

# hyperMILL®

## millTURN

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## hyperMILL® millTURN

The *hyperMILL® millTURN* module offers you machining strategies for turning. Together with *hyperMILL®*, NC programs can be created for complete machining with turning and milling operations. Due to the module's seamless integration, the tool database, stock tracking and collision check functions can be freely combined for all machining operations. Postprocessing is carried out with only one post processor for all milling and turning tasks.

### Strategies and functions

#### Advanced stock definition

This function offers the user several options for creating turning stock.

- The stock contour can be selected as a 2D sketch
- Relative to a rotational axis, the software will automatically calculate a rotationally symmetrical stock that contains the entire CAD model
- The user generates the turning stock on the basis of 3D milling stock or an STL model.

#### Turn roughing

Turn roughing is used for machining rotationally symmetrical interior and exterior surfaces and is available as straight roughing, contour-parallel and radial roughing. Machining is also possible with tilted tools.

#### Turn finishing

Turn finishing enables contour-parallel fine machining of rotationally symmetrical surfaces. Slope-dependent machining and approach and retract macros enable precise adjustment to individual requirements.

#### Grooving

Grooving, parting off and groove turning operations can be programmed using this strategy. Optimisation functions such as finishing, wall distance, ramp angle, toolpath compensation or pecking also enable the user to create customised machining jobs.

#### Drilling

This strategy is designed for central drilling and stock tracking with a fixed tool on the workpiece's rotational axis. On milling/turning machines, this strategy is a useful alternative to helical drilling.



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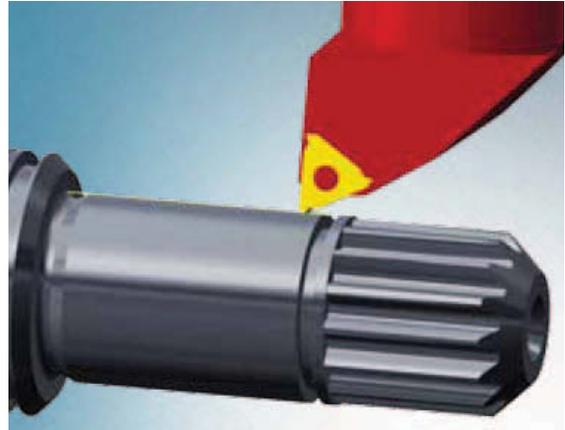
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### Thread cutting

Single or multiple constant-pitch threads can be cut as cylindrical or cone-shaped threads both externally and internally.

### Job linking

This feature allows all operations that are executed with the same tool to be linked into a single machining job. Infeed, retract and transitional movements between individual jobs are checked for possible collisions.



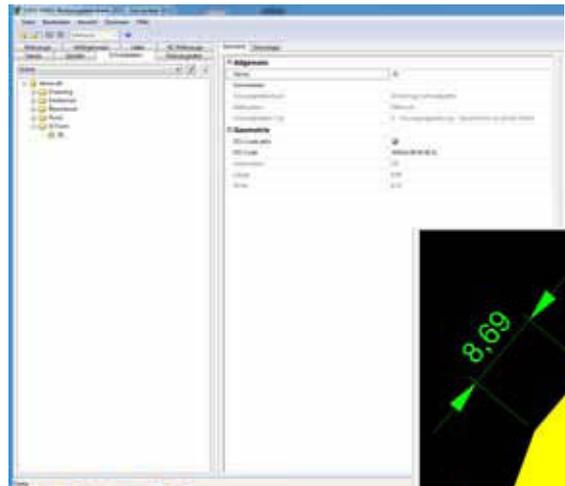
## The OPEN MIND tool database

Tools along with the tool number, geometry, holder and insert can all be stored in a tool database. Support for turning tools facilitates seamless, efficient tool management for all turning and milling jobs.

The following turning tools are available:

- Turning tool
- Recessing tool
- Axial recessing tool
- Threading tool

Turning tools are assembled from tool holders and tool inserts. The insert can be specified manually or via the ISO code. In addition, a free tool geometry can be defined for free-form grooving.



## OPEN MIND post processors

hyperMILL® is able to calculate toolpaths independently between machine and controller. The post processor generates NC programs based on this neutral data. Depending on the selected hyperMILL® version, the following post processors are available for hyperMILL® millTURN:

4axis post processor indexed mill/turn combination, 4axis post processor indexed+simultaneous mill/turn combination, 5axis post processor indexed mill/turn combination, 5axis post processor indexed+simultaneous mill/turn combination, post processor upgrade from milling to mill/turn post processor, additional turning post processor for two axes

