Software changes

easyGrind
SMP TECHNIK

VERSION 6.11

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Machining

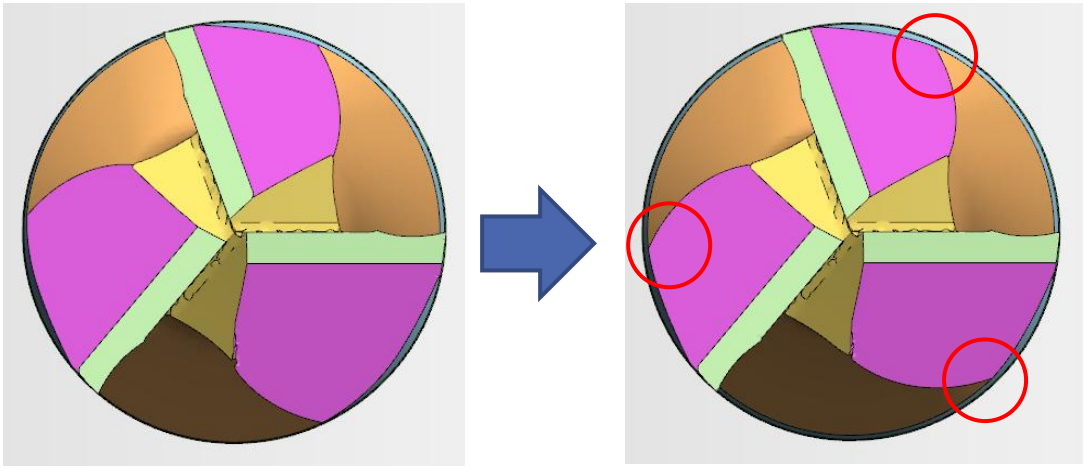
Mill

Mill, tooth back width calculation

Creation of a utility that automatically calculates the ideal offset to maintain the tooth back width along a mill. The use cases are:

- Uneven divisions
- Different helices
- Tapered mills



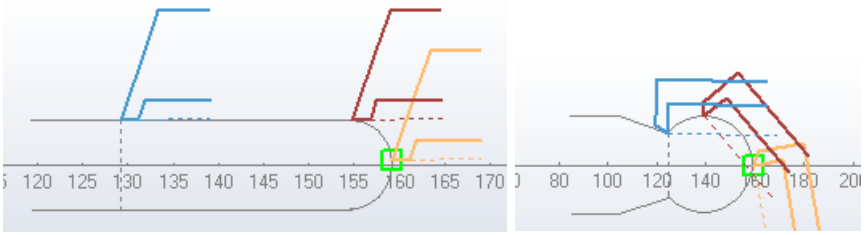


Mill, "form relief" job

The "Wheel incidence" parameter is duplicated on the job page. Caution: if the values are specified per tooth on the parameters page, these values will be overridden by the value on the job page.

2D view in jobs

Schematic display of the wheel incidence and the WHEEL (on the job's 2D view) for peripheral reliefs, continuous reliefs, tip zone reliefs and ball mills



Ball mill:

Ability to declare "With/Without center tooth"

Added the "End Flute" job

Also included

Drill, "Land" job on double-flute tool

Added diameter tolerances (to maintain parallelism)

Added dressing to the "Land" job

Drill, "Ref. Flute" job

The clearance at the end of the flute has been improved

Drill, "Land Grinding" job

Added the dressing parameter "dress at the start of the job"

Chamfer mill

Support for uneven division

Inserts, rake face job

Added the end cutting angle, which allows the rake face to be oriented according to the last missing angle

Implementation of RotA180 and Reverse B

Form inserts

Ability to vary the outer relief along an insert profile. The default is to keep everything fixed

Broach

Probing the tilt on a flat broach

Machine origins - P16

The history of machine origin changes is now saved automatically

Probing

Probing oil holes

Cycle improvement

Probing the helix (blade probe)

If the probe touches between the first and second probing points, the "Apparent helix" parameter allows the movement to be customized

Probing the eccentricity (blade probe)

H-Helical: Securing the approach/clearance during the probing cycle.

A-Edge: better positioning in A

Miscellaneous

General use

Centralizing messages

The bottom of the main screen displays events and error messages.

The history will be archived in C:\Numaffut\Journal\yyyy-mm-dd_EasyGrind.log The following will be displayed:

- All messages on screen (outside of normal operation)
- Opening, saving a tool
- Opening, saving a wheel
- Tool probing: information on the probed values
- Wheel probing: information on the probed values
- Click on CNC tool page
- Wheel probing: start
- Wheel truing: start
- Wheel dressing: start
- Start of robot campaign
- End of robot campaign
- New tool in the campaign
- All robot messages already displayed (mostly errors)

Machine

Dressing

Creation of the Forward/Return cycle

Speeds in the forward/return cycle

Customization of approaches / clearances on the wheel profile

Robot

Maximum gripping height concept

Numaffut.ini, [SCARA Robot], HPrise_Maxi = 0 by default. If >0, it will check that the gripping height of each campaign is indeed below this value.

CNC editing, G93 feed

On Flexium+ CNCs, the maximum feed rate can go beyond 999.99. By default, the maximum speed is 5000. Thanks to this, machining speeds are better respected on form tools.

This value can be overridden in Machine.ini, [CNC Link], G93F_Max

Also included

Automatic update

If the PC is connected to the internet, the operator will be automatically notified of updates, and can install them in a few clicks.

Fixes

Machining

3-lip mill

Y out of travel during clearance of the end relief (reverse tapered mill)

Mill, "Continuous relief" job

When machining in I-Reversed, the inter-tooth clearance was done incorrectly

Mill & Hob, "Peripheral Flute" job

Approach Y+100000000 resolved (following the taper correction)

Broach: approaches / clearances

G52 was systematically added to the blocks in approaches. However, in some cases, it was either already there (not very serious), or it should not have been there (particularly in X).

Probing

Hob, check probing

When calling the helix or cutting straightness probing without probing the division first, the probe moved in G1 in Z from its parking position at the start of the program.

Hob, helix probing

The "Use probed helix" parameter is hidden on hobs. Before machining, the module did not take into account the left-page tip distance parameter. This is now the case.

Hob, division probing

Sign issue for the X offset in left-hand cutting

Wheel probing, X stylus

When chaining a D and W probing, and the diameter position of the W probing is much smaller than the outer diameter, there was a risk of collision

Miscellaneous

Tool parameters screen

The error indicators on the parameter tabs did not always work

Removal of the runtime error that occurred when switching screens too quickly.

License

Added the key number when an error message is displayed to the operator

Translation

Slovak language

Machine with steady rest (U axis)

Code reliability improvements

eSim

Simulating a mill with the "Vertical lip" option – the 1st tooth was oriented downward. Now, it is oriented upward, as in the 2D view

Robot & Wheel Probing

Removal of various bugs that appeared since v.6.06