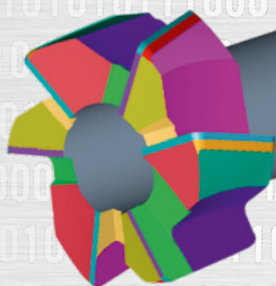


HELITRONIC TOOL STUDIO 3 R3

**RELEASE 3
UPGRADE**



New capabilities

The current release version 3 R3 includes new possibilities for the CAD/CAM grinding software HELITRONIC TOOL STUDIO. Our customers can use the version 3 R3 for more efficiency and higher productivity to increase their competitiveness.



Grinding



Eroding



Laser



Measuring



Software



Customer Care

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 in the HELICHECK series for contactless complete measurement of tools and production parts.

Walter Maschinenbau GmbH is part of the UNITED GRINDING Group. Together with our sister company, Ewag AG, 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, rotary 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.

HELITRONIC TOOL STUDIO 3 R3

The version 3 R3 for the grinding software HELITRONIC TOOL STUDIO extends its capabilities as one of the leading grinding software. WALTER is the expert in tool machining and inspires customers with its solutions. Plenty of new abilities gives your WALTER grinding, measuring or eroding machine new possibilities for tool machining and tool measurement.



Software

HELITRONIC TOOL STUDIO 3 R3 at a glance

Application

- Design, programming, simulation, production of rotationally symmetrical tools and production components
- Grinding and regrinding of complex tool geometries in a single clamping
- Economical from batches of 1 to mass production
- HELITRONIC TOOL STUDIO with licence erosion

Software

- HELITRONIC TOOL STUDIO with integrated wizard technology (WALTER knowledge base)
- Numerous options and extensions for more features and special applications

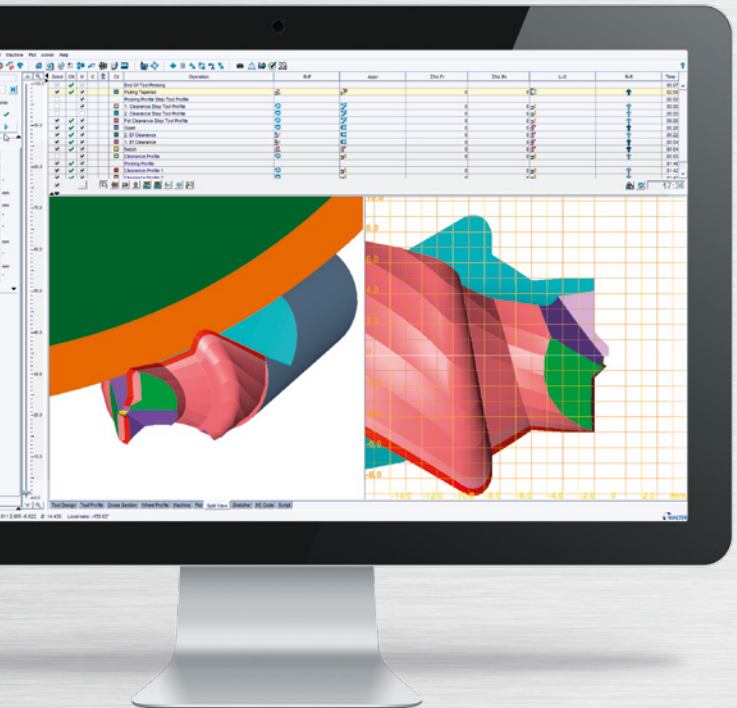
“What you see is what you grind” – this variant of Microsoft founder Bill Gates’ world-famous quote “what you see is what you get” brings the philosophy of HELITRONIC TOOL STUDIO into focus.



¹⁾ No need for a hardware extension for machines with HMC 600 control.
Machines with controls type HMC 400 and 500 require a hardware extension.

Machines

- Fully automatic CNC tool grinding machines and/or tool erosion machines from the HELITRONIC series
- Grinding machines with Andron control will still be supported¹⁾
- Compatible with PCs and laptops with Windows XP, Windows 7, Windows 8, Windows 8.1 and Windows 10





1. Clearance Profile EF for axial flutes

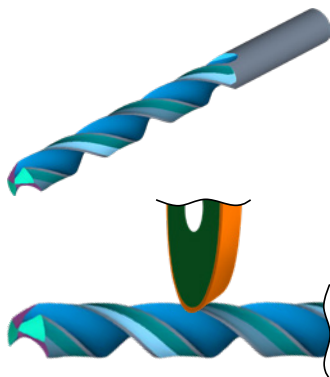
Overview:

Possibility to align the operation "Clearance Profile EF" perfectly to the operations:

- Fluting axial or probing flute axial
- Fluting axial regrinding or probing flute axial regrinding

