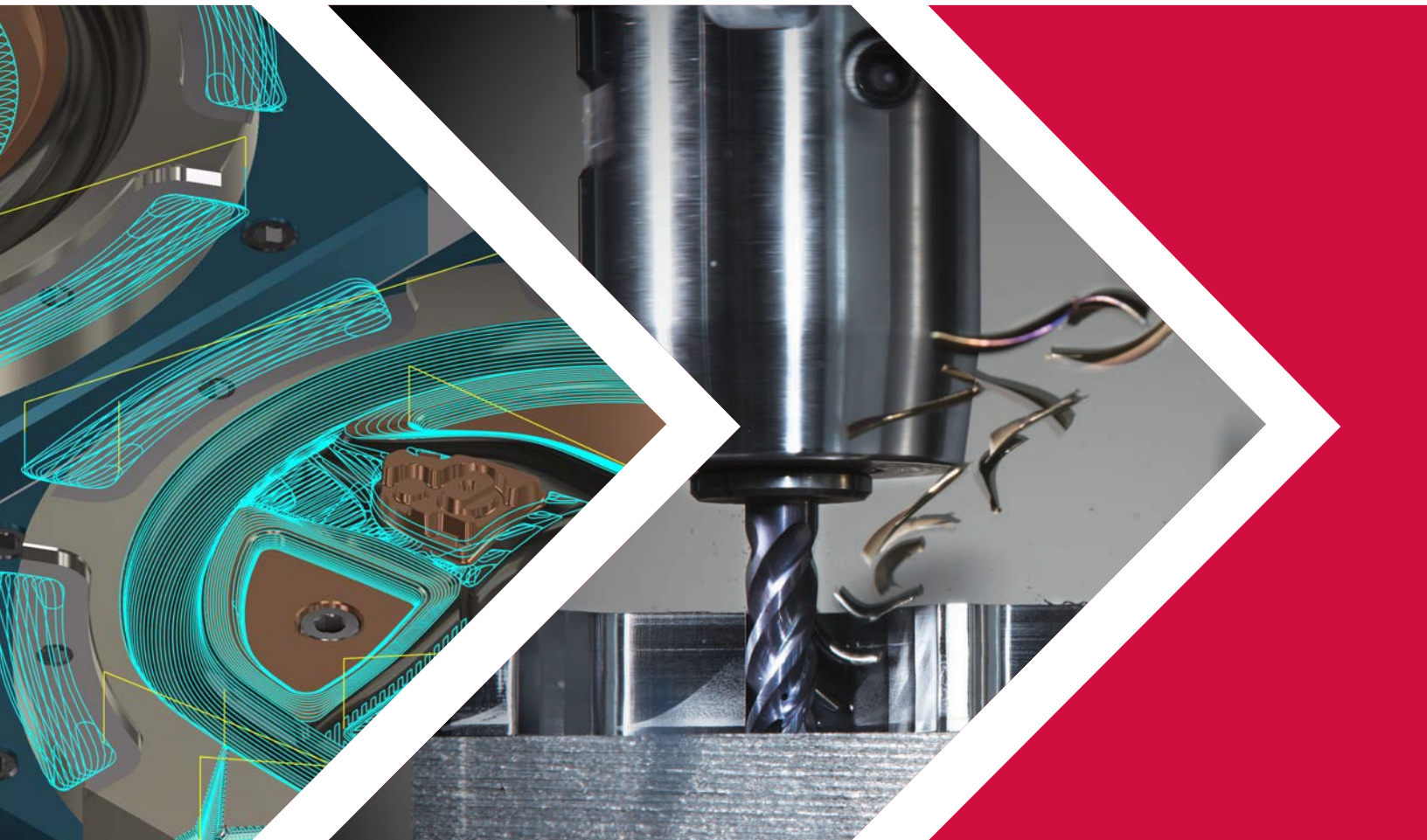




THE FUTURE STARTS HERE



Mastercam 2019



MILL



LATHE



MILL-TURN



WIRE



ROUTER



Mastercam for
SOLIDWORKS®



DESIGN



MOVING OUR INDUSTRY FORWARD

As the world's most widely used CAM software, Mastercam has a tremendous community of users around the globe. It is our intention to leverage that combined energy and intelligence for our mutual benefit. That's the heart of our new Masters of CAM initiative.

Over the coming weeks, month, and years, we will be collecting stories, tips, tricks, and solutions from our extended Mastercam community. This input will be available to everyone at MastersofCAM.com.

It takes more than one or two clever ideas to stay competitive these days. So we'll be collecting as many good ideas as we can. Some ideas will help your shop's productivity. Some ideas will inspire creativity. And some ideas may direct our future software development. We know a lot of smart Mastercam users, and we are all smarter when we work together.

Our Masters of CAM program will grow in breadth and depth over time. For now, please visit MastersofCAM.com and see what amazing things people are making. Then share a story of your own.

HELP US SHAPE THE FUTURE.
BECOME A MASTER OF CAM



Over **430** sales and support offices worldwide



98 countries provide local training, services, and technical support



Most **widely-used** CAD/CAM software in the world



Over **250,000** seats installed



(L-R) Mark Summers, Chairman; Meghan West, President and CEO; and Brian Summers, Executive Vice President

THE FUTURE IS FAST.

We should know. We are helping to shape it.

For Mastercam, speed and efficiency have been driving innovation for years. Dynamic Motion™, innovative milling and turning toolpaths, and now Accelerated Finishing™ have put us at the leading edge of efficiency and reduced cycle times. By dramatically reducing cycle times while extending tool and machine life, we've helped our users to not only stay ahead of the competition, but define the standards of the industry.

Today, there is a growing need for collecting, analyzing, and using data across the entire manufacturing process — often referred to as Industry 4.0. From concept through delivery, this digitalization allows for better decision making to reduce bottlenecks, react to changes, fine-tune performance, and boost productivity.

Mastercam 2019 not only provides the enhanced machining productivity you would expect, but additional functionality is included to help users expand digital data exchange as shops transition to the efficient, data-driven environment of Industry 4.0.

A passion for innovation infuses our company. Working closely with third-party development partners, tool makers, and CAM thought leaders and experts, it's exciting to create software and services that solve the world's manufacturing challenges.

Our leadership is stable, and our customer support remains strong, even as others cut back. Looking ahead, you can trust that Mastercam will remain the best CAD/CAM software in the world.

The future of manufacturing is bright — and with Mastercam, it's going to be fast. That's the whole point. So, let's shape the future together!

Meghan West
President and CEO, CNC Software, Inc.

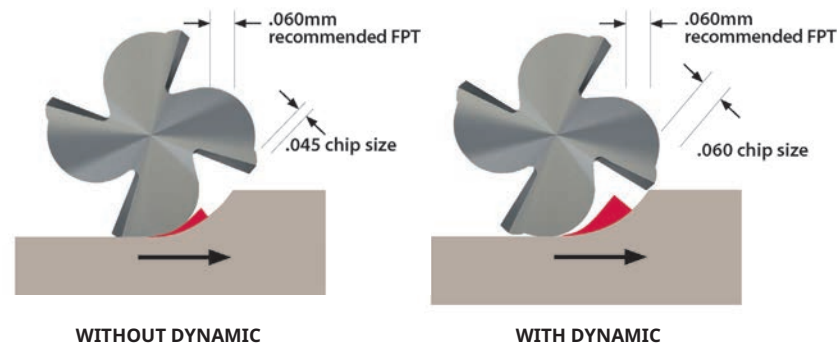
DYNAMIC MOTION TECHNOLOGY IS A GAME CHANGER



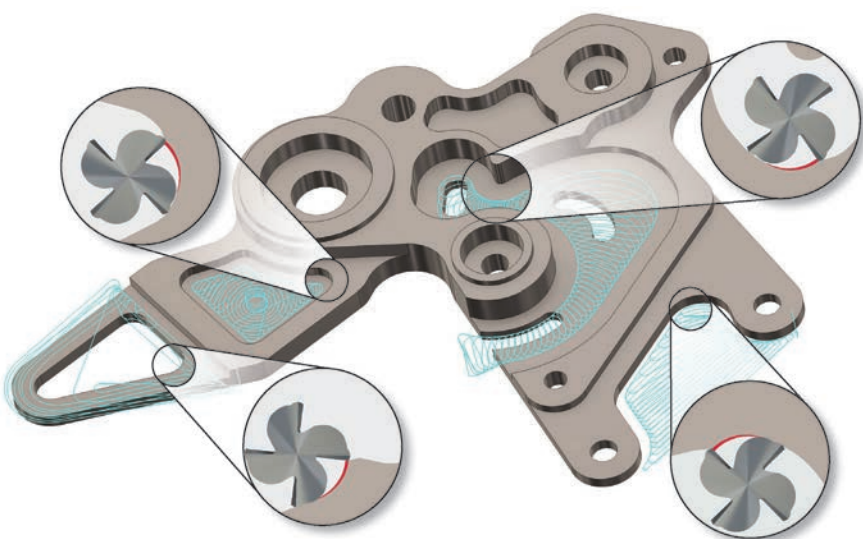
Dynamic Motion™ toolpaths maximize material removal rate and can reduce cycle times by 25 to 75%. Dynamic Motion uses a proprietary set of rules to continually adjust toolpath motion to maintain a constant chip thickness everywhere on the part. This results in consistent machining performance, shorter cycle times, and longer tool life.

The secret is in the chips.

A consistent chip load is crucial to an efficient cut. Mastercam's Dynamic toolpaths calculate the precise peak efficiency of the tool, material, and speed. When you get it right, heat is taken away in the chips, keeping the tool and part cool to the touch. You see it in uniform chip size. You hear it in how the machine runs. You'll appreciate it in dramatically shorter run times, fewer tool replacements, and a much stronger bottom line.



The magic of Dynamic toolpaths is driven by the recommended chip load for the tool, the optimum feed rate, and recommended surface speed.



Optimum cutting on any geometry.

Dynamic Motion maintains conditions across the entire cut by calculating optimum feed rate for a given material, tool, and tool diameter. You will see that chip size won't vary. You will hear the difference, too. No chirping, squealing, or chatter. Just fast, consistent, and safe Dynamic Motion.

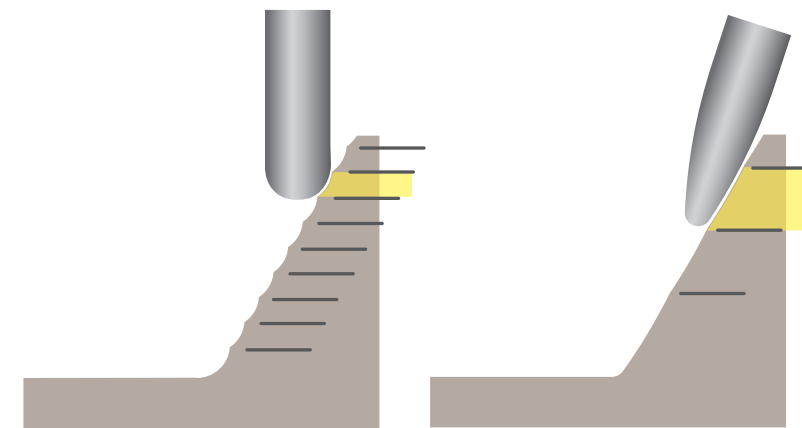
For more information, visit Mastercam.com/Dynamic

ACCELERATED FINISHING TECHNOLOGY GIVES YOU NEW WAYS TO WORK FASTER



The next leap forward in shorter cycle times.

