

# hyperMILL®

2026



© The helmet was programmed and produced by DAISHIN

hyperMILL® 2026

## WHAT'S NEW?

 **OPEN MIND**  
THE CAM FORCE

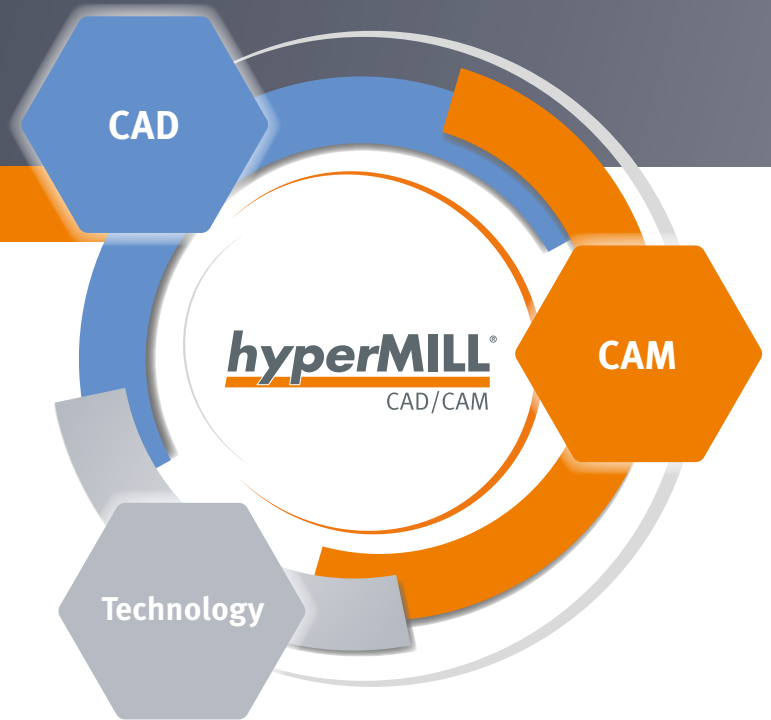


## What's new in *hyperMILL*® 2026?

*hyperMILL*® 2026 sets new standards for performance, process reliability, and range of applications. Further developments in the areas of CAD, CAM, and *hyperMILL*® VIRTUAL Machining ensure more efficient workflows and more powerful calculation algorithms.

### Your maintenance advantage at a glance

As a maintenance customer, *hyperMILL*® 2026 provides you with all new features and performance optimizations within your licensed modules and strategies at no extra cost.



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### Now available:

*hyperMILL*® 2026 tutorials. In this playlist, we show you the most important new features of *hyperMILL*.

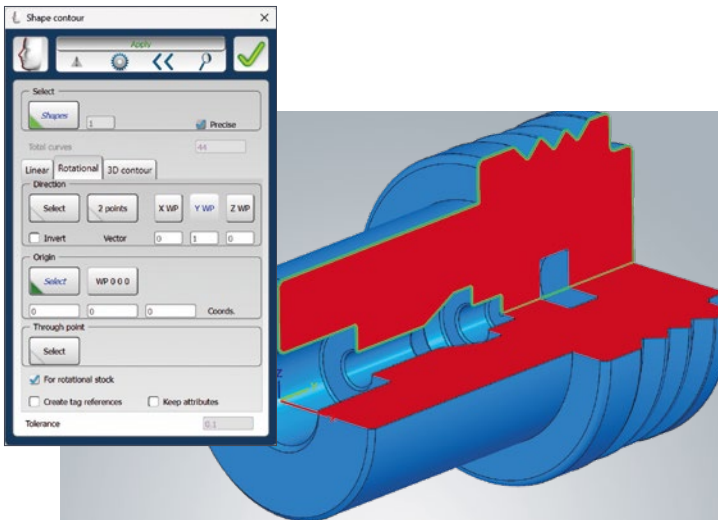


**Review system compatibility:** To ensure optimal performance and stability, we recommend regularly running our diagnostic program, Systemchecktool.exe.

**Note:** Windows® may reset the graphics driver or its settings when carrying out updates.

**System requirements:** Windows® 11 (64-Bit) | **CAD integrations:** Autodesk® Inventor®, SOLIDWORKS

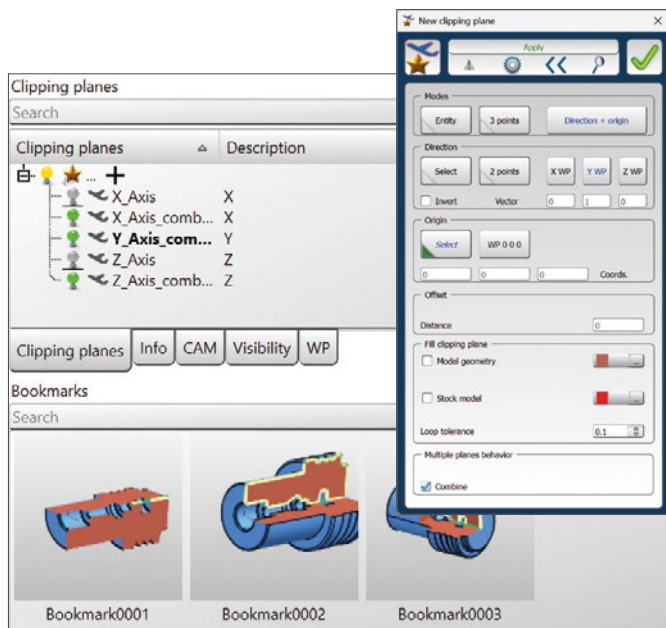
**Software languages:** de, en, es, fr, it, nl, cs, pl, ru, se, sl, tr, pt-br, ja, ko, zh-cn, zh-tw



## Shape contour: Stock for turning parts

The new “For Rotational Stock” option allows you to easily create silhouette curves for rotationally symmetrical components. When creating a rotational stock, a continuous contour along the axis of rotation is required. If this is not the case, a stock consisting of several STL bodies is created. With the “For rotational stock” option, you can now automatically remove all contours that cross the axis of rotation, creating a single, continuous line along the axis.

**Benefit:** Fast and reliable production of turned parts thanks to a consistent rotational contour.



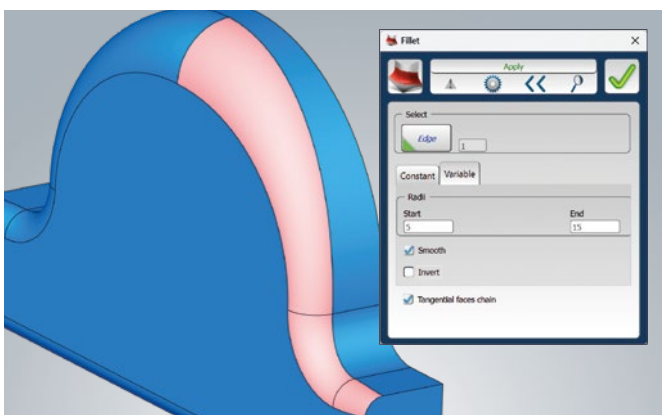
## HIGHLIGHT

### New clipping management

The management of section views has been fundamentally revised. All commands from the former “View – Cut Level” menu are now grouped together under the new “Cut Views” tab. All clippings can be managed centrally via a context menu under this tab. Functions are available for creating, editing, deleting, inverting direction, renaming, setting to current, and exclusively activating individual cut levels.

