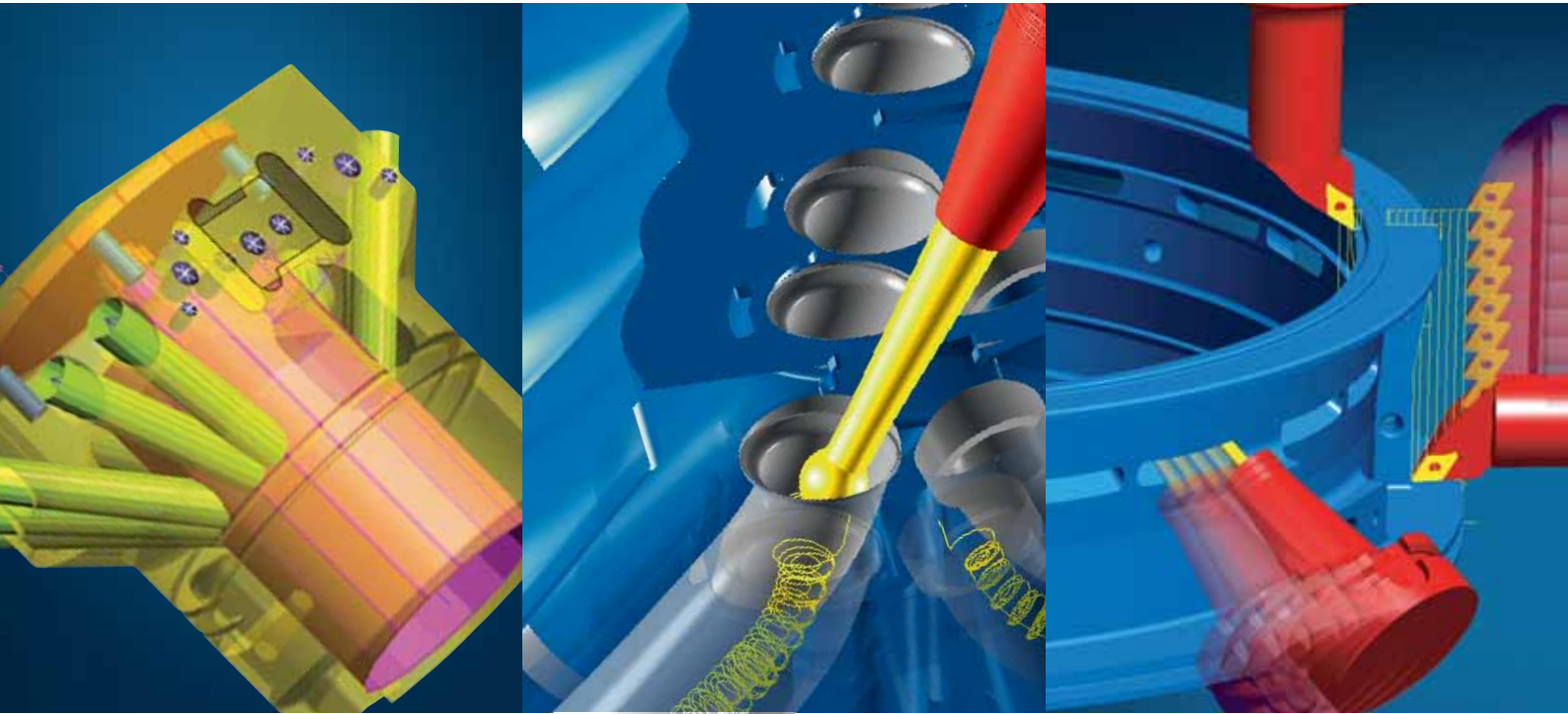


hyperMILL®

2D ▪ 3D ▪ HSC **5** AXIS




For complete machining and continuous processing




OPEN MIND ▪ THE CAM COMPANY

hyperMILL® – Featuring the most comprehensive range of CAM strategies in a single interface