Benefit:

- High accuracy positioning via regrinding or probing



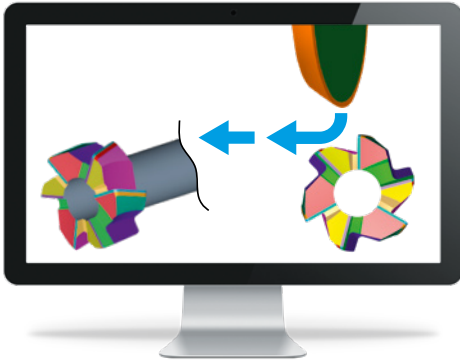
2. New parameter "rear margin width" for double margin drills

Overview:

- This new functionality allows the operator to create double margin drills ground with the diameter clearing operation

Benefit:

- Faster and more flexible tool designing



3. New fluting method “gash style” for operation axial fluting

Overview:

- With the new option “Use Gashing Style” the grinding move can be defined similar to a gashing operation (Grinding in Y Axis direction)

Benefit:

- More flexible way to grind axial flutes
- Typical use case “Side Milling Cutters”

4. New parameter “distance ahead of center” in operation “axial flute regrinding”

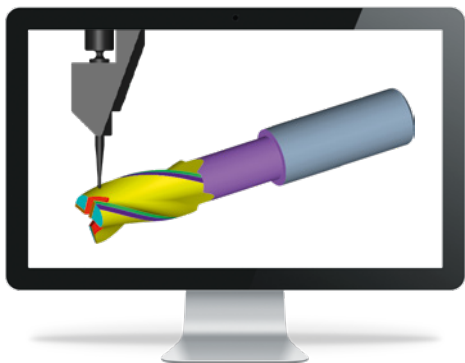
Overview:

- Modern cutting tools require a well defined tool geometry. Especially brazing process often results in slight variations of rake geometry. This option helps to grind rake to a defined target value ensuring even material removal on flute face during the grinding process

Benefit:

- This ensures an even amount of material removal at the flute face





5. Combination necking regrinding

Overview:

- To combine the necking/circular grinding operation to a regrinding idn. The parameterization of the neck depends on the probed diameter (smart probing) and the probed flute length (probing flute helix)

Benefit:

- Regrinding in one clamping + more flexibility in HELITRONIC TOOL STUDIO

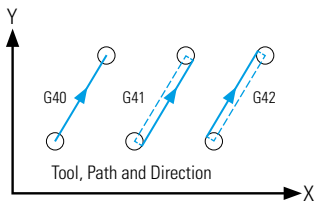
6. Option "FLEXPROG" – new possibility: Cutter Radius Compensation G41/G42

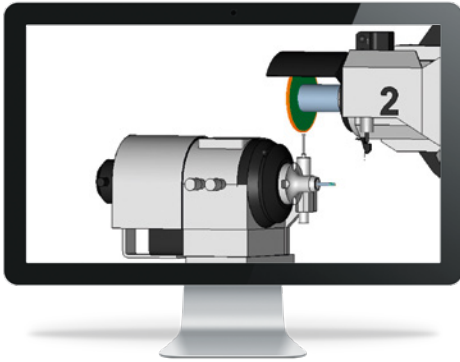
Overview:

- This feature enhances the operator to use G41/G42 NC-Codes with the HELITRONIC TOOL STUDIO option FLEXPROG

Benefit:

- If the tool radius compensation is applied, the workpiece contour points are programmed directly. Therefore, the tool center point path isn't taken into account. The control must only be told whether the tool travels on the left (G41) or right (G42) along the contour





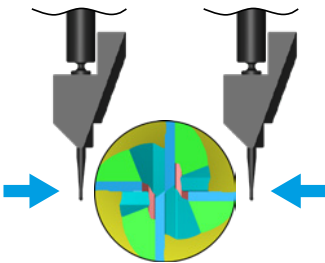
1. Option “Grinding wheel measurement” inside the machine for HELITRONIC MICRO

Overview:

- This new functionality allows the operator to probe wheel geometry inside the machine during the grinding process. The wheel wear can be compensated automatically and will be taken for the next tool

Benefit:

- Increase productivity due to on time measurement + compensation of the grinding wheels
- Higher quality due to a complete controlled grinding process



2. Option „IMS” – new possibility: direct diameter probing with snap gauge principle

Overview:

- This new possibility allows a direct and precise measurement of the tool diameter

Benefit:

- Possibility to keep grinding process in tighter diameter tolerances due to improved measurement technology



3. Option “grinding wheel measurement” in combination with option dressing for HV 400L & HVD 400 L

Overview:

