

WorkNC V24

The CAD/CAM solution for 2 to 5 axis machining

This new version of WorkNC has exceeded all expectations. All the core values on which its reputation has been built since 1987 are ever-present: rapid and automatic programming, safe and reliable toolpaths and high performance machining.

Rapid and automatic programming

The new Rest Material Display function has been further enhanced, transforming it into a genuine analysis tool to aid CAM programmers in their perpetual quest to reduce machining preparation times. It allows users to rapidly evaluate the different amounts of rest material left on the model according to user defined color ranges. On large models or very complex parts, it will now be very easy for users to determine small zones or pockets that still need to be machined. Tedious inspection tasks to ensure that finishing strategies can now be applied are a thing of the past. With this one single function, time savings and usability for roughing and semi-finishing phases will be greatly appreciated.

A wide range of other innovative features are proposed in WorkNC V24 such as toolpath transformations (symmetry, rotations and translations), new 2D feature options for sequencing deep drill operations allowing drill speed optimization at hole intersections, 2D feature import directly from native NX files and quicker collision calculations.

WorkNC V24 offers a new collision detection algorithm that calculates much faster than in previous versions and takes into account the machine, the toolpath and the clamping system.

Precise visual representation of the rest material

3+2 axis toolpath transformations

New Remachining toolpaths

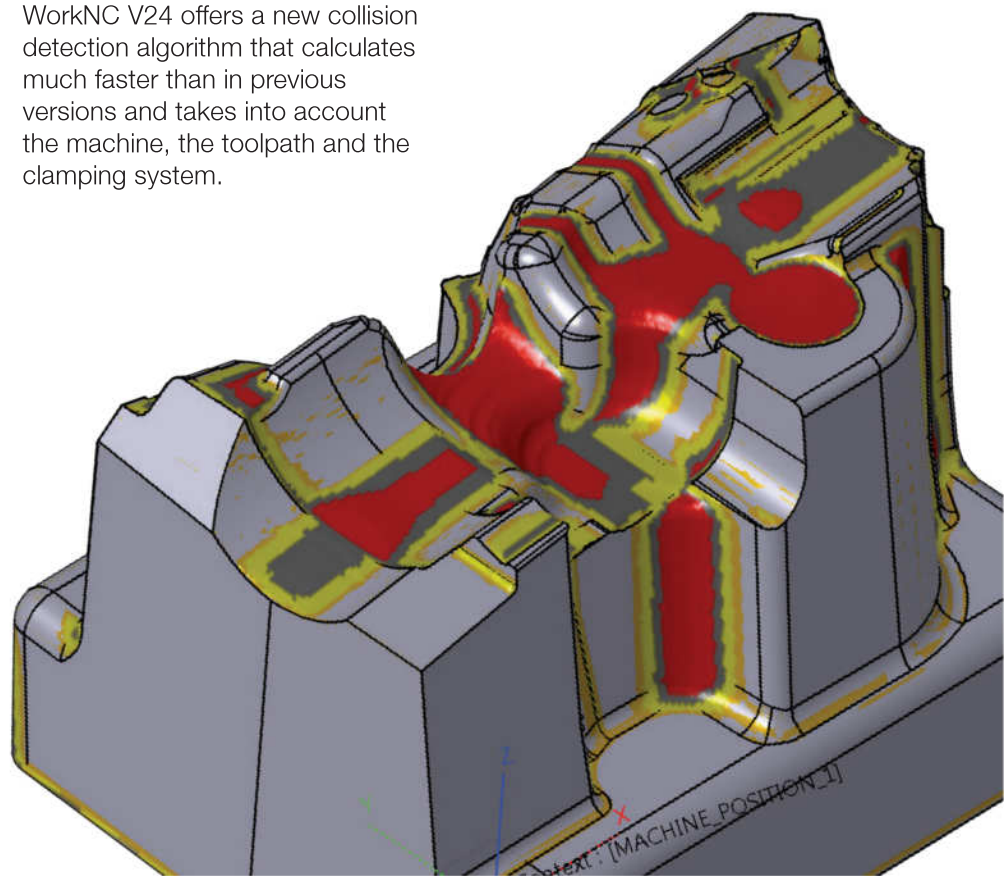
Shorter calculation times

Surface finish quality

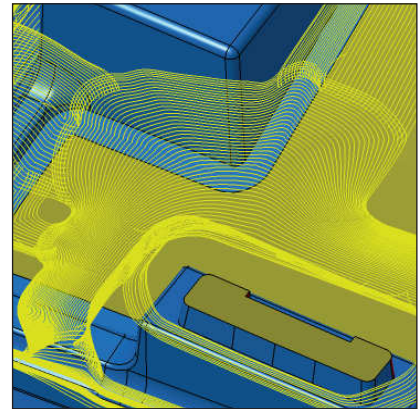
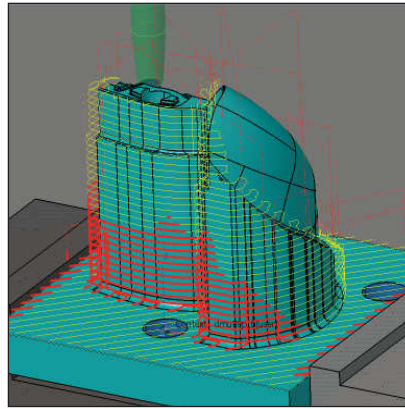
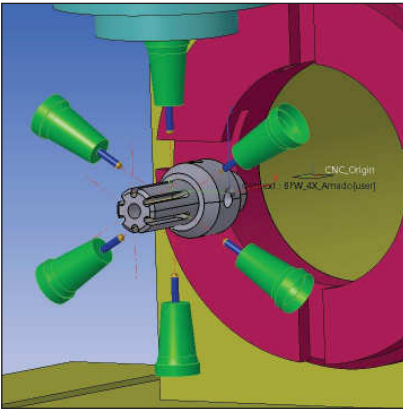
Streamlined, high precision collision detection functions

3+2 axis assembled toolpaths

Deep drilling optimization



WorkNC is second to none where toolpath security is concerned. WorkNC V24 features a set of standard collision detection functions covering the machining environment, the tool holder, the stock, the machining center...



Safe and Reliable Toolpaths

