Software changes

easyGrind
SMP TECHNIK

VERSION 6.12

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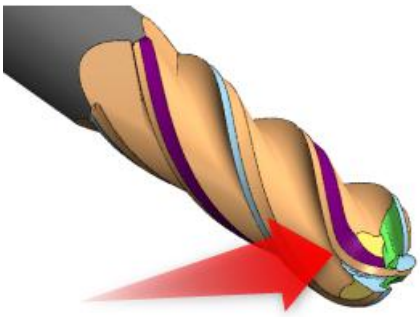
Machining

Mill

MILL, Continuous Relief (radiused tip, ball-nose tip, ball mill):

Major improvement to **5-axis machining**. The variation of the wheel incidence and wheel incline along the edge is better managed, and the wheel "jitters" much less in the machine.

Note: does not apply to method B (methods G and D only)



MILL, Peripheral FLUTE, Continuous FLUTE:

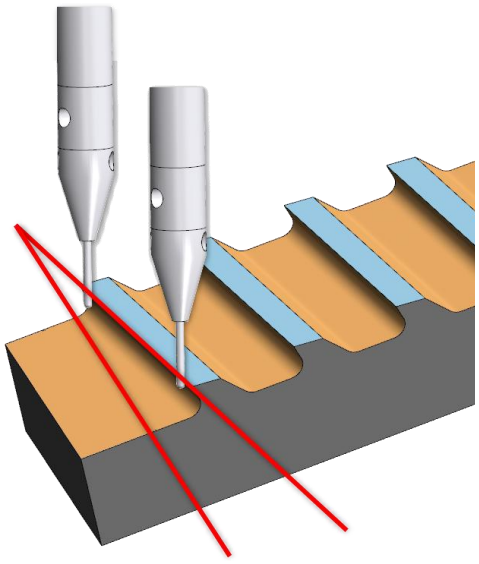
-Improved: When the cutting edge and offset can vary between the tip and the shank, the "shank side" parameters are added to the job parameters.

3-LIP MILL

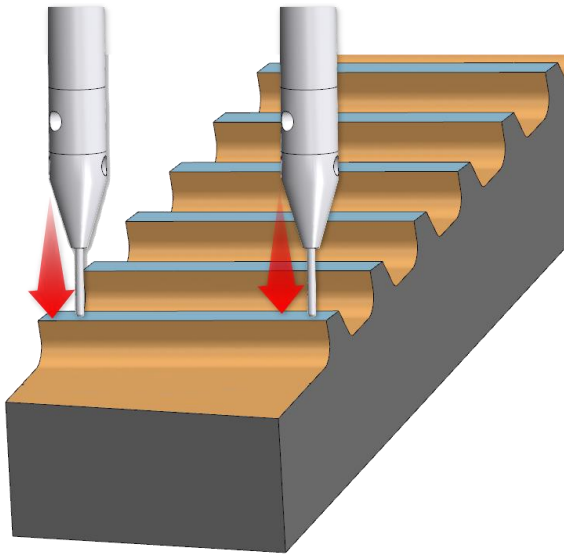
Added the "GRINDING" & "SHORTENING" jobs

Broaches

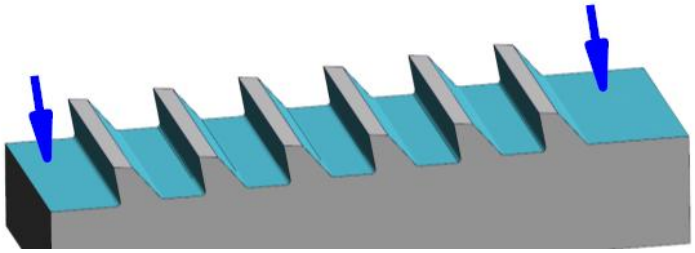
Probing the tilt



Probing the edge slope



Manufacturing the chip chamber



And more…

see the dedicated broach document

Fellow cutter



new definition of the DIN 1829 rake angle: at the middle of the tooth.

