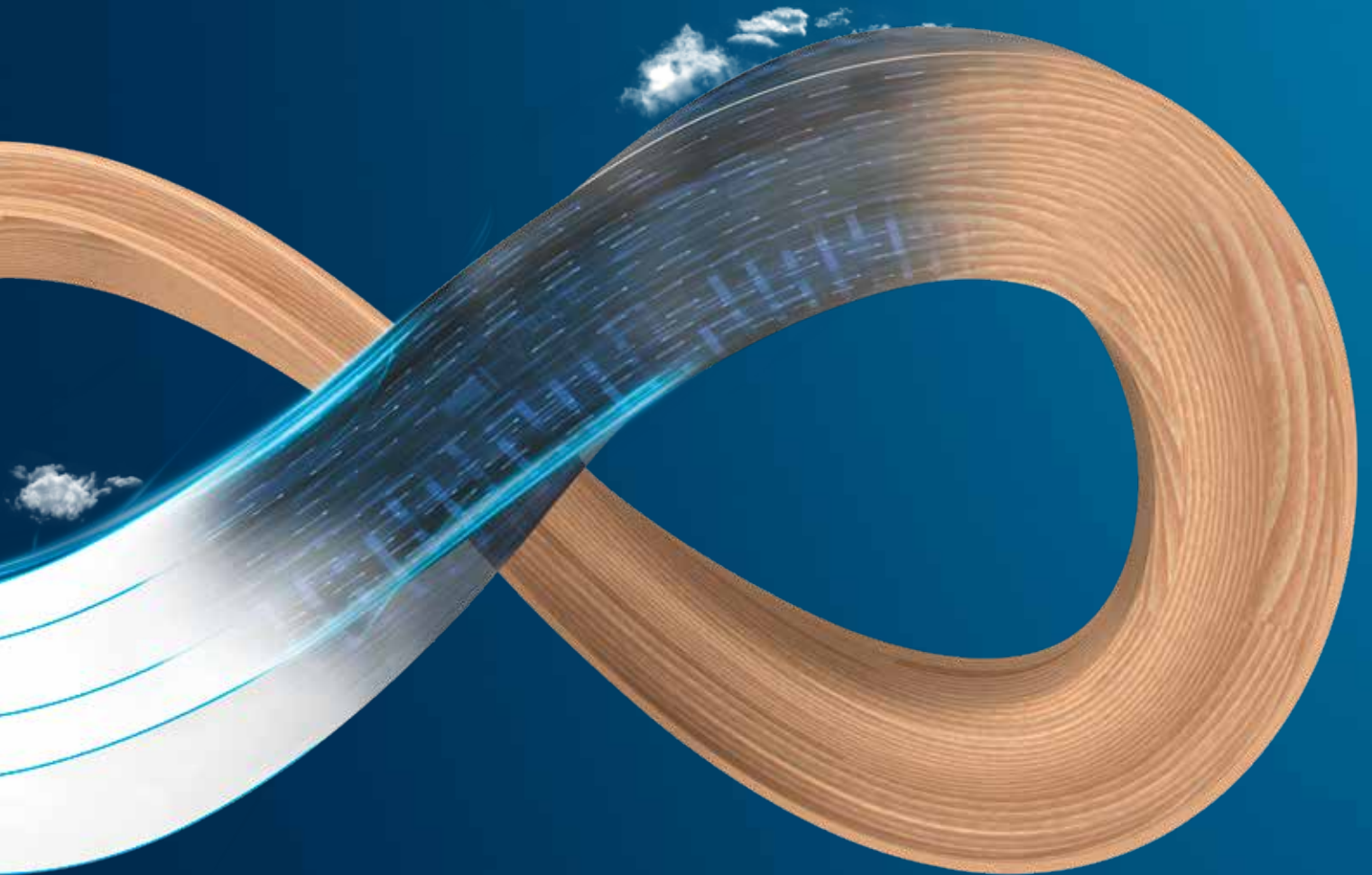


WOODWOP⁸ CNC programming

New Functions. Infinite possibilities.

At a glance: Versions 8 and 8.1



The woodWOP success story began more than 30 years ago.

The basic principle of woodWOP has not changed to this day. In the latest version woodWOP 8, HOMAG offers users a large number of new functions and endless possibilities.

1991	woodWOP 1	Premiere at LIGNA 1991: First workpiece-oriented programming in the wood industry
1994	woodWOP 2.5	First version under MS-DOS for work preparation workstations
1997	woodWOP 4.0	First Windows version with unlimited number of contour elements
2002	woodWOP 5.0	Wizard technology for edge processing programming
2009	woodWOP 6.0	3-dimensional representation of workpiece, tool and clamping device
2012	woodWOP 6.1	CAD functions
2015	woodWOP 7.0	CAM plugin for 5-axis programming
2017	woodWOP 7.1	Feature detection
2019	woodWOP 7.2	Extension routing macros, 3D Model Wizard
2021	woodWOP 8.0	New wizard, contour templates, Formula Wizard, MPRXE exchange format
2023	woodWOP 8.1	Nesting plugin, extensions block macros

HOMAG.COM

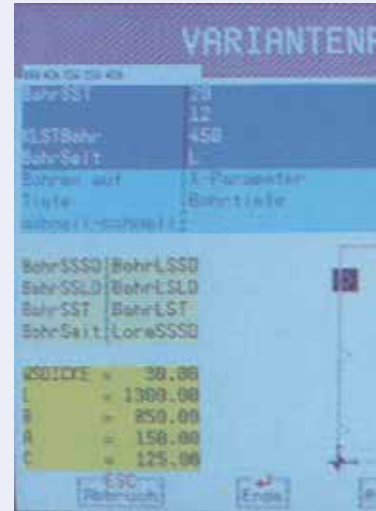


Free download of woodWOP components

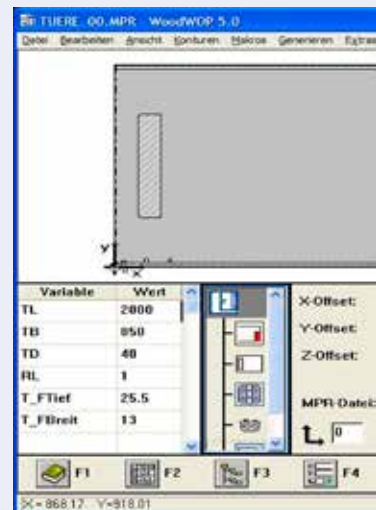
FORUM.HOMAG.COM



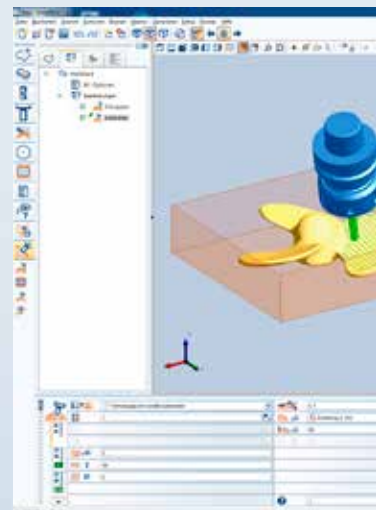
The world's largest forum on the subject of woodWOP



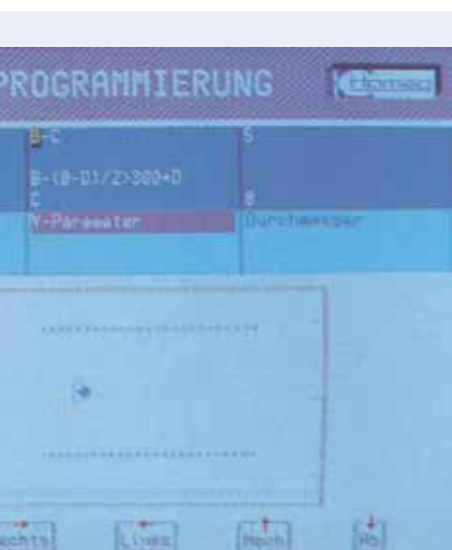
1991 woodWOP 1.0



2002 woodWOP 5.0



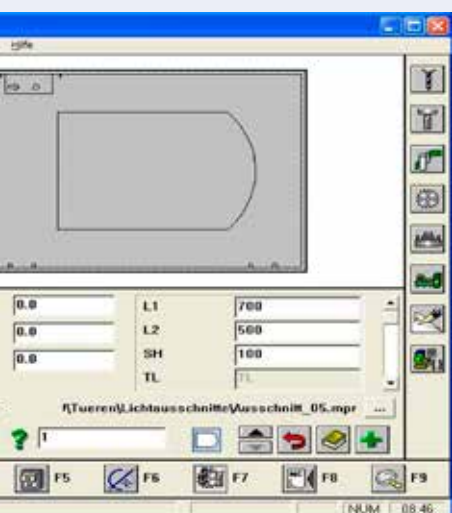
2015 woodWOP 7.0



woodWOP – the CNC programming system from HOMAG

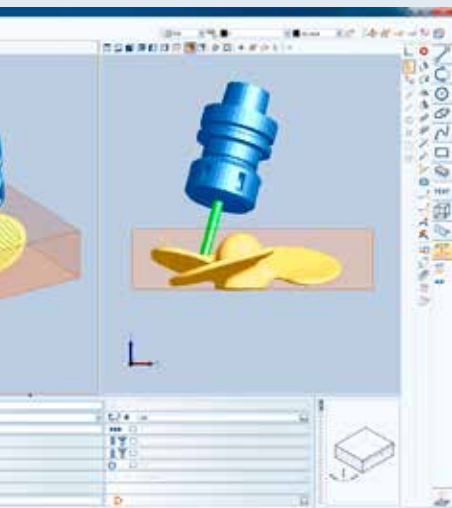
woodWOP is the CNC programming system from HOMAG. The centerpiece of the innovative user interface is the large graphic area in which the workpiece is displayed three-dimensionally. Routing, drilling or saw cuts are programmed quickly and easily by entering the processing parameters and displayed realistically in the graphic. This guarantees maximum programming reliability and constant control during program creation.