Mastercam's Accelerated Finishing™ technology, simply called Finish, is the next leap forward in addressing today's innovative profile tools and processes aimed at greater efficiency and higher machining productivity. Collaborating with the industry's smartest tool manufacturers, our software takes full advantage of these new tool designs to dramatically reduce finishing cycle times while actually improving surface finish.



Traditional ball or bullnose endmills require many passes and leave cusps to be finished later.

Newly designed finishing tools increase contact area. This means fewer passes and shorter cycle times – with equal or better surface finish.

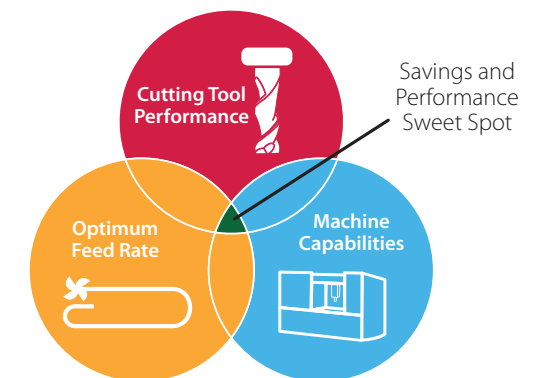
Fewer passes. Better surface finish.

Leveraging new designs in large-radii tool profiles, Mastercam Accelerated Finishing technology maximizes tool contact area. That means fewer passes, flatter cusps, and a better surface finish.

Innovations designed for your business.

Mastercam's Dynamic Motion toolpaths cut roughing times by up to 75%. And now with our exclusive Accelerated Finishing technology, total cycle times are again being dramatically reduced.

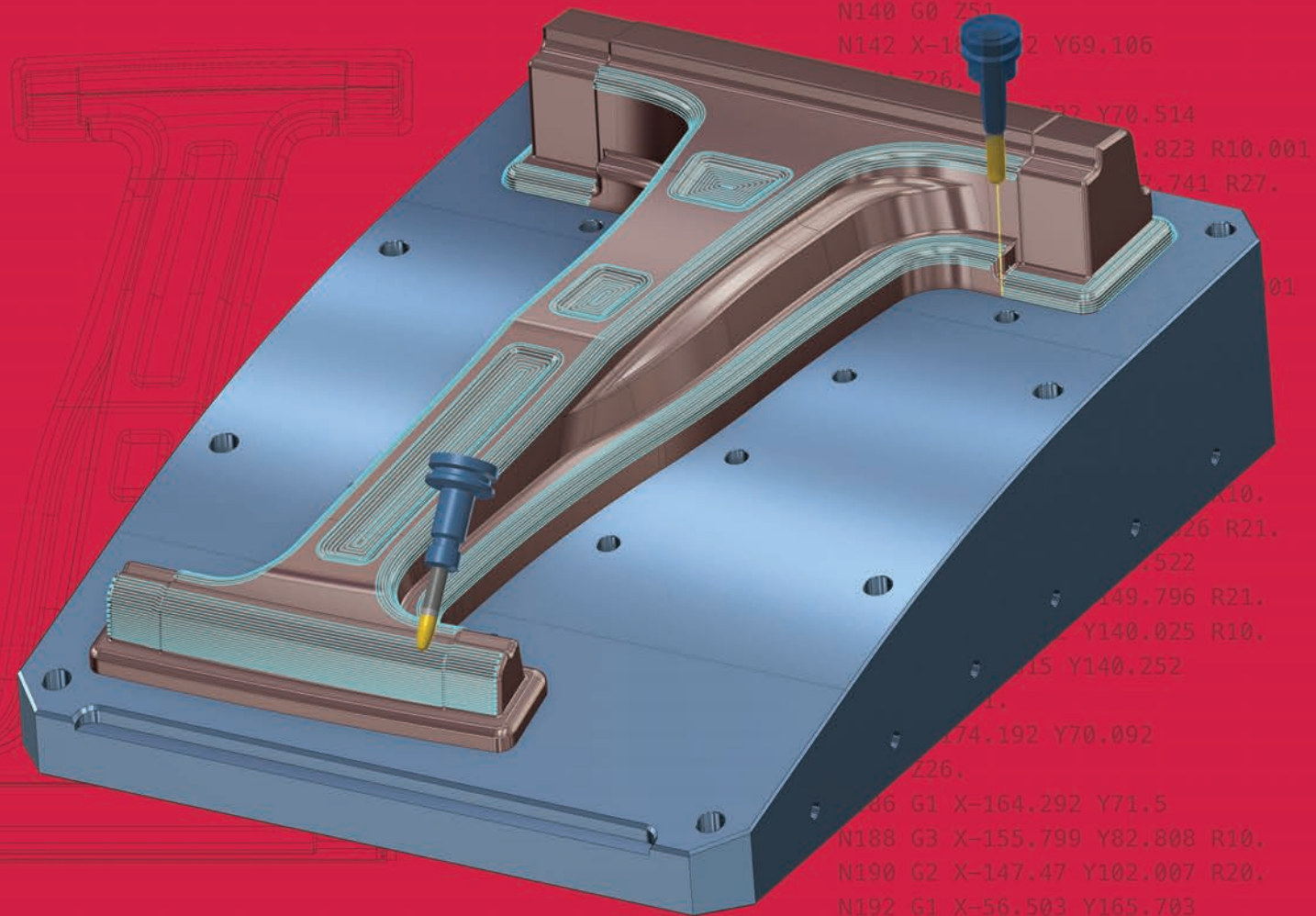
Maximum machining effectiveness is achieved at the intersection of optimal machine capability, maximum cutting tool performance, and optimized toolpath strategies. Mastercam's Dynamic Motion and Accelerated Finishing technologies provide the toolpath performance needed to reach this goal.



Mastercam is designed to help you consistently hit the savings and performance "sweet spot" of faster run times and less wear on machines and tools.



TRUST THE LEADER FOR SPEED AND EFFICIENCY



Mastercam Mill is rich in features yet still simple and intuitive to use.

Mastercam

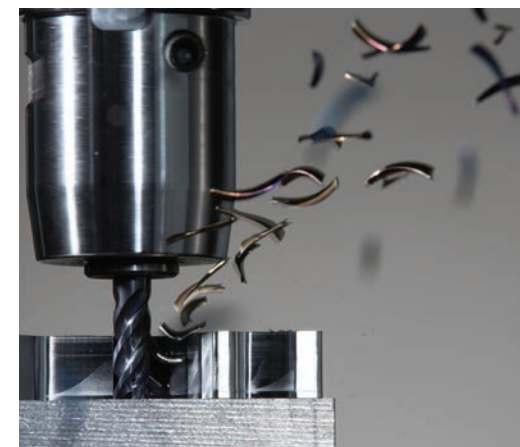
POWERED BY MASTERCAM'S
DYNAMIC MOTION™ TECHNOLOGY



INTELLIGENT MACHINING SAVES TIME AND MONEY

Mastercam's Dynamic Motion and Accelerated Finishing combine for powerful productivity gains.

For nearly a decade, Mastercam has included Dynamic Motion. Carving out massive amounts of material quickly while dramatically extending tool life, Dynamic Motion immediately saves money. Combined with vendor-specific tool support and Mastercam's expanded Accelerated Finishing, projects come off the machine faster and with higher quality than ever before.



Mastercam Mill has been shop-tested more than any CAM program in the world. You can count on Mastercam for real-world, proven results.

TIME AND MONEY

100 steel (4140) parts cut with and without Dynamic toolpaths.

With

3 mins. 17 secs.

\$100/hour machine cost

3 mins. 17 secs. x \$100/hr.
= \$6.03

\$6.03 per part
x 100 parts =
\$603

Without

16 mins. 41 secs.

\$100/hour machine cost

16 mins. 41 secs. x \$100/hr.
= \$27.81

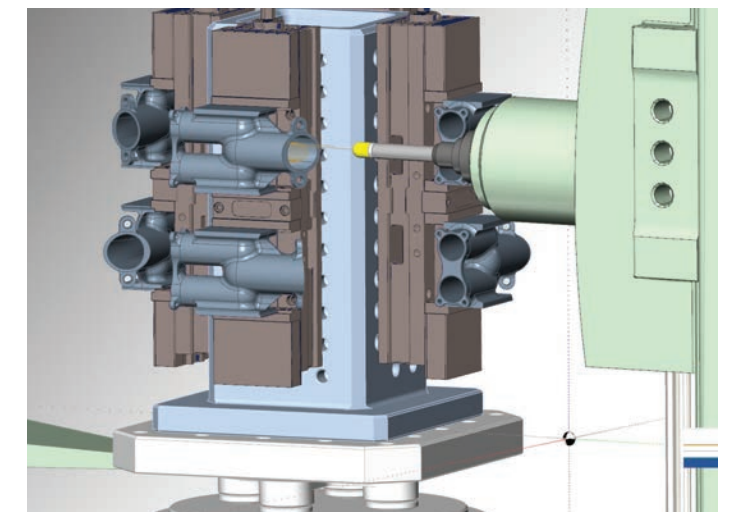
\$27.81 per part
x 100 parts =
\$2,781

Real world savings of 78%

Flexible, expandable, and connected.

Comprehensive toolpath strategies provide multiple approaches for programming any part, regardless of complexity. Modify any element and toolpaths are updated, eliminating rework.

Build libraries of your favorite machining strategies. Choose customized operations, apply them to your next job, and reduce your programming time. With interfaces to digital tool libraries and other manufacturing software, Mastercam ensures you are ready for the next digital revolution. Fast, easy, productive — the way programming should be.



Mastercam's active Stock Model, Toolpath Verification, and Simulation mean increased confidence on every project. Tool library support, including CoroPlus® and MachiningCloud, helps you make tooling decisions fast.



