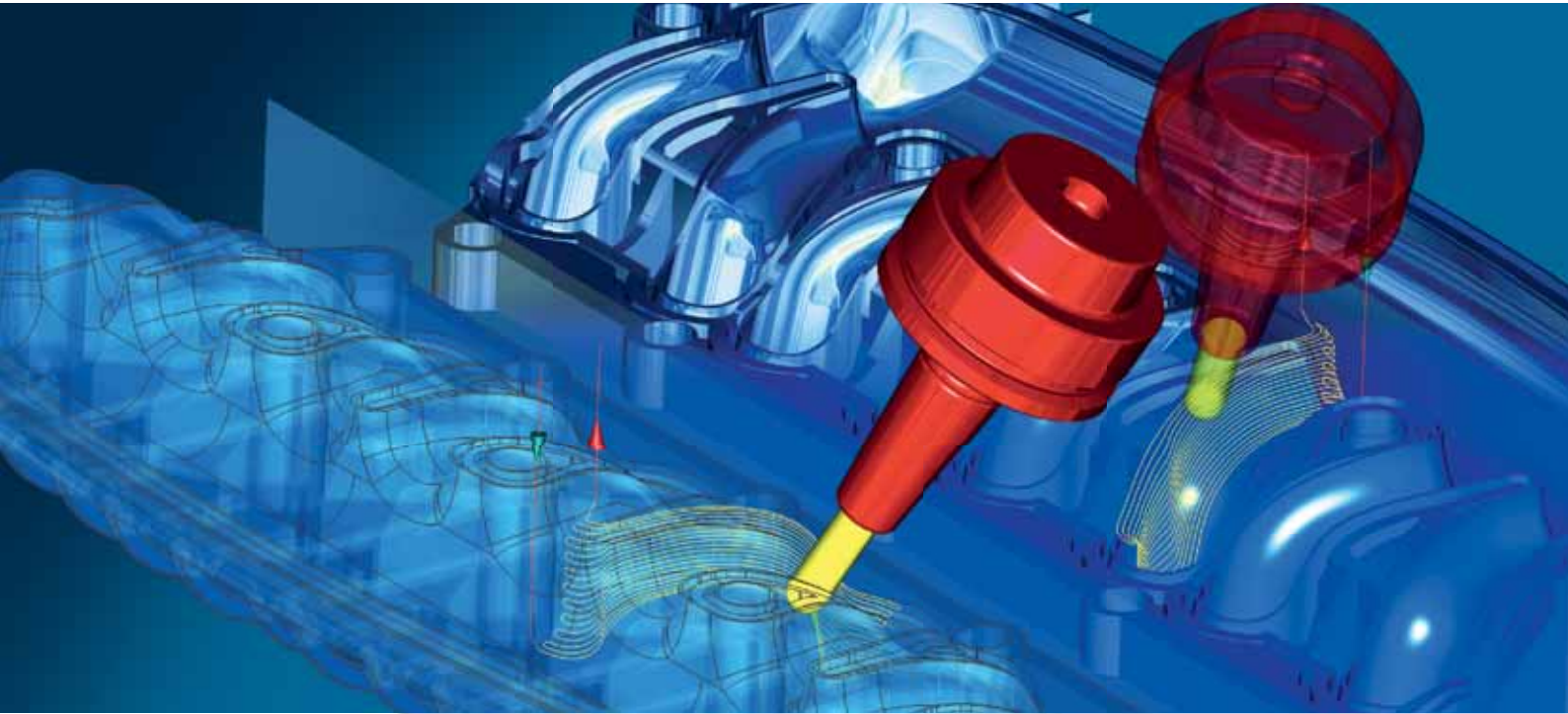


hyperMILL[®]

NEW 2009.1



Easy. Efficient. Fast.

VERSION 2009.1



OPEN MIND ■ THE CAM COMPANY

Programming ease that pays!