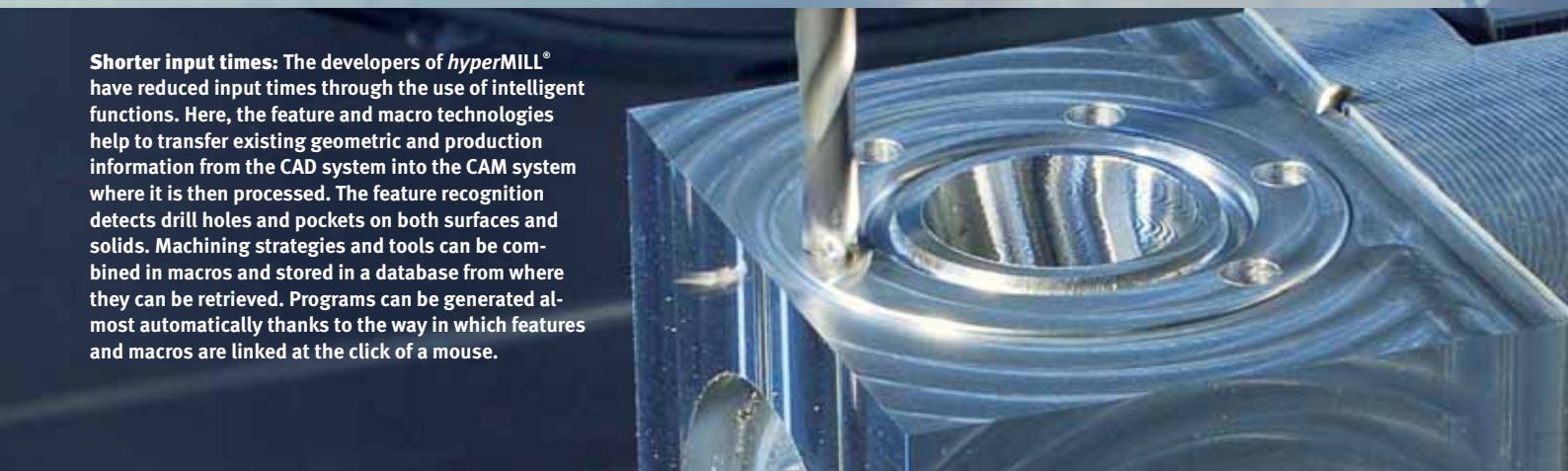
The *hyperMILL*® CAM software program integrates all the available strategies and applications such as 2D, 3D, HSC and 5AXIS milling, mill/turn as well as dedicated application solutions in one straightforward, Windows-based user interface. One CAM software solution is therefore all that is required to program complete machining processes even for challenging parts. And that is a genuine advantage, when continuous processing, minimised cycle times and reliability are the order of the day.



One CAM software solution for everything: The wide range of machining strategies and optimisation functions allows parts to be programmed very flexibly and efficiently. Stock tracking as well as collision check and avoidance are available for all the strategies. A postprocessor that is individually adapted to machines, controllers and components reliably converts the CAM programs into machining programs. The new workspace monitoring feature with limit switch control provides additional process reliability.



Programming support: A single user interface for all the strategies makes learning the programs and using them routinely much simpler. Dialog boxes with graphical support, plausibility checks and a clearly structured job list all help to support users. In addition, *hyperMILL*® features automated functions that reduce input times. These functions include automatic collision check and avoidance and the fully automated calculation of the tool position for 5axis simultaneous machining.



Shorter input times: The developers of *hyperMILL*® have reduced input times through the use of intelligent functions. Here, the feature and macro technologies help to transfer existing geometric and production information from the CAD system into the CAM system where it is then processed. The feature recognition detects drill holes and pockets on both surfaces and solids. Machining strategies and tools can be combined in macros and stored in a database from where they can be retrieved. Programs can be generated almost automatically thanks to the way in which features and macros are linked at the click of a mouse.