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



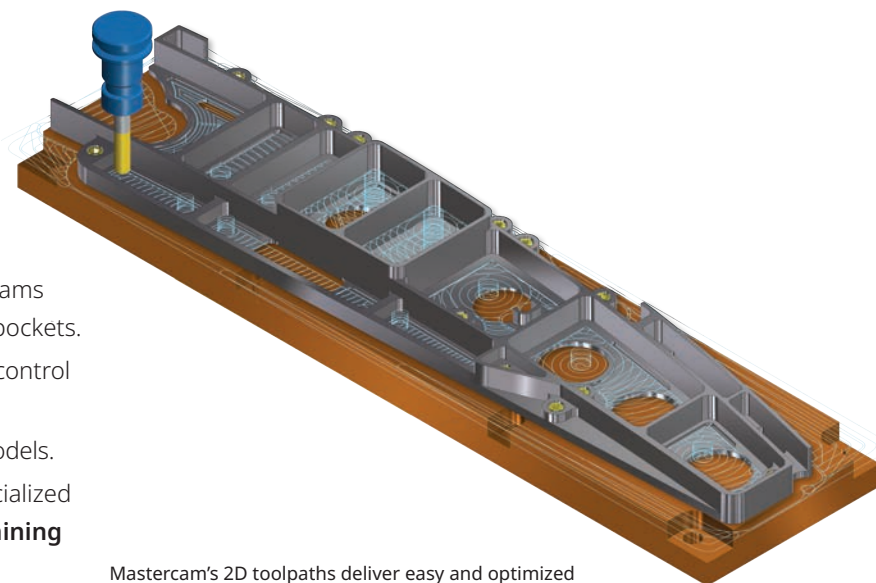
2D MACHINING

Serious 2D capability.

From simple to complex, Mastercam Mill's 2D machining capability delivers the tools you need to compete.

- **Feature Based Machining (FBM)** automatically programs prismatic solid features like drill holes, contours, and pockets.
- **Powerful editing features** provide flexible and easy control of toolpath strategies.
- **Automate machining** of chamfer features on solid models.
- Precision chip control for a wide set of tools, plus specialized tool support including ISCAR®'s **High Efficiency Machining (HEM)** tool set and more.

Dynamic Motion powers much of our 2D suite. It allows you to maximize your material removal rate, and can lower your cycle time, while increasing the life of your cutting tools. Check out Mastercam.com/Dynamic to hear it directly from our customers.



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

MULTIAXIS MACHINING

Complexity simplified.

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 machining over multisurface floors.
- **Advanced gouge checking**, a "safe zone" around the part, and safe linking between operations.
- Fast, simple 5-axis trimming and stock-aware drilling.
- Ability to create full 5-axis motion from a **3-axis toolpath**.

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

- **Mastercam Blade Expert** for multibladed parts and hubs.
- **Mastercam Port Expert** for head ports and tube-type applications.



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



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.

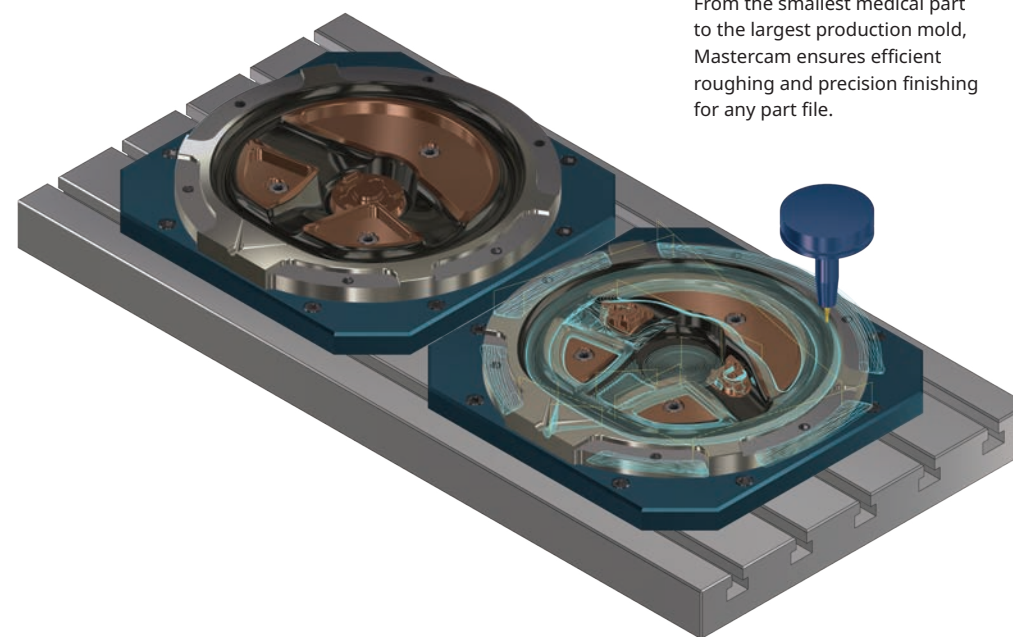
3D MACHINING

Our finish is more finished.

Mastercam provides unsurpassed control on surface cuts, delivering superior finishes and optimized cycle times.

- Mastercam's Dynamic Motion technology powers **dramatically efficient roughing**.
- Constant scallop machining maintains a consistent finish on sloped and flat surfaces.
- Constant-Z rest milling (remachining) identifies and machines areas needing a smaller tool.
- **Hybrid finishing** creates a single toolpath that changes cut methods as the slope changes.
- **Pencil tracing** walks a tool along the intersection of surfaces to clean out hard-to-reach areas.

Cut multiple surfaces, solid models, and STL data — our refined 3D toolpaths give you a smooth, precision finish to please even your toughest customers.



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

Mastercam is more widely used than any other CAM program.



Rigorously shop tested

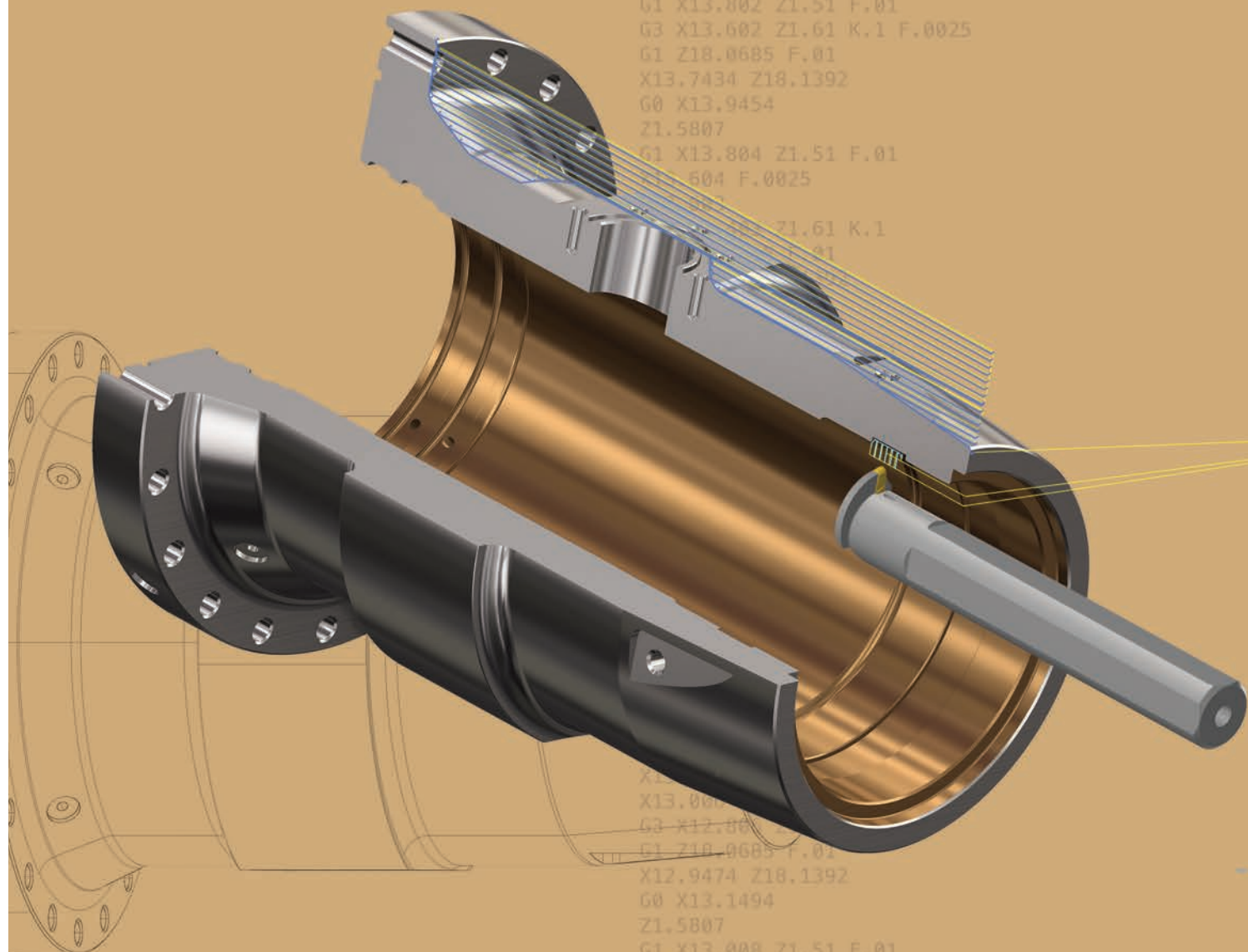


More experienced programmers



Strong support community

FAST, EASY, AND PRECISE TURNING



Mastercam Lathe lets you move the same part file between milling and turning operations with ease and confidence.



POWERED BY MASTERCAM'S DYNAMIC MOTION TECHNOLOGY

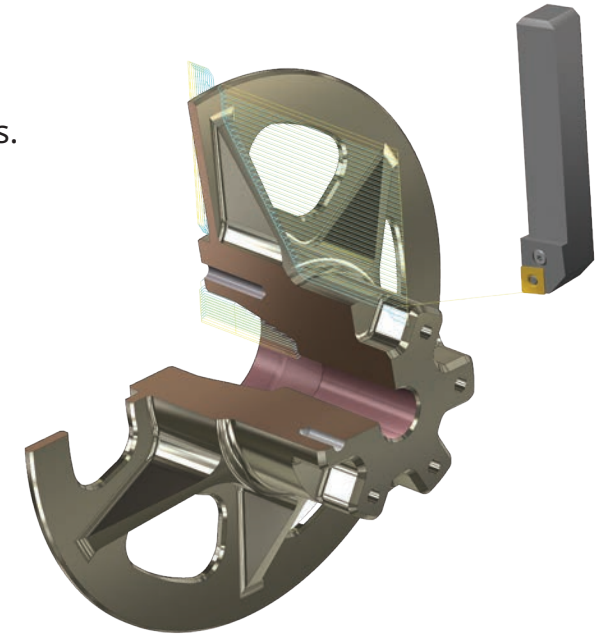
POWERFUL, FLEXIBLE TOOLS FROM THE MARKET LEADER

A set of tools that streamlines your entire process.

From importing any CAD file to Dynamic roughing and precision finishing, Mastercam Lathe gives you a variety of strategies to turn parts with greater efficiency and productivity.

Efficient programming, designed for modern manufacturing.