With *hyperMILL*® 2009.1, we are setting new standards in advanced programming: more process reliability, improved surface quality, shorter production times and increasingly less programming time even for complex parts.

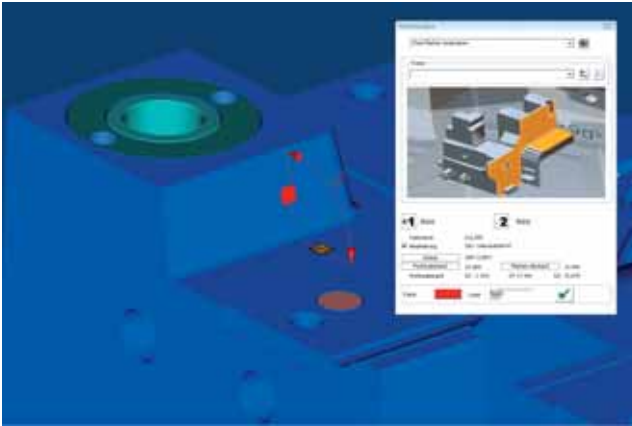
On top of that, the new version provides a host of intelligent new functions.

These greatly speed up programming through automated processes that run in the background. Traverse paths and rapid travel movements are now optimised automatically, which results in faster machining times. An extended job list, added analysis functions and the new OPEN MIND tool database ensure a more transparent workflow.

When it comes to efficient and comprehensive CAM programming from 2D right up to 5axis machining, *hyperMILL*® 2009.1 is the new benchmark.

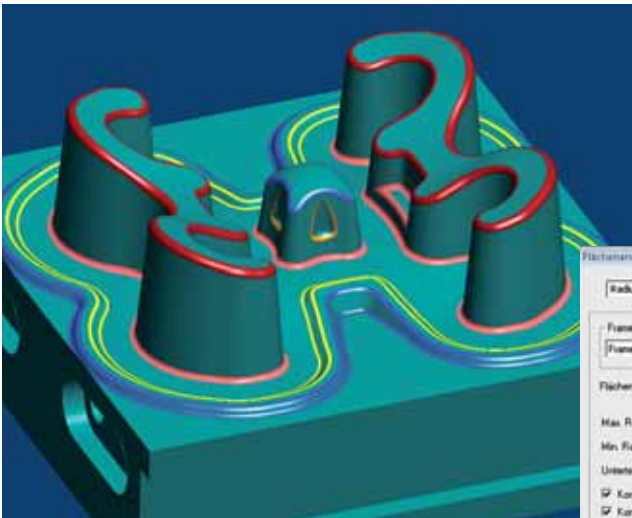


Strong on analysis

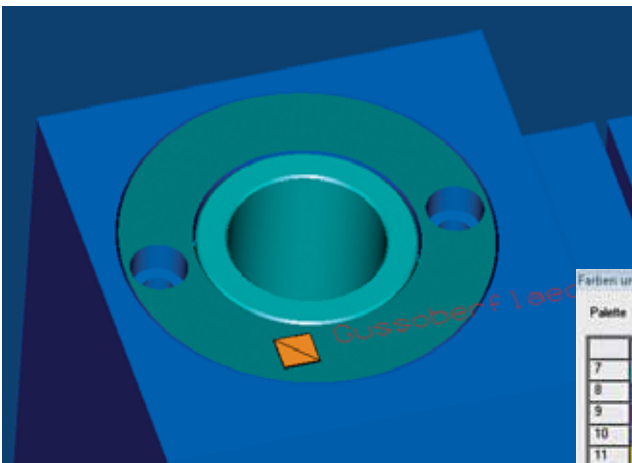


The new version of *hyperMILL*® features a wide range of analysis functions. Components can be checked easily and quickly, which is vital for efficient job planning and seamless CAM programming.