YOUR SOLUTION



CONTENT

- 04 Formula assistant
- 05 Mass changes
- 06 List of the used tools
- 07 3D visualization of units
- 08 Variable table
- 10 Additional parameters for macro names
- 12 Extensions block macro
- 14 woodWOP templates
- 16 CAD and CAM plugin
- 18 Nesting plugin
- 20 Other extensions
- 21 Wizard
- 22 Technology database "TechEdit"
- 23 Import formats



Enhancements in operation and in the WOP area

Formula assistant

The new formula assistant makes the creation of formulas extremely simple. The user has everything in view in the multi-line formula field. Building blocks such as mathematical functions, variables and conditions are at the user's fingertips for assembling their formulas. The formula components are highlighted in color. This makes even complex formulas easy to understand. Not only the formula result, but also partial results can be calculated.

Advantages:

- Convenient operation due to modular principle
- Support for complex formulas

The screenshot displays the 'woodWOP Formula editor' window. The main area shows a multi-line formula being edited:

```

1 IF MATERIAL = "MDF" OR MATERIAL = "CHIPBOARD"
2 THEN
3 101
4 ELSE
5 102

```

The formula components are color-coded: 'IF', 'OR', and 'CHIPBOARD' are in red; 'MDF' is in blue; 'THEN' is in blue; '101' is in black; 'ELSE' is in blue; and '102' is in black. The line containing '102' is highlighted in yellow.

On the right side, there are two panels:

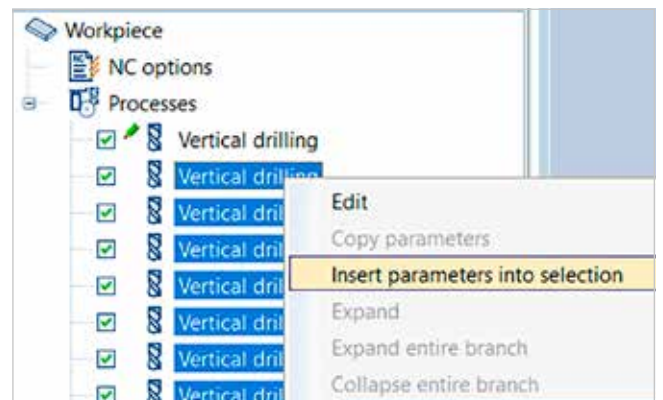
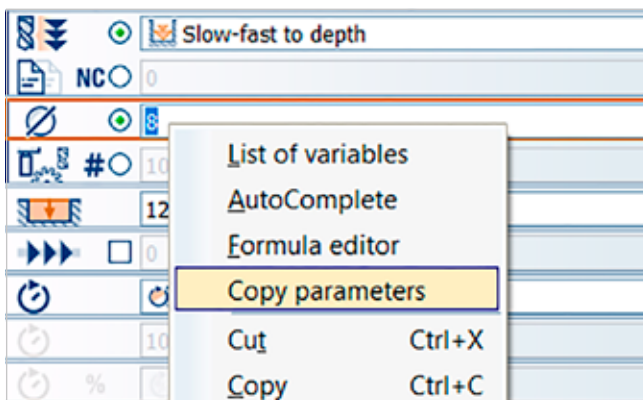
- Formelelemente:** A list of mathematical functions and operators, including '&', 'ABS(<Zahl>)', 'AND', 'ARCCOS(<Zahl>)', and 'ARCSIN(<Zahl>)', along with a 'Paste' button.
- Variables:** A table listing variables with their values and comments.

Name	Value	Comment
_BHX	1	Maschine 1 - BHX500
_ABD	0	keine ABD
_mirror	0	gespiegelt
_nonmirror	1	nicht gespiegelt
		gespiegelt in Y
		nicht gespiegelt in Y
		kleiner Kreisbogen ccw
		kleiner Kreisbogen cw

At the bottom right, there are 'OK' and 'Cancel' buttons. A 'Formel prüfen' button is also visible.

Mass changes of parameter values

With the transfer of parameter values, mass changes to macros can be made quickly and easily with just a few clicks.



The way it works:

- Make changes in a macro
- Transfer of one or all parameters to the parameter clipboard
- Selection of all other macros to be changed
- Insertion of one or all parameter values

Advantages:

- Time saving when creating or modifying programs
- Convenient and fast correction, e.g. of incorrect or incomplete values from CAD data transfer



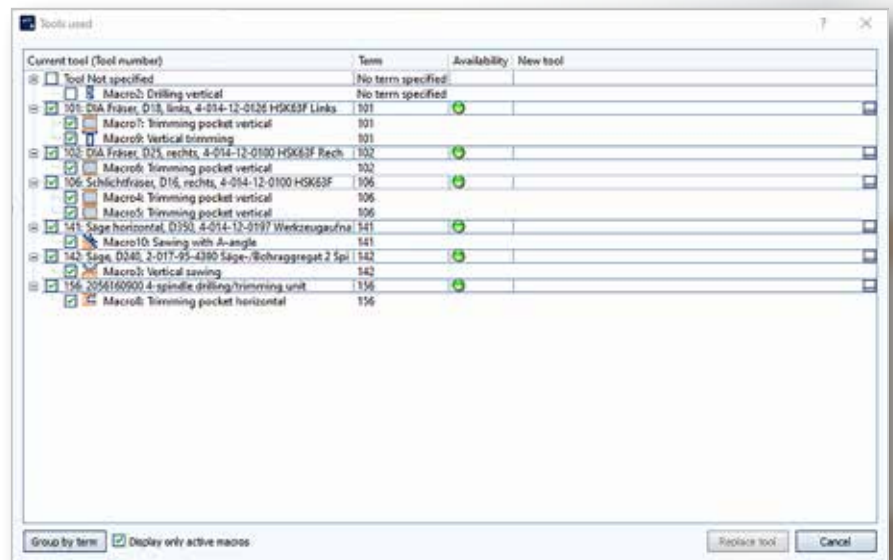
Enhancements in operation and in the WOP area

List of the used tools

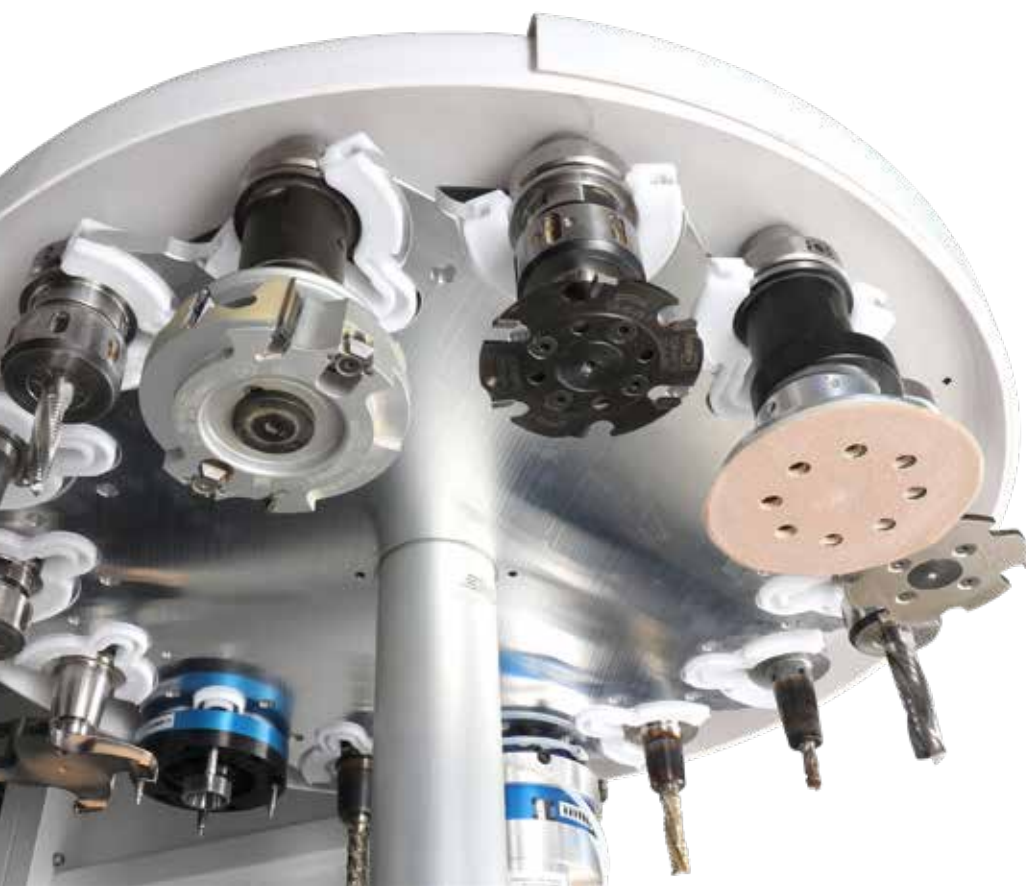
- List of all tools used in the program
- Filtering on all macros or only the active macros
- Display of the availability of the tools
- Easy replacement of the tools

