

WALTER INFO 22/2015

# HELITRONIC DIAMOND EVOLUTION

Efficient rotary eroding and grinding machine, Two-in-one

**NEW  
OPTION  
TOP LOADER**



## Key parameters

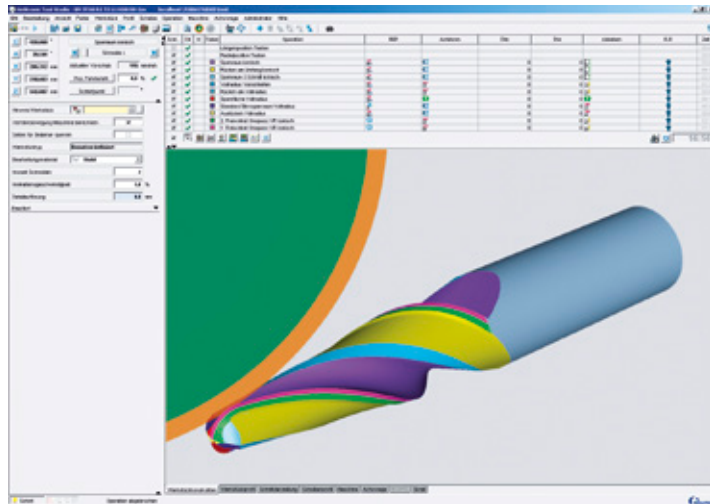
The HELITRONIC DIAMOND EVOLUTION is a high efficient solution within our EDM portfolio for rotary eroding of PCD/CBN tools and grinding of HSS/carbide tools in one single clamping cycle on a minimal footprint. Tool diameters from 1 to 165 mm, tool lengths up to 185 (255) mm, each item can weigh up to 30 kg.

# The HELITRONIC DIAMOND EVOLUTION at a glance



## Optimal erosion process with DIAMOND-PLUS

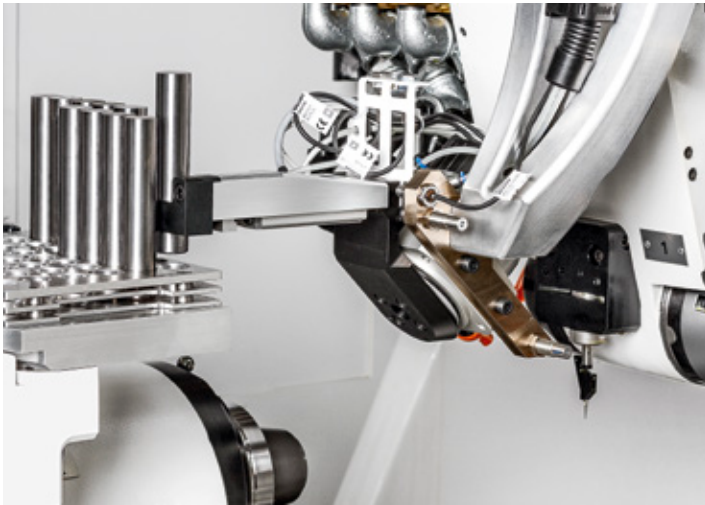
The latest generator development "DIAMOND-PLUS" which is delivered as standard in all EDM machines, offers through the new variable acceleration factor an optimal erosion process, independent of disturbances such as differences in material, electrode shape, stock removal, tool profile, etc. This means that the erosion process is continuously controlled to ensure constant quality. Such a process behavior is unique on the market. In addition, the new contour acceleration increases the eroding speed up to 40%, and with the fine finishing operation an optimal surface quality is simultaneously obtained.



## HELITRONIC TOOL STUDIO with integrated EDM functionality

- Design, programming, simulation and production of rotationally symmetrical tools and production parts
- EDM and grinding of complex tool geometries in a single clamping cycle
- Built-in Wizard technology (WALTER Knowledge Base)
- 3D Live simulation
- Collision detection





Option: Top loader

## Application

- Rotary eroding and grinding of rotationally symmetrical tools for metalworking and woodworking industries
- Cost-efficient production and / or re-sharpening
- Fully automated, complete machining with only a single clamping cycle
- Machinable materials include PCD, CBN, HSS, carbide, cermet, ceramic

## The machine

- Low vibration, solid grey cast iron, gantry type construction (patented)
- X, Y, Z linear axes with ball-type linear drive
- A, C rotating axes with worm drives
- Belt-driven spindle with two ends
- Each spindle end can take up to three rotating electrodes/grinding wheels
- Robot loader for HSK and cylindrical tools (option)
- Top loader: Up to 500<sup>3)</sup> tools from diameter 1 mm to 16 mm (option)
- 3-stage rotary eroding process for highest quality finish
- FANUC, the global standard for control equipment
- Numerous efficiency options

## Software

- HELITRONIC TOOL STUDIO, CAD/CAM software for design, programming, simulation and production – Now with EDM functionality
- Walter Window Mode WWM
- Numerous software options to extend the system's performance and to increase its efficiency

## Grinding spindle drive

Max. grinding wheel diameter	150 mm
Max. diameter of rotating electrode	150 mm
Grinding spindle speed	0 – 10,500 rpm

### HELITRONIC DIAMOND EVOLUTION with belt-driven spindle

Spindle ends	2
Tool holder	HSK 50
Peak power	9 kW
Spindle diameter	80 mm

## Others

### Paper filter

Capacity	approx. 350 l
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## Tool data <sup>1)</sup>

Min. tool diameter	1 mm
Max. tool diameter (vertical)	165 mm
Max. tool length, complete processing <sup>2)</sup>	185 mm
Max. tool length, peripheral grinding <sup>2)</sup>	255 mm
Max. tool length, end face grinding <sup>2)</sup>	185 mm
Max. tool weight	30 kg

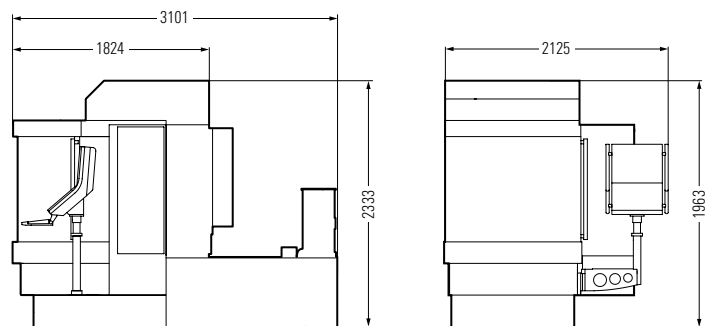
## Options

Manual and automatic steady rest, manual and automatic tailstock, glass scales, extensions for robot loader, combi filter system, mist extractor, silencer, etc.

<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 the theoretical taper diameter of the workpiece holder.

<sup>3)</sup> Depending on tool diameter.



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