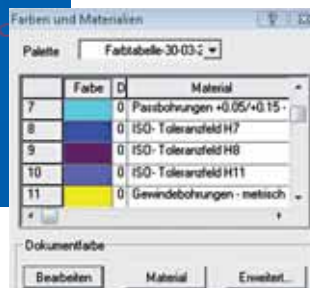
With our new analysis tools, you can easily recognise which properties of your design elements are important for machining. Information such as surface type, radii, coordinates and selection points are available directly at the click of a mouse.



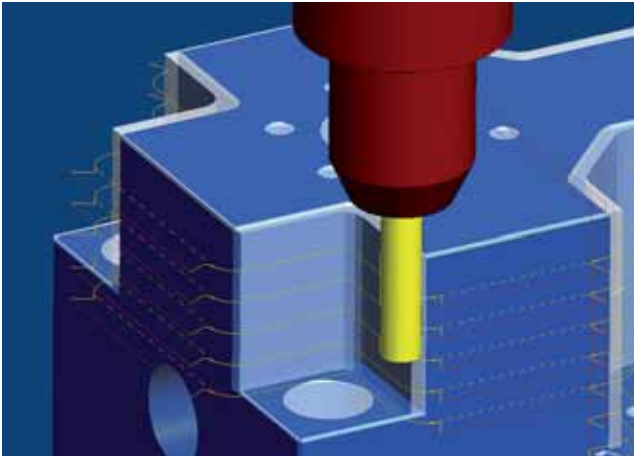
By selecting two elements together, you can display distances between surfaces and points, as well as angles between adjacent surfaces. This function also lets you measure depths.



Machining data, such as machining type or tolerances, are often compiled into **standardised colour tables**. You can now store these within *hyperMILL*®. This means you can determine very quickly which tolerances and fits for drill holes or other geometries need to be generated for the component.

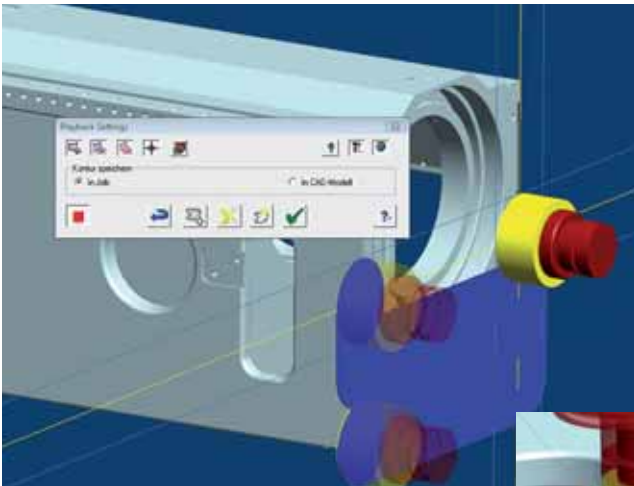


Faster 2D milling

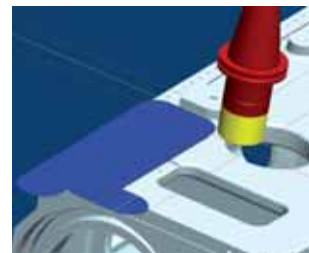


2D highlights include new and improved 2D contour milling, playback milling, and breakthrough detection in feature-based pocket machining.

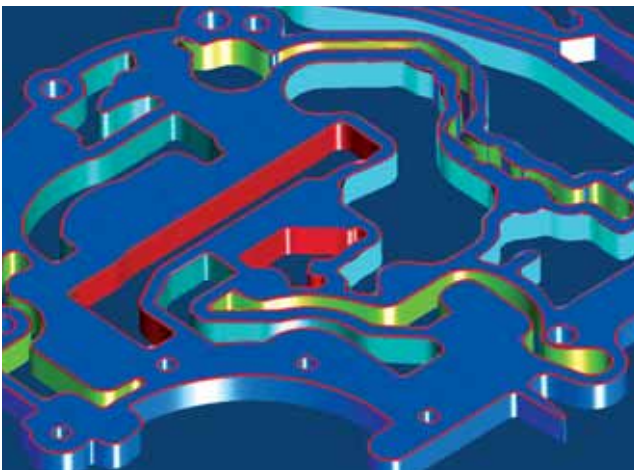
The new 2D contour milling cycle offers superb optimisation possibilities, reducing both programming and machining times. Automated approach and retract strategies ensure the best paths are selected for the tool's approach and retract movements. The best possible starting point is also selected automatically. Tool paths are now trimmed against the stock automatically, which is a particularly useful function. This optimises the traverse paths and also eliminates redundant travel. In addition, collision checking of the milling area ensures maximum process reliability.



