

hyperMILL®

2019.2

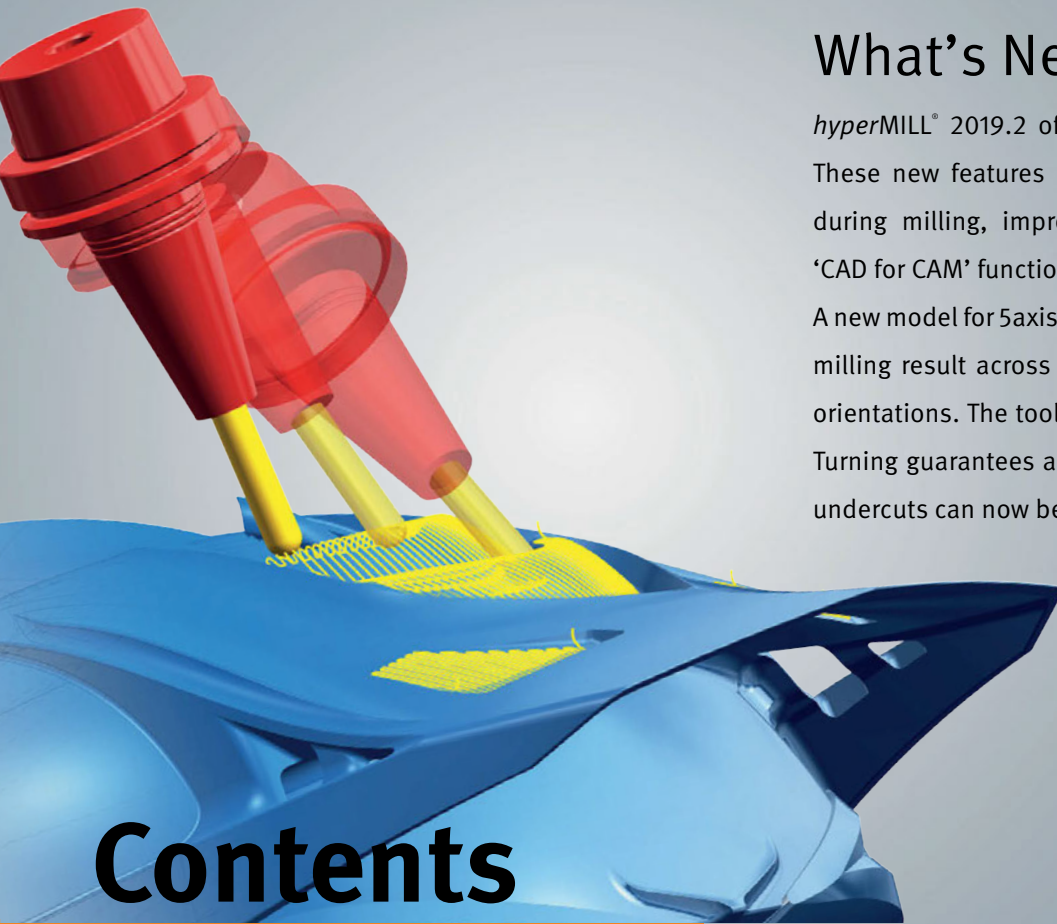


What's New?



 **OPEN MIND**
THE CAM FORCE

© The helmet was programmed and produced by HILTI.



What's New in 2019.2?

hyperMILL® 2019.2 offers many innovations in all areas. These new features include increased surface precision during milling, improved turning strategies, and many 'CAD for CAM' functions.

A new model for 5axis Tangent Machining enables a perfect milling result across multiple surfaces with different ISO orientations. The tool life monitoring in High Performance Turning guarantees a secure turning process. In addition, undercuts can now be easily recognized in *hyperCAD*®-S.