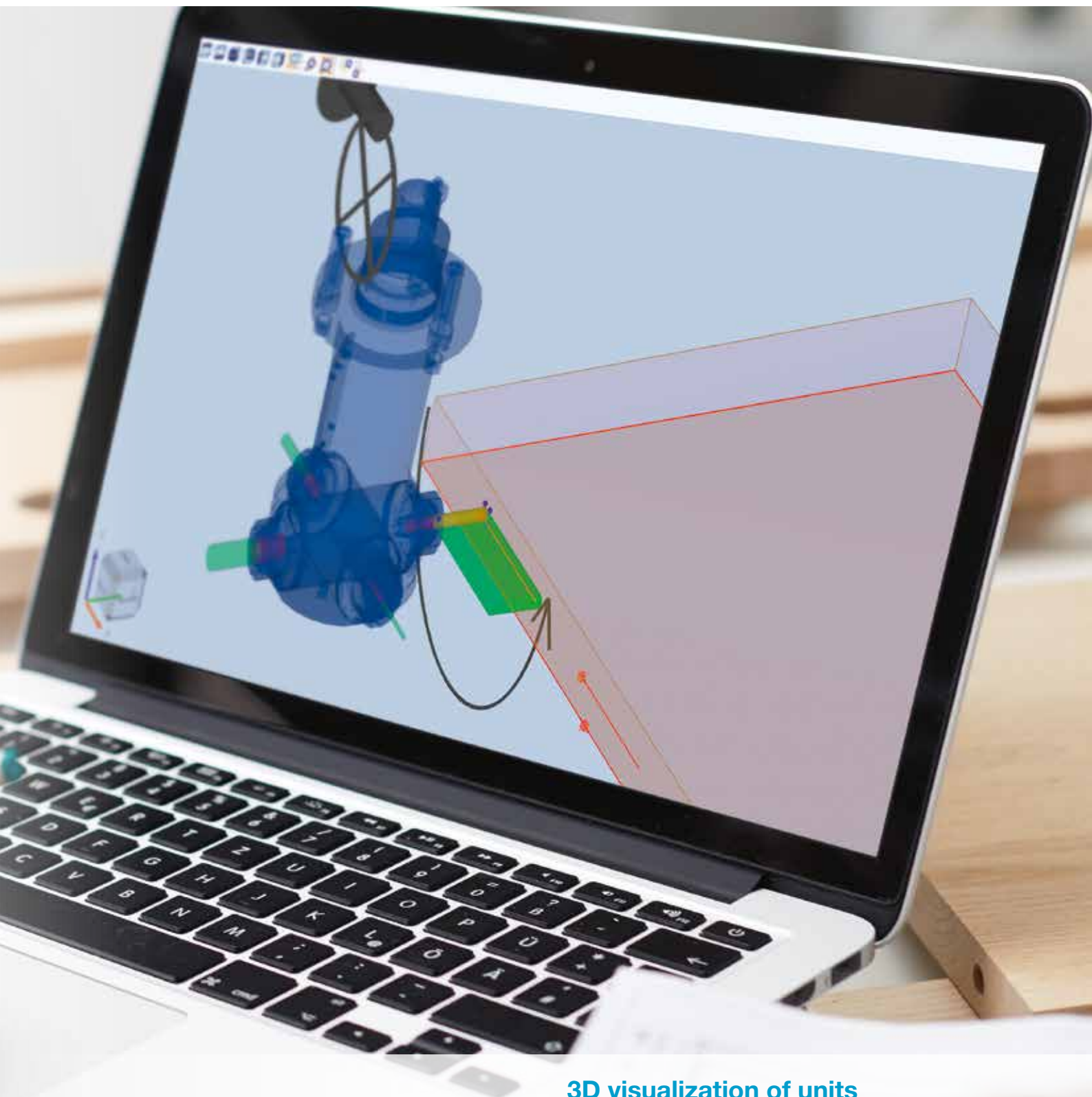
Advantages:

- Convenient overview of the necessary tools
- Better preparation for setting up the machine
- Fast modification of the program, e.g. in case of errors made by the work preparation or the CAD/CAM system



Current tool (Tool number)	Term	Availability	New tool
<input type="checkbox"/> Tool Not specified	No term specified		
<input type="checkbox"/> Macro2: Drilling vertical	No term specified		
<input checked="" type="checkbox"/> 101: DIA Fräser, D18, links, 4-014-12-0126 HSK63F Links		<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Macro7: Trimming pocket vertical	101		
<input checked="" type="checkbox"/> Macro9: Vertical trimming	101		
<input checked="" type="checkbox"/> 102: DIA Fräser, D15, rechts, 4-014-12-0100 HSK63F Rech		<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Macro9: Trimming pocket vertical	102		
<input checked="" type="checkbox"/> 106: Schlichtfräser, D16, rechts, 4-014-12-0100 HSK63F		<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Macro4: Trimming pocket vertical	106		
<input checked="" type="checkbox"/> Macro9: Trimming pocket vertical	106		
<input checked="" type="checkbox"/> 141: Säge horizontal, D190, 4-014-12-0197 Werkzeugeufna		<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Macro10: Sawing with A-angle	141		
<input checked="" type="checkbox"/> 142: Säge, D185, 3-017-99-4390 Säge-/Sohrapparat 2 Spl		<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Macro9: Vertical sawing	142		
<input checked="" type="checkbox"/> 156: 2056160900 4-spindle drilling/trimming unit		<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Macro9: Trimming pocket horizontal	156		





3D visualization of units

Display of the 3D unit model directly in woodWOP

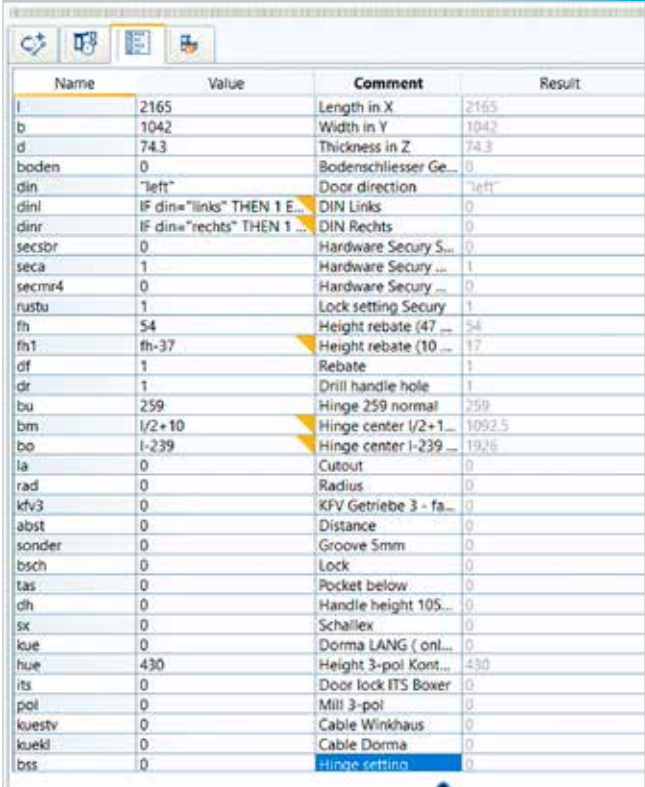
Advantages:

- Better recognition of the programmed operation
- Ensuring error-free programming

Enhancements in operation and in the WOP area

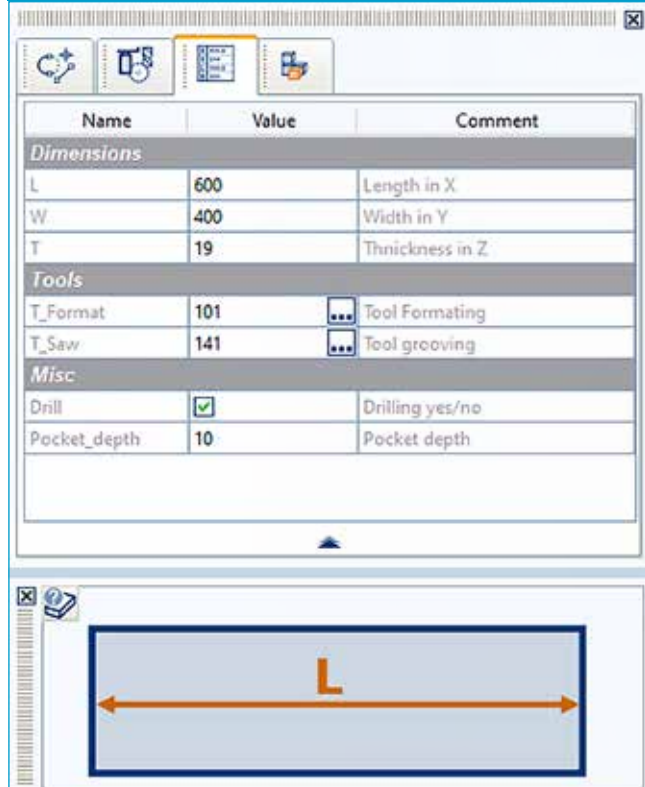
The variable table

OLD



Name	Value	Comment	Result
l	2165	Length in X	2165
b	1042	Width in Y	1042
d	74.3	Thickness in Z	74.3
boden	0	Bodenschliesser Ge...	0
din	"left"	Door direction	"left"
dinl	IF din="links" THEN 1 E...	DIN Links	0
dinr	IF din="rechts" THEN 1 ...	DIN Rechts	0
secsbr	0	Hardware Security S...	0
seca	1	Hardware Security ...	1
secm4	0	Hardware Security ...	0
rustu	1	Lock setting Security	1
fh	54	Height rebate (47 ...	54
fh1	fh-37	Height rebate (10 ...	17
df	1	Rebate	1
dr	1	Drill handle hole	1
bu	259	Hinge 259 normal	259
bm	l/2+10	Hinge center l/2+1...	1092.5
bo	l-239	Hinge center l-239 ...	1926
la	0	Cutout	0
rad	0	Radius	0
kfv3	0	KFV Getriebe 3 - fa...	0
abst	0	Distance	0
sonder	0	Groove 5mm	0
bsch	0	Lock	0
tas	0	Pocket below	0
dh	0	Handle height 105...	0
sx	0	Schallex	0
loe	0	Dorma LANG (onl...	0
hue	430	Height 3-pol Kont...	430
its	0	Door lock ITS Bower	0
pol	0	Mill 3-pol	0
kuestv	0	Cable Winkhaus	0
kuekl	0	Cable Dorma	0
bss	0	Hinge setting	0

NEW



Name	Value	Comment
Dimensions		
L	600	Length in X
W	400	Width in Y
T	19	Thickness in Z
Tools		
T_Format	101	Tool Formating
T_Saw	141	Tool grooving
Misc		
Drill	<input checked="" type="checkbox"/>	Drilling yes/no
Pocket_depth	10	Pocket depth

Diagram showing a rectangular shape with an 'L' corner and a double-headed arrow indicating length 'L'.