Mastercam Lathe delivers a set of easy-to-use, advanced programming tools with greatly expanded options when paired with Mastercam Mill. Easy rough, finish, thread, groove, bore, and drill routines combine with C/Y-axis machining to cut any job. Dependable toolpath verification ensures your parts are done right the first time.



Select lathes offer expanded job setup, part transfer, and programming options.

TIME AND MONEY

100 Hastelloy parts cut with and without Dynamic toolpaths.

With	Without
40 mins.	5 hrs.
1.5 inserts per part	12.5 inserts per part
\$100/hour machine cost	\$100/hour machine cost
40 mins. x \$100/hr. = \$66	5 hrs. x \$100/hr. = \$500
1.5 inserts @ \$25 = \$37.50	12.5 inserts @ \$25 = \$312.50
\$103.50 per part x 100 parts = \$10,350	\$812.50 per part x 100 parts = \$81,250

Real world savings of 87%

Key turning features.

- **Quick Toolpaths** let you program in a few clicks.
- Intelligent ID and OD roughing.
- **Dynamic Motion** roughing extends insert life.
- Rough parts in sections or over the entire model.
- Fast facing including roughing and finishing.
- Grooving with multiple depth cuts, including peck motion and full-radius plunge turning.
- Complete and easy threading.
- Control chip breakage on difficult-to-machine materials.
- **Automatic gouge checking** on the tool's front and back.
- Chuck, part, steady rest, and tailstock detection.
- Easily machine wireframe, surface, and solid models.
- Create turning profiles on any shaped part.
- **Full milling support available** for machines with live tooling for C and Y axes.
- **Expanded job setup, part transfer and programming options** on select lathes.

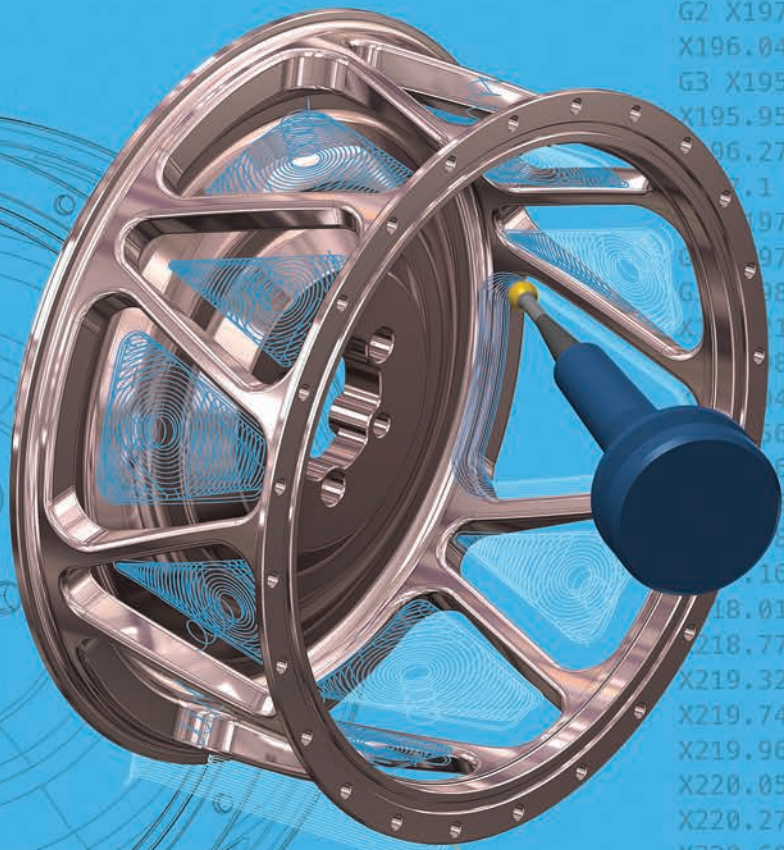


With your standalone license of Mastercam Mill, you now have the option of also running the corresponding version of Mastercam for SOLIDWORKS®.





RUN WITH CONFIDENCE; PROGRAM WITH EASE



Automate your complex programs on today's high-powered, multitasking machining centers. Program it right the first time, every time.

Mastercam

POWERED BY MASTERCAM'S
DYNAMIC MOTION™ TECHNOLOGY

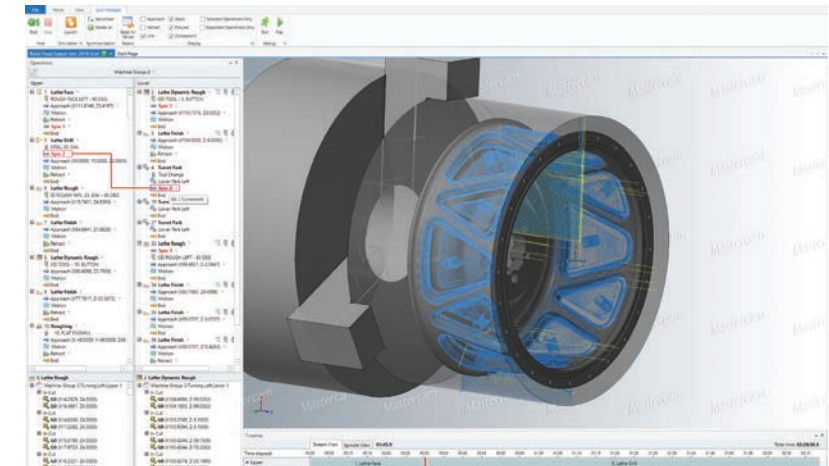


SIMPLIFY YOUR MOST COMPLICATED PROJECTS

Mastercam Mill-Turn simplifies today's high-powered, multistream machining centers.

With Mastercam, your workflow is efficient. Choose your machine, and Mastercam Mill-Turn automates part transfers, toolplanes, stock definition, and setup. Then apply your toolpaths and launch the Sync Manager, verify your project with simulation, and post your code. Changes along the way are fast and easy — the way programming should be.

Mill-Turn's Sync Manager is a user-friendly way to optimize part cycle times and manage interactions between toolpath operations. Easily navigate our Gantt-style timeline and vertical stream interface to coordinate operations and track cycle times.

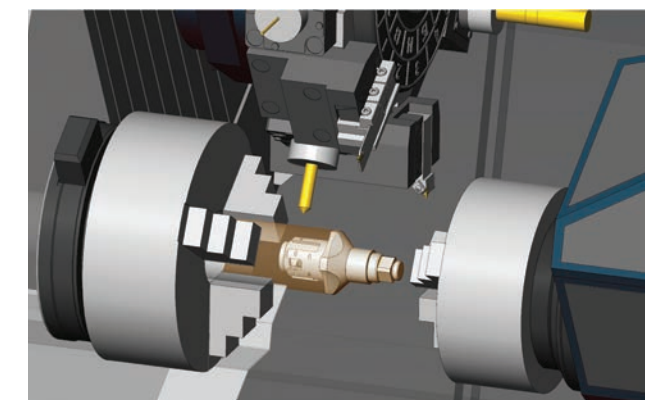


Get more out of your machines with Machine Simulation.

Accessed from the Sync Manager, Machine Simulation provides visual verification and assurance that the interaction and syncing between operations perform exactly as you planned. Validate against potential collisions and track cycle time estimates to achieve maximum efficiency.

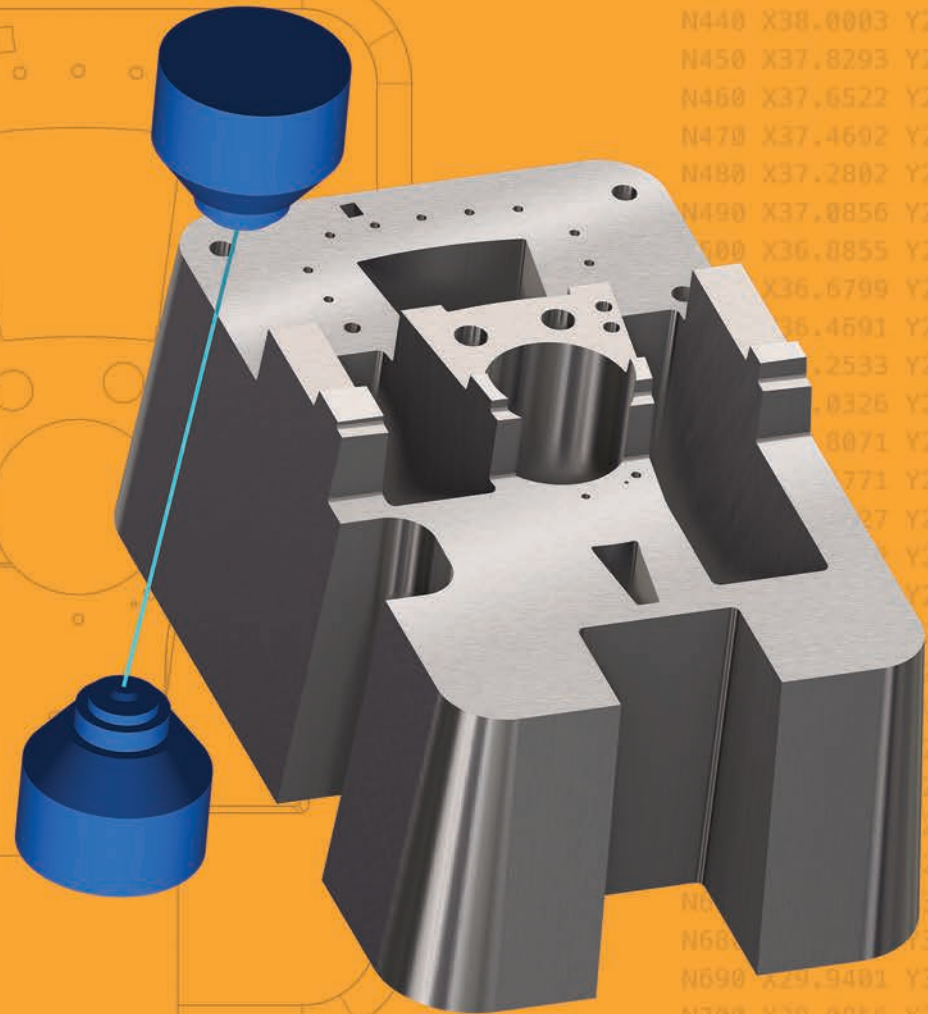
Avoid mistakes. Save time and money.

All machine components, workholding, stock, tools, and parts are simulated from the safety of your desktop, ensuring a safe and secure machining experience. You can identify potential collisions, see your cutting motion, and explore ways to optimize your processes with simulation. View all streams and statistics of the entire machining process with the capability to jump to any point in the process with the click of a button.



Get the most from your machine with multistation and half-index tool support.

ROBUST EDM TOOLS FOR SPEED & EFFICIENCY



Mastercam Wire delivers powerful, comprehensive wirepaths in a streamlined, easy-to-use interface.