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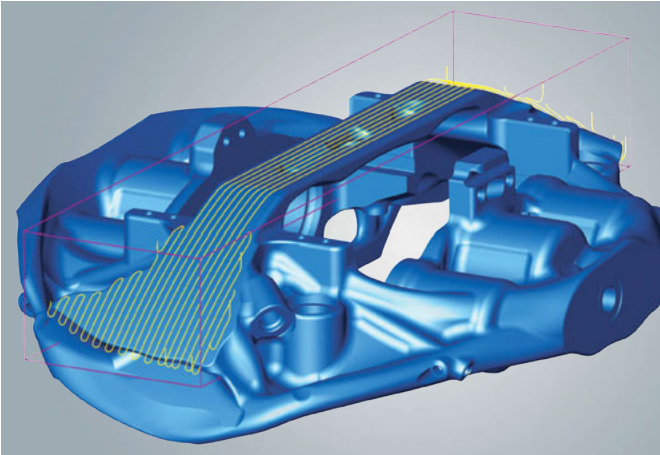
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Review system compatibility: To ensure optimal performance and stability, we recommend regularly running our diagnostic program, Systemchecktool.exe. **Note:** Windows 10 may reset the graphics driver or its settings when carrying out updates.

System requirements: Windows® 7 (64 Bit), Windows® 8.1 Pro and Windows® 10 | **CAD integrations:** *hyperCAD*®-S, Autodesk® Inventor®, SOLIDWORKS, ThinkDesign, *hyperCAD*® | **Software languages:** de, en, es, fr, it, nl, cs, pl, ru, sl, pt-br, ja, ko, zh-cn, zh-tw

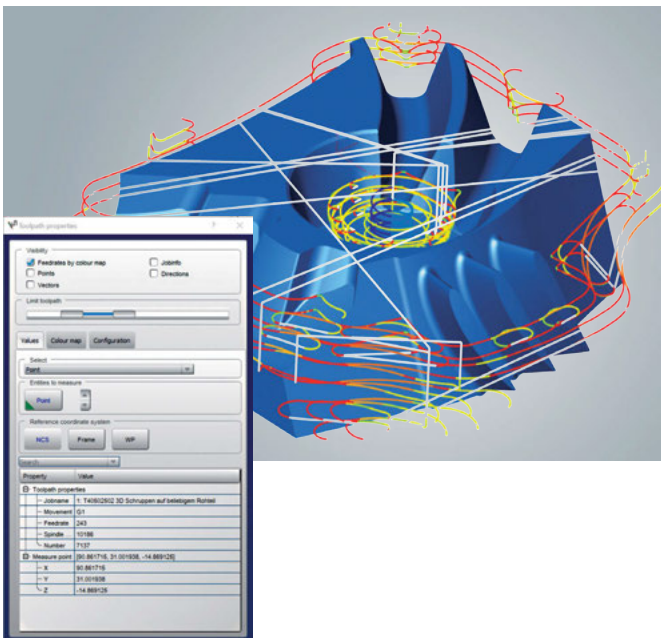


Toolpath

The 'dynamic highlight' for toolpaths can now be deactivated in the options. This ensures that the toolpaths are not selected unintentionally, and makes it easier to select underlying surfaces or contours. The selected toolpaths are still displayed in a selection color.

Furthermore, it is also possible to generate bounding boxes for the toolpaths as an alternative type of highlight. If the user moves the mouse pointer over a toolpath, its bounding box will be displayed.

Benefits: Increased user-friendliness.



Toolpath analysis

Feedrate analysis has been added to the toolpath analysis. Based on feedrate values, the toolpaths are colored automatically or manually by entering individual values.

The toolpath area can be limited using a slider. This makes it possible to perform a local analysis quickly for large toolpaths. For better visualization, it is also possible to modify the point and line thickness.

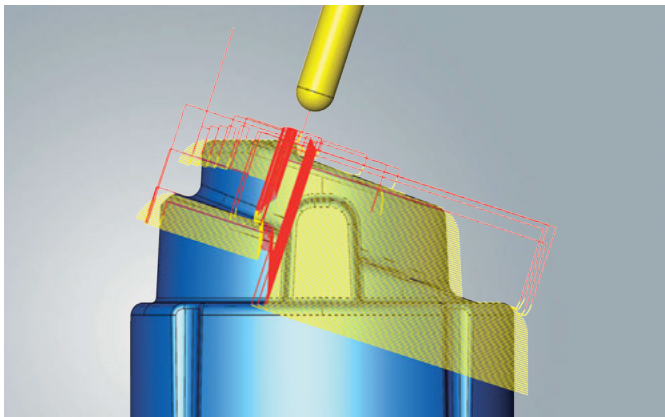
Benefits: Fast and detailed toolpath analysis.