The “New” and “Edit” commands also allow you to combine the behavior of multiple clipping planes. You can use the buttons in the tab to enable or disable individual clippings. Defined settings can then be saved as bookmarks.

**Benefit:** Clear and flexible management of different cutting levels.



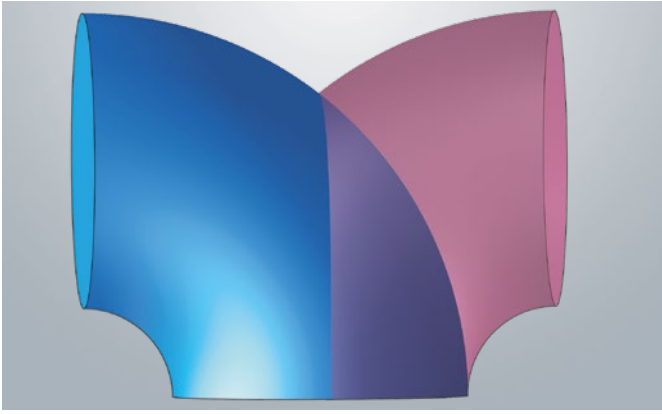
## HIGHLIGHT

### Variable Fillet

The “Fillet” feature has been expanded to include the new “Variable” option. This allows you to create fillets with different start and end radii directly on a solid. The “Smooth” and “Invert” options are also available. The “Smooth” function ensures clean tangents at the beginning and end of the fillet, which is particularly important when mirroring components.

Variable rounding allows you to create radii without trimming surfaces and can be created associatively, so that subsequent changes can be made at any time.

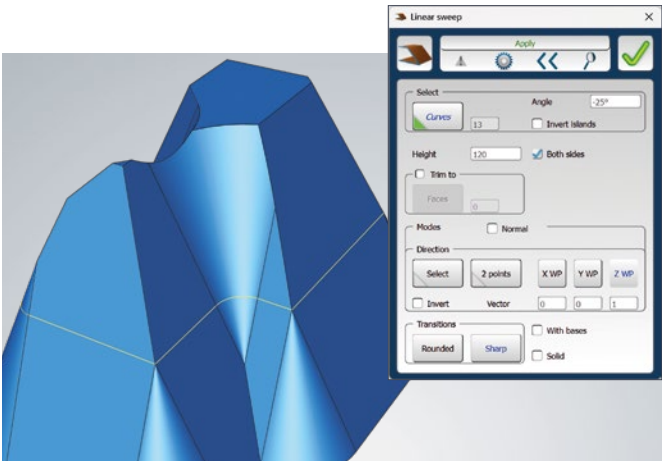
**Benefit:** Easy creation of flexible, associative fillets with freely definable, variable radii.



## New algorithm for Boolean operations

The *hyperMILL*® functions for Boolean operations now use a new algorithm. This ensures that geometries with overlapping common surfaces, such as those found in pipe geometries, are correctly mapped.

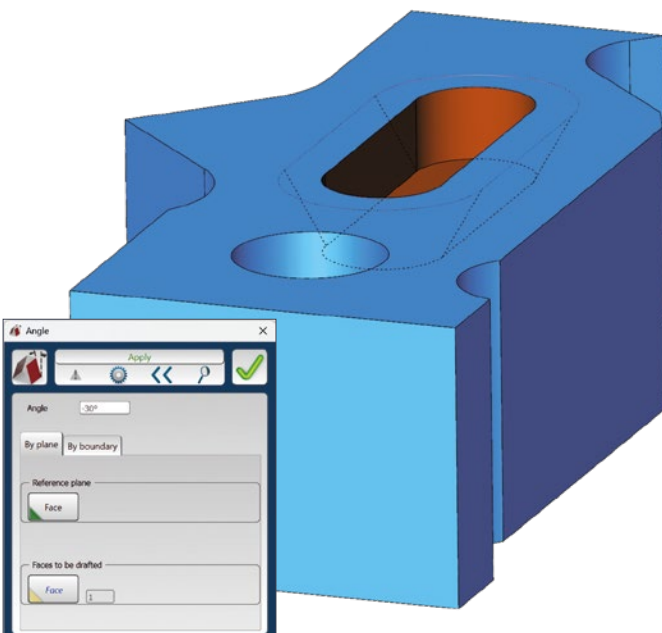
**Benefit:** Enables reliable Boolean operations for complex geometries.



## Improved linear sweep – in both directions

*hyperMILL*® now allows you to easily extrude even highly complex sketches with a defined angle of inclination in both directions. Surfaces that intersect themselves or others are automatically trimmed. This allows you to create complex geometries, such as those required for molds or electrodes, even more efficiently and with maximum precision.

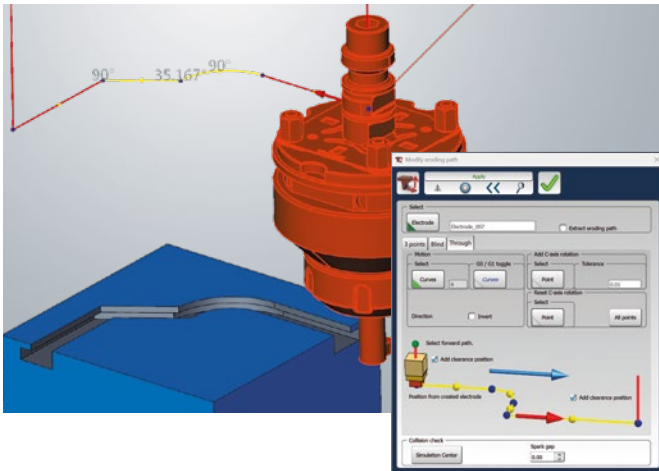
**Benefit:** No reworking required for complex extrusions.



## New feature: Angle

With the new “Angle” feature, solid bodies can now be given a draft angle in just a few clicks. You can choose between two options for defining the draft angle: “On plane” and “On boundary.”

**Benefit:** Easy definition of draft angles directly on the solid model.



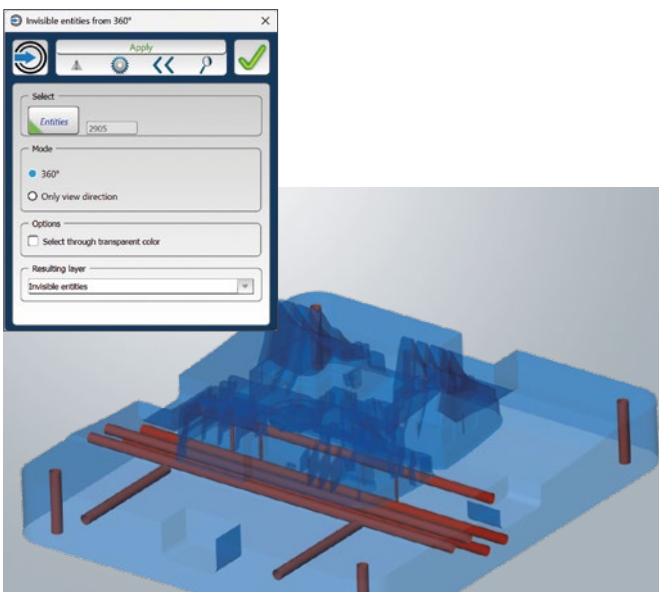
### HIGHLIGHT

## Optimized control of erosion paths

With *hyperMILL*® Electrode, you can now define feed movements (G1) or rapid movements (G0) in a targeted manner. Whereas previously the entire eroding path was executed uniformly as G1, individual curve sections can now be selected directly and assigned accordingly. Switching between G0 (red) and G1 (yellow) is intuitive and is correctly taken into account both when outputting the 3D path to the EDM machine and in the *hyperMILL*® SIMULATION Center.