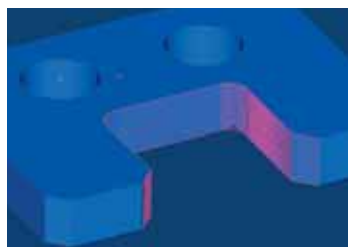
Playback milling lets you flexibly define basic milling steps simply by rolling the mouse pointer over the relevant areas. This shows the material removal for the selected milling diameter and checks the milling path for collisions.



Playback milling with collision-checked NC paths.



Pocket Feature Recognition (see list) now also includes **breakthrough detection**. As well as closed pockets, pockets with islands and pockets with open sides, *hyperMILL*® now also detects breakthroughs.



The new breakthrough detection further enhances the software's feature-based pocket machining capabilities.

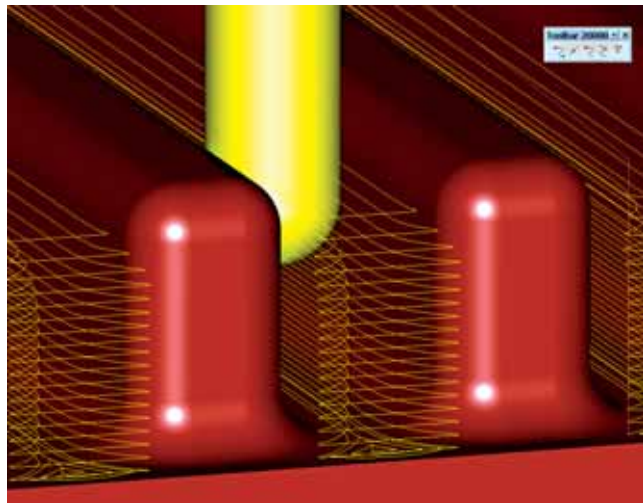
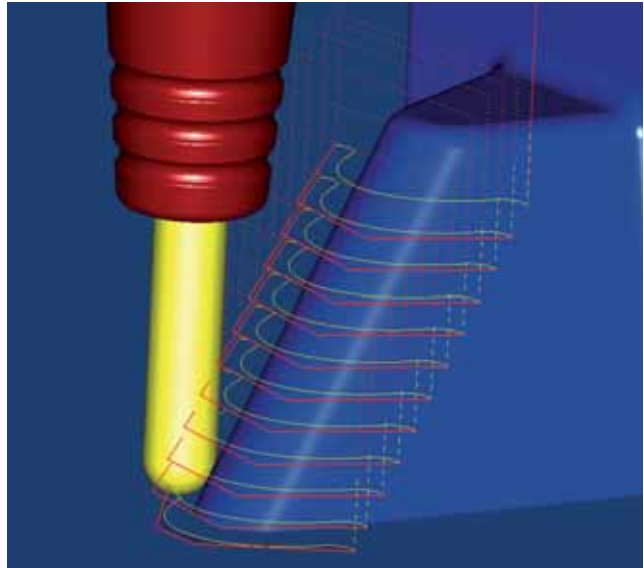
More performance for 3D machining

In the area of 3D programming, *hyperMILL*® 2009.1 is also offering a number of new functions. Our efficient new programming solutions include automated approach and retract strategies, a new 3D rest machining cycle, and 3D toolpath compensation.