The variable table is extended by some new possibilities:

- New attributes „Hide“ (hide row) and „Boolean“, „Toolnumber“
- Drop-down list
- Define minimum and maximum value
- Define auxiliary graphics
- Two views: List view and form view
- Separator with text as header

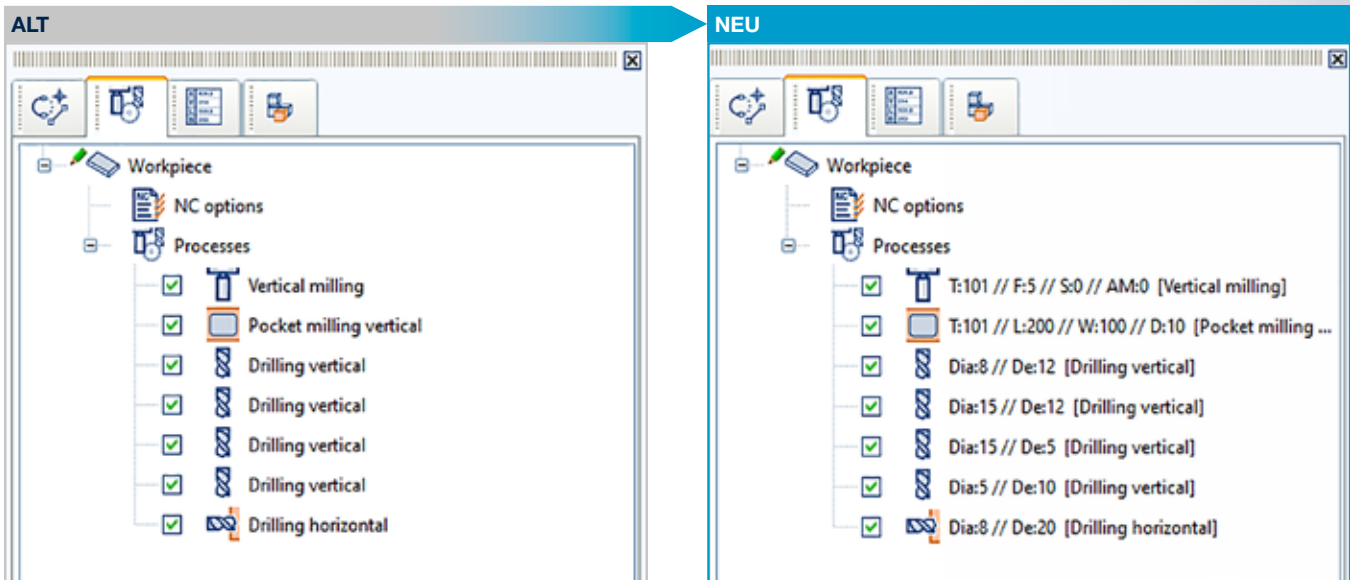
Advantages:

- Easier operation due to clear variable table
- Simpler component programming



Enhancements in operation and in the WOP area

Additional parameters for macro names



- Display of additional parameter values in the macro list
- Individually definable which parameters should be displayed in addition to the macro name
- Settings → General → Display additional parameters/Define additional parameters

Advantages:

- Better overview in the macro list
- Search less, find more

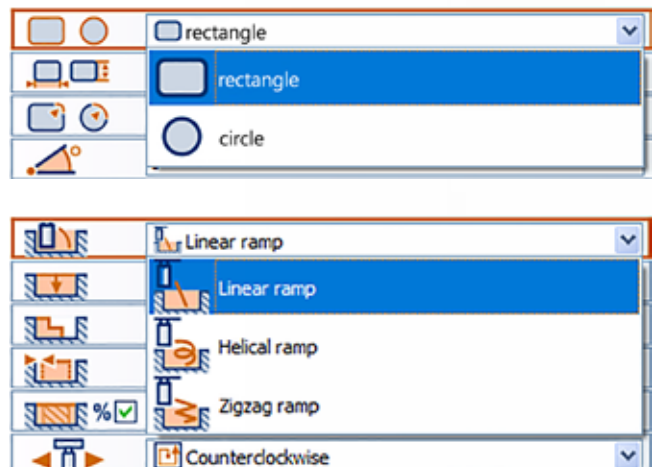
Pocket macros

Extensive revision of and new functions for the pocket macros

- Reference point selectable: pocket center point, corner point or center point of a pocket side
- Specification of pocket shape rectangle/circle
- Approach modes: linear ramp, helical ramp or zig-zag ramp
- Routing direction: clockwise or counter-clockwise, synchronous or counter-rotation

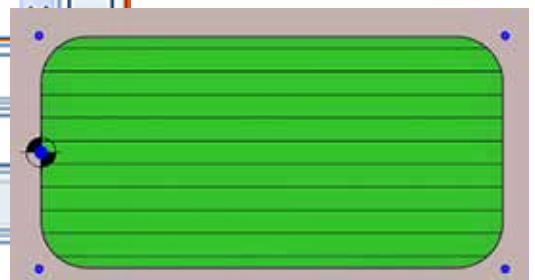
Advantages:

- Coordinate input as dimensioned in the drawing, no conversion necessary
- Better quality due to better approach modes





	<input type="checkbox"/> Minimum	<input checked="" type="checkbox"/> Centre
	Minimum	200
	Centre	
	Maximum	

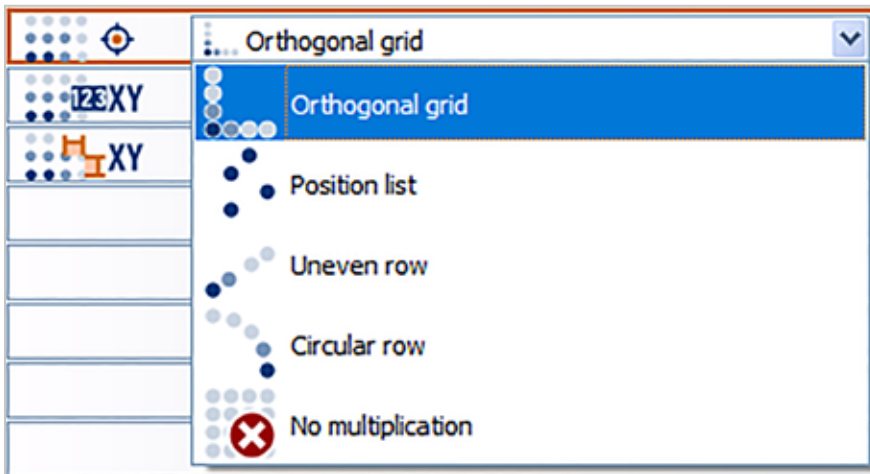


Enhancements in operation and in the WOP area

Extensions block macro

A block macro in woodWOP is used to group and multiply the macros it contains. So far, such multiplications are only possible in an orthogonal grid, i.e. n times in X and m times in Y. New ways to multiply are:

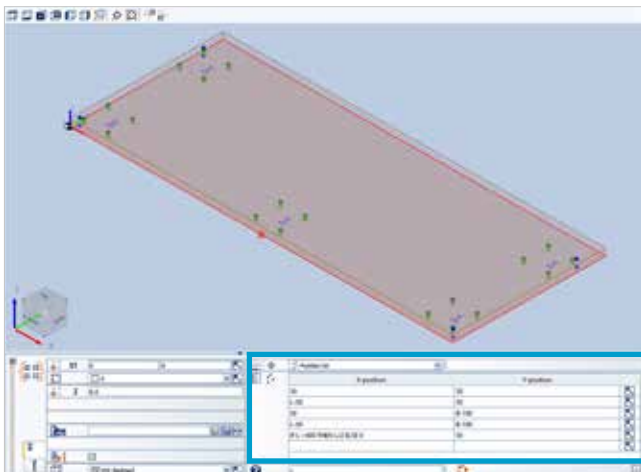
- Multiplication by position list
- Multiplication by non-uniform series
- Multiplication by circular series



Advantages:

- Macros no longer have to be programmed multiple times: less effort when making changes
- Multiplication of all macros in the block, not only of drilling operations

Extensions block macro: Position list

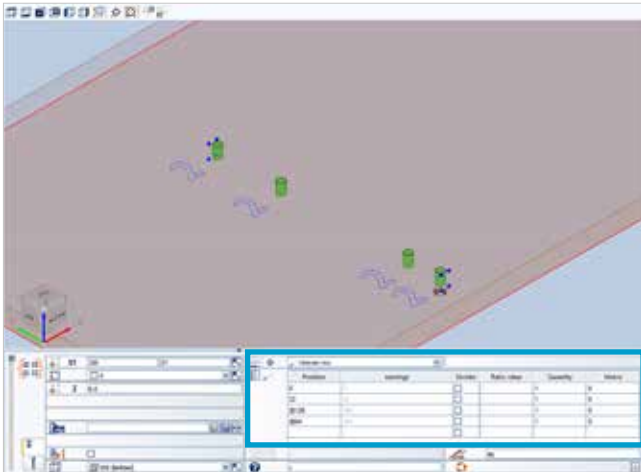


- Any number of positions in X/Y plane
- Programmable with variables
- Positions selectable via arrow symbol in graphic

Advantages:

- Results in more compact programs
- More flexible way to program operations that are required several times in the program and only differ by their positions.

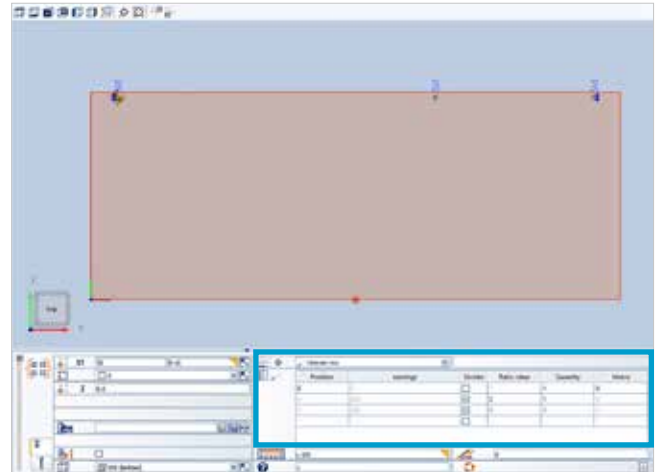
Extensions block macro: Uneven row



- For processing on a linear row with different distances
- List with several partial series
- Position absolute or relative to the previous position

Advantages:

- Results in more compact programs e.g. for uneven drilling patterns

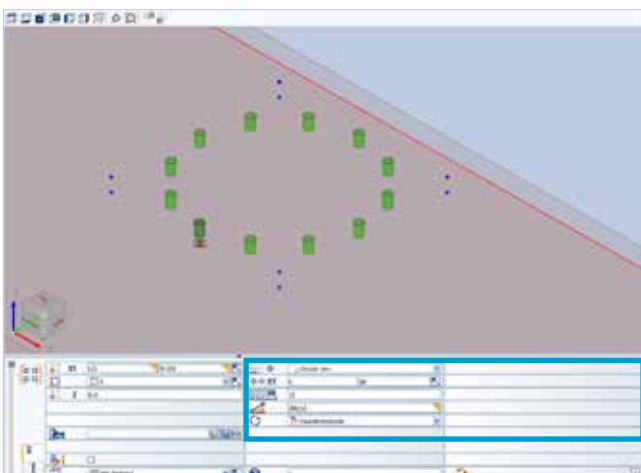


Specification of dividers possible: In what ratio are the distances between the processing operations in this row:
 Example: The remaining length of the non-uniform row is filled with holes in the ratio 2:1.

