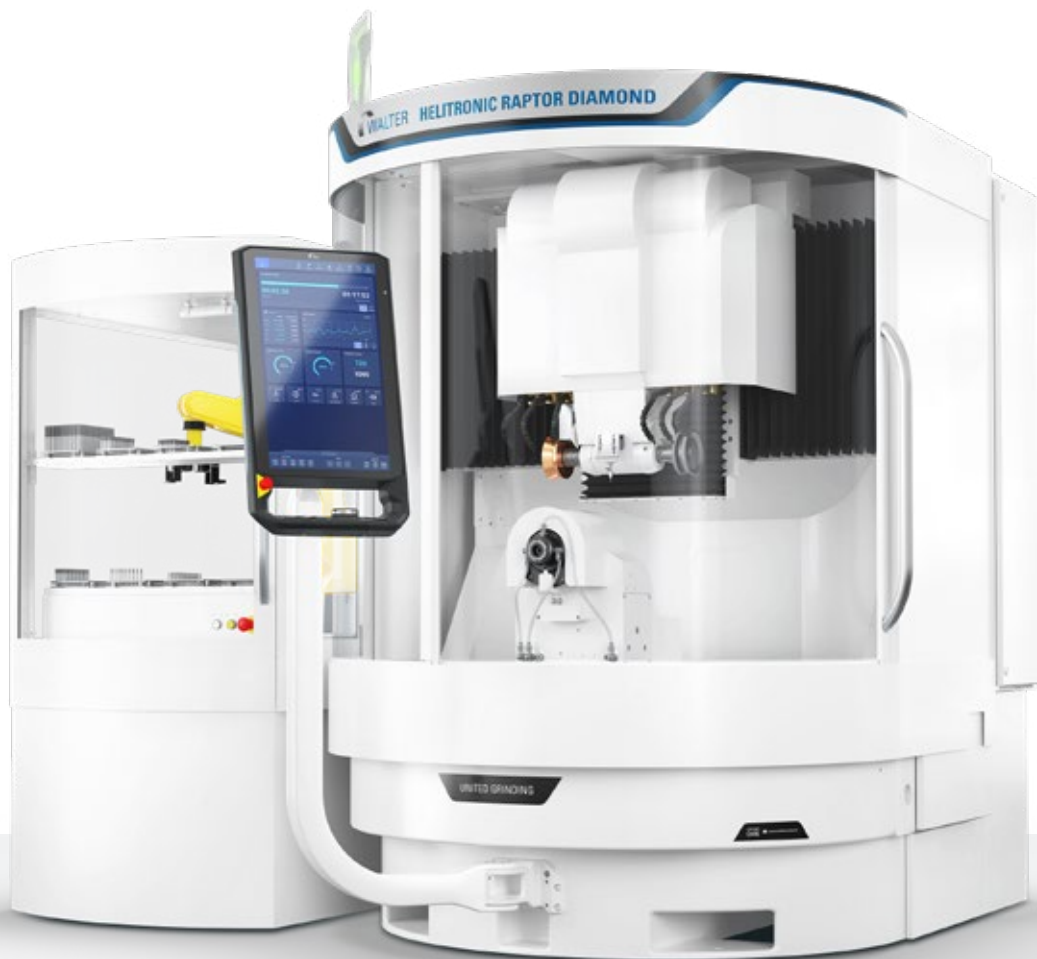
- C.O.R.E. OS operating system
- HELITRONIC TOOL STUDIO, CAD/CAM software for design, programming, simulation and production
- HELITRONIC TOOL STUDIO with licence erosion
- Walter Window Mode WWM
- Numerous software options to extend the system's performance and to increase its efficiency

« Anyone looking for an affordable eroding and grinding machine for the production and resharpening of PCD tools will find the right allround solution in the HELITRONIC RAPTOR DIAMOND »

SIEGFRIED HEGELE, HEAD OF PRODUCT MANAGEMENT

YOUR BENEFIT

The HELITRONIC RAPTOR DIAMOND is the cost-effective and performance efficient entry-level solution within our erosion portfolio when it comes to eroding PCD-/CBN tools and grinding HSS-/HM tools in a single clamping cycle, on a small footprint, as well as for large tool diameters! Tool diameters of 3 to 400 mm, tool length incl. End Face Operation up to 270 mm and weight up to 50 kg.