In WorkNC V24, toolpath safety has been further enhanced in relation to cutting tools. Substantial work has been carried out to attain the optimal machining conditions that are recommended by cutting tool manufacturers.

A wide range of tools are available for both roughing and finishing strategies - tapered, conic, multi-tapered - ensuring collision free machining in optimized conditions.

In 3 axis and 3+2 axis machining modes, the WorkNC collision detection module will indicate to the user the shortest possible cutter that can be used.

For 5 axis machining, the Auto5 module will determine the best possible conditions for a user defined cutting tool.

Special attention has been given to machining with small cutters in order to optimize cutting conditions for features such as ribs and narrow slots.

WorkNC V23 saw the advent of assembled toolpaths which allow users to control transitions

between toolpaths before postprocessing. This function has been further developed in V24 to process 3+2 modes and machines with tilted heads. In the majority of cases, automatic assembled toolpath calculations give collision free results within machine limits.

High Performance Machining

WorkNC toolpaths undergo regular and comprehensive reviews to ensure that users benefit from the most efficient algorithms and the latest machining technologies. After having extensively reviewed roughing and finishing strategies in versions 22 and 23, it has been the turn of remachining strategies to be completely 'revamped' in Version 24. This has been achieved by obtaining a greater precision in detecting the areas to be remachined:

- Vertical areas
- Planar areas

Z-Level machining is used on vertical areas whereas planar surfaces will be machined using contouring strategies.

The new variable Z step option generates smoother trajectories along with enhanced optimization offering improved surface finish quality and further gains in productivity.

New CAD Features

Further STL file processing options are also a new feature of WorkNC V24.

A new function based on the reorganization of detected zones allows different elements to be grouped together and used to create curves.

Text engraving applied to a guide curve is also another new function to appear in V24 which deserves mention.

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