If necessary, you can also deactivate the automatically generated free movements for approach and departure movements. This prevents incorrect program outputs and ensures that existing erosion paths remain fully compatible.

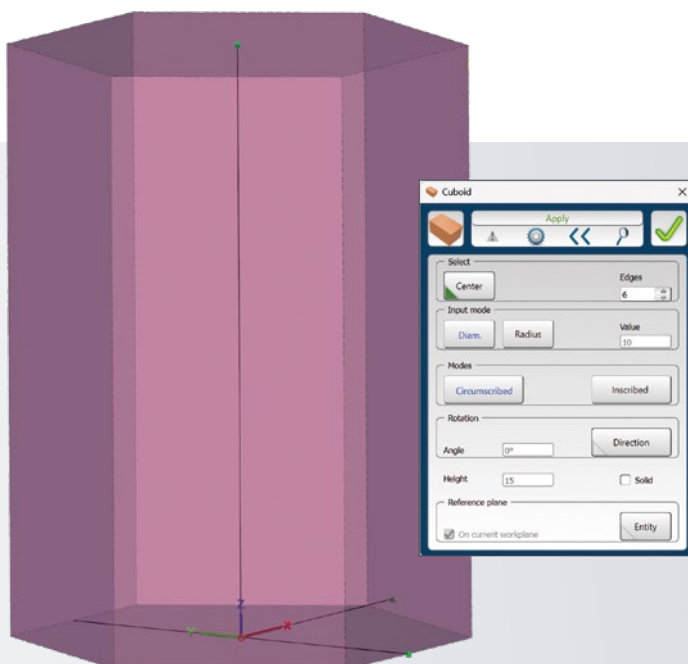
**Benefit:** Reduced machining times through feedrate control on the eroding toolpath.



## Invisible entities from 360°

With the new “Invisible Elements from 360°” function, you can identify geometric elements that are not visible from the outside of the model. This makes it quick and easy to simplify the analysis of large imported assemblies. You decide whether to apply the function to the entire model or to a selection of elements. Visibility can be checked from all directions (360°) or only from the current viewing direction. Invisible elements are automatically moved to a freely selectable layer.

**Benefit:** Automatic hiding of invisible geometric elements.



### HIGHLIGHT

## New shape: Cuboid

In *hyperMILL*® 2026, another geometry is available under Shapes. With the new command for creating cuboids, you can quickly and precisely define cuboid geometries. These are easily created using the center point, number of edges, dimensions, and orientation. Optionally, you can create a cuboid directly as a solid.

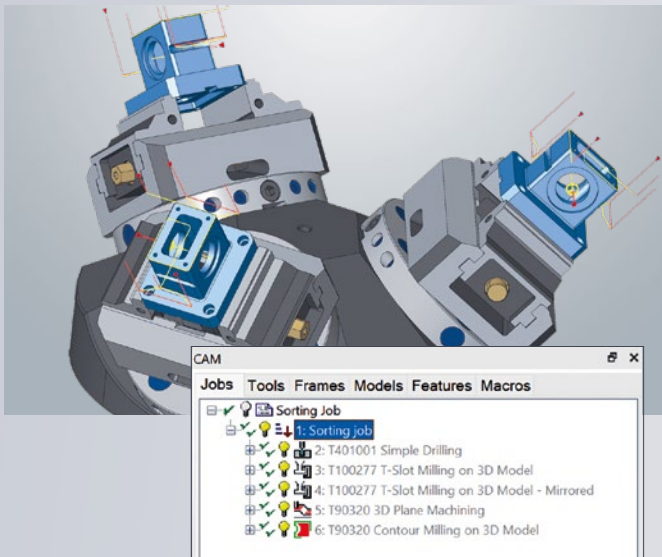
**Benefit:** Significantly faster and more flexible creation of rectangular geometries.

## HIGHLIGHT

## Sorting Job

With the new “Sorting Job,” you can use *hyperMILL*® to transform complete machining sequences from different jobs and tools in a targeted manner while maintaining the desired sequence. The Sorting job applies sorting and transformation logic to the entire machining sequence contained therein. Milling and drilling operations are taken into account together and rearranged across multiple tool and job type changes. You can use any number of different tools within a sort job. This allows you to efficiently structure complex job lists without having to break down or rebuild existing machining logic.

**Benefit:** Flexible transformation of complete machining sequences with different tools and job types.

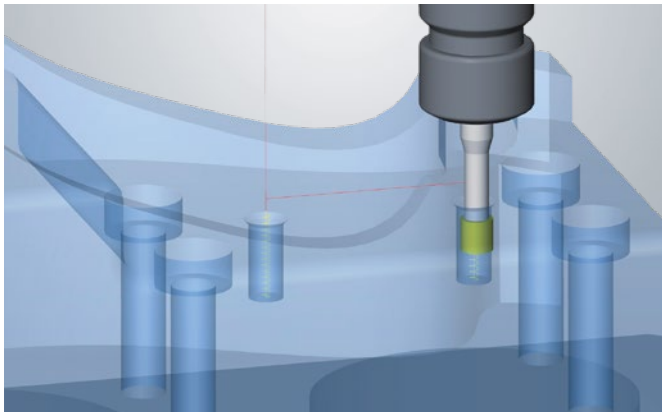


## Helical Thread Drilling/Milling

With the new “Helical thread milling” strategy, you can program thread mills in *hyperMILL* in a targeted and reliable manner. These tools combine drilling and Thread Milling in a single operation.

A separate tool type, the “Helical Thread Drill/Mill”, is also available in the strategy for this type of machining. Only the core diameter of the drill tap is taken into account for the collision check with regard to the component model.

