Mastercam 2024 **HIGHLIGHTS**

Productivity | Performance | Progress

2024 TOP TEN FEATURES

Explore the new Mastercam features you've been waiting for! This brochure runs through a few top features across the suite of Products that will enhance your productivity and profitability. But that's not all Mastercam 2024 has to offer. Visit whatsnew.mastercam.com to see everything Mastercam's latest game changing installment has to offer.

B-Axis Contour Enhancements

Productivity | Mill-Turn

Three major enhancements have been added to the B-Axis Contour Turning operation: Ability to manually edit tool axis vectors, manually edit usable insert area, and adjust stock function. This allows for much more in-process control and understanding of the motion of the B-axis head from within the toolpath interface.



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Turret Mounted Angled Milling Heads

Performance | Mill-Turn

Users can now use turret-mounted angled milling heads in Mill-Turn operations. This lets you create toolpaths on angled planes using turret-mounted tools. Enjoy enhanced productivity and ease of use for both milling and turning operations within the Mill-Turn product.





Process Hole Improvements

Progress | Mill, Router

The Process Hole toolpath applies previously defined processes to a part's solid hole features, which consists of one or more holemaking operations' built-in functions library. The ability to import applicable processes into the working part file will save time and money while maintaining consistency with your processes.



Holemaking Enhancements

Productivity | Mill, Router, Multiaxis, Mill-Turn

A "display graphical elements" button has been added to the holemaking and multiaxis toolpath dialog boxes. This control permits the user to show or hide graphical elements, such as selected geometry colors and graphical planes, depending on the toolpath type. This allows for more customized control on a hole-by-hole basis or across the entire holemaking toolpath.





Toolpath Type	Clearance	Plane Display Settings
Holder	125.0 \bigoplus Absolute \checkmark	
Stock Cut Parameters	Only at start and end of operation	
Cut Parameters Tool Axis Control Limits	Retract	
Hole Segments	5.0 Associative ~	ω 🗟 🖉 🗸 🔪
Home / Ref. Points Safety Zone		
Arc Filter / Tolerance Planes Coolant Canned Text	Top of Stock	
Misc Values	0.0 Incremental V	
Axis Combination Rotary Axis Control	Depth	
	0.0 • Incremental · ·	
	Calculate depth from top of line/hole	
Quick View Settings	Tip Comp	
Tool SOLID CARBI Tool Diameter 10	Break Through Amount:	0.25
Corner Radius 0	Tip Angle:	140.0
Feed Rate 275.065	in a region	
Spindle Speed 1897 Coolant Off	Tip Length:	1.819851

Waterline – Detect Undercuts, Add Partial Cuts

Performance | Mill

Introduced in Mastercam 2023 for Dynamic OptiRough and Area Roughing (3D), waterline toolpaths are now aware of undercut stock conditions, which results in improvement to the toolpath motion and less air cutting. This option has been renamed from Detect undercut stock to Detect stock break through.

3D High Speed Toolpaths - V	_	
Toolpath Type Model Geometry Toolpath Control Tool Holder 	Trim to stock Compute remaining stock from Previous operations One other operation Detect stock break t	~
Cut Parameters Steep / Shallow Linking Parameters	O Roughing Tool Diameter:	25.0



Dynamic Motion – Maximize Engagement

Productivity | Mill

The Dynamic Mill, Face, and Dynamic OptiRough toolpaths now include a new Maximize engagement option on the Cut Parameters page. When selected, it produces more nominal chips, minimizes the number of small chips, and helps prevent problematic stand-alone material slivers. Additionally, Mastercam moves towards the entered Stepover as quickly as possible. This helps extend tool life, reduces vibration, optimizes heat generation, promotes healthy chip evacuation, and reduces overall machine wear.



Save/Load Toolpath Defaults List

Productivity | General, Systems

This enhancement to saving and loading defaults allows a user to specify individual files and operations to load from/ save to. The user can quickly switch between different default sets for different toolpath goals or transfer operational data from file to file. This delivers time savings, an enhanced user experience, and drastically improved functionality, flexibility, and overall usefulness.





Gview Cube – New On-Screen Gnomon

Productivity | General, Systems

Mastercam's traditional on-screen gnomon has been augmented with the new Gview cube, which is a more graphical way to show plane orientation. With many interactive features, the optional Gview cube is relative to the WCS by default and features many options that allow the user to control the cube and on-screen representation of the part.



Machine Group Setup Stock Updates

Productivity | General, Systems

Three new easier, more intuitive selection methods have been added, including Add from two corner, Add rectangular stock, and Add cylindrical stock. Stock definition is the first thing a user must do, and these new stock definition methods simplify and speed up the process while creating a better user experience.





Solid Hole Enhancements

Productivity | General, Systems

New solid hole enhancements include matching edge treatments for top and bottom edges, changing the direction of existing through holes, and creating new solid operations from a single existing hole operation. This represents more flexibility, fewer clicks, and time savings when creating geometry for holemaking operations.



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