Mastercam

THE MASTERCAM DIFFERENCE

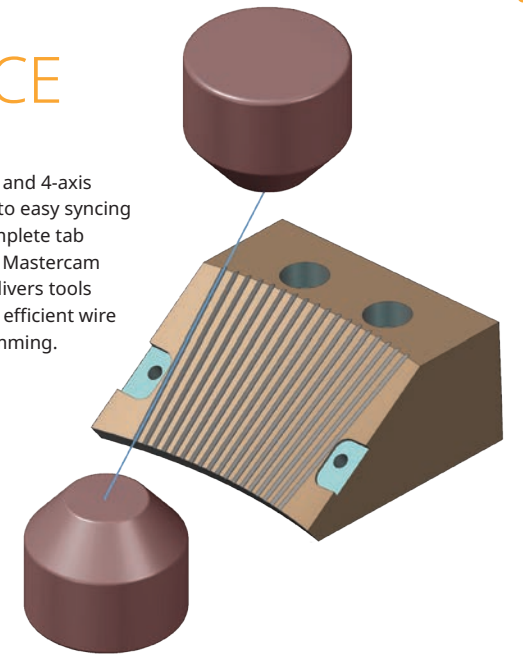
Designed for efficiency.

Mastercam Wire lets you move a single part file between machines, saving time and avoiding mistakes. User-customizable wire libraries store power settings and other registers for rough and skim passes.

Other features include:

- Efficient tab creation and management.
- Control settings for corner types and taper angles at any point in the contour.
- Straight or tapered cut from either direction.

From 2- and 4-axis cutting to easy syncing and complete tab control, Mastercam Wire delivers tools for fast, efficient wire programming.



Having the best software is only one of many ingredients for success.

A global community of Mastercam users, experts, educators, and enthusiasts helps you get the most from your investment. Mastercam Resellers bring years of experience, helping to ensure that you are getting the most practical and comprehensive support in the industry.

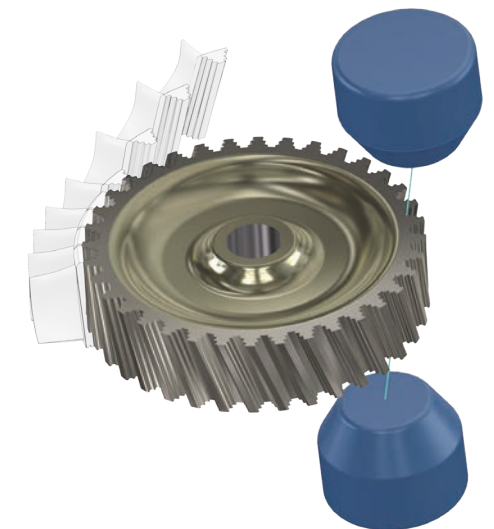
Machine support is available for Mitsubishi, Sodick, Makino, AgieCharmilles, and many others.

Expand your shop's capabilities.

From basic 2-axis contouring to complex 4-axis motion, Mastercam ensures that you are ready for any job. Mastercam delivers:

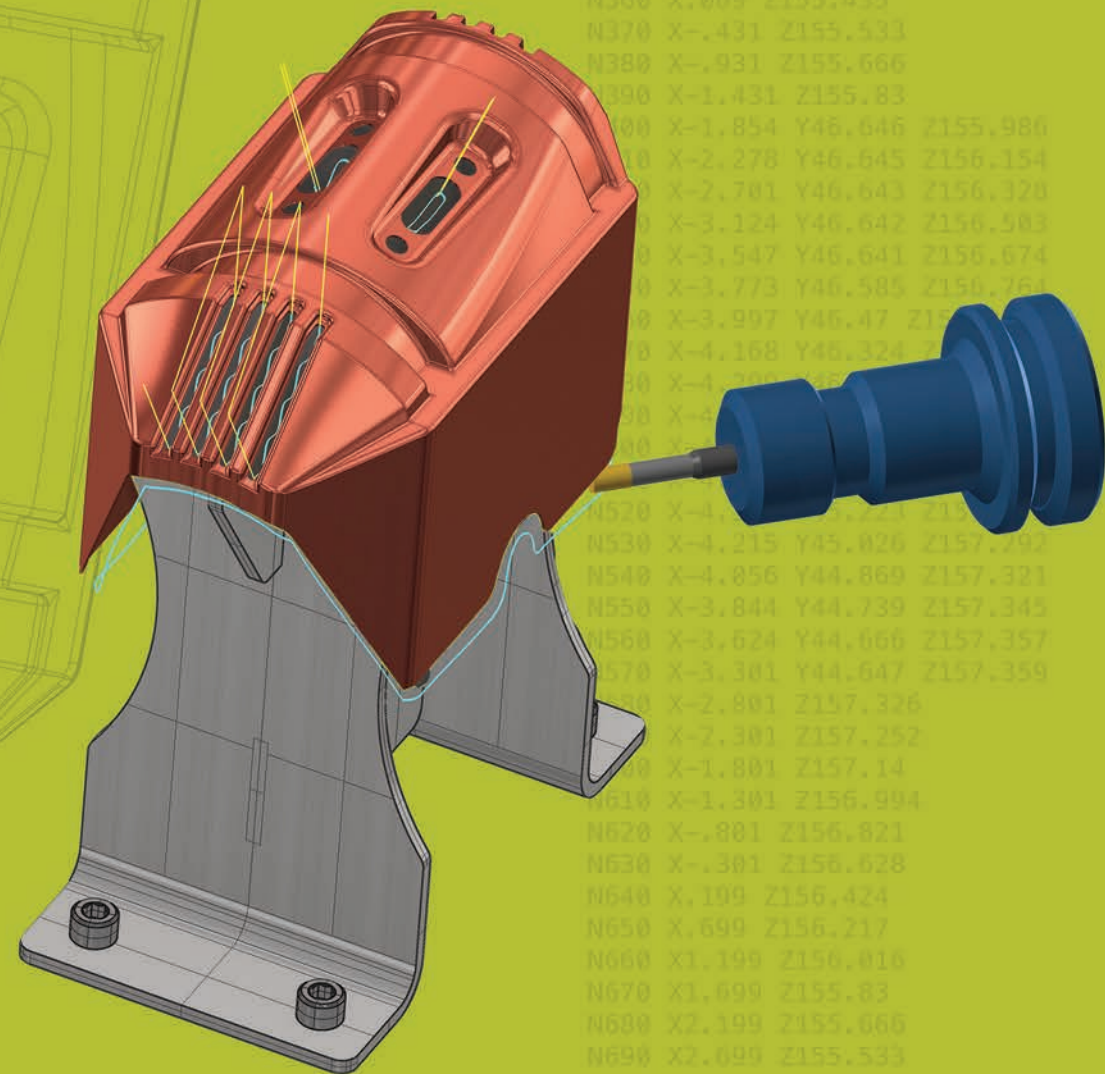
- **Contouring** made easy in 2- or 4-axis.
- **Automatic** lead-in and lead-out strategies.
- **Automatic or manual** 4-axis syncing.
- **Automatic** skim and reverse cuts.

Open virtually any CAD file or use Mastercam's built-in 3D modeling tools.





SIMPLE OR COMPLEX ROUTER MACHINING MADE EASY



Mastercam Router brings complex routing functionality with an easy-to-use interface.



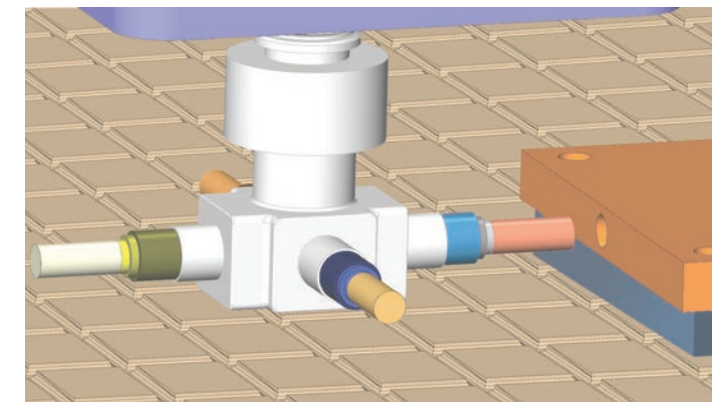
POWERED BY MASTERCAM'S DYNAMIC MOTION TECHNOLOGY

FLEXIBLE AND EXPANDABLE

Mastercam Router offers solutions for all your 2D, 3D, or multiaxis challenges — from wood to composites.

Once you program a part, no matter how complex, you can modify any element of the job and immediately get updated toolpaths without slowing down. You can also build a library of your favorite machining strategies and apply them to new models.

Mastercam's powerful Dynamic Motion technology not only helps extend tool life and reduce machine wear, but helps eliminate tool dwell damage as well. **Automatic Toolpathing** brings in parts from today's top design packages to help speed flat panel work.



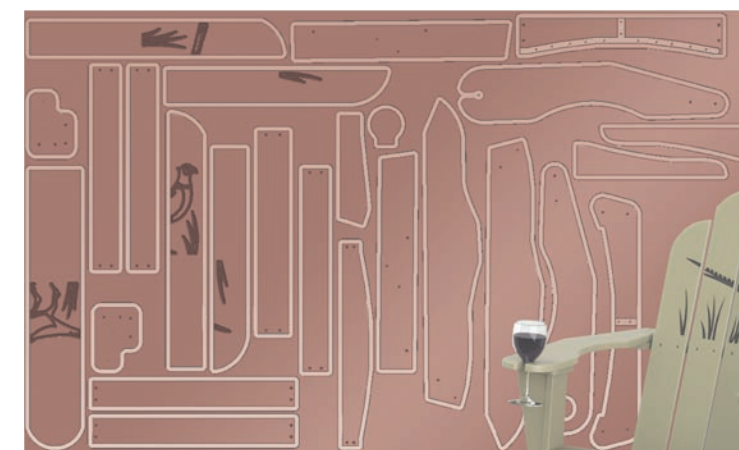
Mastercam Router streamlines multiple tool programming including block drills and aggregate heads.

A comprehensive package of powerful tools.

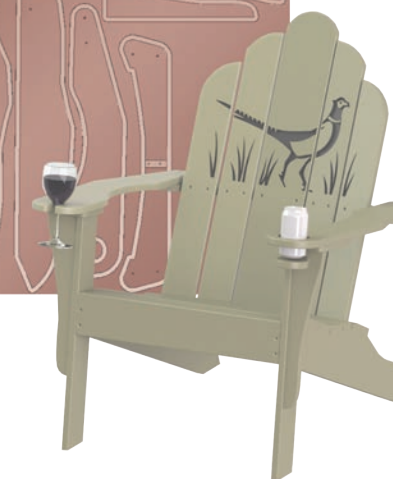
2D machining can range from simple to very complex. Mastercam Router delivers powerful 2D tools from contouring, pocketing, and drilling to automated, feature-based, solid model programming.