Advantages:

- Division via dividers similar to the dividers in SmartWOP or HOMAG iX
- Complex formulas can be avoided

Extensions block macro: Circular series

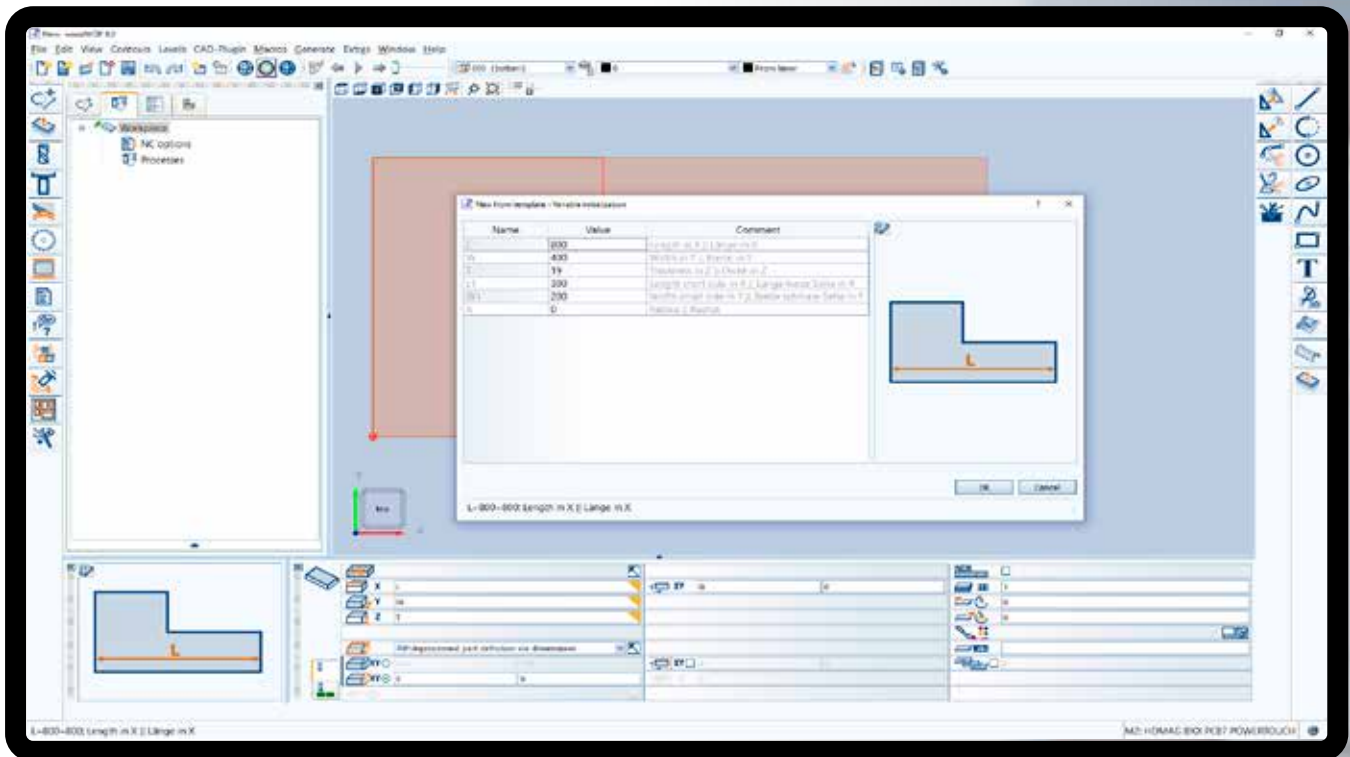


- Multiplication of machining operations on a circular pattern
- For machining operations with their own angle of rotation (e.g. pockets or rows of holes), the alignment is added according to the circular multiplication

Advantages:

- Convenient programming e.g. of holes on a circular pattern
- Complex formulas can be avoided

Enhancements in operation and in the WOP area



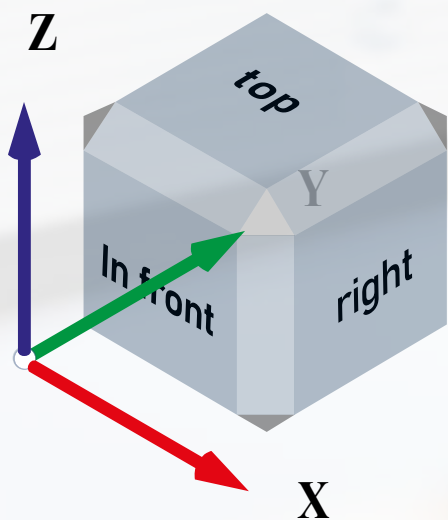
woodWOP templates with basic shapes

The woodWOP templates with basic shapes make programming new workpieces a lot easier. After selecting the basic shape, order-related variable values can be filled in and processing operations can be stored. The templates can also already contain processing operations such as formatting.

The template library can be extended by the user with their own templates.

Advantages:

- Programming of workpieces without contour programming
- Time saving for standard forms

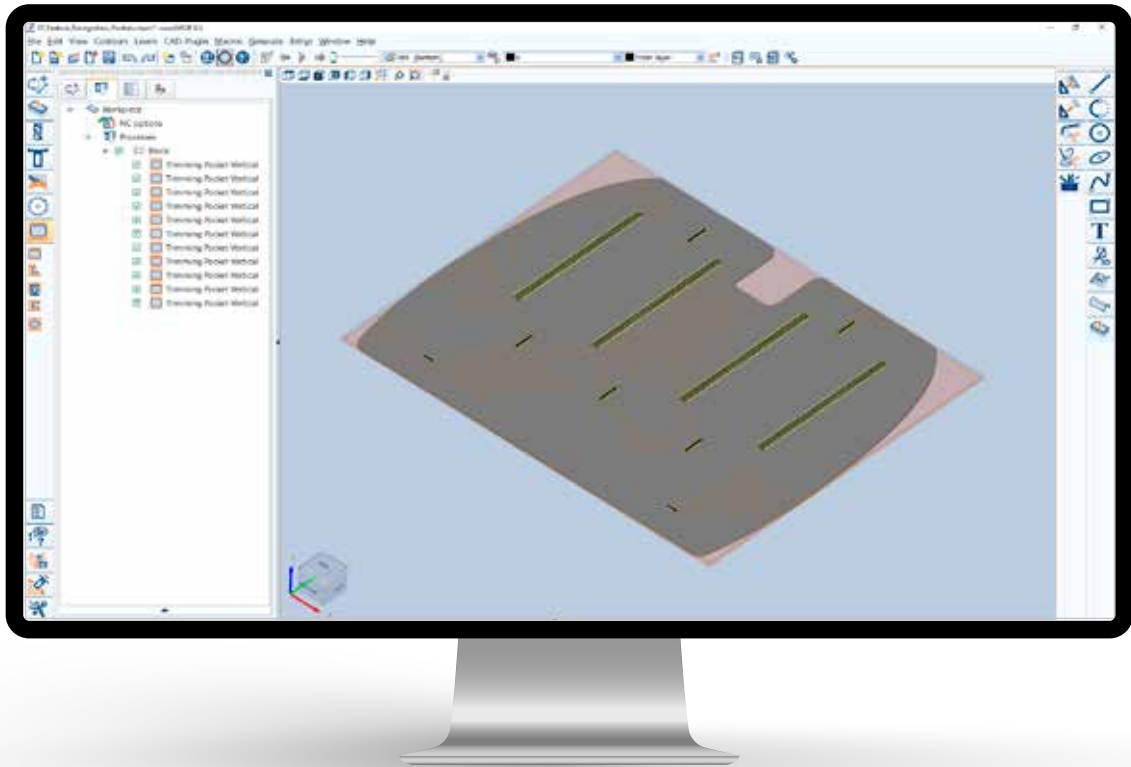


Navigation cube (ViewCube)

Advantages:

- Fast rotation of the workpiece
- Easy orientation for 3D display of workpieces

Enhancements in CAD and CAM plugin



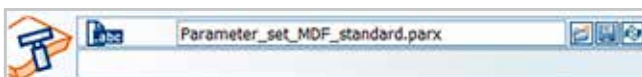
Feature recognition

As of woodWOP 8, feature recognition also detects grooves and rectangular pockets. After analyzing the 3D model, the appropriate processing macro is generated automatically. The user can define the templates himself in the conversion profile.