Highlight

Changing the job list name and comments

Thanks to an improvement made to the job list management, it is now possible to modify the job list name and comments without having to subsequently recalculate the project. The new or modified comments are used and output directly in the NC file or in the report.

Benefits: Reduced programming time.



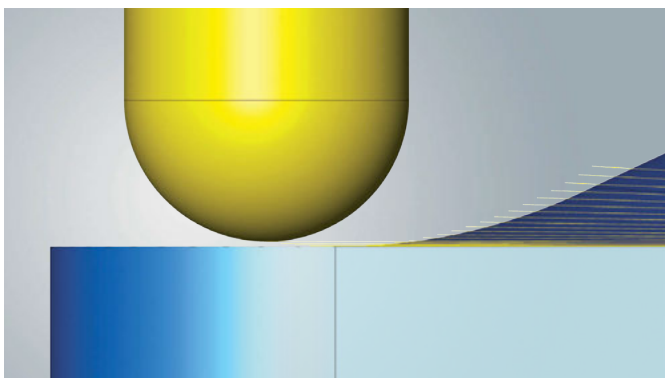
Highlight

3D Shape Z-level Finishing

Two new functions facilitate optimized machining:

- The 'High precision surface mode' option ensures ultra-smooth surfaces with tolerance in the μm range.
- The toolpaths are trimmed automatically in undercut situations in surface mode with extended milling surfaces. When surfaces without extensions or bounding curves are used, the toolpath trim function can be activated manually.

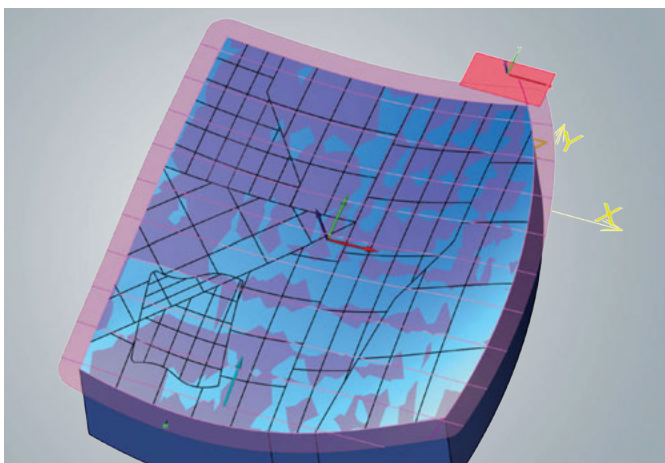
Benefits: More efficient machining, better surface quality.



3D Profile Finishing

The 'Smooth overlap' function improves the surface quality in transition areas. The length and height of the overlap can be freely defined in order to adapt the machining optimally to the component conditions. A perfect, unnoticeable transition to the adjacent surface is achieved in the overlap areas by lifting the tool slightly.

Benefits: Seamless finishing.

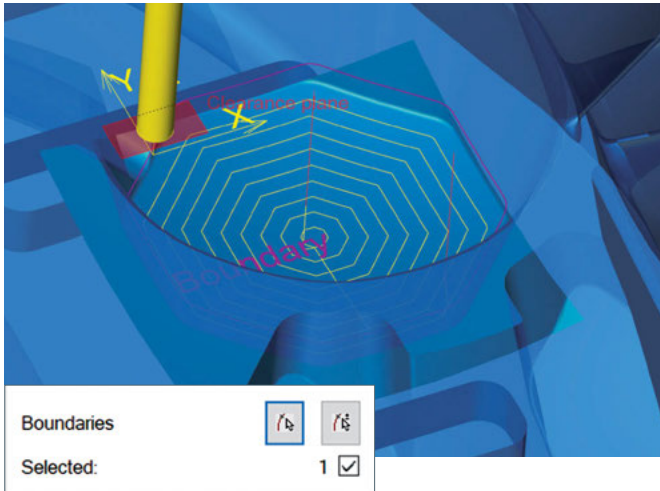


Highlight

5-axis Tangent Machining

The *hyperCAD*[®]-S 'Global fitting' function has been integrated directly into the CAM strategy. In 'Global drive shape' mode, a surface with defined ISO orientation is automatically generated and used for the toolpath calculation when multiple milling surfaces are selected. The orientation in U and V can also be defined here. The 'Offset curve' option is also available to allow toolpath guidance along a curve. Visual feedback, which includes the tool, global surface, and infeeds, increases the user-friendliness of this capability.