HELITRONIC RAPTOR DIAMOND with the optional robot loader (left)

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

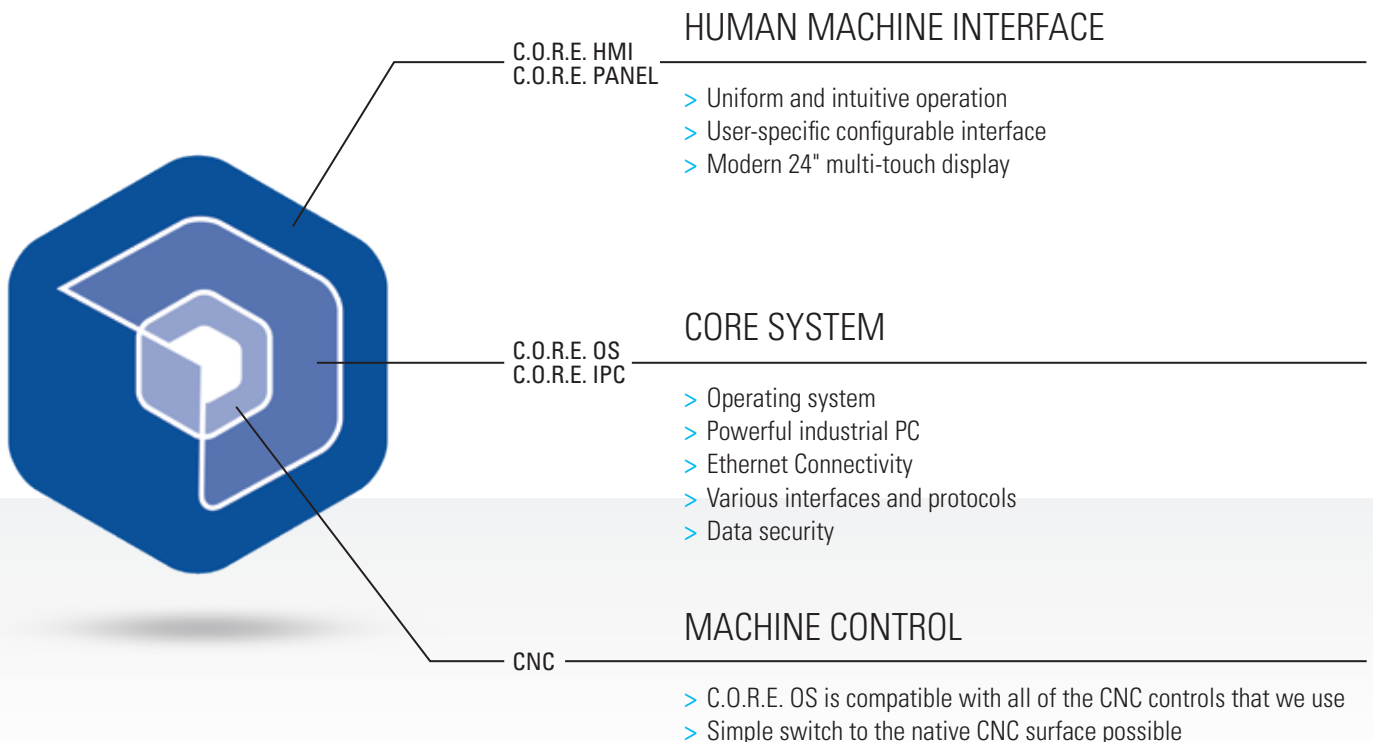
C.O.R.E. helps us make your production fit for the digital future.