Advantages:

- Faster conversion from CAD import to the processing program
- Avoid double data entry

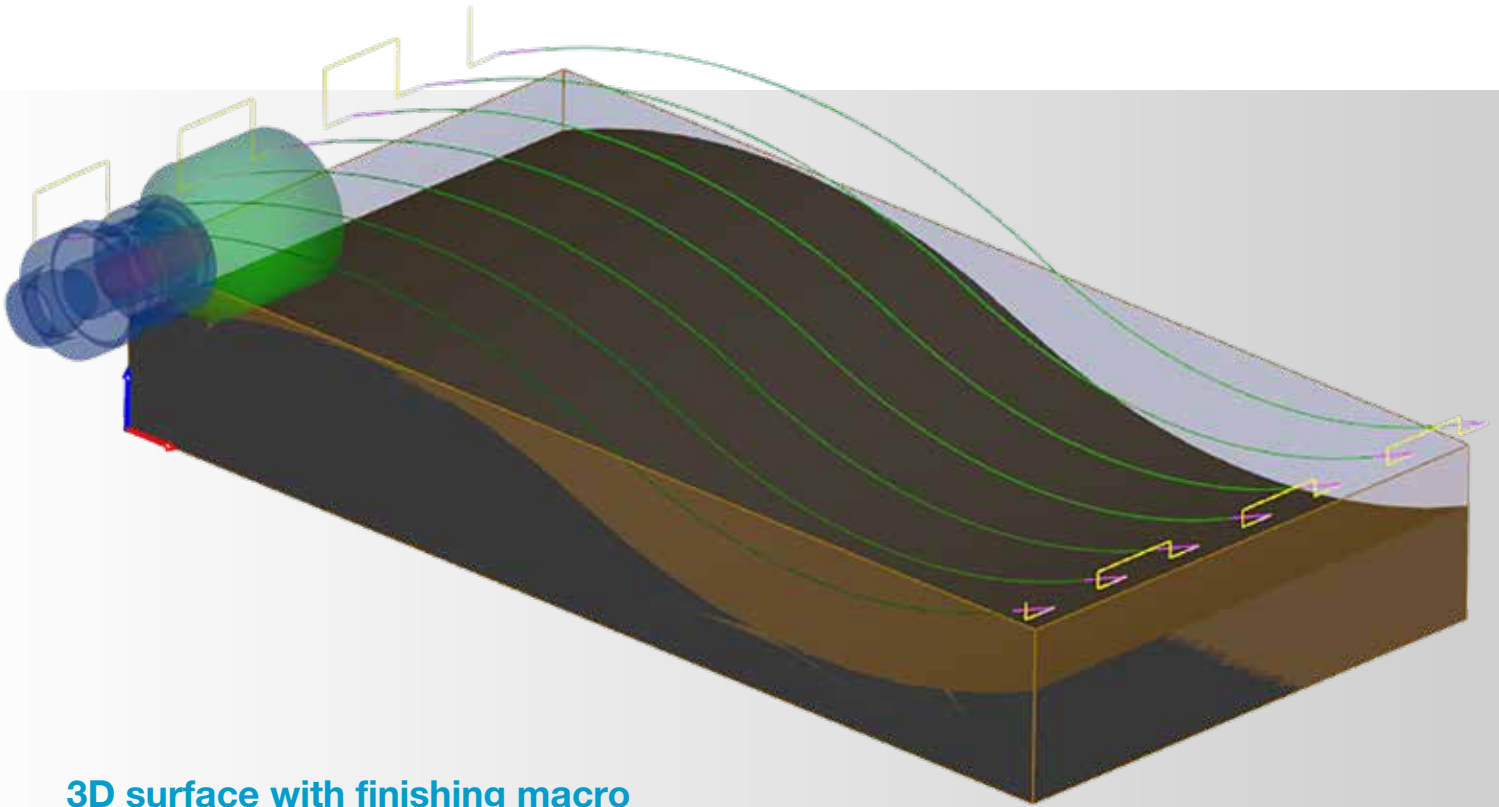
Parameter sets for CAM plugin macros



Proven values for tool, feed speed, routing strategy, etc. can now be saved in parameter sets. For new programs that require similar processing strategies these parameter sets can be reloaded.

Advantages:

- Faster programming
- Fewer tests required
- Easy reuse of proven settings



3D surface with finishing macro using the tool flank

In the CAM-macro "Finish milling", the operation is currently performed with the tool tip.

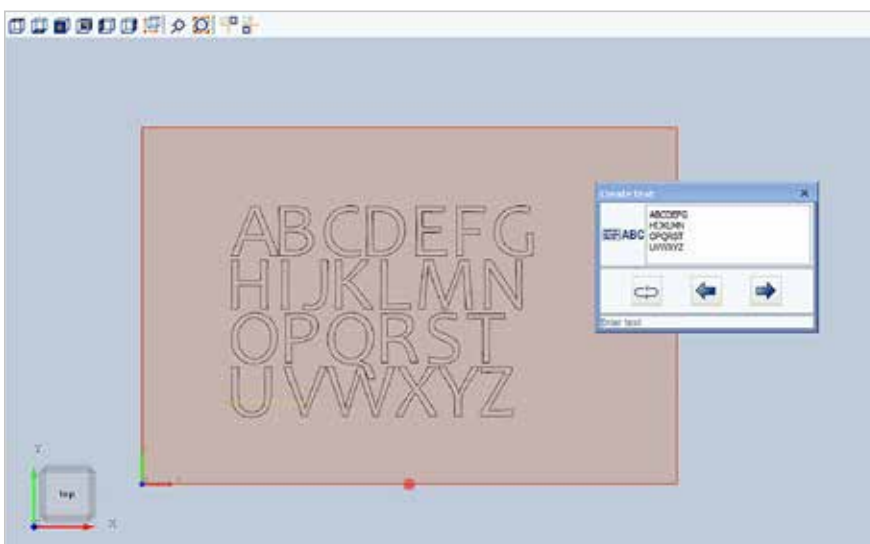
In the finishing macro, the tool can now also be programmed using the tool flank.

Advantages:

- Faster processing
- Better routing quality
- Longer tool life

CAD text multiline

The woodWOP CAD plugin has been extended by the input of multi-line texts.



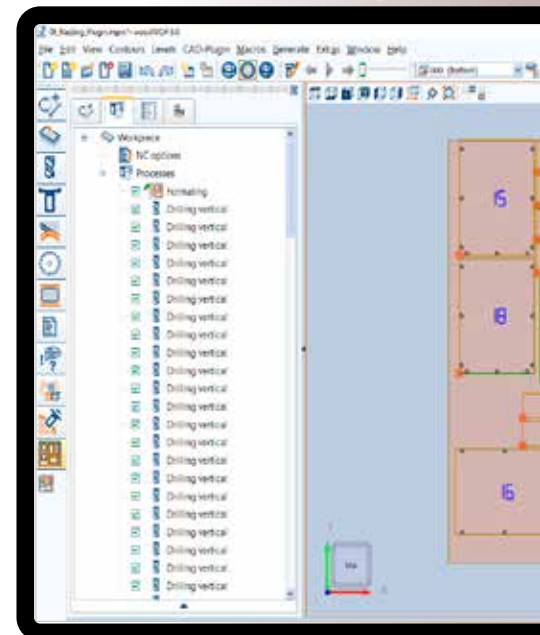
Advantages:

- Simple programming, as only one text element is required

Nesting plugin

The Nesting plugin provides a new format macro for formatting multiple parts in the nest.

After the contour analysis, the nesting plugin automatically generates the routing paths. Depending on the requirements, the workpieces are routed out individually or processed in the so-called staydown or commonline processes. The nesting plugin can be controlled by optimization software such as intelliDivide Nesting.