Production mode is a new optimisation function that lets you minimise the approach and retract movements within a job. If there are any areas not needing to be machined, production mode ensures that these are bypassed free of collisions and with the shortest path possible. This significantly reduces machining times, particularly for large parts and using slow machines.

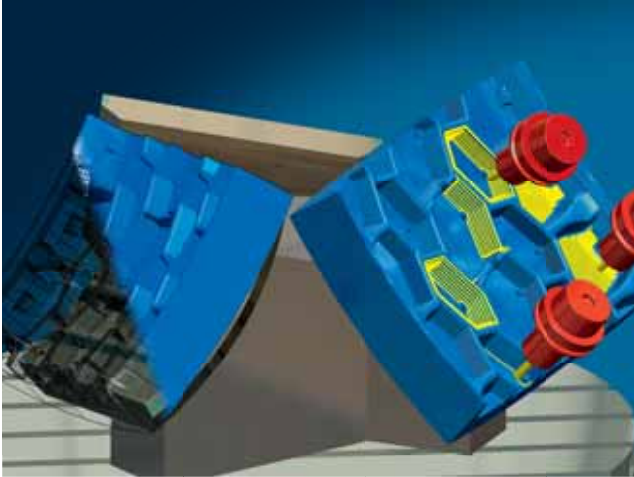
3D rest machining has also sped up the machining process. Ribs and grooves are now very easy to mill. Deep areas containing large amounts of material can be cleared completely and effectively using a constant infeed.

Reference tool and reference job: The new 3D rest machining cycle has added bullnose endmills to the reference tool list. Also, instead of a tool, you can now select a previous machining job as a reference. This function is a definite highlight for added efficiency. It means that only those rest material areas need to be machined where the reference job would have caused collisions. A repeat search for potential rest material areas is no longer needed, as the calculation is already based on the areas detected by the reference job. The only remaining programming task is to re-calculate the NC paths. Furthermore, you can define a new tool for the job at any time. There is no need for additionally defining boundaries or milling areas.

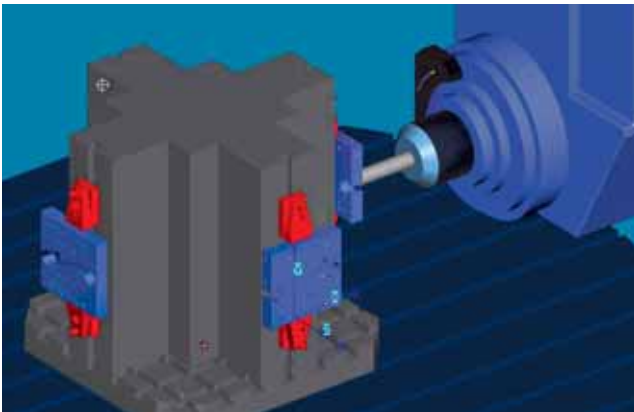


Rest material areas can be milled and cleared using 3D machining, 5axis fixed-tool machining, or even 5axis simultaneous machining.

Programming at the click of a mouse



hyperMILL® 2009.1 offers several new options for automated programming. With the transforming and mirroring functions, machining steps for identical, similar and symmetrical geometries can be copied very easily.



With transformations, you can duplicate programs across the work area as often as you like. Any changes to the original are automatically applied to all of the copies. Every parameter can also be modified individually. A very useful function is that transformed programs can be checked for collisions against the finished part. This means that jobs involving tombstones or multiple clampings can be programmed reliably and quickly.



Mirroring is suitable for fully symmetrical parts – such as left and right parts – as well as for parts that contain isolated symmetrical shapes. All climb-milling steps are retained for the mirrored operations. Any changes to the original are automatically applied to the mirrored versions. Again, every parameter can also be modified individually if required.