Continuous processing thanks to CAD-integrated solutions

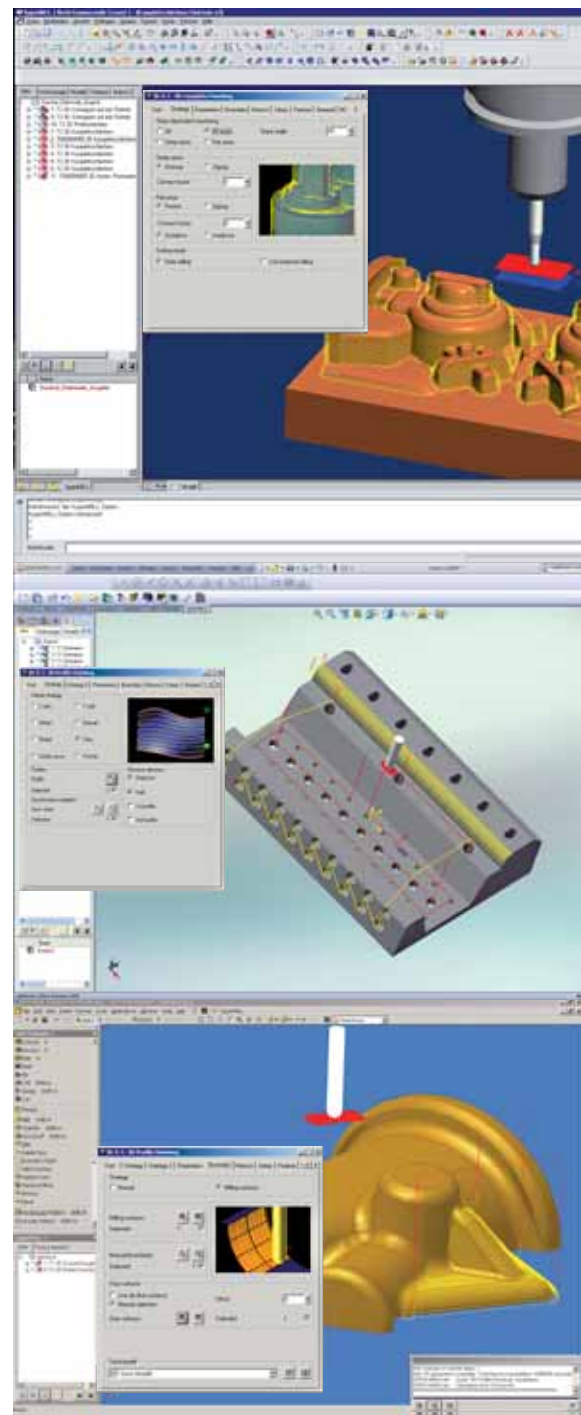
OPEN MIND Technologies is offering their globally successful *hyperMILL*® CAM software as a CAD-integrated solution for *hyperCAD*®, thinkdesign, **SolidWorks**® and Autodesk® Inventor™. These CAD integrations are ideal for establishing continuous process chains. In addition, direct interfaces allow data to be imported smoothly from CATIA V4® and CATIA V5®, Pro/ENGINEER®, Unigraphics®, Parasolids® and **SolidWorks**®. Furthermore, popular standard interfaces such as IGES, STEP or STL are available for exchanging data.

hyperCAD® *hyperCAD*® is the powerful CAD system from OPEN MIND Technologies AG that is based on the think3 kernel. *hyperCAD*® allows models to be designed, edited and revised quickly and intuitively.

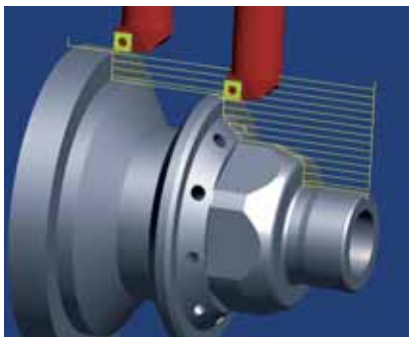
thinkdesign Fully integrated into the CAD system's user interface, this solution facilitates continuous processing with thinkdesign.