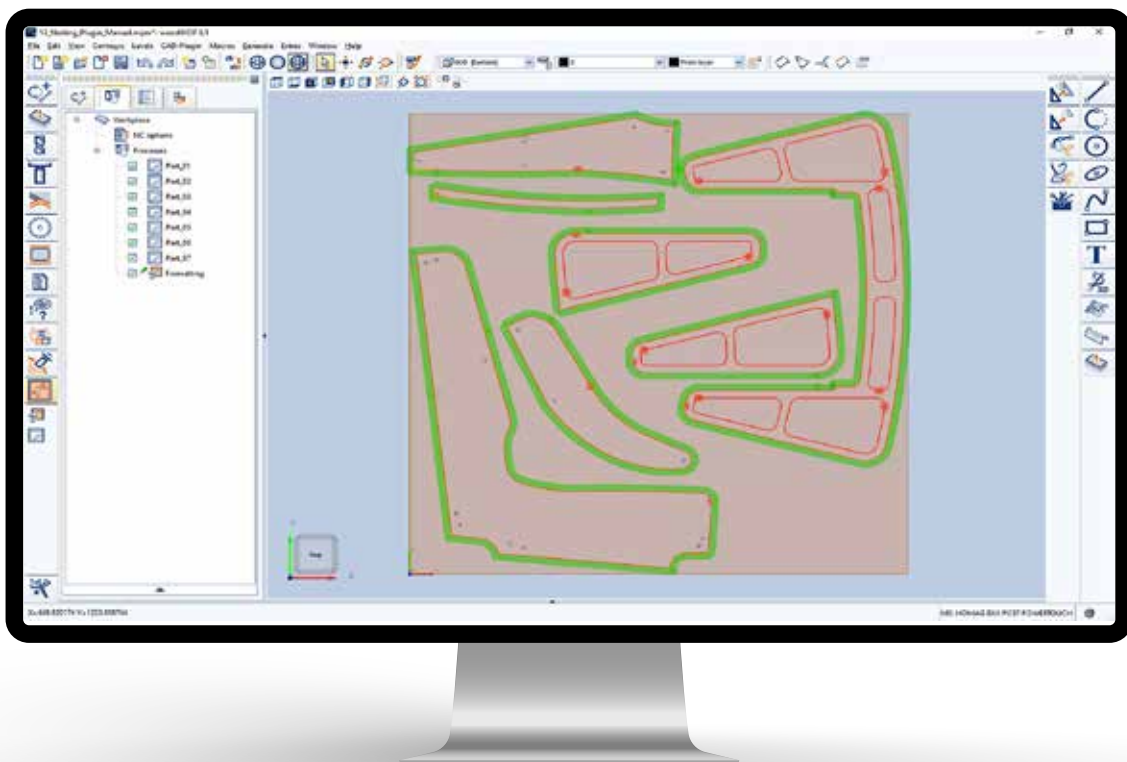
Nesting plugin: manual nesting

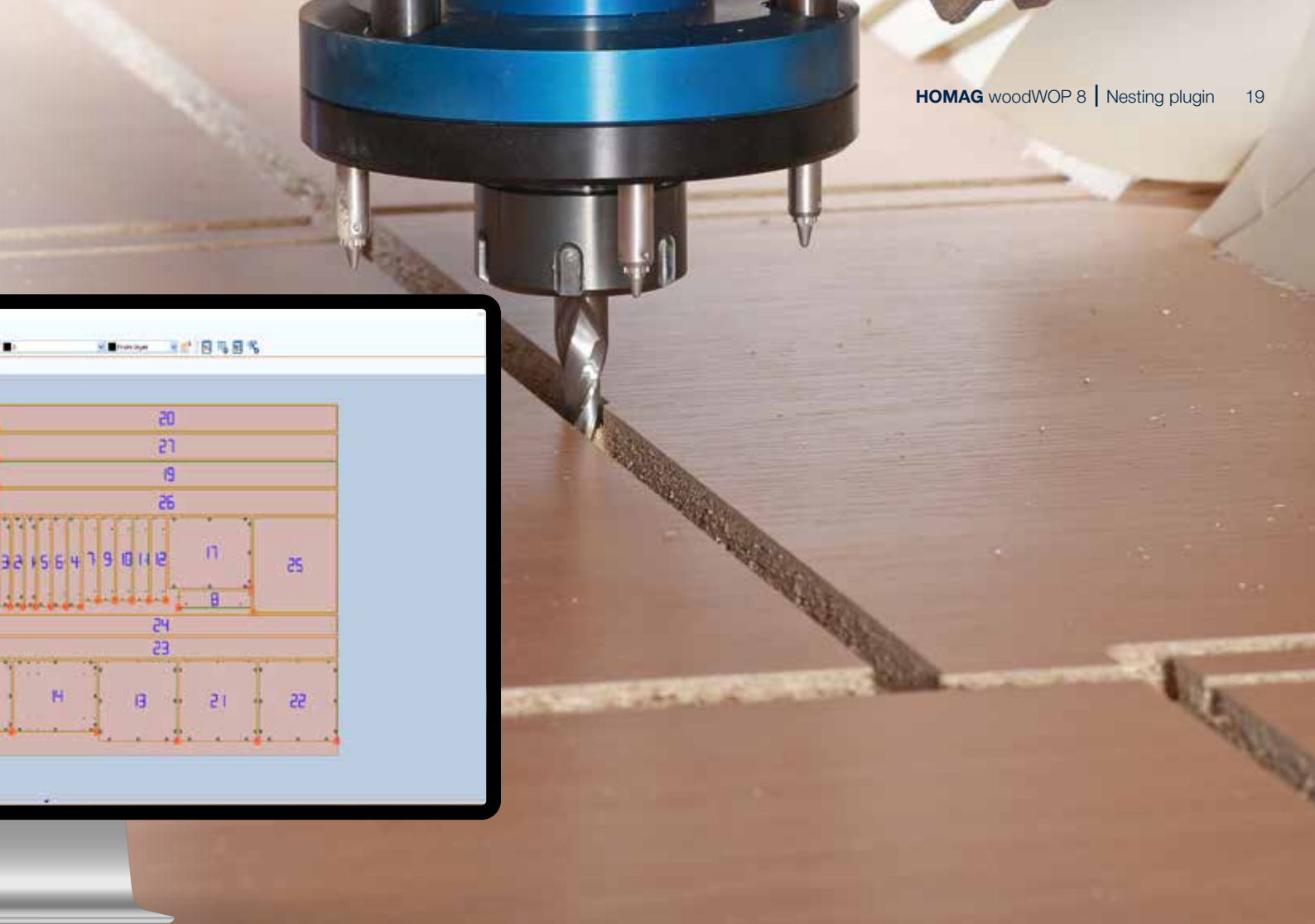
Replacement of woodNest Basic and integration of manual nesting into the nesting plugin.

- New macro "single part"
- Moving of single parts by touch or with the mouse
- Monitoring of minimum distances to the edge and to neighboring parts
- If required, a formating macro can be added. E.g. for a stay-down nesting strategy or for tabs.

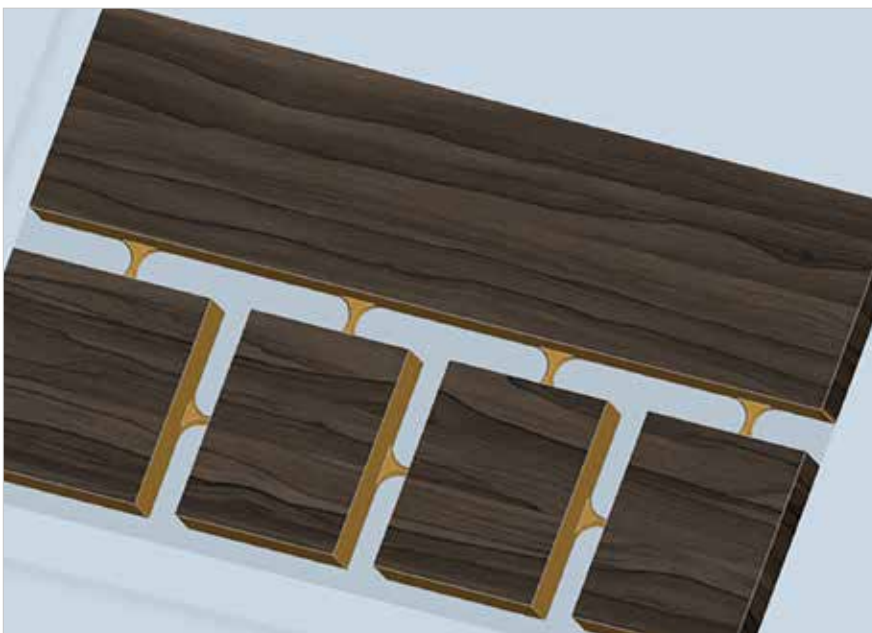
Advantages:

- Simple programming, e.g. for the remanufacturing of defective parts
- Occasional nesting without separate nesting software





Enhancements formatting macro: tabs



- New: Generation of tabs for all parts, only small parts or for a manual selection of parts
- Optimized CNC-compatible traversing of ridges incl. grinding

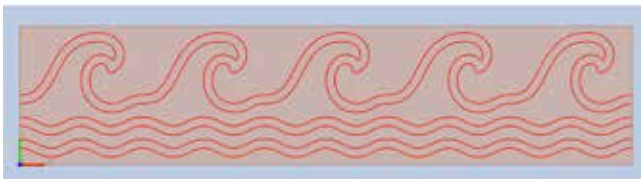
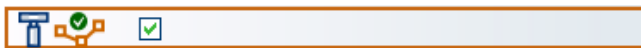
Advantages:

- Process-safe holding of small parts

Other extensions

Connecting vertical routing operations

In woodWOP, a routing operation has so far always had a lead-in and a lead-out movement. With the new “Join vertical routing” function, identical processing operations are now combined if the end point of the previous routing operation is the same as the start point of the next routing operation.



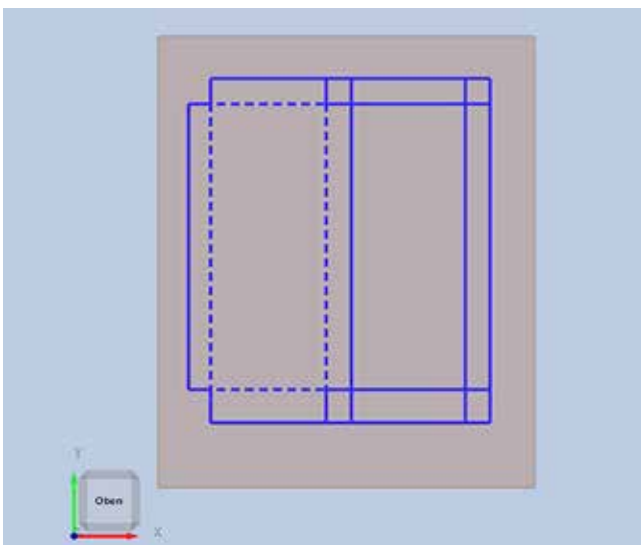
- New parameter in the NC options
- Also for routing operations programmed in components and multiplied e.g. in block macro

Advantages:

- Saves time by avoiding the lead-in and lead-out movements
- Enables variable joining of contour operations, e.g. for patterns or ornaments

Feature recognition: recognition of cutting macros

For board cutting machines, woodWOP cutting macros are used. New is that these are automatically recognized via the Feature Recognition from dashed lines in DXF-drawings.

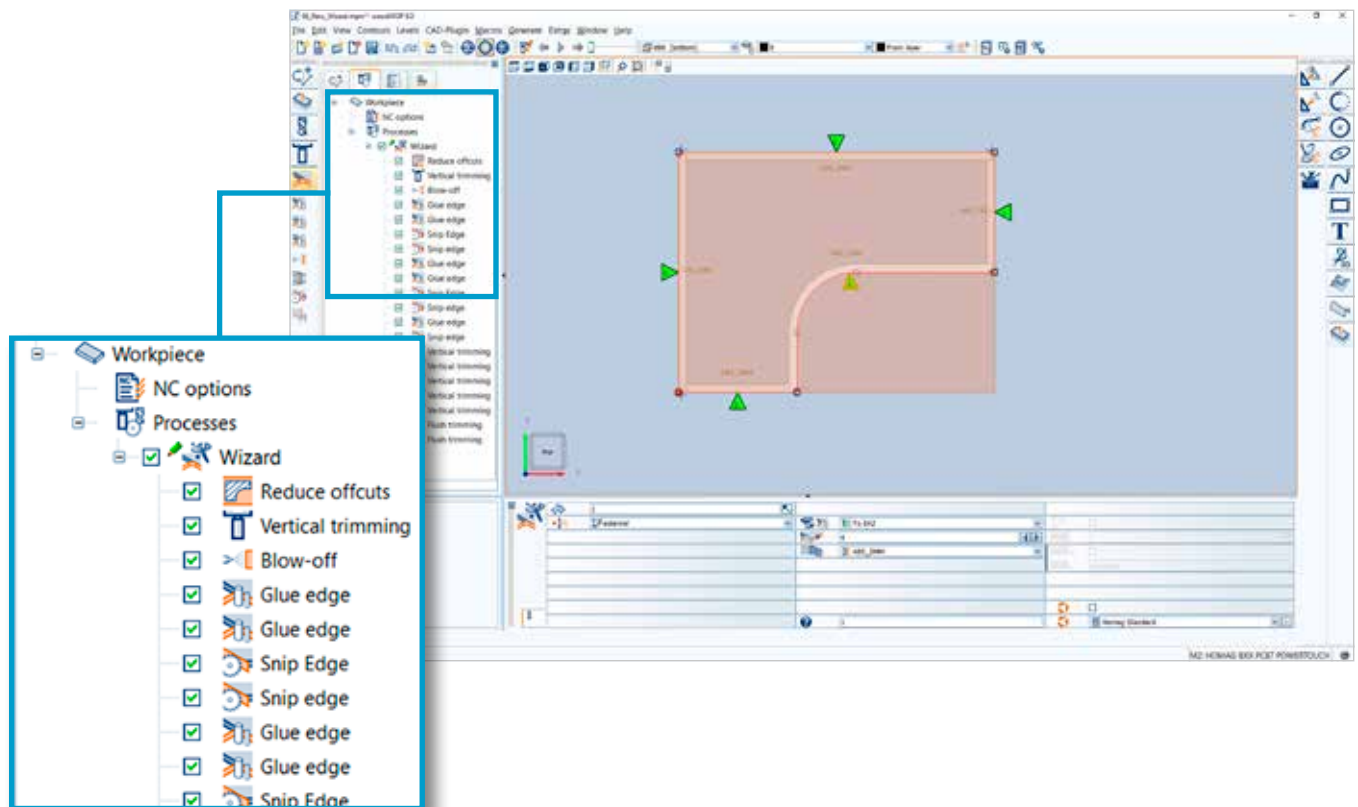


- Draw cutting lines as dashed lines in CAD
- DXF import into woodWOP
- Start feature recognition → Cutting macros are generated

