

MILL

The most widely used CAM software in the world is now the most dynamic. Mastercam's embedded Dynamic Motion technology dramatically shortens production times while extending the life of your machine and tools. Mastercam Mill is rich in features yet still simple and intuitive to use.

POWERED BY MASTERCAM'S DYNAMIC MOTION[™] TECHNOLOGY Dynamic Motion technology is truly the next big thing in CNC machining. It's a new way of designing toolpaths that saves time while extending tool and machine life.

"Mastercam's Dynamic toolpaths have allowed us to push our machine tools and reduce cycle times as much as 50%."

Jason Premo, CEO, ADEX Machining Technologies, Greenville, SC



INTELLIGENT MACHINING SAVES TIME AND MONEY.

Dynamic Motion technology dramatically increases machine efficiency.

Since 2008, Mastercam has been building Dynamic Motion into our software. That means it has been shop-tested and proven in realworld environments. Dynamic Motion toolpaths carve out massive amounts of material quickly – while significantly extending the tool life – immediately putting more money in your pocket. Sounds unbelievable, right? But as the market leader, we've had our Dynamic Motion toolpaths tested in virtually every conceivable work environment around the world. It works.



MASTERCAM IS MORE WIDELY USED THAN ANY OTHER CAM PROGRAM

For you, this means a few very good things. First, there's a large and evergrowing base of potential employees already trained and comfortable with Mastercam. More trained, experienced, and certified Mastercam programmers makes your workforce focused and ready for expansion. Second, we are shop-tested. Our software engineers are constantly reaching out to customers to improve and streamline our products. This makes Mastercam the easy choice for the long haul.

Mastercam Mill, including our cutting-edge Dynamic Motion technology, has been shop-tested more than any CAM program in the world. You can count on Mastercam for real-world, tested solutions.

Ultimately flexible and expandable.

Mastercam Mill offers a broad selection of solutions for almost any CNC milling challenge – 2D, 3D, or multiaxis. Whether your customer base is automotive or aerospace, medical or consumer products, energy or heavy machinery, Mastercam Mill is ready to help you deliver.

Mastercam's large selection of toolpaths and functions means there's always more than one way to get the job done. Once you program a part, no matter how complex, you can modify any element of the job and immediately get updated toolpaths without starting over. You can also build a library of your favorite machining strategies. Choose any of your saved operations, apply them to a part, and Mastercam helps adapt them to the new model. Because Mastercam Mill is fully integrated CAD/CAM, it's fast, easy, and productive. The way programming should be.



Mastercam's fully associative toolpaths let you efficiently make changes without slowing down. Mastercam Mill's active Stock Model, Toolpath Verification, and Simulation features provide increased confidence on every project. The new Tool Manager delivers a fast, efficient way to create and organize your tooling assemblies.



With your standalone license of Mastercam Mill, you now have the option of also running the corresponding version of Mastercam for SOLIDWORKS.

Mastercam, MILL

2D MACHINING

Serious 2D capability.

Your daily needs for 2D machining can range from simple to very complex. Mastercam Mill delivers the tools you need.

- Feature Based Machining (FBM) automatically programs prismatic solid drill holes, contours, and pockets. Save or change the strategies at any time.
- Complete and easy control of approach, start points, and entry methods.
- Contour and pocket remachining use smaller tools to automatically clean out material left from previous operations.

Mastercam's 2D toolpaths deliver easy and optimized pocketing, contouring, drilling, facing, and much more.

• Radial chip thinning for a wide set of tools, plus specialized support for ISCAR®'s High Efficiency Machining (HEM) tool set.

Dynamic Motion powers much of our 2D suite, constantly adapting to create smoother, safer motion and making better use of the entire tool. Check out new videos at **Mastercam.com** to hear it directly from our customers.



The proof of any CAM software is what comes off the machine. Mastercam is crafted to help you get the best possible finish in the shortest amount of time.

· 3D MACHINING

Our finish is more finished.

Mastercam's extensively shop-tested 3D toolpaths provide unsurpassed control on surface cuts, delivering superior finishes and optimized cycle times. Our smart **hybrid finishing** creates a single toolpath that changes cut methods as the slope of the model changes. And our 3D Toolpath Refinement gives you a finished look to please even your toughest customers.

- Cut multiple surfaces, solid models, and mesh entities (STL data).
- Dramatically efficient roughing powered by Mastercam's Dynamic Motion technology.
- Constant scallop machining maintains a consistent finish on sloped and flat surfaces alike by using a consistent 3D stepover.
- Constant-Z rest milling (remachining) identifies and machines areas and critical depths that need to be cut with a smaller tool.
- **Pencil tracing** walks a tool along the intersection of surfaces to clean out hard-to-reach areas. Single or multiple passes deliver precision cleanup.

MULTIAXIS MACHINING

Complexity simplified.

Multiaxis machining can dramatically increase a shop's competitiveness. Mastercam's multiaxis interface is surprisingly simple and intuitive to use, ensuring any shop can make the move when the time is right. And with Mastercam, you have complete control over the three crucial elements of multiaxis machining: cut pattern, tool axis control, and collision avoidance. From 4-axis rotary and roll die cutting to multiblade impellers with tight internal cuts, Mastercam helps simplify even the most complex jobs.

Other highlights include:

- Multisurface 5-axis roughing and finishing (including depth cuts), plunge roughing, and flowline machining.
- Swarf fanning and swarf machining over multisurface floors.
- Advanced gouge checking, a "safe zone" around the part, and safe linking between operations.
- Fast, simple 5-axis trimming and drilling.
- Create full 5-axis motion from a 3-axis toolpath.

From basic 5-axis contours to Dynamic roughing and complex finishing, Mastercam is built to streamline multiaxis programming.

For specialty machining, ask about these available Add-Ons:

- Mastercam Blade Expert delivers specialized tools for efficiently cutting multi-bladed parts and hubs.
- Mastercam Port Expert offers dramatically faster head port programming and smoother toolpath motion.



For more information, visit MastercamMill.com



"The accuracy of our medical parts is crucial. Patient care depends on it. And we depend on Mastercam."

> Wayne Gruver, Lead Toolmaker Image Molding Denver, CO

From the smallest medical part to the largest production mold, Mastercam ensures efficient roughing and precision finishing for any part file.