SolidWorks® SolidWorks users can also work with *hyperMILL*® in their familiar CAD environment. This leads to a clear increase in productivity, as does the fact that all the machining strategies can be accessed on a single user interface.

Autodesk® Inventor™ Certified for Autodesk Inventor 2009, this CAD integration also guarantees an efficient mode of operation in a familiar operating environment.

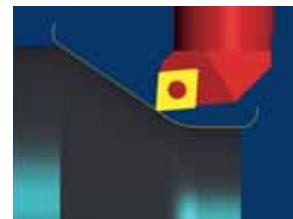


hyperMILL® offers an extensive range of machining strategies on a single user interface. These strategies are complemented by numerous optimisation functions, which allow the machining to be adapted to individual jobs. These machining strategies and optimisation functions lay the optimal foundations for flexible and cost-effective production.

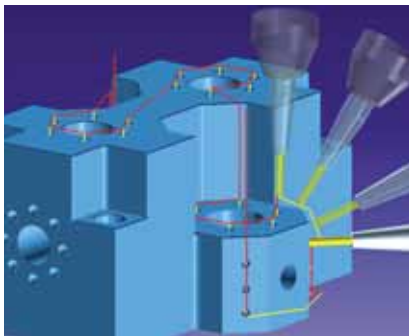


Turn roughing

Mill/turn using *hyperMILL*® *millTURN*: The *millTURN* module is fully integrated in *hyperMILL*®. This means that milling and turning strategies can be freely combined in one program. *hyperMILL*® *millTURN* provides turning strategies for roughing, finishing, grooving, thread cutting and drilling. Falling contours can also be taken into account in the machining. Optimisation functions exist for each of the available strategies.

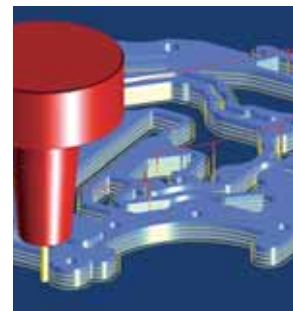


Approach and retract macros
Grooving

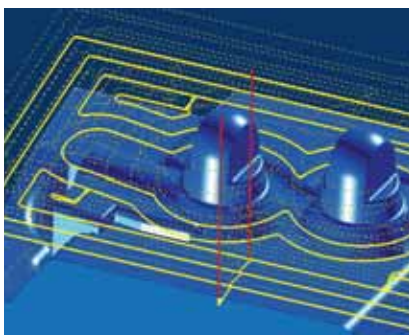


5axis drilling with toolpath optimisation

2D-machining: Face milling, pocket machining, contour milling, rest machining, 2D and 5axis drilling strategies are available for programming typical 2D tasks. One particular highlight of the pocket milling and drilling strategies is that the existing artificial intelligence and control cycles are supported. Thanks to the feature recognition and processing, pockets and drill holes can also be programmed particularly efficiently. Drilling can be defined, among other things, as thread milling and drilling or deep hole drilling.