Tooth count check probing

ability to probe the length and setup on a helical Fellow cutter. Direct call of %134

- Reminder: the "RAKE FACE" job combines the 2 jobs "Cyl. Peri. FACE" (method D) and "Bushing Face" (method F).

This allows jobs to be stacked in roughing and finishing passes.

- Added forward/back travel on page 7 for these 3 jobs.

Also included …

Hob, DEBURRING job

Creation of a deburring job based on a preconfigured cylindrical grinding

In X: usable length with 10 mm on each side

In R: Mill radius - flute depth

Ability to add Shank or Tip overtravel, and to add stock allowances and facing passes

TIP SPIRO in SQUARE DRILL:

updated to have the same behavior as in drills

Probing

Z probe calibration %138

-Improved: Z- probing on both sides of the master

-Improved: end-of-program clearance: Z, then Y, then the rest

Wheel probe calibration

-Improved: %158 clearance in X first at the end of calibration

-Improved: the only calibration possible is Full-Quick, which does not calibrate in Y+

Blade probe

the option is coded in the license. Editing probing with a blade probe without the option is not allowed

Fixes

Under-profile probing

The help 2D view was not correct for probing planes on a drill. Caution: when clicking on the probing parameter, the plane is only correct if the probed stage is 1

Under-profile probing

-Fixed: Since v.6.09, the way of imposing the "probe pos on face" parameter has changed, but this did not work for under-profile helix probing.

Blade probe, multi-point helix probing

Since the beginning (??), there is a typo that means evolving helices should not be able to be probed. The fact that this was not detected earlier remains a mystery...

Setup probing

line unintentionally commented out

Miscellaneous

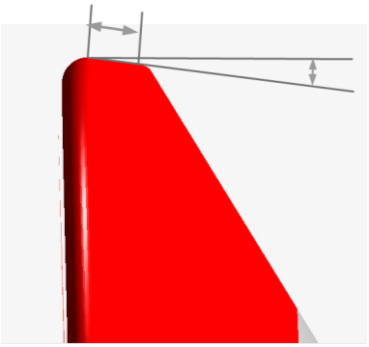
General use

GRINDING:

If there are several grinding jobs, they are all shown schematically on the 2D view in the job

WHEEL:

Creation of a "special typeBT9" among dish wheels: this wheel shape perfectly describes the wheel used when grinding the back + the bottom + the rake face in a single operation



HELISURF WHEEL SHAPE:

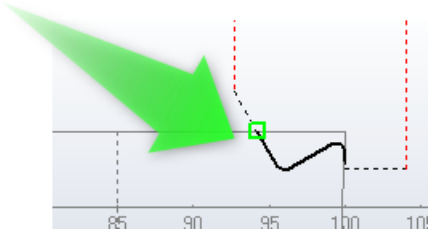
when calculating the wheel, you can choose to center the profile in the middle of the blank, to the right, or to the left (useful for helical hob wheels)

INCH

the default unit can be chosen in options->display. When importing/exporting a DXF file, a screen is shown to choose the DXF unit: mm or inch

2D VIEW in each job:

- the starting point of the toolpath is shown schematically (green square)