**Benefit:** Simple and secure programming of helical thread drilling and milling cutters.

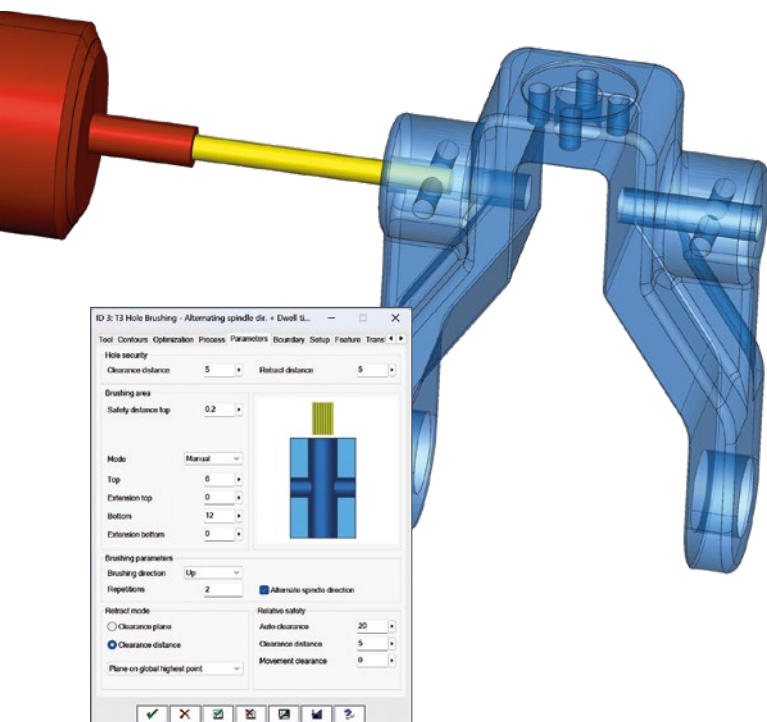


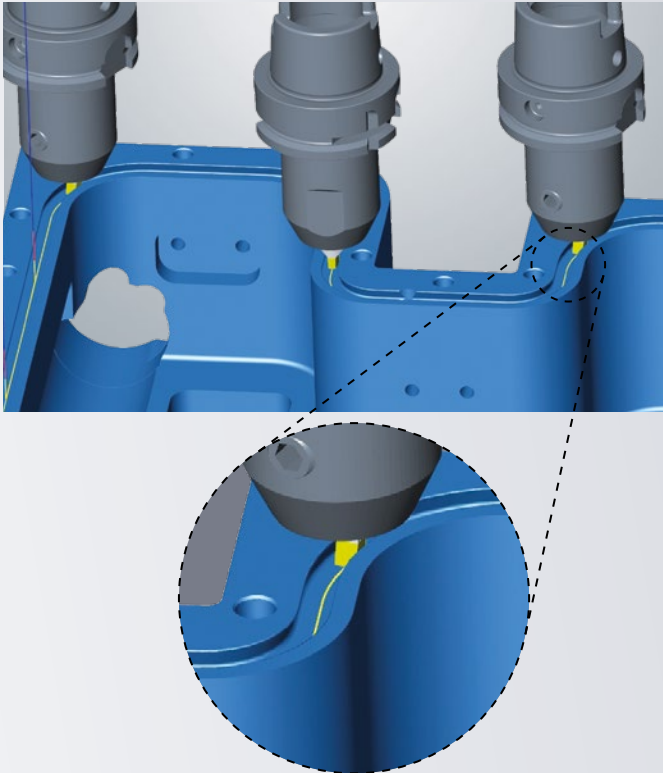
## Hole Brushing

The new, specially designed “Hole Brush” tool type is now available for the “Hole Brushing” strategy. It is optimally tailored to the brushing process and replaces the previous “Drilling Tool” tool type for this application.

In addition, a new option has been introduced that automatically alternates the spindle rotation direction during multiple brushing passes. The spindle rotation direction is changed for each repetition, which removes burrs at intersections more reliably. In addition, you can define a dwell time that is maintained when changing the spindle rotation direction. This reduces the load on the machine's energy management system and increases process reliability.

**Benefit:** More reliable deburring of cross holes and internal threads and increased process reliability with the brushing process.



**HIGHLIGHT****2D HALE Machining**

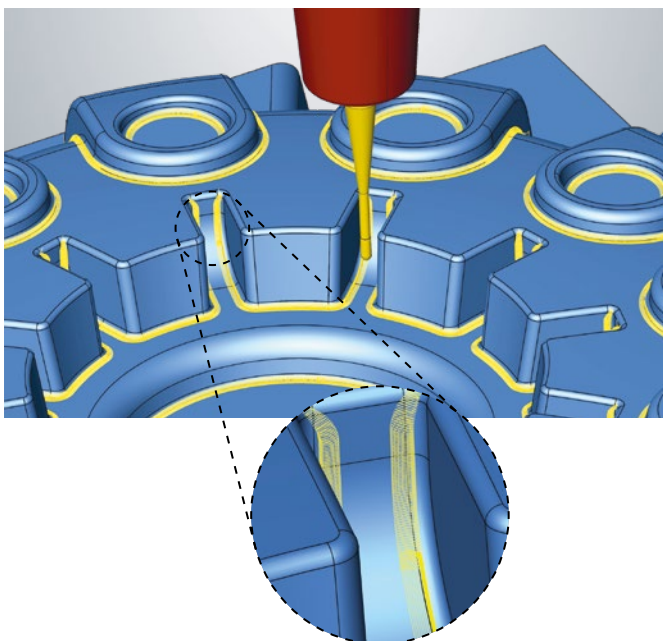
The new “HALE Machining” strategy offers you a specialized machining process for component areas with high surface quality requirements. It is used, for example, to produce sealing surfaces with a scratch-free finish. For certain applications, it can also be an economical alternative to conventional milling processes.

Material removal takes place without active spindle speed. The spindle axis operates as a trailing axis, allowing the tool to be continuously guided orthogonally along the contour. Programming in *hyperMILL*® is similar to 2D Contour Machining.

A special tool type is available for machining. The tool and tool holder are defined in *hyperMILL* TOOL Builder and must be created at the correct angle. With *hyperMILL*® VIRTUAL Machining, you can reliably simulate and check the entire process for collisions.

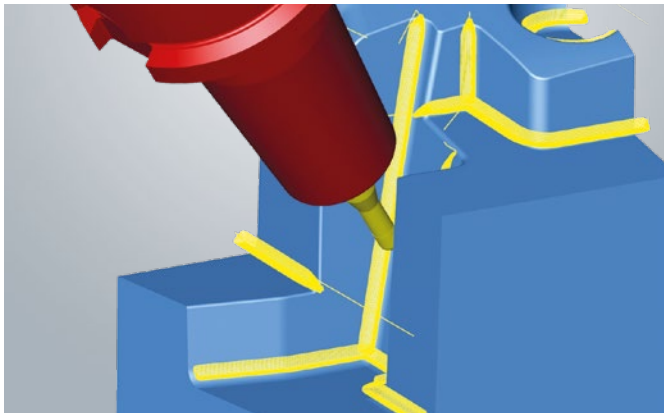
**Benefit:** Perfect surfaces without processing marks across the sealing direction.

**NOT INCLUDED IN MAINTENANCE**

**HIGHLIGHT****3D Automatic Rest Machining**

The calculation algorithms for the three machining strategies “Z level”, “Parallel”, and “Normal” have been redesigned to make the machining of rest material areas even more reliable and efficient. This allows rest material areas to be detected much more precisely and machined with clearance. Feed specifications are reliably taken into account, resulting in more uniform toolpaths and more stable machining processes. In addition, a smooth overlap is automatically integrated at all relevant points, both on steep and flat surfaces as well as at transitions, during entry and exit movements, and in closed loop toolpath motions.

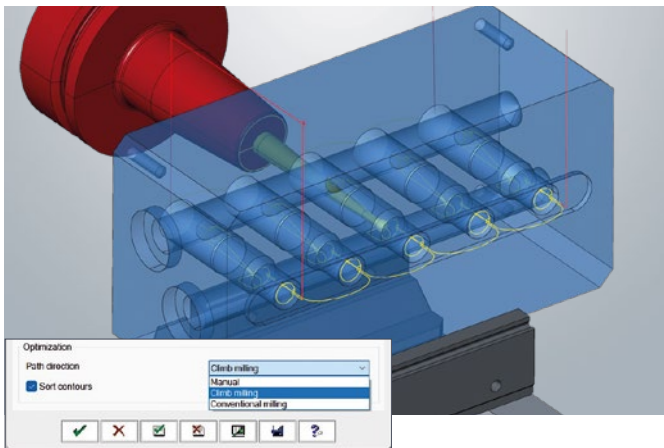
**Benefit:** Improved Rest Machining with optimized toolpaths and smooth transitions.

