

WALTER INFO 1/2021

HELITRONIC RAPTOR

THE REASONABLY PRICED ALLROUNDER
FOR PRODUCING AND REGRINDING TOOLS

NEW



The HELITRONIC RAPTOR is the ideal entry-level machine for efficient grinding and regrinding of rotationally symmetrical tools with a small footprint. For tools with diameters of 3 to 320 mm, tool length including End Face Operation up to 280 mm and weight up to 50 kg.

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HELITRONIC RAPTOR AT A GLANCE

APPLICATION

- Cost-effective grinding and regrinding of rotationally symmetrical tools for metal and wood industry
- Fully automated, complete machining in a single clamping cycle
- Materials include HSS, carbide, cermet, ceramic

MACHINE

- NCT 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 (standard)
- Productivity package (option) consisting of 24 kW grinding spindle drive unit (0–7000 rpm) and glass scales
- Up to three grinding wheels for each spindle end
- Automatic clamping cylinder with clamping device
- Top loader: Up to 500³⁾ tools from 3 mm to 32 mm in diameter (option)
- FANUC, the global standard of control technology

SOFTWARE

- HELITRONIC TOOL STUDIO
- Numerous software options to extend the system's performance and to increase its efficiency

GRINDING SPINDLE DRIVE

Max. grinding wheel diameter	200 mm
Grinding spindle speed (standard)	0–10,500 rpm
Spindle ends	2
Tool adapter	NCT
Peak power	11.5 kW
Spindle Diameter	80 mm

TOOL DATA¹⁾

Min. tool diameter	3 mm
Max. tool diameter (vertical)	320 mm
Max. tool length for peripheral grinding ²⁾	350 mm
Max. tool length for end face grinding ²⁾	280 mm
Max. tool weight	50 kg

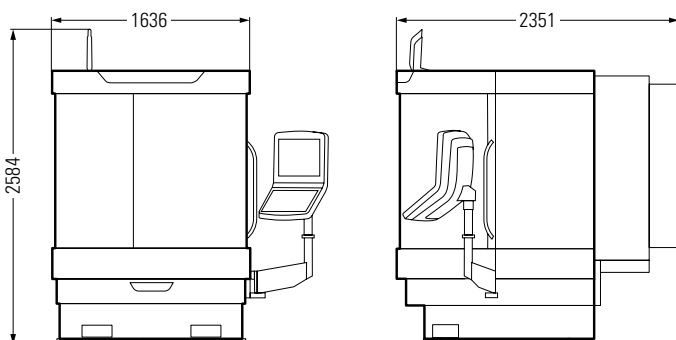
OPTIONS

Productivity Package (24 kW spindle and glass scales); Top loader; HSK spindle; measuring probe for measuring the grinding wheels; manual support steady rest; manual tailstock; workpiece holder with torque motor; sharpening stone holder; work table; vapour separator; silencer; fire extinguishing system; Automatic, electric measurement of machine reference (AEMDM); etc.



Option Top loader

HELITRONIC RAPTOR



Dimensions in mm. Options, accessories or doors in open position may increase the dimensions of the machine. No guarantee is provided for this information.

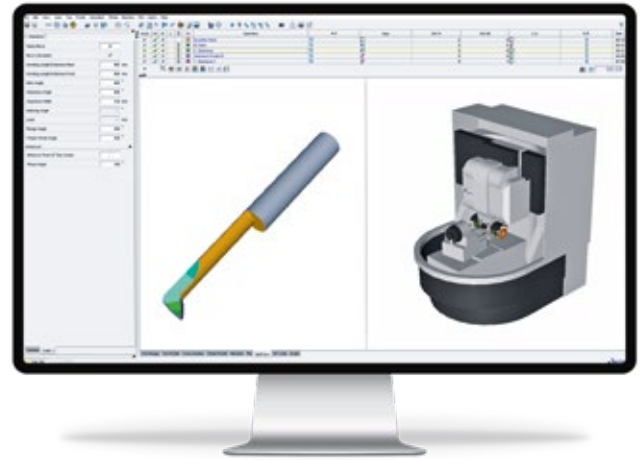
- 1 The maximum tool dimensions depend on the type of tool and its geometry, as well as the type of machining.
- 2 From the theoretical taper diameter of the workpiece holder.
- 3 Depends on the tool diameter.

HELITRONIC TOOL STUDIO

adds operational convenience to 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. HELITRONIC TOOL STUDIO: This combines ease of programming with the greatest possible flexibility. With minimum complexity, machining steps and movement sequences for both rotationally symmetrical standard tools and for special tools can be programmed by the operator. 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 option: Feedrate Optimizer

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

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.

Efficiency option: Tool Balancer

- Analysis of the centre of gravity
- Balancing the tool

The "Tool Balancer" is an easy way to analyse, and balance out if necessary, centre-cutting tools with an odd number of flutes (unevenly divided tools) or special tools. The efficiency-increasing method has two core functions: One is to analyse the centre of mass and the other is to automatically balance the tool using different techniques. The approach is simple and can be mastered with just a few mouse clicks. Analysis during the development phase means that the process of prototype production can be significantly shortened. Balanced tools have a longer tool life, can machine at higher speeds, produce higher-quality surfaces and result in less wear-and-tear. Asymmetrical tools are well-suited to machining processes with high rotation speeds up to a point where significant imbalance forces occur.



Walter Maschinenbau GmbH
Jopestr. 5 · 72072 Tübingen, Germany
Tel. +49 7071 9393-0
info@walter-machines.com

For worldwide contact details, please visit
www.walter-machines.com