Advantages:

- Much faster, as macros are automatically recognized
- Creation of carton cutting programs practically possible without woodWOP knowledge

Programming edge banding with woodWOP



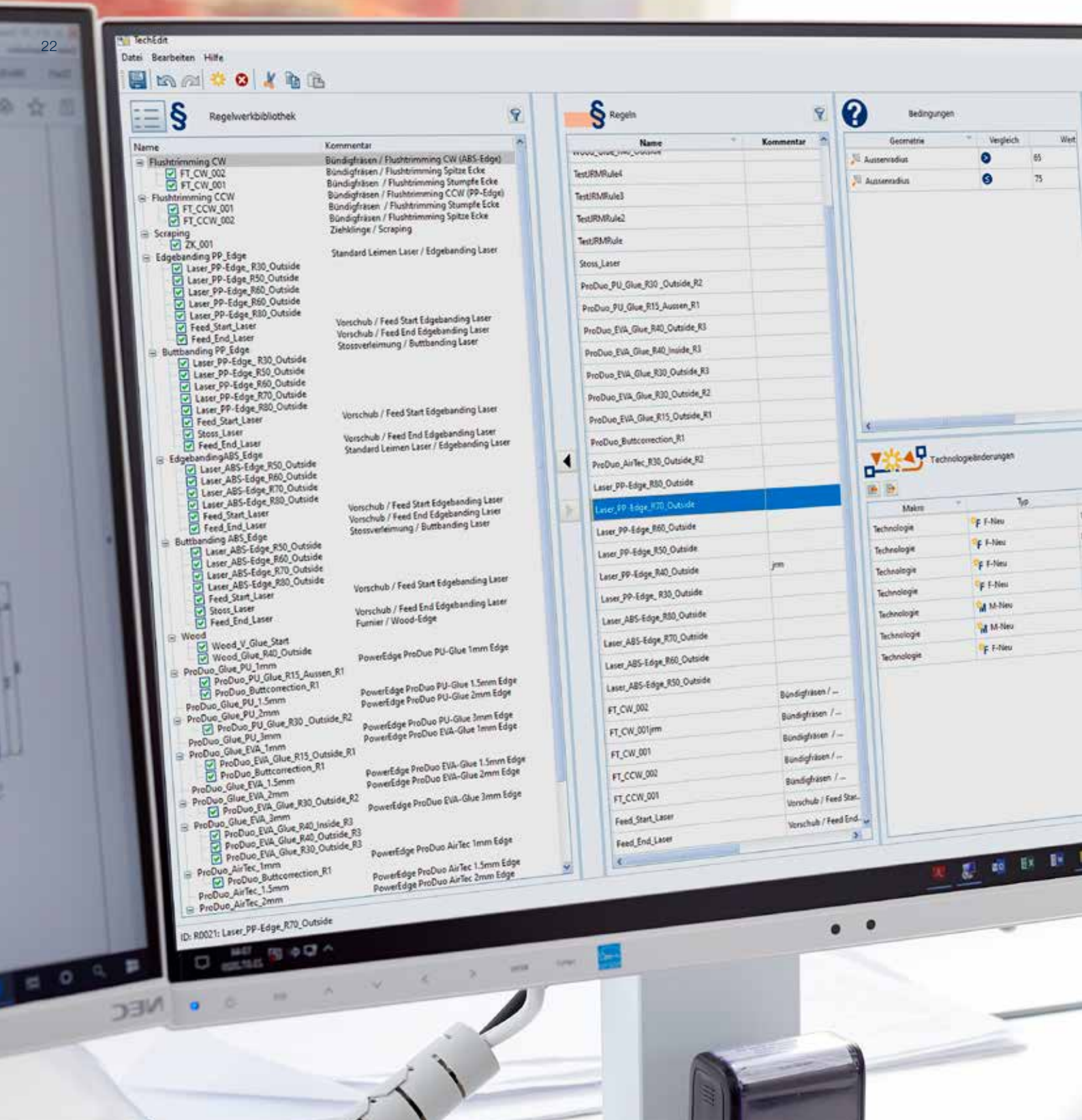
Wizard

The new wizard for programming edge banding is fully integrated into woodWOP. Instead of a separate application, programming is done via the Wizard macro. The edgebanding type, sequence and other important parameters are defined directly on the workpiece. The generation run is started with a mouse click and the individual processing macros are automatically inserted in the macro list. The generation run can also be started automatically when the workpiece is loaded on the machine.

Advantages:

- Faster creation of programs for machines with edge banding
- Wizard macro controllable from external CAD/CAM solutions



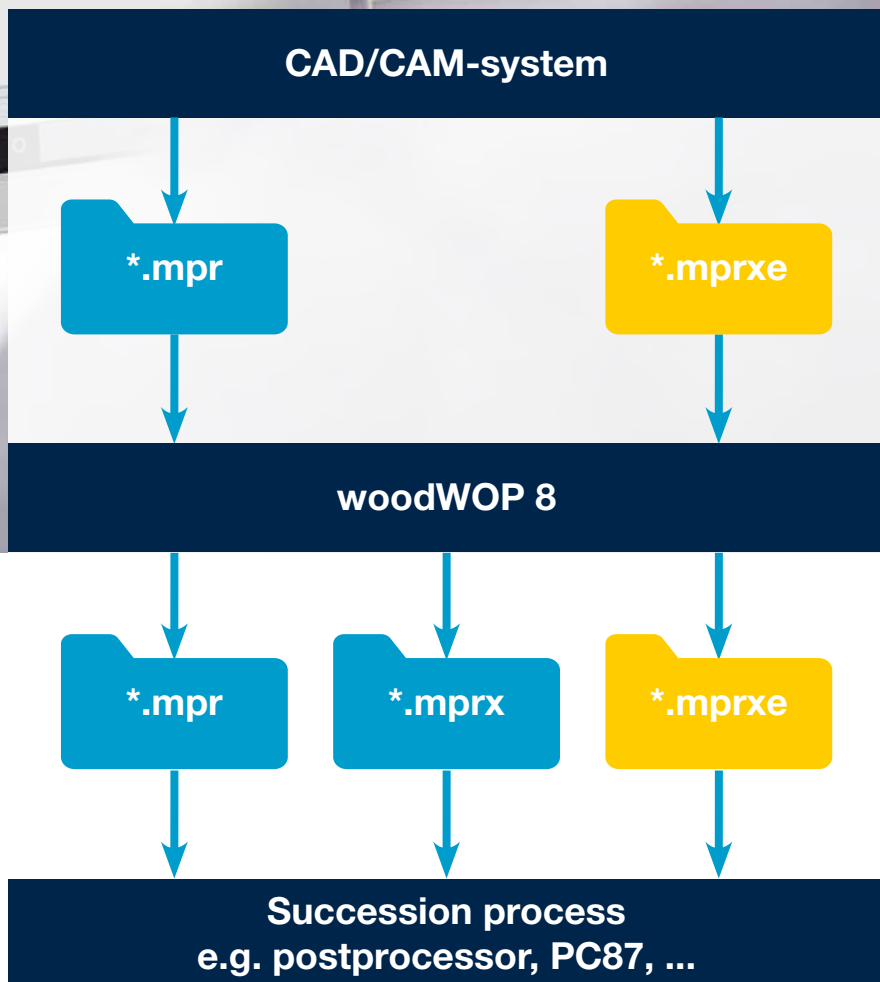


Technology database „TechEdit

As a knowledge database for technology changes, e.g. for edge banding on the CNC machine, the new technology database „TechEdit“ offers an intuitive solution. The user has all settings at a glance in the new user interface. The technology database makes it possible to store process engineering know-how for later use on the basis of rules and conditions.

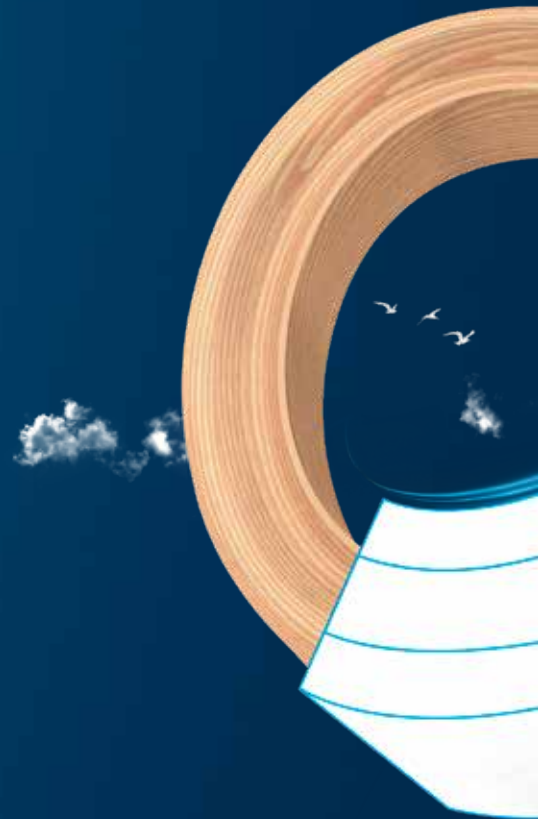
Advantages:

- Easy reuse of proven settings
- Central point for collecting process engineering know-how



New file format MPRXE

The new MPRXE file format offers new possibilities both internally and externally. The reduced memory size and faster loading/saving make the MPRXE file format significantly more performant, especially for large and complex programs. External CAD/CAM systems can use the MPRXE file format to control the new wizard macro or string variables, for example.



Status 05/23 | Technical changes, print errors and mistakes reserved. Pictures may show special equipment.



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