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

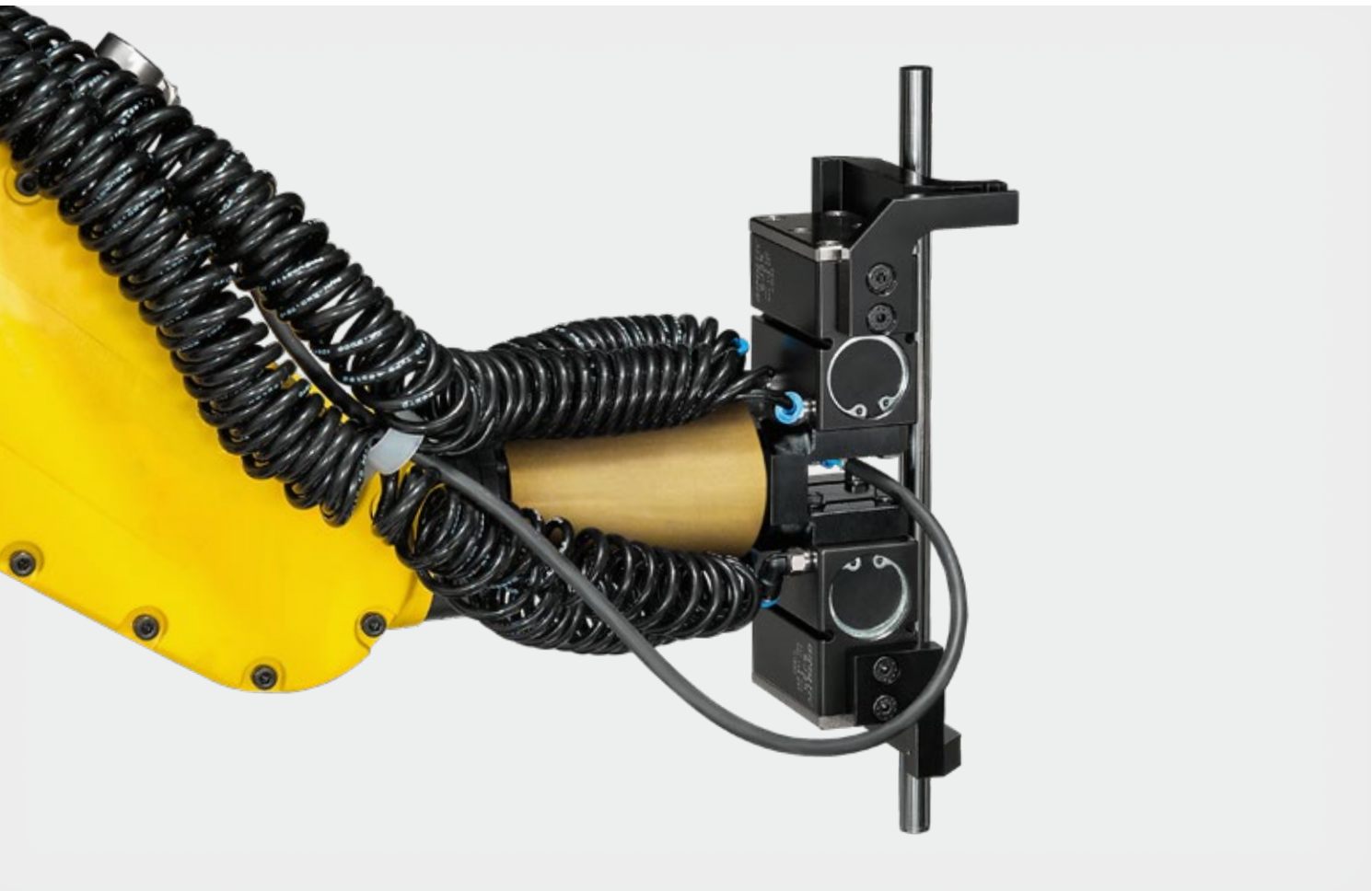
ERGONOMIC OVERRIDE SWITCH



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

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.

