# WorkNC V23

## Almost 30 years as the CAD/CAM solution for 2 to 5 axis machining

WorkNC 23 optimizes the production management process by adopting a completely revised collision management tool and adding the assembled toolpath function. Creating a new project in WorkNC V23 is now 5 times quicker than in previous versions.

### Efficient processing

WorkNC V23 improves productivity and offers a solution for data storage problems. Part geometry activation is now up to 5 times more rapid. The size of a newly generated WorkNC project is up to 5 times smaller.

Graphic display performance has been improved by around 30%. Graphic manipulation of large parts is more comfortable.

### Continual improvements in WorkNC machining strategies

Le Global Roughing can now handle a local stock which can be created for specific needs such as machining inserts or repairing molds after welding build-ups. This new function is independent with respect to the global stock model of a WorkNC project. The Z-Level Remachining toolpath has some significant improvements. Machining efficiency in sharp corners is greatly improved and ensures a top quality finish. Toolpath fluidity can be further enhanced by the possibility of using a smoothing radius. Tapered and conic cutters can now be employed in several 3 axis toolpaths. The Undercut Remachining toolpath now benefits from dynamic tool holder collision detection which ensures the generation of collision-free toolpaths.
Some new options have also been implemented in 5-axis toolpaths. 4-axis Profiling allows the tool to be projected onto the surface; Surface Machining allows a surface offset to be defined...

### Assembled toolpaths + postprocessor

WorNC now features assembled toolpaths which allow users to control transitions between toolpaths before postprocessing.
By taking into account the machining context, WorkNC uses machine kinematics when calculation the transitions. In the majority of cases, automatic assembled toolpath calculations give collision free results within machine limits. Users enjoy a high degree of flexibility for manually modifying, adapting or transforming transitional movements.

Improved graphic display performance

Shorter calculation times
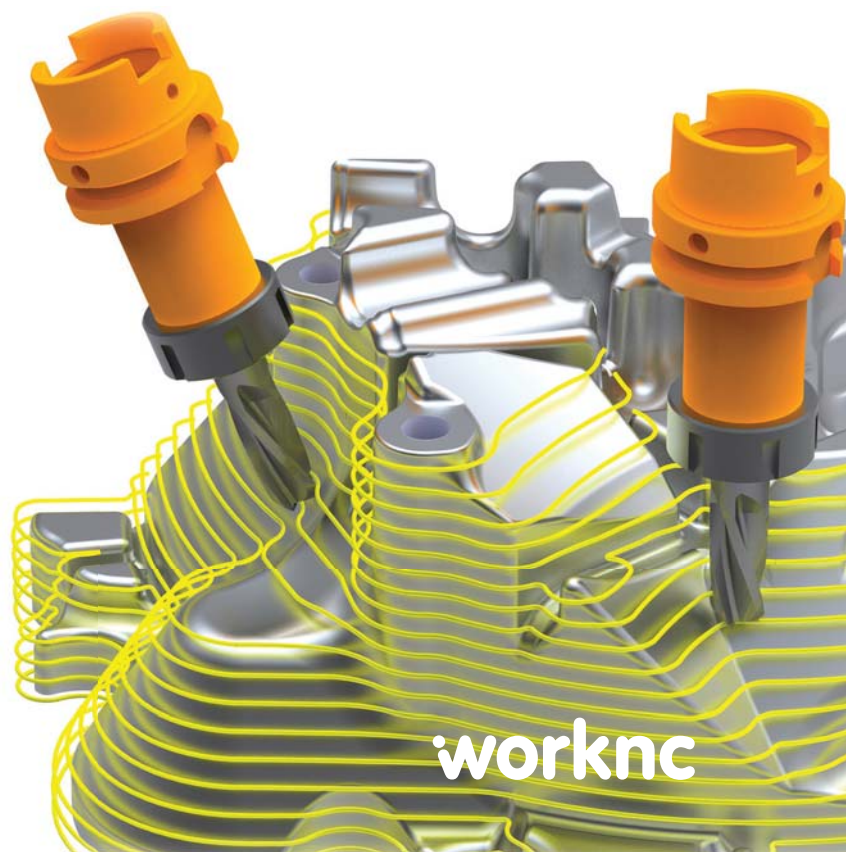
Better surface finish quality