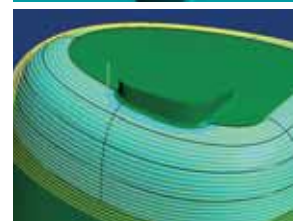
Contour milling

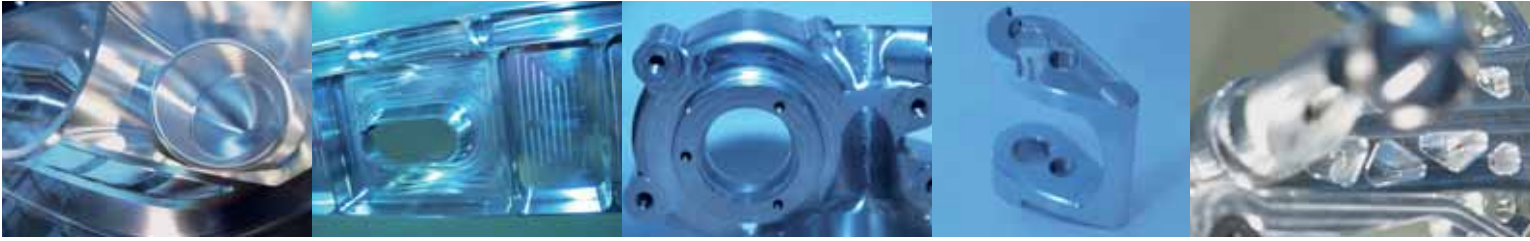


Complete machining

3D-machining: Simple and complex parts can be machined efficiently using 3D strategies that include arbitrary stock roughing, profile and Z-level finishing and rest machining, as well as special strategies such as complete finishing or equidistant finishing. Optimisation functions allow machining jobs to be precisely adapted to the existing requirements. Collision check and avoidance guarantees process reliability and easy programming.

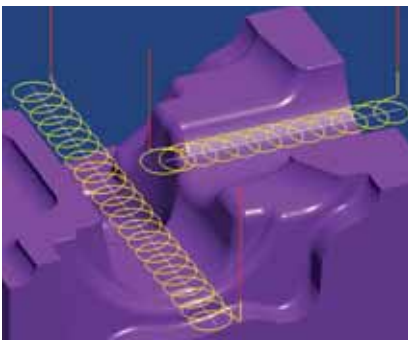
Rest machining and
ISO machining



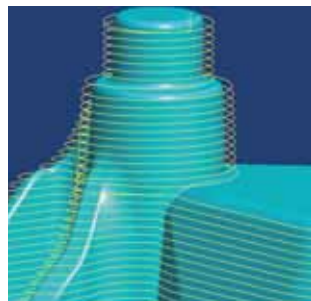


HSC with hyperMILL®: Many 3D and 5axis strategies integrate special functions for high-speed cutting. These include:

- Filleting of corner radii for a high feedrate in a continuous machine movement
- Smooth plunge and infeed for optimal cutting conditions and tool movements between paths
- Spiral or trochoidal machining



Trochoidal machining



Spiral toolpath

5axis machining: Depending on the machining task and the machine kinematics, users can select an optimal 5axis machining process from various 5axis tilt strategies, which include milling with fixed option 3+2, autoindex and 5axis simultaneous machining. Rest Machining, profile finishing, Z-level finishing and equidistant finishing, among others, are all available as 5axis strategies. There is also a range of special 5axis cycles such as 5axis top milling, 5axis swarf cutting or cutting edge machining.

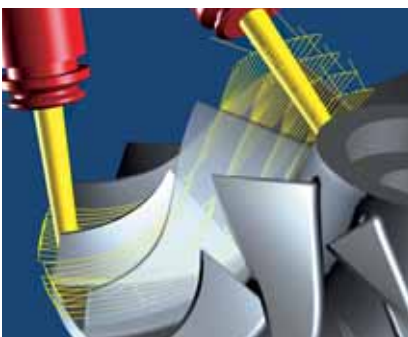


Contour milling

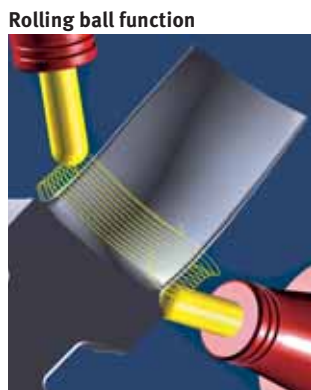


5AXIS simultaneous milling
5AXIS swarf cutting

Special applications: Geometries such as impellers, blisks, blades, tubes and tyres pose special requirements that standard solutions cannot satisfy. For this reason, *hyperMILL®* offers user-friendly special applications that facilitate simple programming. Special functions such as the rolling ball function for milling the radii between blades or the simple definition for tube machining ensure optimal machining results.



Impeller roughing



Rolling ball function

Service, support, upgrades

The software is developed entirely in house. This fact together with the close cooperation of the consulting, training and support groups means that OPEN MIND Technologies AG can provide flexible and customer-oriented services. The Upgrade Agreement includes regular software updates and upgrades, as well as a free support hotline at our branches throughout the world.



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