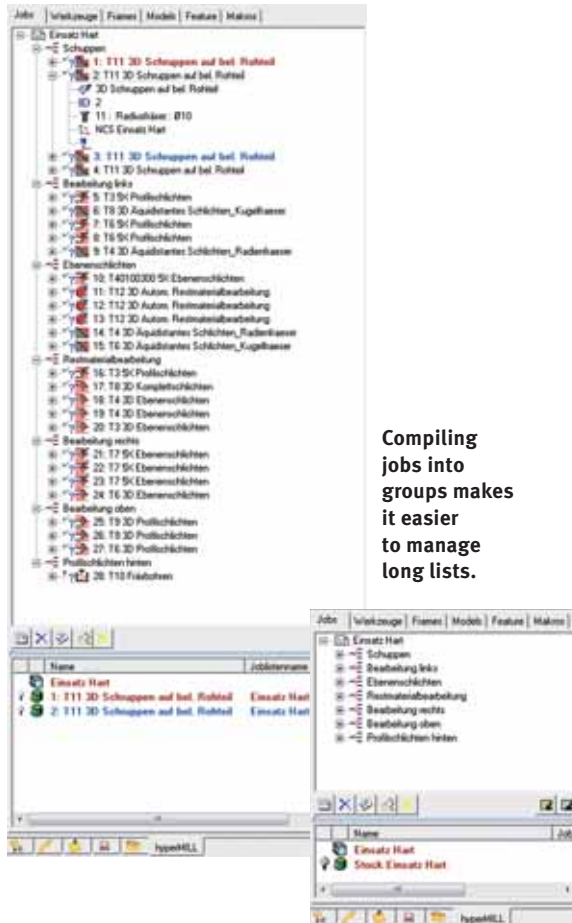


The machining of symmetrical elements can be programmed automatically thanks to mirroring and transforming.

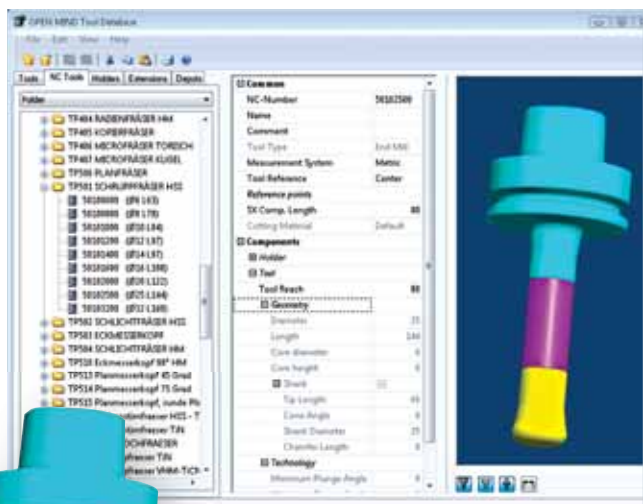
Well organised

Transparent workflows ensure seamless, reliable processes. With this in mind, *hyperMILL*® 2009.1 is adding innovative concepts such as the new extended job list and the new OPEN MIND tool database.

The extended job list enables sorting by job groups. Jobs can be grouped according to job step, geometry, spatial position or tool inclination. This makes it much easier to manage long job lists. The job steps can be shown or hidden from the list as a group. With such a versatile job list, project management becomes even easier and more reliable.



With the new OPEN MIND tool database, tools are represented even more precisely than before. The graphical user interface provides very detailed tool definitions. The database can depict complete tools and even include tool coupling types. This enables very comprehensive collision checking, especially in combination with tool extensions. Depending on the tool assembly, the machining strategy and the material, a range of technology parameters can also be stored, making our tool database a great solution for efficient tool management. Furthermore, there is an importing function for accessing the databases of well-known tool manufacturers.



In the tool database, assembled tools are depicted very accurately.

hyperMILL[®] 2009.1

Other new features at a glance

- Improved deep hole drilling with feedrate reduction for cross-holes
- 3D roughing that recognizes remaining stock and can remove regions greater than a specified [minimum] stock condition
- 3D cutter compensation
- Optimised fast travel concept
- Intelligent job integration
- New functions for 5axis simultaneous machining

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