Benefits: Simplified programming.



5-axis Shape Offset Finishing

To improve milling area selection, the milling area can now be defined via a boundary curve. This allows the user to select areas more simply and quickly.

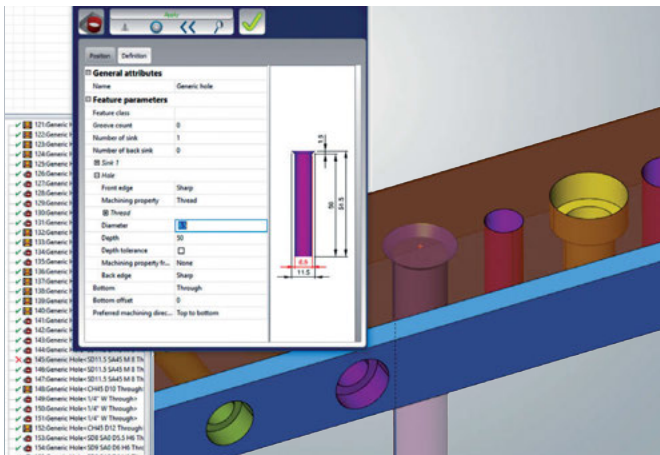
Benefits: Increased user-friendliness.

Feature and Macro Technology

Color table

The values for the thread length and floor distance have been added to the color table in order to improve the programming of threads.

Benefits: Simplified programming.



Hole feature associativity

Holes that have been created in *hyperCAD*[®]-S can now be associatively linked with *hyperMILL*[®]. Model changes made to the CAD feature, such as drill hole parameters or patterns, are automatically transferred to *hyperMILL*[®]. This way, design changes are definitely included in the CAM programming and errors are avoided.

Benefits: Fast modification of component drill holes.

Macro database

New functions have improved the way in which users work with the macro database.

- When macros are applied, it is now possible to search for specific content of a macro using a full-text search. This allows the user to find suitable machining macros more quickly.
- The user can define the machine and material groups as defaults for subsequent operations.

Benefits: Simplified use of macros.



A True Pioneer and Technology Leader Right from the Start

25 years ago, the founders and technology enthusiasts of OPEN MIND set a revolutionary starting point: software for 5axis simultaneous machining. OPEN MIND was the first CAM manufacturer to offer this technology for mold and die manufacturing. Thinking ahead and always being one step in the lead – this has always been and still is the driving force behind OPEN MIND. This is because OPEN MIND stands for a pioneering spirit and forward-looking technologies.

The innovative *hyperMILL*® strategies allow you to always get the most out of your machines – today and in the future!