Streamlined, high precision collision detection functions

Assembled toolpaths + postprocessor

Automatic Drilling Module

STL model CAD functions

New CAD functions



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After a complete reviewal of finishing toolpaths in V22 and to meet customers' requirements concerning quality, development work concerning toolpath precision and fluidity along with surface finish quality has remained the order of the day for WorkNC.
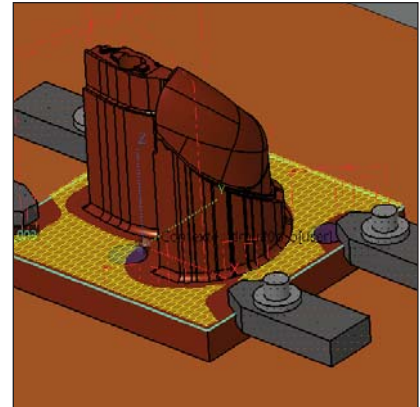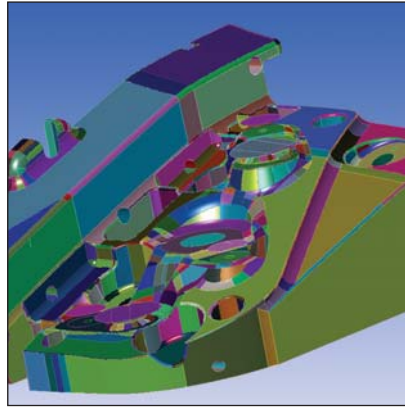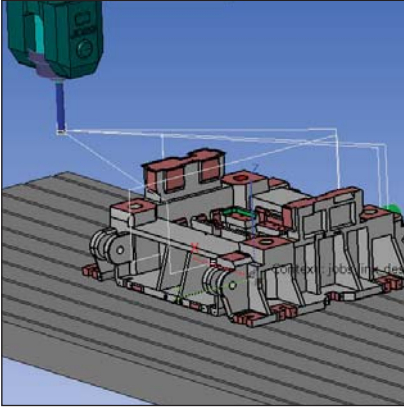






### WorkNC V23 now benefits from a new collision detection calculation module

WorkNC detects collisions and out-of-limit conditions in a global machining environment which takes into account the machine, the part, the clamping system along with the tool and tool holder assembly. Collision detection calculations are now run in a parallel calculation window allowing users to continue preparing other tasks in the graphic interface. Collision detection results are conserved throughout the project lifecycle. The collision detection results display has been reviewed to ensure greater clarity and uniformity between machine and tool holder collision tests. An M (Machine) status symbol has also been added to the toolpath line in the Workzone Manager to indicate the result of the test. The tool holder collision detection module also allows the toolpath to be modified in the presence of a clamping system.

### Automatic Drilling Module

The automatic drilling module now disposes of tapping tables containing all the required predrilling, tapping, chamfering data... These tables cover the different standards used in the industry (ISO, DIN...). One of the advantages is that only a single machining strategy is required for all the different diameter tapping operations.

A tapping toolpath by contouring with a profile cutter is a newcomer to V23. It is also now possible to realize automatic drilling operations based on a points file.

A graphic editing function allows the start point of a hole to be rapidly moved to another position in case of design modifications.

### New CAD preparation functions

The surface fillet creation function has been reviewed with the additional possibility of creating surface chamfers using the same method.

Fillet and chamfer creation has been made easier by allowing local stitching of the surfaces involved. Two new functions have been added using the same techniques:

- Tangent surface extension

- Surface offsetting

Potential problems caused by complex intersections are correctly handled.
All these functions benefit from previsualization before validation.

### New functions for processing STL files

STL model management in the CAD module has been completely revised. The STL model is now a structured entity.
CAD operations can now be performed on STL models in V23. Basic geometric entities can be separated (planes, cylinders, cones, fillets...).
After separation, users can:

- Independently work on each identified entity in the CAM module.

- Individual entity boundary extraction.

- Cylinder axis creation.