**HIGHLIGHT****5-axis Rest Machining**

The strategy has been completely redesigned and, as with 3-axis machining, offers new calculation algorithms for the three machining strategies “Z level”, “Parallel”, and “Normal”. The improvements ensure more precise and reliable detection and machining of rest material.

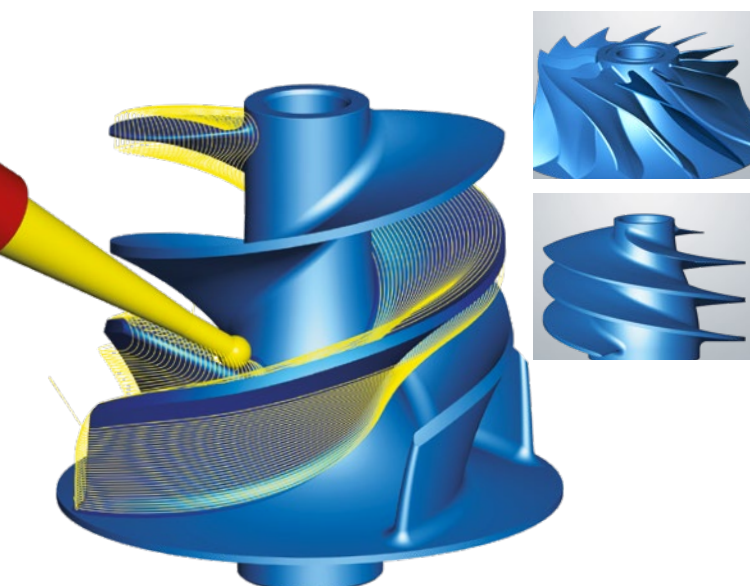
The cutter orientation determination for 5-axis machining has been significantly optimized. Fixed orientation is preferred, which reduces machining time and improves surface quality. At the same time, improved collision avoidance ensures smoother 5-axis simultaneous movements. The new “Minimum clearance angle” option gives you even more tool control.

**Benefit:** More efficient and higher-quality 5-axis Rest Machining with optimized toolpaths and perfect tool settings.

**5-axis Deburring strategies**

Both 5-axis Deburring and 5-axis Hole Deburring strategies have been further developed to reduce the programming effort even more. If desired, the strategy now automatically optimizes the contour sequence and milling direction. A new optimization area is available for this purpose in the contour tab. If you activate the “Sort contours” option, 5-axis Hole Deburring automatically determines an optimized sequence for contour machining for each hole. The “Milling direction” option allows you to specify whether the milling direction defined in the contour manager should be used or whether the milling direction should be automatically adjusted with respect to climb milling or conventional milling.

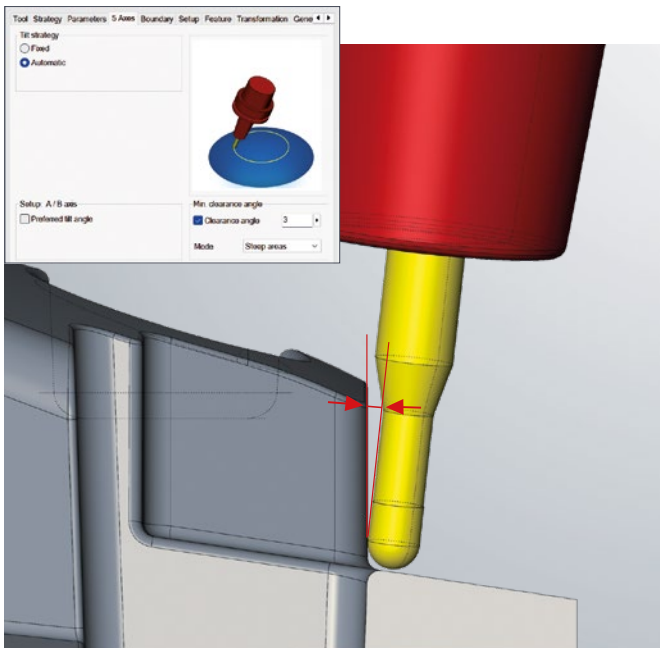
**Benefit:** Reduced programming time thanks to automatic optimization of contour sequence and milling direction.

**5-axis Multi-Blade Point Milling**

The camberline mode for tool orientation determination has been completely revised. It enables significantly more robust toolpath generation with smoother machine movements. At the same time, the setup of the strategy has been simplified so that even complex applications can be programmed quickly and with clearance.

This enhancement expands the range of application to include fuel pumps and inducers in addition to classic impeller and blisk geometries.

**Benefit:** More robust toolpaths, smoother movements, and an expanded range of applications for complex impeller and blisk geometries with simplified setup.



## HIGHLIGHT

### 5-axis Automatic Mode

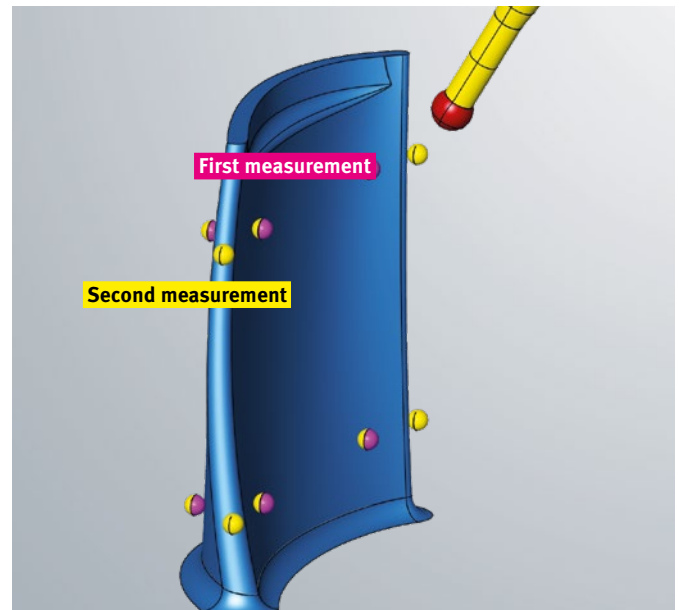
The 5-axis automatic mode makes it much easier to program complex 5-axis machining operations and significantly reduces the amount of programming required. Based on a preliminary analysis of the entire toolpath, *hyperMILL*® automatically determines the optimal tool positions and uses indexed and simultaneous movements in a targeted and efficient manner.

*hyperMILL*® 2026 offers you the new option “Minimum clearance angle.” This allows you to specify a minimum distance between the tool shank and the component. This value is consistently taken into account when searching for the cutter orientation angle so that the tool shank maintains a defined clearance distance from the component during machining.

The 5-axis automatic mode is available in the following strategies:

- 5-axis Rest Machining
- 5-axis Profile Finishing
- 5-axis ISO Machining
- 5-axis Rework

**Benefit:** Simple and reliable 5-axis programming with automatic orientation search and defined clearance angle between tool shank and component.



