

WALTER INFO 3/2020

# HELITRONIC RAPTOR DIAMOND

FLEXIBLE "TWO-IN-ONE" EROSION AND GRINDING  
ENTRY-LEVEL MACHINE

**NEW**



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.

[walter-machines.com](http://walter-machines.com)

 **WALTER**

# HELITRONIC RAPTOR DIAMOND AT A GLANCE

## 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
- Top loader: Up to 500<sup>3)</sup> tools from 3 mm to 32 mm in diameter (option)
- 3 stage spark erosion process for highest quality finish
- FANUC, the global standard of control technology
- Cooling on workpiece holder
- Fire-extinguishing system

## SOFTWARE

- HELITRONIC TOOL STUDIO (optional erosion function)
- Walter Window Mode WWM
- Numerous software options to extend the system's performance and to increase its efficiency

## GRINDING SPINDLE DRIVE

Max. grinding wheel/electrode diameter	200 mm
Grinding spindle speed	0 – 10,500 rpm
Spindle ends	2
Tool adapter	HSK 50
Peak power	11.5 kW
Spindle Diameter	80 mm

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

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

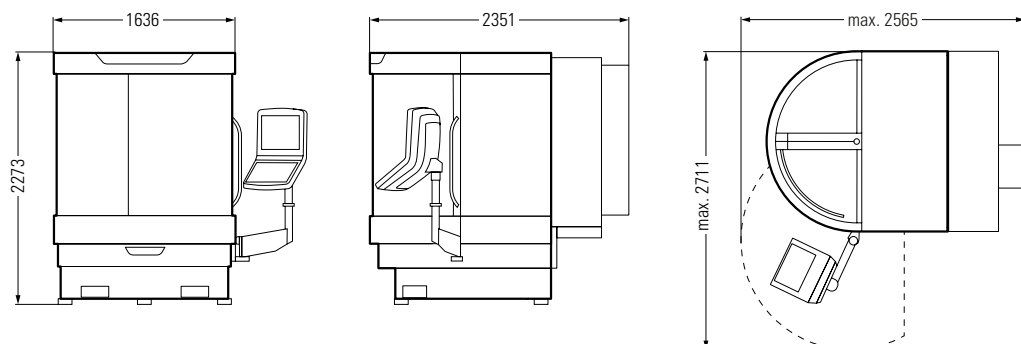
## OPTIONS

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; erosion function in HELITRONIC TOOL STUDIO; Automatic, electric measurement of machine reference (AEMDM); etc.



Option: Top loader

### HELITRONIC RAPTOR DIAMOND

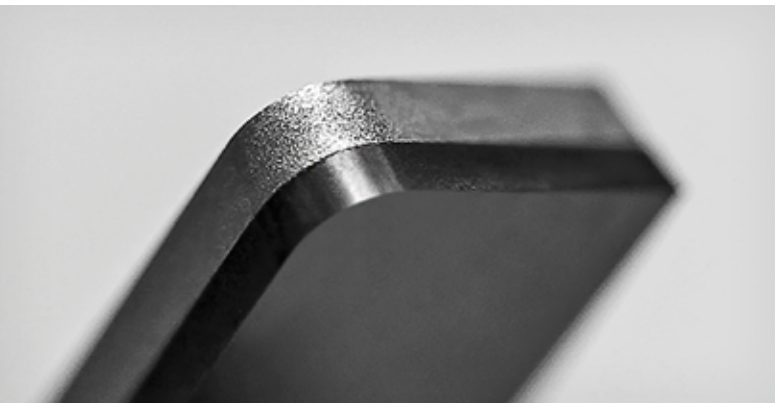


Dimensions in mm, subject to modifications due to technical progress and errors. No guarantee is provided for this information.

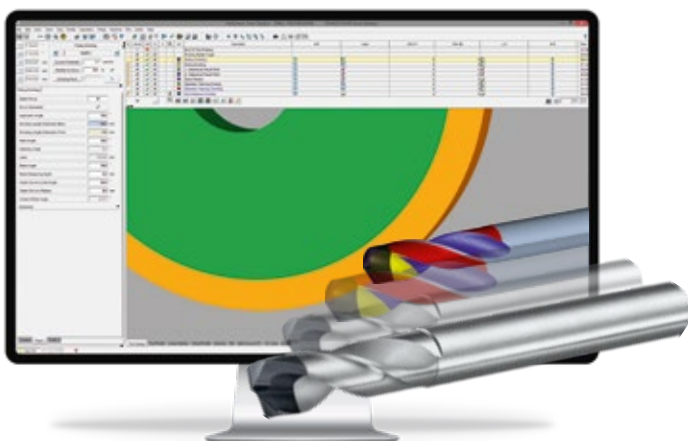
- 1 The maximum tool dimensions depend on the type of tool and its geometry, as well as the type of machining.
- 2 From the theoretical taper diameter of the workpiece holder.
- 3 Depends on the tool diameter.

### Optimum erosion process with FINE PULSE TECHNOLOGY

Our "FINE PULSE TECHNOLOGY" eroding concept sets new standards in terms of the surface quality, cutting edge roughness and process reliability of PCD tools. It is installed as standard in the HELITRONIC RAPTOR DIAMOND. The difference to the other tools in 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



### HELITRONIC TOOL STUDIO with integrated erosion function (optional)

"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"

- CAD/CAM system for creating tools, even with complex tool geometries. CAD, design, programming, simulation and production in one software program
- Simulation of grinding and/or eroding operations directly on the machine or at the PC workstation
- Automatic collision control
- PCD simulation
- High-precision integrated 3D-Live-Simulation. All parameter changes are immediately presented "live"
- Click & Edit – simple operation by selecting operations by directly clicking on the simulation model
- Flexible modular system thanks to a modular layout. Freely combinable and extendible operations for future further developments



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