For 3D machining, Mastercam Router gives you streamlined, efficient 3D roughing and finishing, including automated leftover stock cleanup.

Mastercam's Multiaxis interface gives you complete control over the three crucial elements of multiaxis machining: cut pattern, tool axis control, and collision avoidance.



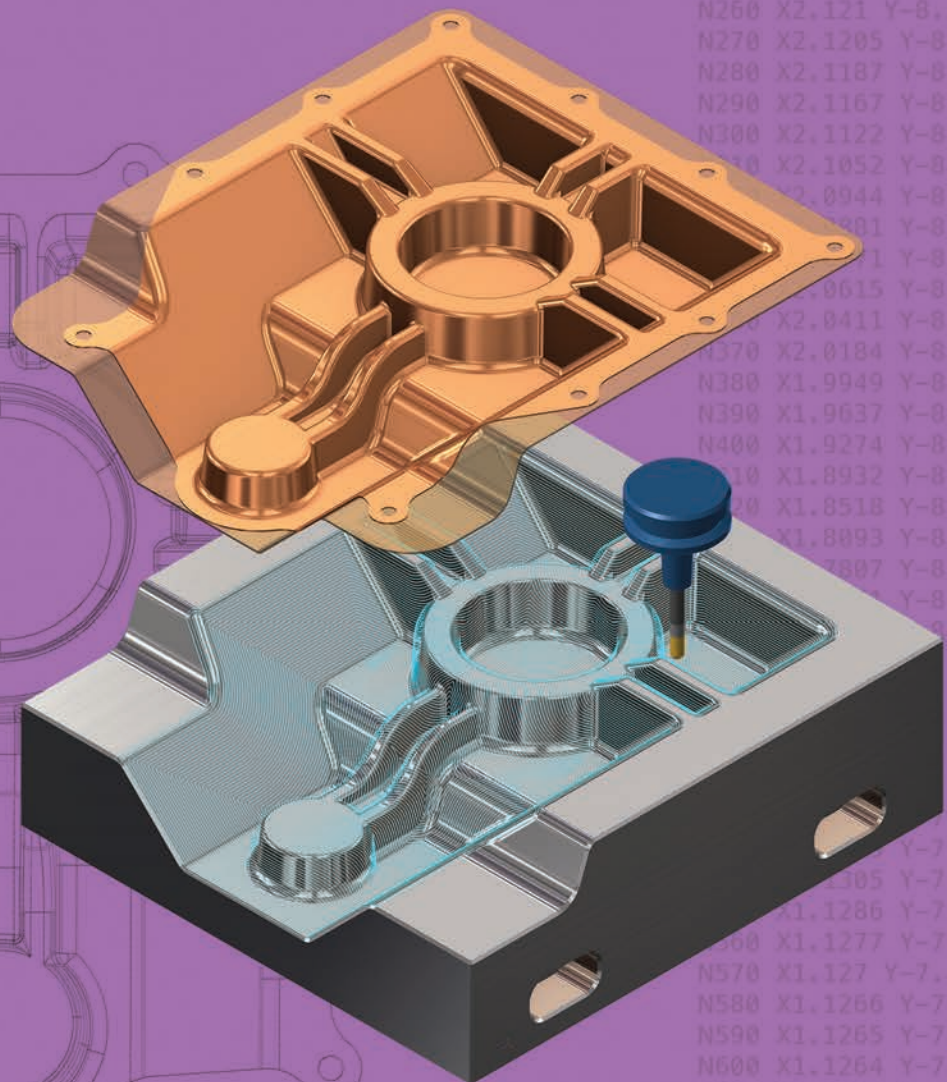
Part and toolpath nesting increase project yields and profitability.



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



THE BEST OF BOTH WORLDS



Mastercam for SOLIDWORKS® combines the world's leading modeling software with the world's most widely-used CAM software.



POWERED BY MASTERCAM'S DYNAMIC MOTION™ TECHNOLOGY

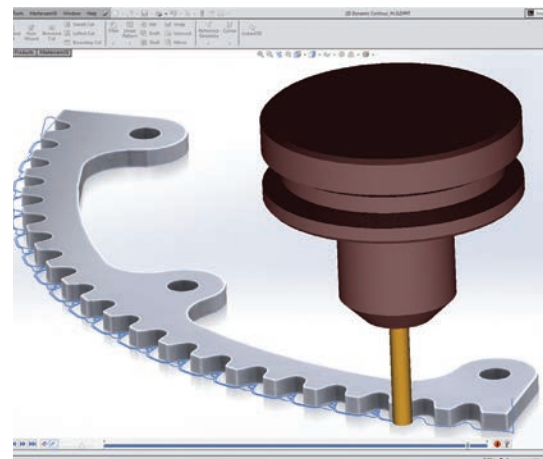
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 N140 G43 H3 Z3.5
 N150 Z2.3846
 N160 G1 Z2.3746 F100.
 N170 X2.1463 Y-10.5146 Z2.3695
 N180 X2.1443 Y-10.5138 Z2.3661
 N190 X2.1381 Y-10.5117 Z2.3646
 N200 X2.1353 Y-10.5097 Z2.3653
 N210 X2.134 Y-10.5082 Z2.3661 F80.
 N220 X2.1314 Y-10.5029 Z2.3687
 N230 X2.1294 Y-10.4863 Z2.3747
 N240 X2.1274 Y-10.4718 Z2.3782
 N250 X2.1266 Y-10.45 Z2.38
 N260 X2.121 Y-8.5891
 N270 X2.1205 Y-8.5707 Z2.3805
 N280 X2.1187 Y-8.5451 Z2.3826
 N290 X2.1167 Y-8.5311 Z2.3846
 N300 X2.1122 Y-8.5107 Z2.3804
 N310 X2.1052 Y-8.4866 Z2.3939
 N320 X2.0944 Y-8.4599 Z2.4035
 N330 X2.0801 Y-8.445 Z2.4091
 N340 X2.0711 Y-8.4227 Z2.4194
 N350 X2.0615 Y-8.397 Z2.4332
 N360 X2.0411 Y-8.369 Z2.4507
 N370 X2.0184 Y-8.3423 Z2.4708
 N380 X1.9949 Y-8.3183 Z2.4913
 N390 X1.9637 Y-8.2903 Z2.5193
 N400 X1.9274 Y-8.2618 Z2.5528
 N410 X1.8932 Y-8.2385 Z2.5851
 N420 X1.8518 Y-8.2142 Z2.625
 N430 X1.8093 Y-8.1932 Z2.6665
 N440 X1.7807 Y-8.1809 Z2.6951
 N450 X1.7493 Y-8.1493 Z2.7806
 N460 X1.714 Z2.8714
 N470 X1.6758 Z2.9644
 N480 X1.6344 Z2.9509
 N490 X1.5911 Z2.9451
 N500 X1.5465 Y-7.9392 Z3.2951
 N510 X1.5015 Y-7.9324 Z3.3003
 N520 X1.4574 Y-7.9248 Z3.306
 N530 X1.4147 Y-7.9173 Z3.3116
 N540 X1.3734 Y-7.9104 Z3.3179
 N550 X1.3334 Y-7.9044 Z3.3243
 N560 X1.2947 Y-7.8994 Z3.3313
 N570 X1.2574 Y-7.8954 Z3.3389
 N580 X1.2214 Y-7.8924 Z3.3471
 N590 X1.1867 Y-7.8904 Z3.3557
 N600 X1.1534 Y-7.8894 Z3.3647
 N610 X1.1214 Y-7.8894 Z3.3743
 N620 X1.0907 Y-7.8904 Z3.3847
 N630 X1.0614 Y-7.8924 Z3.3957
 N640 X1.0334 Y-7.8954 Z3.4077
 N650 X1.0067 Y-7.8994 Z3.4203
 N660 X1.0814 Y-7.9044 Z3.4337
 N670 G3 X1.1945 Y-7.7368 I-.0238 J-.0238
 N680 X1.2037 Y-7.7201 I-.0415 J-.0339
 N690 G3 X1.2078 Y-7.7007 I.665 J-.1278
 N700 X1.2078 Y-7.5613
 N710 X1.1988 I.1979 J-.0238
 N720 X1.1844 I.1499 J-.2699
 N730 X1.1747 I.1161 J-.6288
 N740 X1.1674 Y-4.4731 I.0524 J-2.0798
 N750 X1.5674 Y-4.4731 I.0524 J-2.0798
 N760 X1.5734 Y-4.4732 I0. J-2.0798
 N770 G1 X2.7295 Y-4.4731

SOLIDWORKS USERS FEEL AT EASE WITH MASTERCAM



Mastercam for SOLIDWORKS combines the world's leading modeling software with the world's most widely-used CAM software.

With Mastercam toolpaths integrated directly within the SolidWorks environment, the toolpaths are applied directly to the part or assembly. Intelligent use of design tables and multiple configurations makes working with families of parts easy.



As a Certified Gold Partner product, Mastercam for SOLIDWORKS delivers the absolute best in 2- through 5-axis milling and turning CAD/CAM integration.

TIME AND MONEY

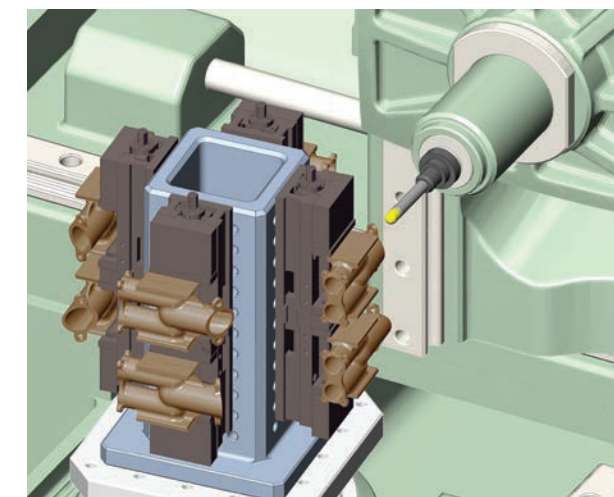
100 steel (4140) parts cut with and without Dynamic toolpaths.

With	Without
3 mins. 17 secs.	16 mins. 41 secs.
\$100/hour machine cost	\$100/hour machine cost
3 mins. 17 secs. x \$100/hr. = \$6.03	16 mins. 41 secs. x \$100/hr. = \$27.81
\$6.03 per part x 100 parts = \$603	\$27.81 per part x 100 parts = \$2,781

Real world savings of 78%

Flexible and expandable.

No matter how complex a part, with toolpath associativity, any modification to the job means the toolpaths are updated immediately. You can also build a library of your favorite machining strategies, apply them to a part, and Mastercam helps adapt them to the new model. Because Mastercam for SolidWorks is a fully integrated SOLIDWORKS Certified Gold Partner, it's fast, easy, and productive — the way programming should be.