- This new functionality allows the operator to dress the grinding wheels according to the desired wheel form and afterwards probe the wheel geometry inside the machine during the grinding process. The wheel dimensions can be compensated automatically and will be taken for the next tool

Benefit:

- Combine dressing and wheel qualification for more accuracy in the grinding process

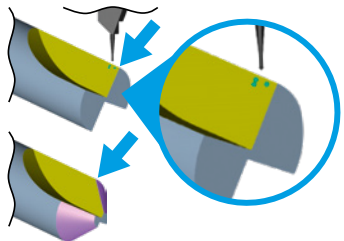
4. Probing flute axial – new possibility: intersection/combination with “axial-radial clearance”/ “clearance axial-radial c-axis”

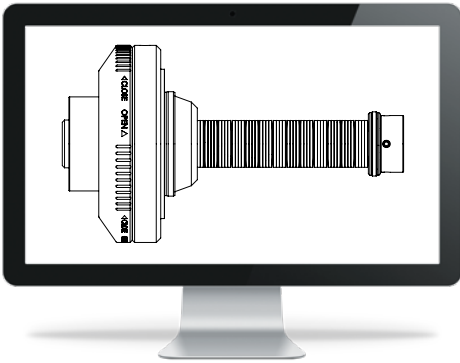
Overview:

- Using operation “Probing Flute Axial” to get the orientation of the Axial Flute Plane and intersect it with the Chamfer Profile in order to get proper position for “Axial-Radial Clearance”

Benefit:

- Higher accuracy on pre – ground axial flutes and/or safety check of the wheel wear on the fluting wheel





1. Combination of HSK adapter and HSK chuck

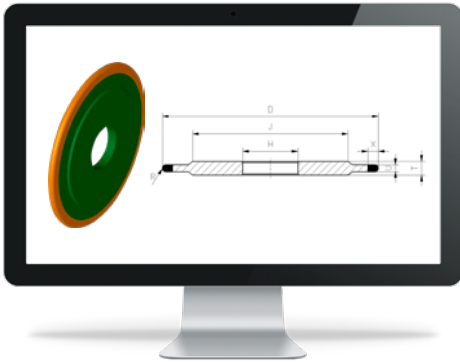
Overview:

- Possibility to simulate an HSK adapter on the workpiece holder in HELITRONIC TOOL STUDIO

Benefit:

- More safety in collision control.
Faster workflow





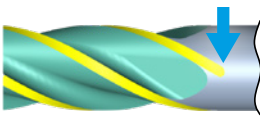
1. Definable wheel body on 14F1 wheel

Overview:

- Ability to define the wheel body of the 14F1 wheel type in HELITRONIC TOOL STUDIO

Benefit:

- Improved collision detection for wheel body

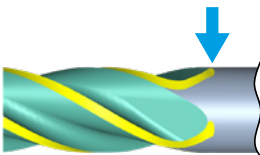


Extend base move – **on**

2. Clearance profile – new parameter: “extend base move”

Overview:

- “Clearance Profile Operation” and “Clearance Operation” can be intersected with a base operation e.g. with a fluting operation. In this version there is an independent checkbox “Extend Base Move”, which allows intersecting with or without a virtual extension of the base operation at the front or the back



Extend base move – **off**

Benefit:

- More flexibility in designing tools



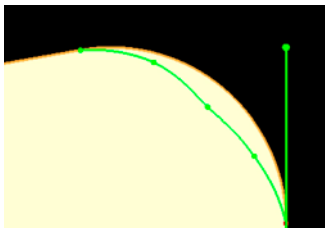
3.3. Password protection for option “network”

Overview:

- Operators are able to enable and disable the network in the general settings. Protect the HELITRONIC TOOL STUDIO Network by a Password input from being switched off

Benefit:

- More safety



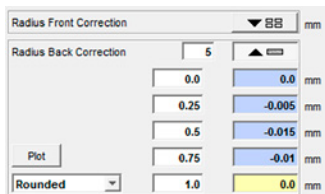
4. Bond radius correction (Upgrade)

Overview:

- To adjust the bond radius according to wheel wear with user experience or via exact measurement of the wheel radius deviation

Benefit:

- More accuracy and more flexibility for the grinding process





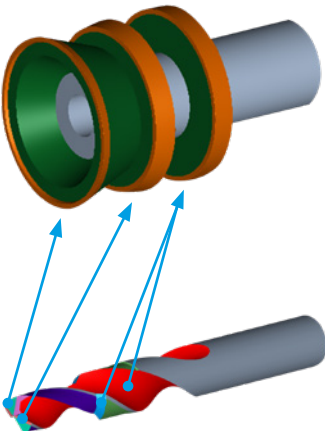
5. Quick Wizard based on tool properties (Upgrade)

Overview:

- Browse & search your IDN-Databse through special tool attributes

Benefit:

- Fast accessibility to your tool data. If no suitable IDN is found, a new IDN can be created with just one mouse click



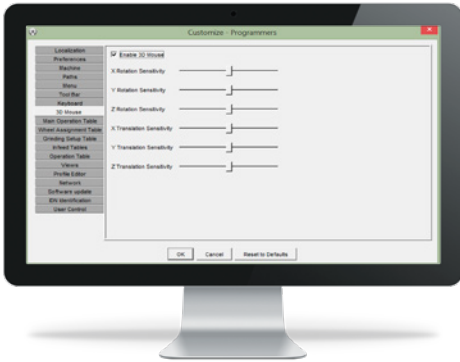
6. Automated wheel assignment

Overview:

- Easy assignment of user grinding wheels to operations from new IDN's from Tool Wizard

Benefit:

- Time savings



7. 3D mouse support

Overview:

- Using a 3D mouse is now possible in HELITRONIC TOOL STUDIO

Benefit:

- More flexibility and higher user friendliness for the work preparation





1. HELITRONIC MICRO & HV 700 L: option "automatic electric reference measurement" of the linear axis X, Y and Z

Overview:

- The automated electrical machine axis referencing replaces the manual axis referencing with an automated process

Benefit:

- The precise positioning of the axes, which works with electrical conductivity makes the measurement independent of the operator and eliminates the factor human



2. Import and export of keyboard bindings (Hotkeys)

Overview:

- The ability to define keyboard shortcuts for HELITRONIC TOOL STUDIO commands plus import or export the keyboard shortcut configuration as .xml-file and/or .html-file

Benefit:

- Save time while setting up your workspace



3. Option "Network Pro"

Overview:

- Machine works on central network database. Rights on IDNs and database are defined by individual User Rights. User Rights are given by Administrator and are stored in central User Control Database. IDN Locking and special treatment of Master IDN's is part of this new Network Concept

Benefit:

- Network solution with a state of the art user rights management
- Maximum control and safety in your shop floor
- Avoid duplicate IDN's spread over several databases



4. Display of spindle runtime and spindle starts at the HELITRONIC TOOL STUDIOS control page

Overview:

- To have a detailed overview about the actual status of the spindle(s) on a HELITRONIC machine. Display the spindle run time and spindle starts of each spindle in the HELITRONIC TOOL STUDIOS control page

Benefit:

- Service monitoring of spindle condition details



5. Option "OPC UA" (Open Platforms Communica- tions Unified Architecture)

Overview:

- The ideal communication protocol for Industry 4.0
- OPC UA (Open Platforms Communications Unified Architecture) is a vendor-independent communication protocol for industrial automation applications. It is based on the client-server principle and allows

seamless communication from the individual sensors and actuators up to the ERP system or the cloud. The protocol is platform-independent and features built-in safety mechanisms

Benefit:

- International IEC standard
- Vendor-independence
- Safe and reliable
- Platform-independence
- From the sensor to the ERP-system

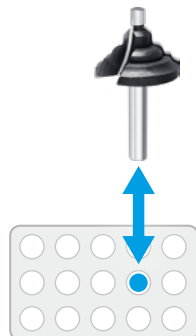
6. Identical pick and drop position in robot loader

Overview:

Handling tools in the robot loader with a bigger deviation of shank and tool diameter e.g mushroom tools, side & face cutters, etc... require more space on a standard robot pallet. Therefore the handling strategy has been changed to use the identical pick and drop position on each pallet

Benefit:

- Space saving solution. Finished tool pallet can also be used for storage





7. Option – “TD ReCAD Output”

Overview:

- Export of the grinding wheel path for use with the option TD ReCAD from ISBE
- With TD ReCAD, created 3D STEP models can be used directly in AdvantEdge FEM – the leading FEM software for optimization of cutting tools. There is no need for a time-consuming and complex remodeling with the aid of CAD construction
- Besides, comparisons between the designed and simulated or already manufactured tool can

be performed with the 3D STEP models quickly and easily

- With this option WALTER is only offering the interface to the software from ISBE. For more information please contact company ISBE

Benefit:

- Using ISBE TD ReCAD, STL data can be transferred very easily into reusable 3D STEP-models, no matter whether the STL data are created by measuring machines or by simulations

8. New cleaning cycle for wheel-changer type 4/8 station changer (HV 400 L/ HP 400)

Overview:

- The “oil/carbide” mist combination which results out of the grinding process will be eliminated mostly through the mist extractor. It is now possible to clean the wheel sets and the coolant distributors from time to time via

a automated cleaning cycle inside the wheel changer system

Benefit:

- Best performance and quality enhancement for the automated grinding process



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