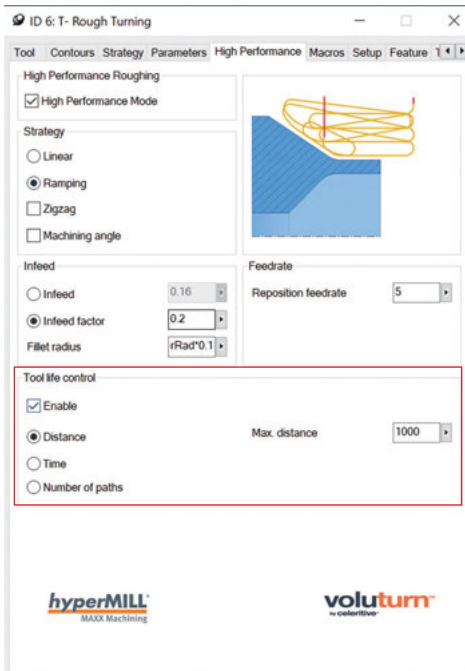
A TRADITION OF INNOVATION



25
YEARS

OPEN MIND

25 YEARS OPEN MIND



Highlight

High Performance Turning

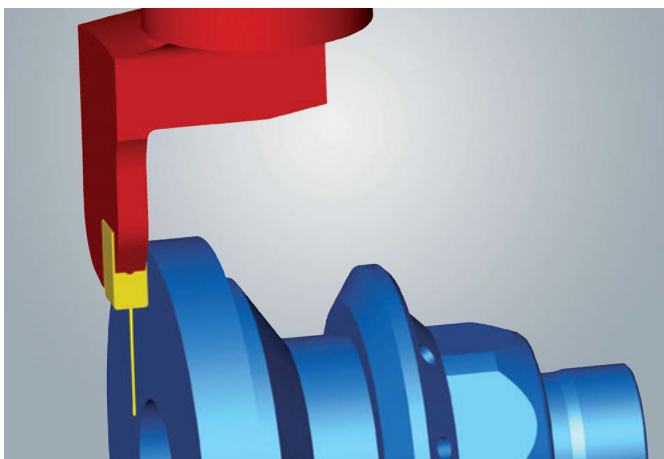
Tool life monitoring has been added to High Performance Turning. Machining is interrupted after a certain distance has been covered, after a specific time, or after a specified number of tool-paths. If the defined limit is reached, a retract macro is generated automatically and the job ends.

Benefits: Increased process reliability, simplified use of sister tools.

Tool database: A_e and A_p

The infeed values A_e and A_p have been added in the tool database for all turning, grooving, and round inserts. This makes it possible to define the infeed length and infeed depth as defaults in the tool database and use them as variables in machining jobs.

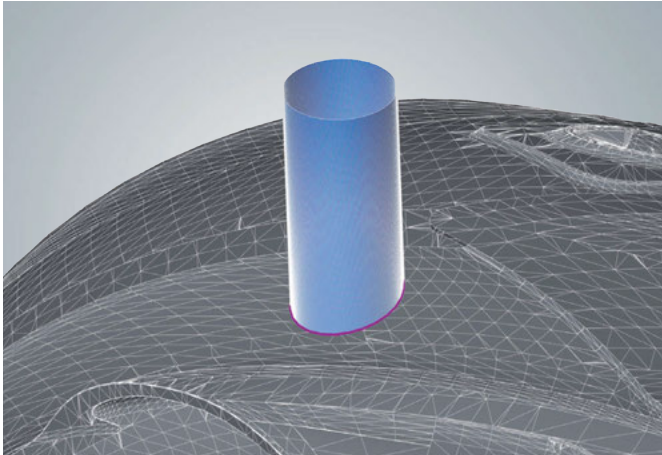
Benefits: Increased process reliability during programming.



Parting

Recessing tools can now be used for parting. This helps to avoid unnecessary tool changes.

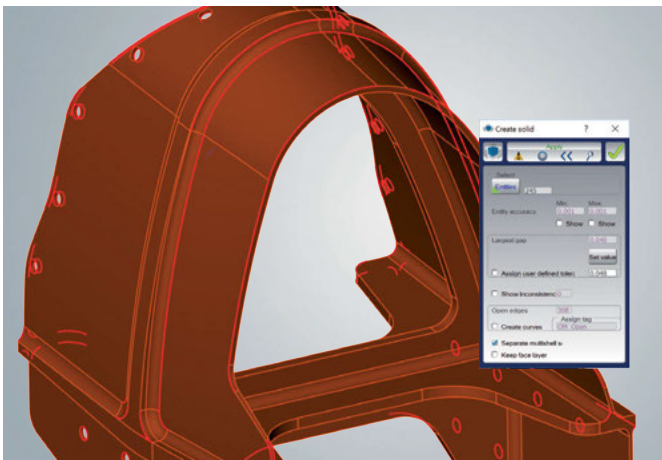
Benefits: Reduced number of tool changes.



Intersect

The 'Intersect' command allows section curves to now be output between meshes and faces. Here, the precision of the polyline that is output can be set using the tessellation tolerance in the properties.