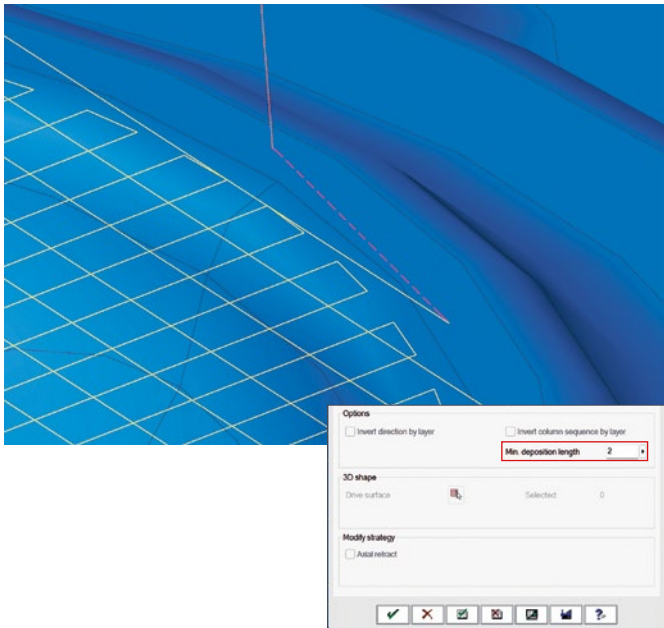
### *hyperMILL*® BEST FIT—Iterative Alignment and 2D Measurements

With *hyperMILL*® 2026, the BEST FIT function has been specifically expanded to enable precise and reliable alignment even for complex components. Two new functions improve both the measurement basis and the alignment process itself.

**Iterative Alignment** allows you to perform BEST FIT alignment step by step. This is particularly advantageous for hard-to-access or thin-walled components such as single blades, as well as for complex cast or die-cast parts. Instead of recording all measuring points in one step, the component is first roughly aligned using easily accessible areas. Additional measuring points are included in further steps. This allows you to safely probe even delicate edges and surfaces and significantly increase alignment accuracy. Sequential programming makes each alignment step transparent and traceable.

BEST FIT now also supports 2D measurement cycles. In addition to classic 3D measuring points, you can use axis-dependent measurements as well as circle, slot/rib, and rectangle measurements for alignment. These use the control system's standard measurement cycles, do not require any special calibration, and provide very precise position determination, for example for the center of a hole. Important points on the component, such as coaxial elements, can thus be aligned with minimal effort.

**Benefit:** More precise and robust BEST FIT alignment through iterative measurement strategies and the use of proven 2D measurement cycles.



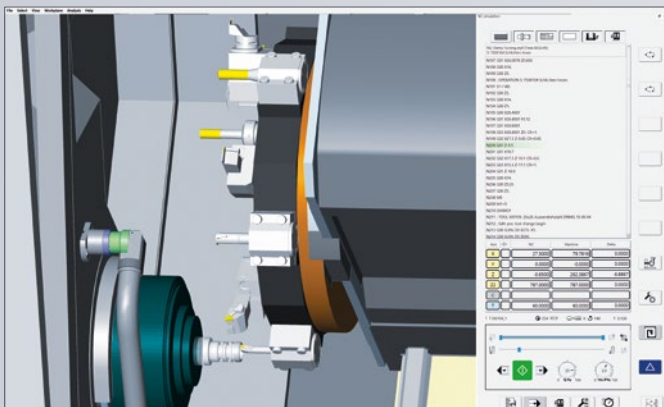
## Advanced process control in additive manufacturing

The additive machining strategy has been improved to simplify programming and further increase process stability in demanding additive applications. You can now define a minimum deposition length. Additive toolpaths that fall below this value are automatically skipped. This allows you to avoid unfavorable short deposition movements, especially in wire-based processes.

The new “Symmetrical additional contours” option is available for creating thick wall structures. *hyperMILL*® automatically generates multiple parallel peripheral paths symmetrical to the reference contour. Manual offsetting of the geometry is no longer necessary, even with open contours.

In addition, you can use the “Use synchronization curves” option to precisely control the tool orientation during 5-axis machining. Synchronization curves ensure smooth and process-oriented axis movements, even with sharp corners or complex geometries, thereby improving the quality of the material application.

**Benefit:** Greater process stability, reduced programming time, and improved component quality thanks to optimized settings.



### HIGHLIGHT

## *hyperMILL*® TURNING – Support for complex turrets

Support for turret configurations has been consistently expanded in *hyperMILL*® VIRTUAL Machining for the 2026 version. In addition to proven axial and radial turret types, complex turrets with mixed axial and radial station alignment are now also fully mapped within a single turret. Each station can be individually equipped with holders and tools. Simulation and collision checking are taken into account realistically and consistently.

**Benefit:** Safe simulation and reliable collision checking even with complex turret configurations.

# Generate, optimize, and simulate NC code securely

*hyperMILL* VIRTUAL Machining bridges the gap between the CAM system and the real machine environment—for unmatched process control and optimization. That's Industry 4.0! Our VIRTUAL Machining technology guarantees reliable CNC machining from programming to the machine.

- Digital twin of your machine
- Based on NC code simulation
- Optimization of motion sequences in the NC program
- Perfect machine connection thanks to bidirectional connection
- Two-way data exchange from CAM to machine
- Simplified programming
- Automatic solution selection



## See how you can benefit from Optimizer technology



Automatically generated connection movements between 2D, 3D, and 5-axis operations as well as different positions



At the touch of a button, our Optimizer converts X-Y movements into movements with a rotational axis.



Required rewind and connection movements are generated automatically and included in the NC code.

## HIGHLIGHT

**hyperMILL® VIRTUAL Machining – Angle head support**

With the angle head support in *hyperMILL®* and *hyperMILL®* VIRTUAL Machining, angle heads can be seamlessly integrated into CAM programming. The angle head is defined as part of the NC tool and configured using the *hyperMILL®* TOOL Builder. The virtual machine consistently takes angle heads into account during NC code generation, toolpath optimization, simulation, and collision checking. Even critical phases such as the approach and retract of the angle head are simulated completely and reliably.

The *hyperMILL®* Optimizer automatically determines optimal approach solutions for angle head machining. Approaching via a curve also allows hard-to-reach areas of the component to be reached safely with clearance.

Machining jobs with and without angle heads can be flexibly combined within a job list. Machine kinematics with nutating heads are also supported. The function is initially available for Siemens (SINUMERIK 840D) and Heidenhain controls.

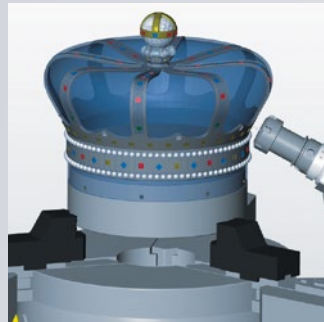
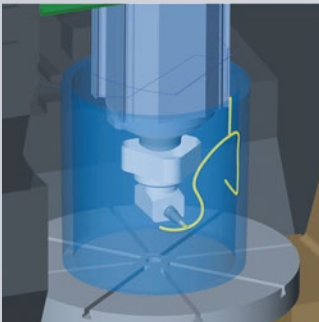
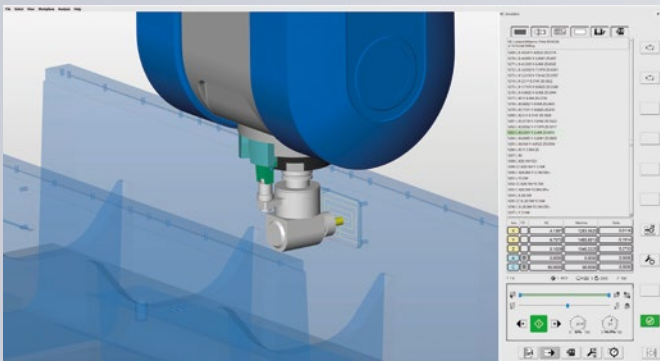
**Benefit:** Secure programming and verification of angle head machining operations.