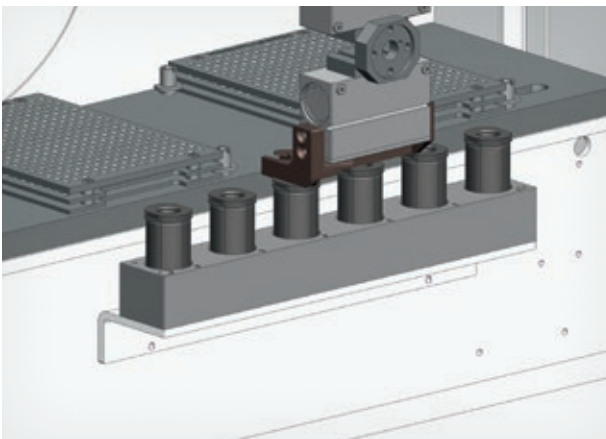


“Combi” equipment package for robot loaders

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

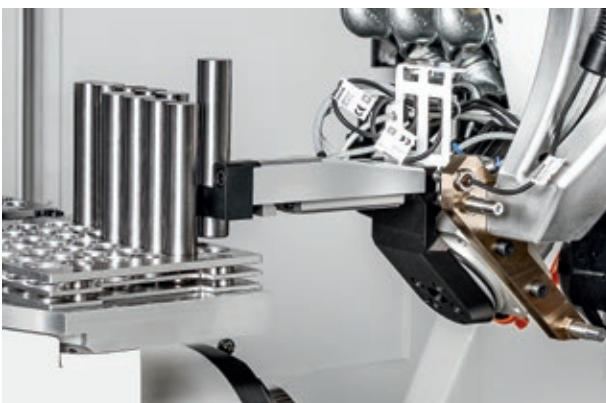


“Multi-Range” equipment package for robot loaders

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.



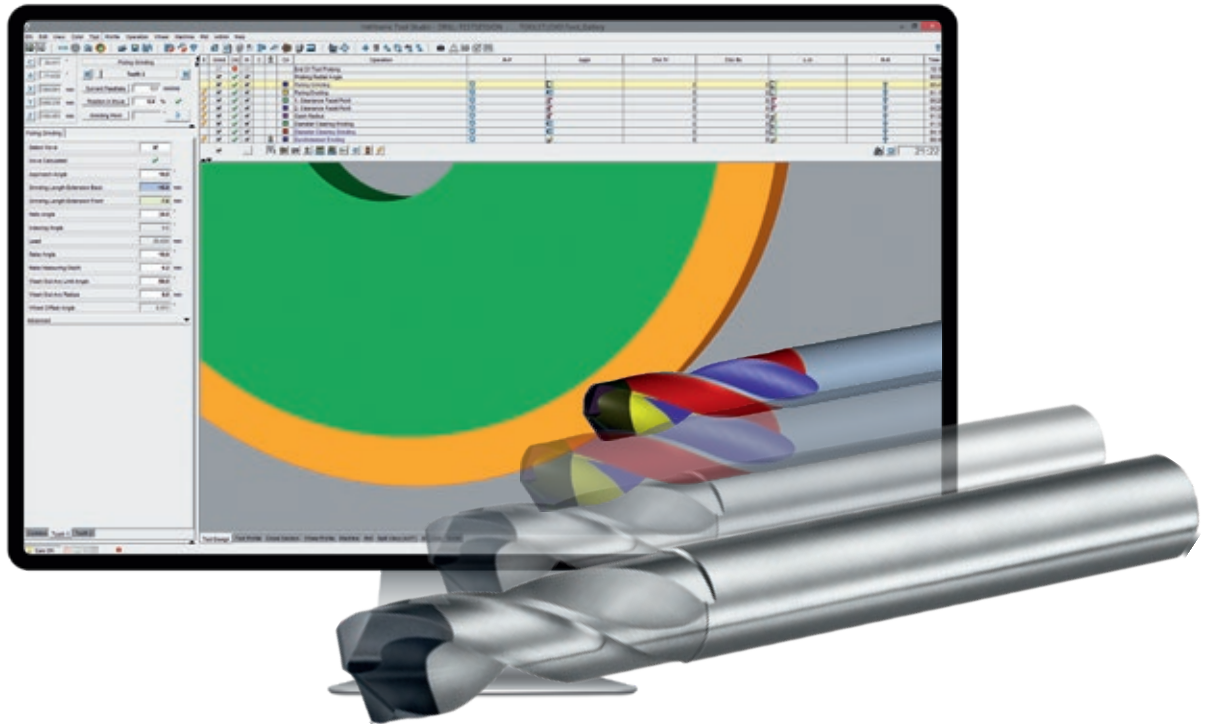
Top loader

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

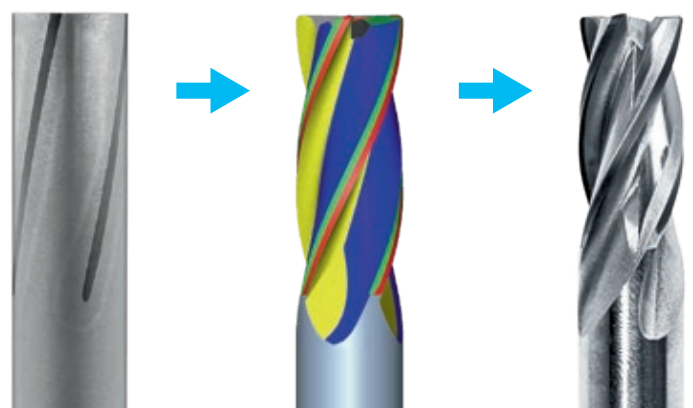
HELITRONIC TOOL STUDIO WITH EROSION LICENCE