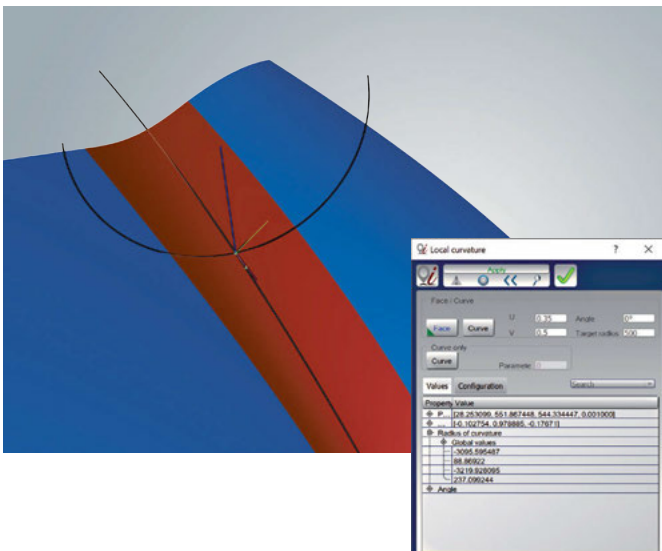
Benefits: Increased user-friendliness.



Create solid

When solids are created, the largest gap between the faces is automatically detected and output. This value can then be entered in the tolerance field so that it can be used for creating solids.

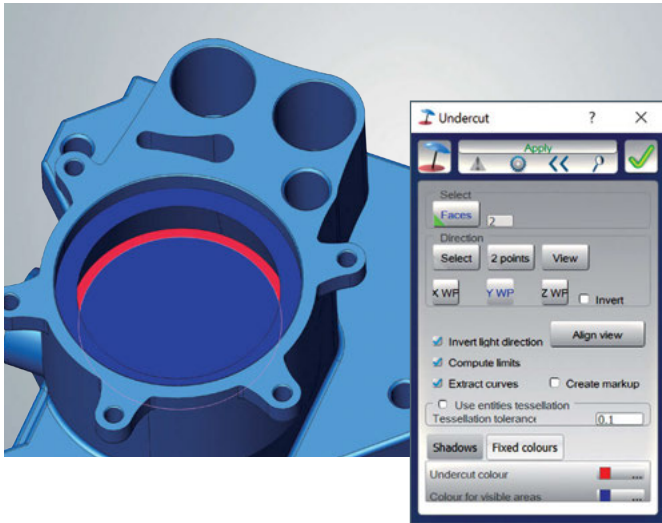
Benefits: Increased user-friendliness.



Local curvature

The new 'Local curvature' analysis function makes it possible to detect curvature radii on components quickly and easily. The minimum curvature radius, which often plays the biggest role, is output immediately. The user can then determine the best possible lead angles or tool radii for machining curved faces, for example.

Benefits: Improved component analysis.

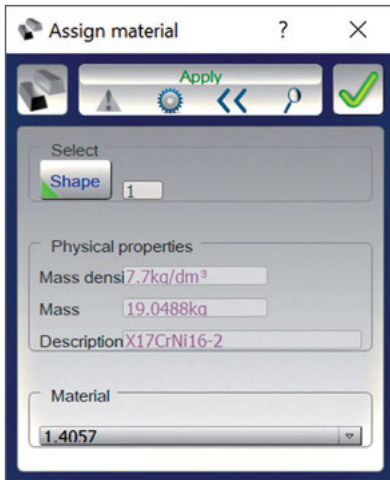


Highlight

Undercut

The new 'Undercut' function makes it possible to detect undercut areas on components quickly and reliably. Bounding curves can be created automatically from the detected areas and used for programming, for example, as milling boundaries or to ensure a better overview.

Benefits: Improved component analysis.



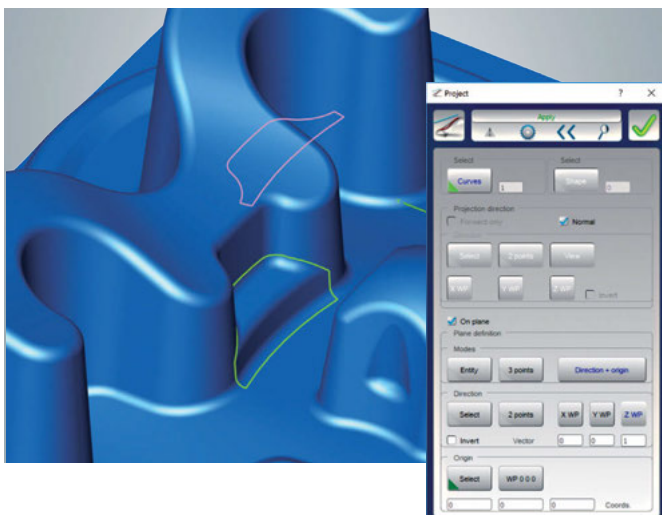
Highlight

Density and mass

Two additions to the entity properties provide more information about the component:

- The center of mass can be determined and generated from solids plus meshes and stocks via the entity properties. This can then be used to ensure an optimal clamping setup, for example.
- In the case of solids and meshes, the weight is output by assigning a material. This makes it possible to achieve a better assessment of the specific component properties.

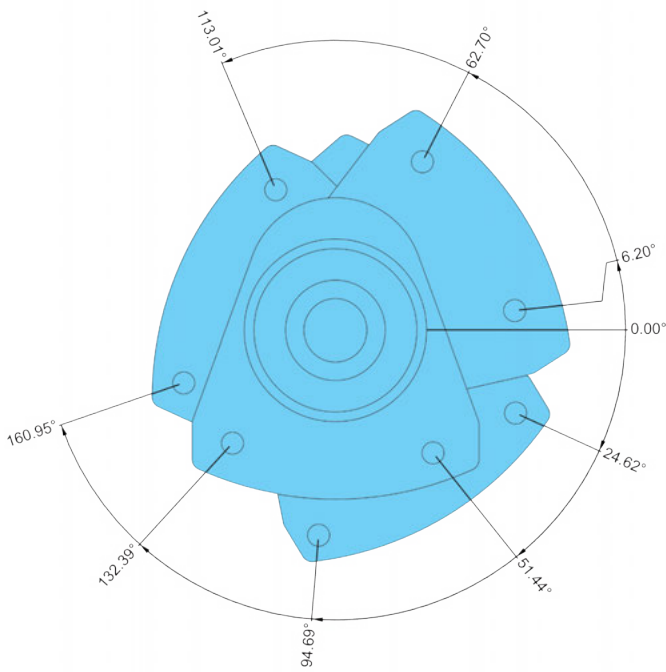
Benefits: Improved information output.



Project

3D polylines can be projected onto planes. This makes it possible to create boundaries for rest material areas, for example.

Benefits: Increased user-friendliness.

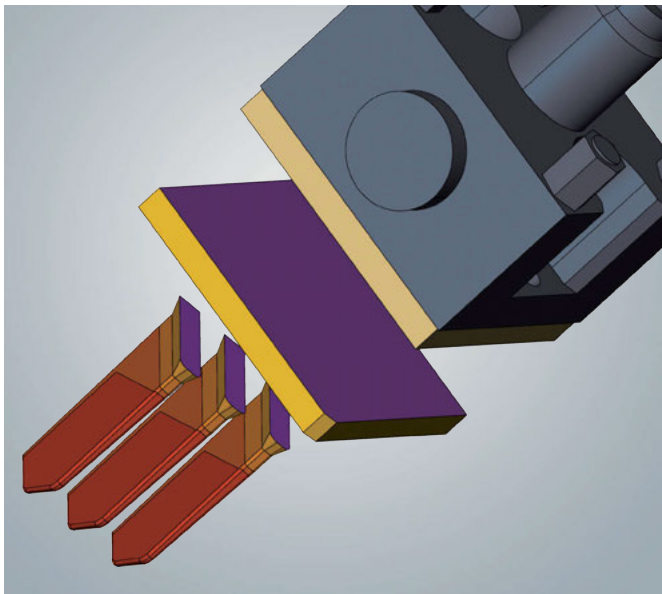


Ordinates

Two enhancements ensure better control of ordinate dimensioning. The user can specify dimensions in a clockwise and counter-clockwise direction. In addition, reference lines can be added with a jog to provide better clarity.

Benefits: Increased user-friendliness.

hyperCAD®-S Electrode



Create electrodes

Two extensions have been implemented for generating electrodes:

- In addition to automatic selection, the user can now manually select existing stock from the database when creating electrodes.
- Two new default colors have been added for the solid and reduction bottom surface to improve the automation of NC programming.

Benefits: Extended stock selection, improved automation.

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