NOT INCLUDED IN MAINTENANCE

**Optimized logic for collision check**

*hyperMILL®* 2026 makes working with modified collision check settings significantly more efficient. Previously, the collision check was performed in its entirety each time a change was made. Now, the *hyperMILL®* VIRTUAL Machining Center saves all collision checks performed within a session and intelligently evaluates modified settings. A complete collision check is only performed again if it is actually necessary. In all other cases, the updated results are available immediately.

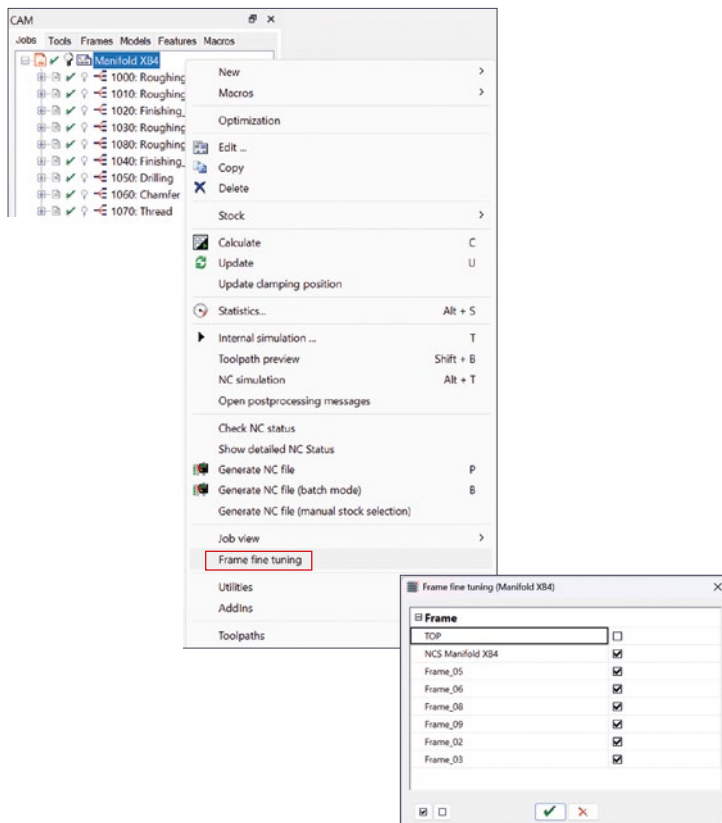
**Benefit:** Faster availability of collision check results when settings are changed.



Axis	NC	Machine	Delta
X	64.6648	389.5888	0.0000
Y	25.0000	319.9080	0.0000
Z	5.0000	129.4112	-4.0925
A	0.0000	0.0000	0.0000
C	0.0000	0.0000	0.0000

T T 303    RTCP    S 531    F 707

105 L Y25 FQ1  
106 L Z-2 FMAX  
107 L X-65.3821 Y-25 FMAX  
108 L Z-9 FMAX  
109 L Z-15 FQ2



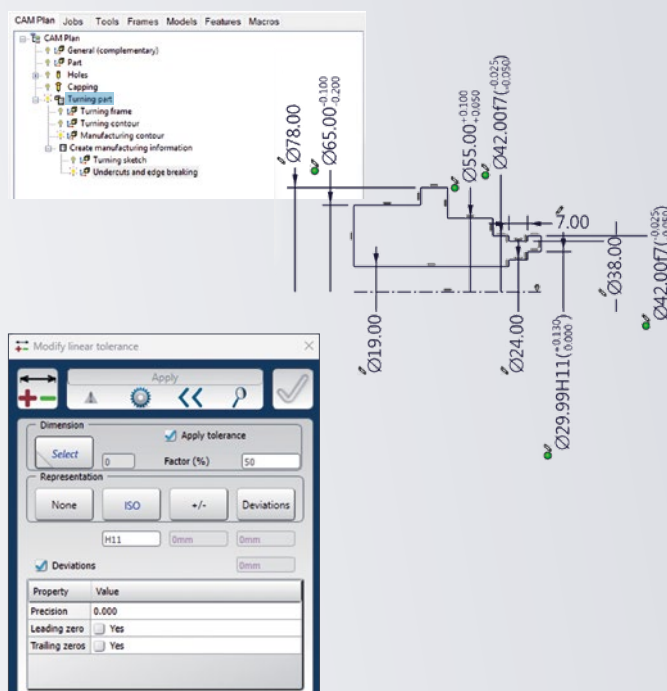
## Frame fine tuning

With frame fine tuning, you can adjust indexed orientations in the NC program without having to create new programs. This allows you to compensate for minor machine deviations or move machining positions safely within the tolerance range.

- Individual control per job list and frame in *hyperMILL*®
- Also for frames created from transformations
- Checking the maximum permissible displacement in the NC program
- Support for Siemens and Heidenhain controllers

**Benefit:** Flexible and direct adjustment of machining positions in the NC program.

## HIGHLIGHT

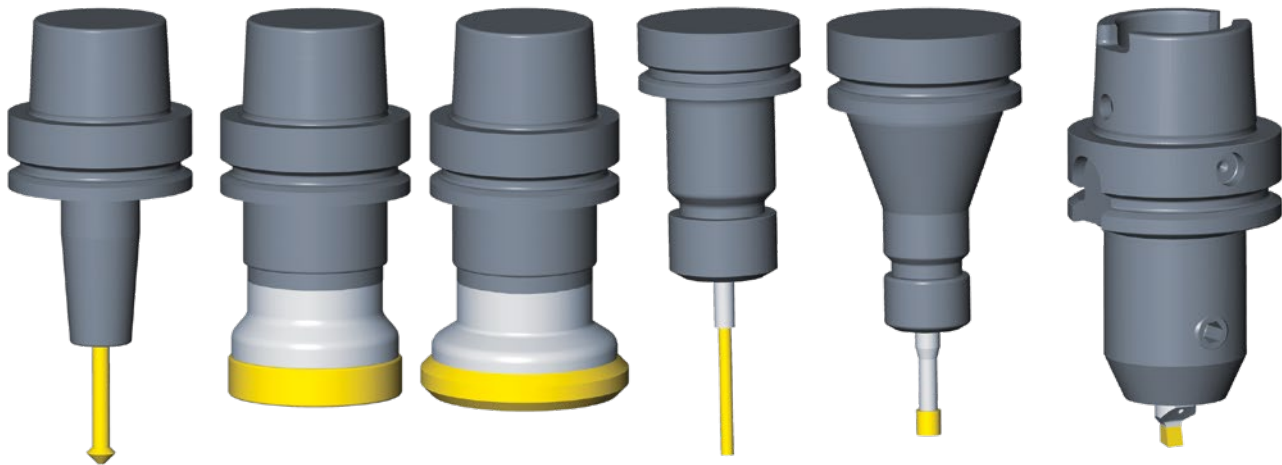


## CAM Plan Turning

With the CAM Plan Turning module, *hyperMILL*® offers you comprehensive programming support for turned and mill-turned components. Often, only geometries without tolerances, fits, or manufacturing information are available for turning programming. Until now, these had to be added manually—a time-consuming and error-prone process. CAM Plan Turning enables you to quickly and consistently enrich turning contours with all relevant manufacturing information. This results in standardized and reusable processes for turning and mill-turn components.