Mastercam's active Stock Model, Toolpath Verification, and Simulation mean increased confidence on every project. Tool library support, including CoroPlus® and MachiningCloud, helps you make tooling decisions fast.

You can choose to buy **Mastercam for SOLIDWORKS®** alone, or you can purchase a standalone license of **Mastercam Mill, Lathe, or Router** and have the option of also running the corresponding version of **Mastercam for SOLIDWORKS®**.



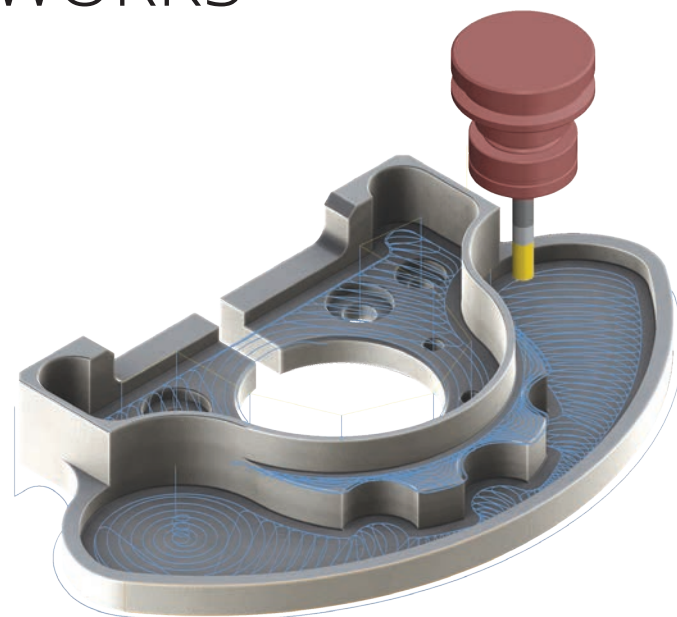
2D MACHINING

Serious 2D capability.

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

- **Feature Based Machining (FBM)** automatically programs prismatic solid features like drill holes, contours, and pockets.
- **Contour and pocket remachining** use smaller tools to automatically clean out material left from previous operations.

Dynamic Motion powers much of our 2D suite. It allows you to maximize your material removal rate, and can lower your cycle time, while increasing the life of your cutting tools. Check out Mastercam.com/dynamic to hear it directly from our customers.



2D toolpaths in Mastercam for SOLIDWORKS deliver easy and optimized pocketing, contouring, drilling, facing, and more.

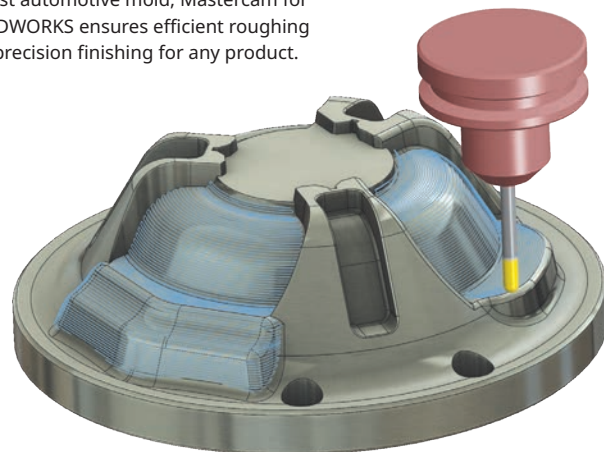
3D MACHINING

Our finish is more finished.

Mastercam delivers 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. Our refined 3D toolpaths give you the smooth, precision finish to please even your toughest customers.

- **Dramatically efficient roughing** powered by Mastercam's Dynamic Motion technology.
- New Equal Scallop strategy provides superior surface finish and smooth machine motion.
- Constant-Z rest milling (remachining) identifies and machines areas that need to be cut with a smaller tool.
- **Hybrid finishing** creates a single toolpath that changes cut methods as the slope of the model changes.
- **Pencil tracing** walks a tool along intersections to clean out hard-to-reach areas, such as internal fillets.

From the smallest medical part to the largest automotive mold, Mastercam for SOLIDWORKS ensures efficient roughing and precision finishing for any product.



TIME AND MONEY

"Mastercam for SOLIDWORKS is making my job easier. I've been using Dynamic toolpaths to get better finishes. It works so well that I'm getting work done in half the time."

Nolan Farmer, Owner
Farmer Plastics & Machining, Inc., Jamestown, CO

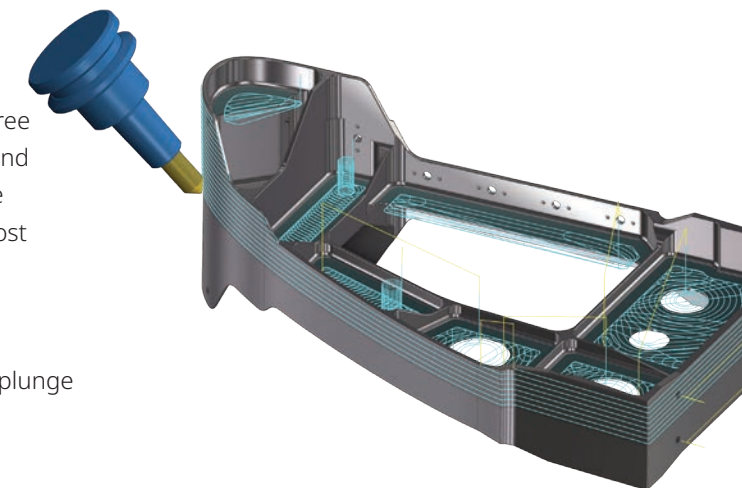
MULTIAXIS MACHINING

Complexity simplified.

Mastercam for SOLIDWORKS gives you streamlined control over the three crucial elements of multi-axis 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 machining over multisurface floors.
- **Advanced gouge checking** and safe tool motion around the work piece.
- Fast, simple 5-axis trimming and stock-aware drilling.
- Easy creation of complex, 5-axis motion from simple, 3-axis toolpaths.



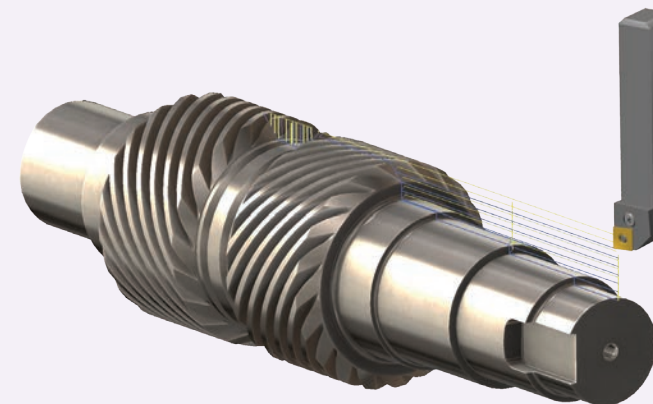
From basic 5-axis contours to Dynamic roughing and complex finishing, Mastercam for SOLIDWORKS streamlines multi-axis programming by design.

TURNING

Fully-integrated within SOLIDWORKS.

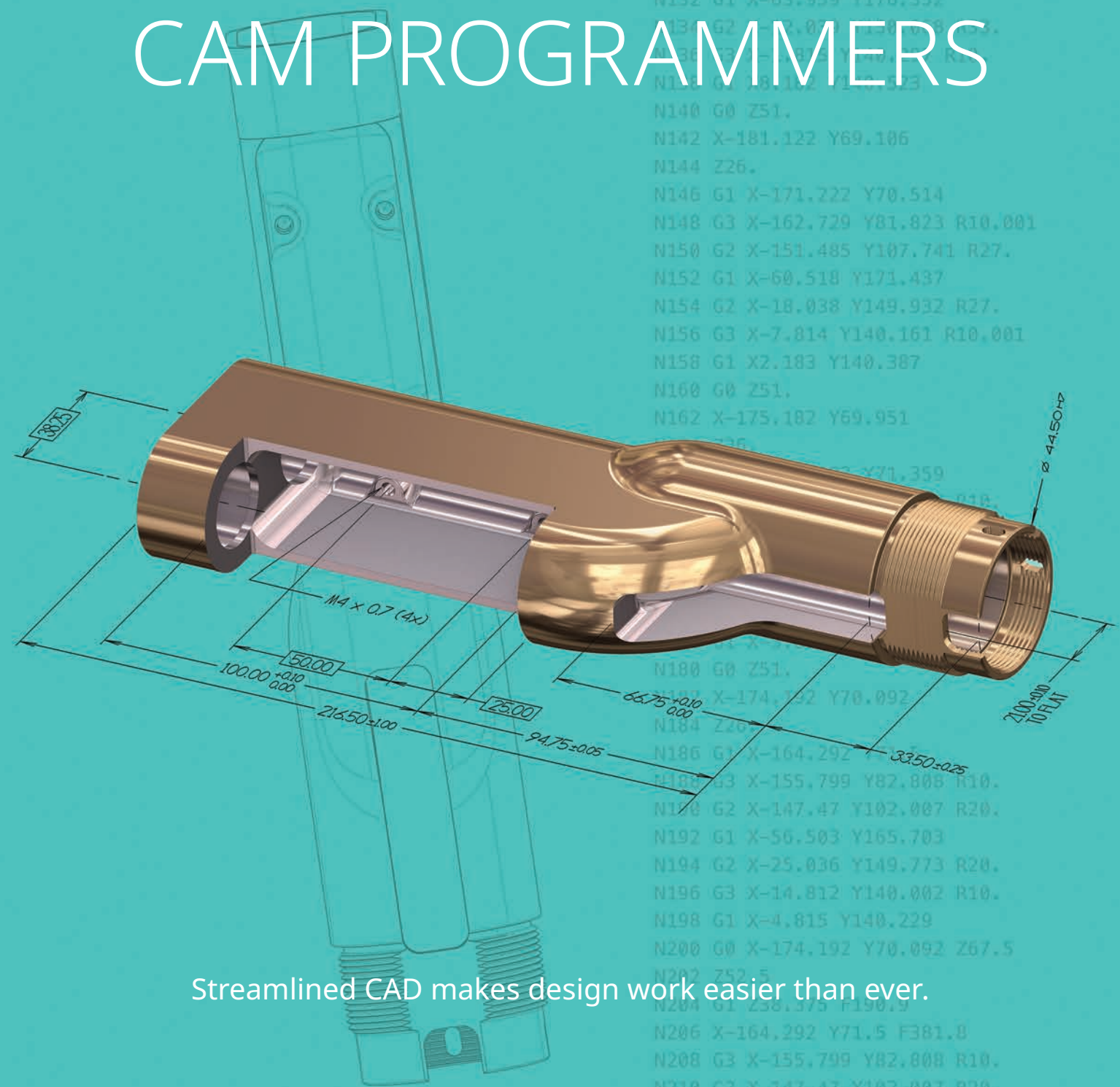
Powerful turning strategies in Mastercam for SOLIDWORKS complement our milling toolpaths, giving you a complete turning toolkit. Functionality includes:

- Easy roughing, finishing, threading, grooving, boring, drilling, and cut off.
- Face and cross contouring and drilling.
- Intelligent ID and OD roughing, including roughing to a boundary for castings.
- **Dynamic Motion** roughing to extend insert life.
- Tool Inspection to check tool wear conditions during your roughing, finishing, and grooving operations.
- Toolpath verification to ensure your parts are machined as intended.