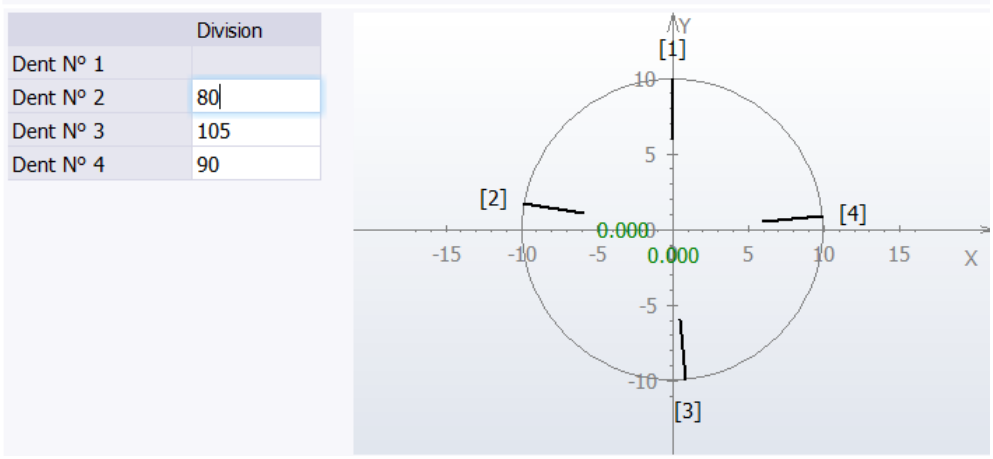
PAGE 7 PARAMETERS:

-Simplified display of increments: A single line per increment, unlock the padlock to customize the value

-All locked parameters: when unlocked, it no longer displays 0.001, it keeps the tool parameter value

UNEVEN DIVISION TOOL:

a 2D end view shows the tooth positions.



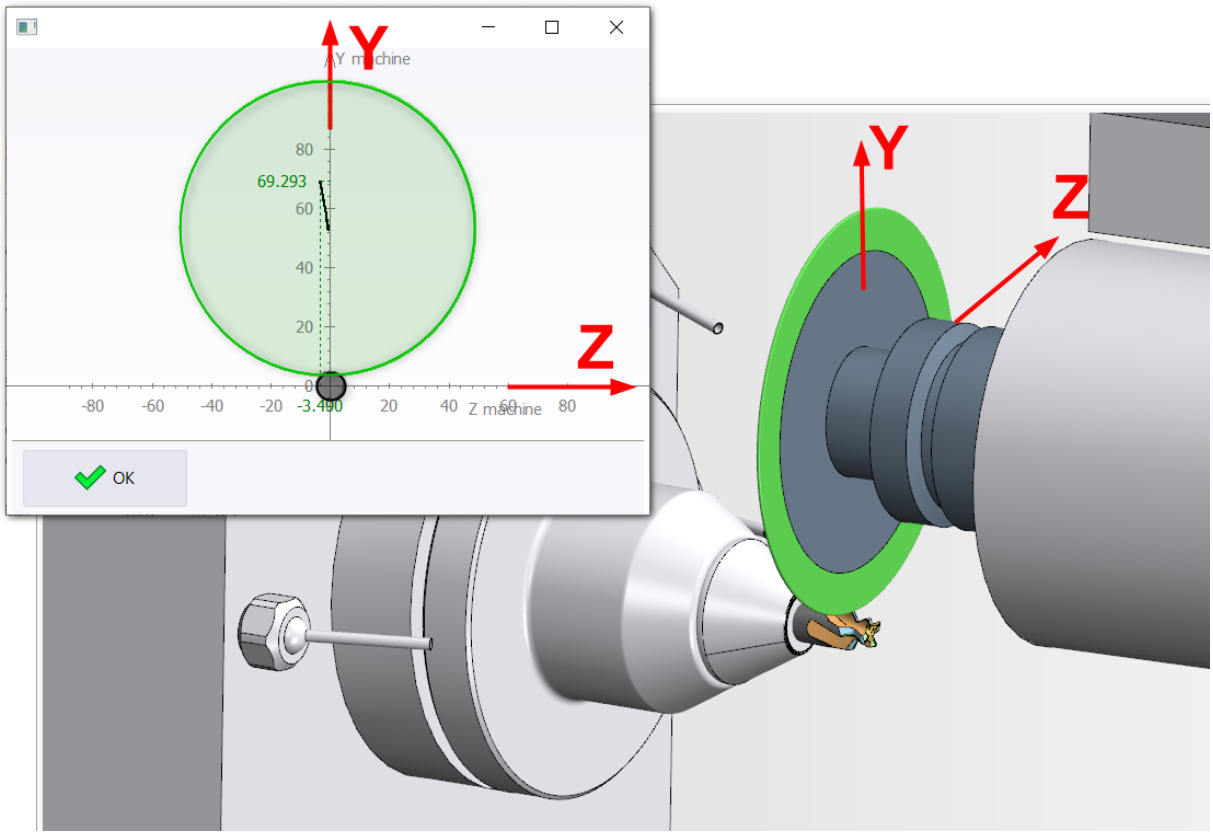
SIMULATE WITH A CUSTOM BLANK:

- a blue circle is displayed on the "Simulation" tab (in addition to the "Blank" tab). The information is available as soon as the tool is opened (no need to go into the simulation page)

Form mill

When the "Prioritize Y/Z" parameter is offered, it is now very quick to see where the wheel will work in the machine (by clicking the parameter's button).

Sometimes, the wheel can work in front for the primary relief, and behind for the secondary relief.



Automatic update

added a button to manually trigger the update. Menu -> Maintenance -> Check for updates

Machine

CA7U wheel changer

break-in program %999

fine-tuning of program %9996

P16

-Improved: improvement to the P16 history: the time is recorded. It indicates whether the P16s were archived manually or automatically.

CNC link

new NUM object management enabled for all applications. The CNC link should be more stable. To be tested

Wheel changer break-in

the break-in mode of %999 can be chosen

a: a single wheel hub in the spindle, empty magazine slots

b: empty spindle, all magazines have a wheel

Fixes

v.6.12.0

eSIM

jobs with the "A axis Modulo" option were simulated incorrectly.

HOB

the Peripheral Flute job was being discretized when this was not necessary (the W return pass no longer worked)

Up/down roughing mill

the ext. roughing form is not offset from one tooth to another

Roughing relief mill

multi-pass was not working

DRILL 34, Ve shank

the methods had disappeared (since 4.87)

DRESSING

in the mills' GRINDING job, the dressing parameters were not hidden

Incorrect approach speed in hob dressing

"WHEEL PROFILES" menu

- creating a new wheel profile no longer worked

- adding or removing a point in a wheel profile no longer worked.

Patch 6.12.5

THE SOFTWARE FREEZES!

Nothing more could be done after editing in the CNC.

MILL: Farewell to "Bench Length":

The following entry in Numaffut.ini always displays "Setup dist." & "Setup angle" for mills (instead of "Bench Length")

[CONFIG_OUTILS] FRAISE : SUPPRIMER_Longueur_Banc = 1

3-LIP FORM MILL (with helix):

the profile was poorly positioned in the flute with the new relief machining methods

Probing

Added logging during probing retrieval

Tapered mill: EXT roughing form used for chip breaker bug

no longer worked since v6.11.5

Fellow cutters

Fine-tuning of Fellow cutter probing

FORM GRINDING:

The value of the "Continuous A Rotation" parameter entered in the tool parameters was always overwritten by the value entered in the job (even if it was equal to 0)

Patch 6.12.3

Flat broaches

converted the "Edge slope" parameter into "Setup correction". Probing the edge slope allows the error to be returned to the correction parameter if desired.

Sign of the depth of cut

particularly in drills, spiro-conical stage job, depending on the method the sign of the depth of cut could be automatically changed. OrdrS was being updated but the value was retrieved from Trav00. Now it is updated in both OrdrS AND Trav00

Patch 6.12.1

FLAT BROACH Tilt probing

fine-tuning

FLAT BROACH Edge slope probing

fine-tuning

ROUND BROACH:

"Tooth 1 pos./stop" was not taken into account for probing

ROUND BROACH in Manufacturing:

when entering increments, the diameter update was incorrect (offset by one line).

the diameter chart has been fine-tuned (sometimes showed offsets on the teeth or on the total tooth count)

Wheel truing

truing program updated when the CNC is a Flexium: a wheel placed in any position can now be handled.6.13