Two templates are available for different requirements. “Turning” is intended for classic turned parts with minimal milling. “Milling and Turning” is ideal for complex milled and turned parts and optionally integrates milling, deburring, and Rest Machining. Based on this, the CAM Plan automatically generates production-ready contours, recognizes turning features, and provides the necessary machining areas for NC programming.

**Benefit:** Significantly reduced programming time and increased process reliability thanks to standardized turning contours with integrated manufacturing information.



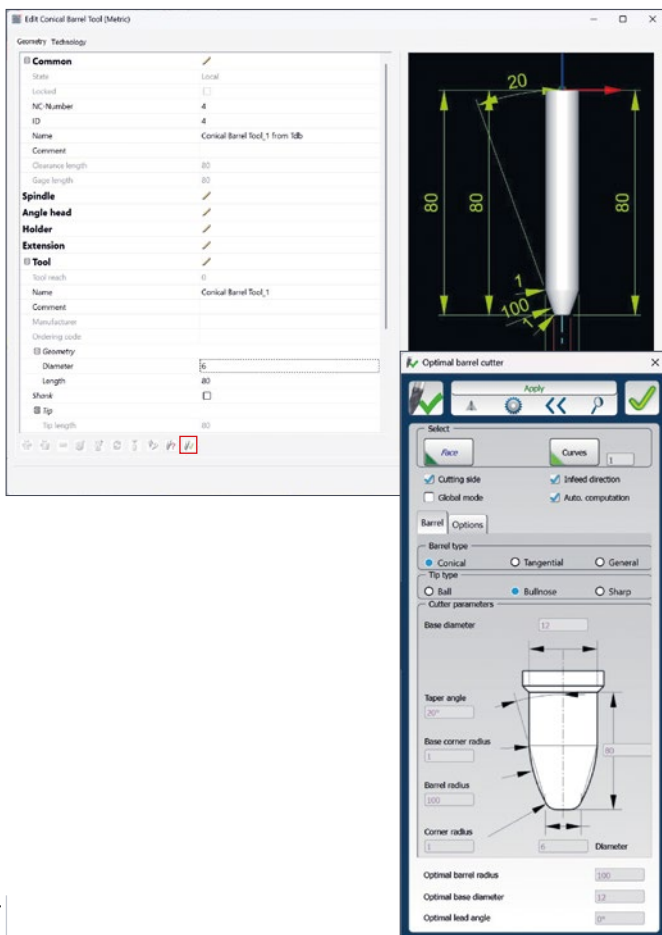
## New tool types

hyperMILL® 2026 offers new tool types for a variety of machining applications. Even complex tool geometries such as Hale tools can be created quickly and easily thanks to the hyperMILL® TOOL Builder and special workflows. All new tool types are simulated in detail and fully utilized for collision checking.

The new tool types include:

- Hole Brush
- Hale tool
- Indexable cutter with shoulder mill inserts
- Indexable cutter with face mill inserts
- Helical Thread Drill/Mill cutter
- Front/Back chamfered cutter

**Benefit:** Rapid creation of new tools, increased process reliability through detailed simulation and collision checking, and improved automatability.



## Optimal barrel cutter – extended verification of existing tools

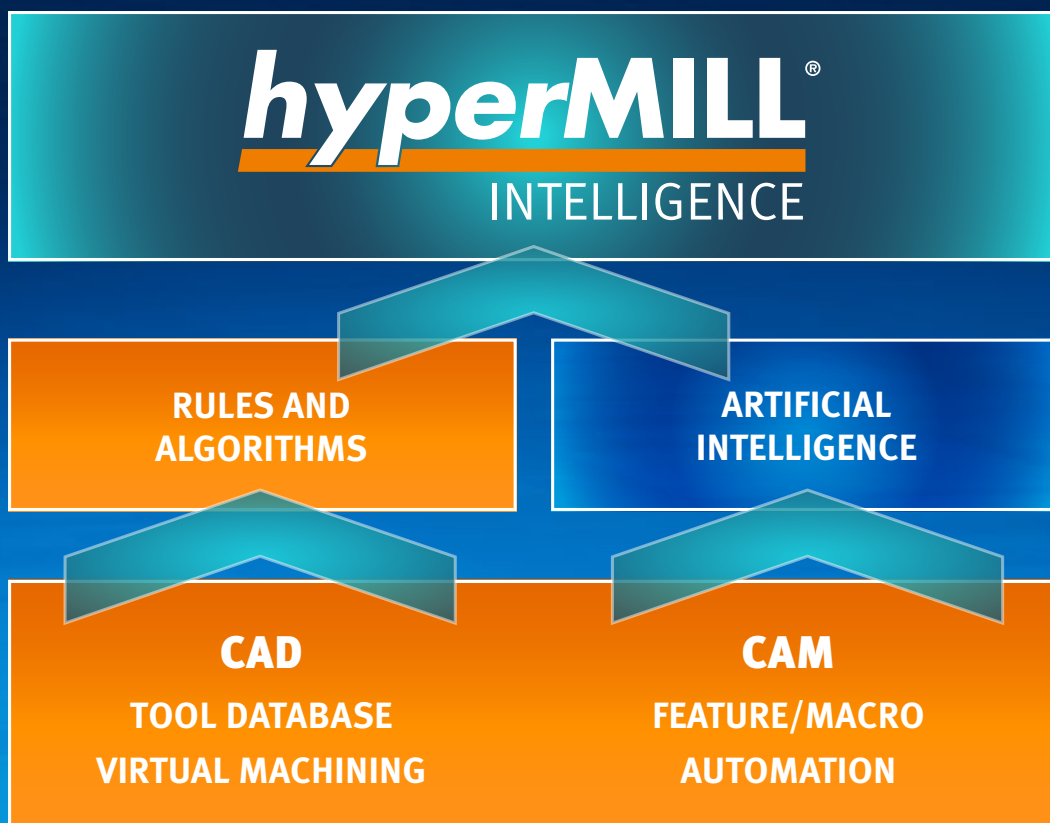
With the “Optimal barrel cutter” function, hyperMILL® supports the analysis and optimal use of barrel cutters for surface machining. Based on different types of barrel cutters, relevant parameters are evaluated to assess the suitability of a tool for the respective machining task.

This function has been specifically expanded in hyperMILL® 2026. Programmers can now check directly whether an existing barrel cutter is suitable for the planned machining operation. The new function “Barrel cutter – Check parameters” is available for this purpose in the “Edit tool” job dialog. No parameters of the tool geometry are changed. Instead, analysis parameters such as contact parameters, maximum barrel radius distance, and lead angle can be applied to the existing tool and evaluated. This allows a quick and reliable decision to be made as to whether the barrel cutter can be used optimally.

**Benefit:** Quick and reliable testing of existing barrel cutters for use in surface treatment.

# Everything that makes CAM intelligent

**hyperMILL INTELLIGENCE** combines automation, optimization, and artificial intelligence on a single technology platform, ensuring reliable processes and genuine intelligence in CAM programming.



What's  
behind  
hyperMILL INTELLIGENCE?



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