- 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

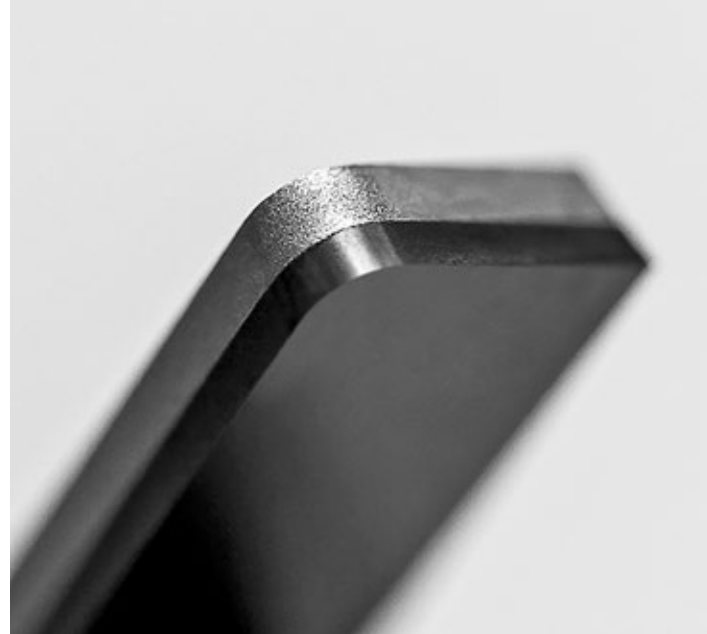
TOP SURFACE QUALITY – TOP CUTTING EDGE

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



TECHNICAL DATA, DIMENSIONS

GRINDING SPINDLE DRIVE

Max. grinding wheel/electrode diameter	200 mm
Grinding spindle speed	0–10.500 rpm
Spindle ends	2
Tool adapter	HSK50
Peak power	11,5 kW
Spindle Diameter	80 mm

TOOL DATA ¹⁾

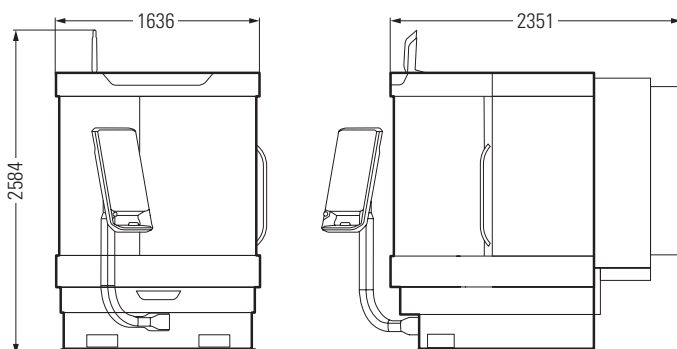
Min. tool diameter	3 mm
Max. tool diameter (vertical)	400 mm
Max. tool length for peripheral machining ²⁾	350 mm
Max. tool length for End Face Operation ²⁾	270 mm
Max. tool weight	50 kg

OPTIONS

- Robot loader with various equipment packages for loading cylindrical and HSK tools
- Hydraulic unit for the steady rest and tailstock support options

Further options:

Glass scales; Top loader; Measuring probe for measuring the grinding wheels; manual support steady rest; manual tailstock; workpiece holder with torque motor; sharpening stone holder erosion; work table; vapour separator; silencer; Automatic, electric measurement of machine reference (AEMDM); Tool Vision System; etc.



HELITRONIC RAPTOR DIAMOND

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 the theoretical taper diameter of the workpiece holder.

³⁾ Depends on the tool diameter.

WE ARE HERE FOR YOU!

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.



Start up
Commissioning
Extension of the guarantee



Qualification
Training
Product support



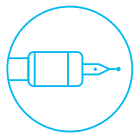
Prevention
Maintenance
Inspection



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

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CUSTOMER CARE



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