CAD TOOLS FOR CAM PROGRAMMERS

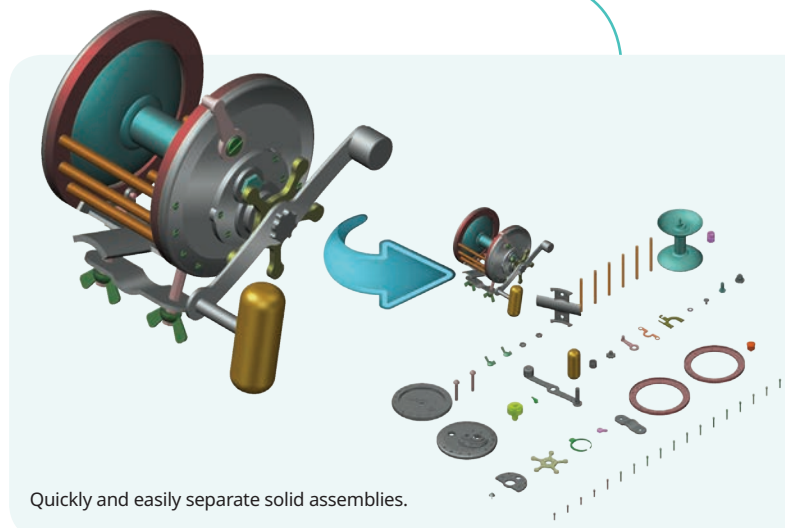


Streamlined CAD makes design work easier than ever.



MODELING AND PREP TOOLS GET YOUR PARTS ON AND OFF THE MACHINE QUICKLY

Whether you're bringing in a file from an outside CAD package or designing one yourself, Mastercam's powerful CAD engine gives you control over the final details of even the most complex jobs.



Quickly and easily separate solid assemblies.

Work with your existing CAD files.

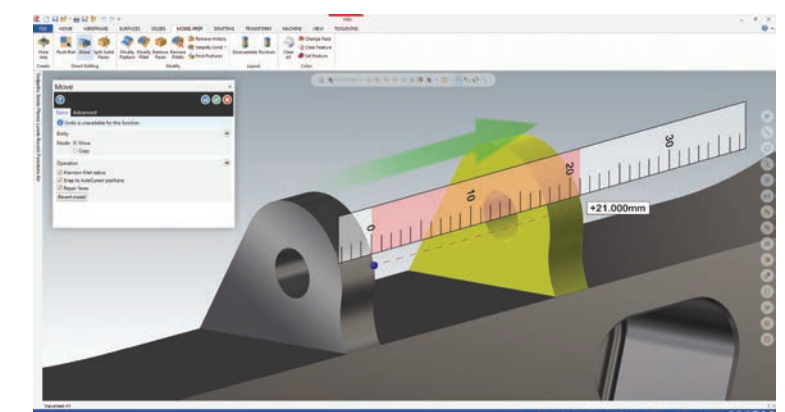
Mastercam helps to preserve design intent with model-based definition (MBD) support and acceptance of varied file formats. These include IGES, Parasolid®, SAT (ACIS solids), AutoCAD® (DXF, DWG, and Inventor™ files), SOLIDWORKS® (including history tree), Solid Edge®, SpaceClaim, STEP, STL, and more. Add-On translators are available for Siemens NX, CATIA™, Pro/E (PTC Creo), and more.

Whether you are prepping customer files...

Getting a part file from an outside source can pose unique challenges. You might need to repair a surface, work with a mesh, cap or hide a feature, create an electrode, or just make sure your fixtures are represented on the part. Mastercam includes a powerful set of model prep tools to make sure the process goes smoothly. From robust surface creation and editing to "push-pull" solid model editing, Mastercam gives you the tools to bring a part from the designer's desk to your machining process, fast.

...or designing your part from scratch.

Having powerful CAD at your fingertips makes your CAM system that much more effective. Mastercam includes a robust set of modeling tools, from complete wireframe and surface modeling to solid modeling. A true hybrid modeling system, Mastercam lets you create, combine, and machine whichever CAD geometry suits your needs.



Push, pull, remove, and directly edit features on new or imported solids, even if they have no history.

MASTERCAM'S SPECIALIZED ADD-ONS

Very often, that one additional CAD or CAM tool makes a specific job easier, faster, and more profitable. If you need very specialized options to precisely match your customer, your workflow, or your products, a Mastercam Add-On can help.



Port Expert

Creates precision engine cylinder head porting toolpaths on surface or solid data, while minimizing unnecessary motion.



Blade Expert

Highly-efficient toolpaths for multibladed parts, delivering superior blades, splitters, floors, and fillets.



ProDrill

Automatically detect, group, and apply drill strategies to large amounts of holes, and automatically create tool definitions from existing geometry.



5-Axis Swarf Cutting

One of the more popular multiaxis techniques, 5-axis swarf machining expands the types of jobs you can do; can be upgraded to the full Multiaxis product.



File Translators

Specialty data translators for Siemens NX™ (UG/NX), PTC CREO® (Pro/E), and CATIA™ ensure you can read and use the files you need.



5-Axis Drilling and 5-Axis Curve Machining

Two targeted, powerful, multiaxis techniques that add extra flexibility to your milling; can be upgraded to the full Multiaxis product.



Mastercam Productivity+™

Brings Renishaw® in-process probing and inspection to your Mastercam programs. Easily set up, validate, and even make in-process adjustments where appropriate.

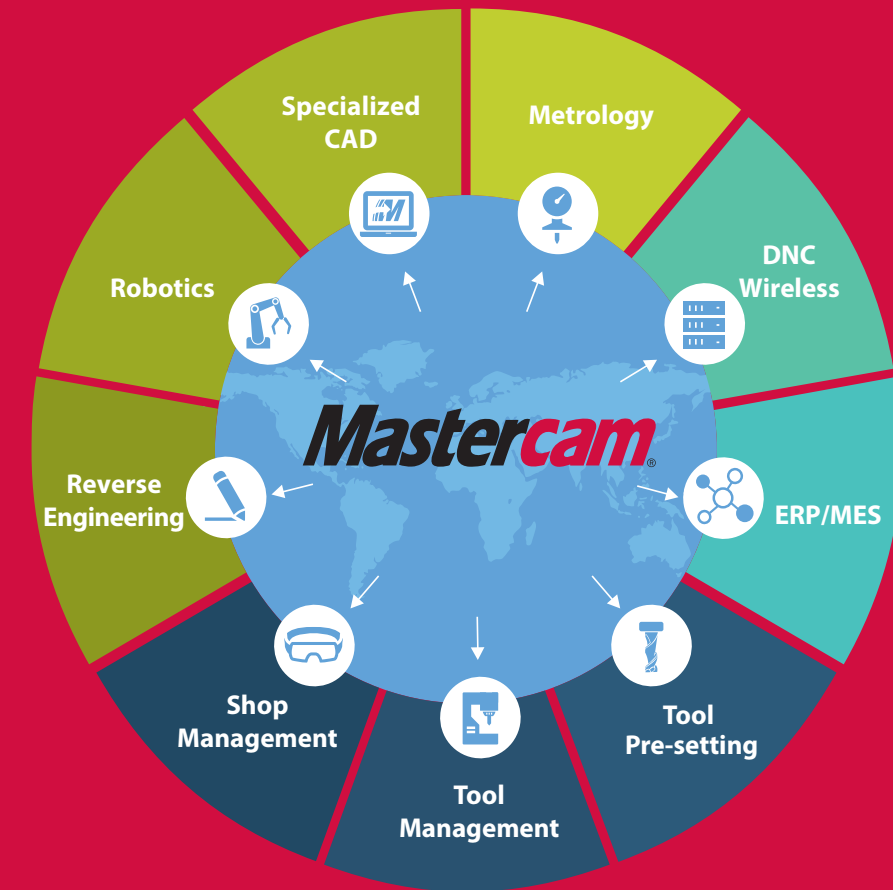


Art

Quickly bring your 2D sketches, clip art, photos, and CAD files to life by crafting them on-screen and cutting them with easy, specialized toolpaths.

For more information, visit Mastercam.com

MANUFACTURING IN A CONNECTED WORLD



Shape your future in manufacturing with Mastercam.

Mastercam provides the spark you need to ignite your productivity now, but it doesn't stop there. To help you keep pace with the evolution of Industry 4.0, Mastercam is developing in step with this revolution in manufacturing. Mastercam's open platform and premier partnerships give you access to everything from paperless workflow and reverse engineering to digital tool management and robotics. These connections — plus the world's largest network of CAM support — provide the fuel you need for sustainable growth long into the future. Welcome to the era of Mastercam connected manufacturing.

TOOLS TO MAKE YOURSELF COMPETITIVE



Mastercam University®

Online, video-based training developed exclusively by CNC Software, Inc. Sharpen your skills on your own schedule, use it to bolster your resume, and get started on the path to Mastercam Certification — with the same training used by corporate staffers and Mastercam Resellers. Mastercam U is easy to use, gives you real-world training applications, and covers all levels of Mastercam skills from basic to advanced.

University.Mastercam.com



Mastercam Certification

If you are looking to set yourself apart as a skilled Mastercam programmer in the increasingly competitive job market, Mastercam Certification is the answer. Our Mastercam Associate Level Certification is acquired by achieving scores of 80% or more in select Mastercam U courses, and our Mastercam Professional Level Certification is a proctored test administered by a Certified Mastercam Instructor. Both will give you the competitive advantage you seek.



WE BREAK TOOLS SO YOU DON'T HAVE TO

The Mastercam Manufacturing Lab™ is an essential testing ground for immediate and hands-on feedback. We run toolpaths and prove-out new techniques in the same conditions you face everyday. We regularly cycle through new equipment so we can replicate a variety of shop conditions and capabilities.

We work with other industry leaders to test their new technology, too. Our goal is to make sure that Mastercam delivers the best in programming and powerful support for every element of your shop.

We may break a few tools as we test the limits of innovations, but it is part of our commitment to the future of manufacturing. Our relentless testing and pushing of limits keeps Mastercam users on the cutting edge of machining capabilities.



CIMQUEST

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About Us

CNC Software, Inc. provides state-of-the-art software tools for CAD/CAM manufacturing markets. Our single focus is to provide superior software products based on our users' needs to solve simple to complex design and machining problems.

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