

# The Ultimate Mold & Die Productivity Tool!

VERICUT Mold and Die software optimizes cutting speeds and detects NC program errors before machining... so you can cut perfect first-time parts faster than ever!

## SIMPLICITY AND FLEXIBILITY

Mold and Die features an interface designed for moldmakers which takes you step-by-step through the verification and optimization process – so anyone in the shop can prepare accurate and efficient NC programs!

You only need three things:

- Stock description: *anything from a simple block to a CAD model file*
- Tooling: *select from the included tool library, create your own, or read tool descriptions from your CNC program*
- NC program: *3-axis G-code or APT*

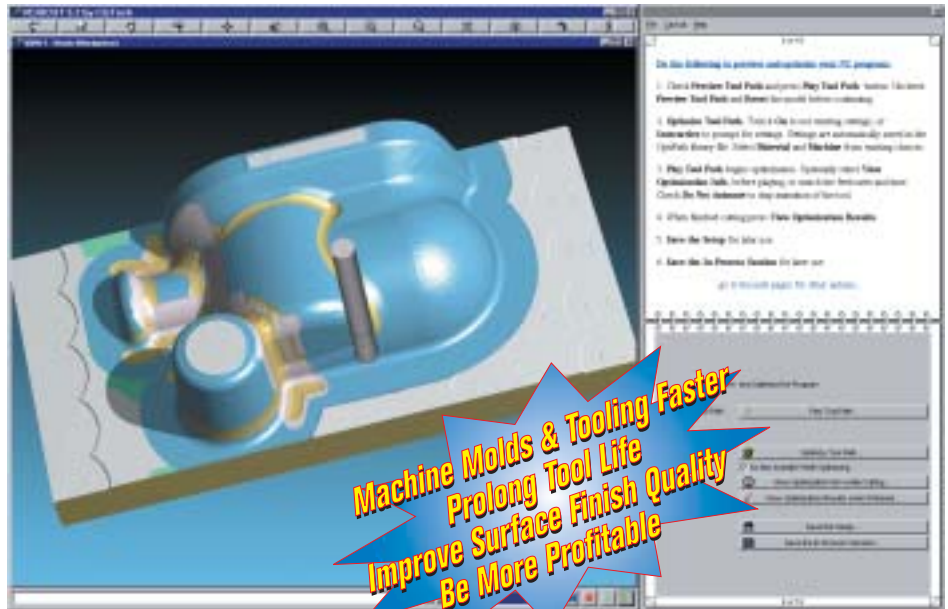
Then, press "cut" – the software does the rest! As it cuts the part it checks for errors and optimizes the NC program on-the-fly!

The interface can be tailored for your specific needs or processes.

## POWER AND SPEED

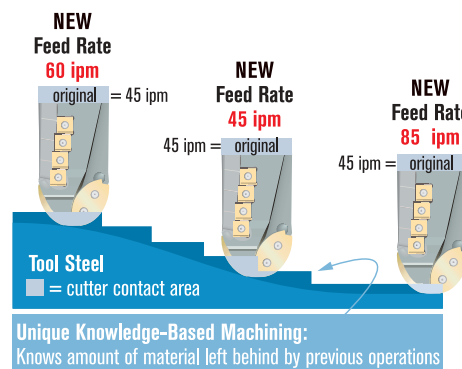
The program detects gouges and collisions between stock and non-cutting portions of the tool. You can pan, zoom, reverse, rotate, and section the cut model for closer analysis.

Mold and Die includes a fast preview mode that enables you to quickly view the results of large NC programs... you control the speed and accuracy.



## EFFICIENCY AND INTELLIGENCE

Mold and Die features proven feed rate optimization technology. Unlike CAM systems, it has a unique knowledge of exactly how much material is removed and how much is left behind. It can therefore determine the ideal feed rates to use, and substitute them where necessary. In areas of heavy material removal, feed rates slow down. During lighter cuts, feed rates speed up.

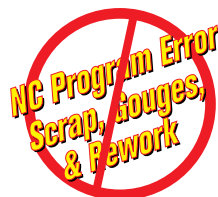


## Optimum Feed Rates

- Help you meet (or beat!) schedules and increase CNC productivity
- Eliminate the need to "optimize by ear" at the machine
- Prolong tool life and minimize wear on the machine  
*Consistent chip load and constant cutting pressure reduce variable forces on the axis motors for smoother machine operation*
- Increase finish quality  
*Constant cutting pressure causes little or no variation in cutter deflection – improving finishes on corners, edges and blend areas so less bench work is necessary*

Mold and Die also reduces machining time and improves surface finish by "curve fitting." It scans the NC program and fits tangent arcs to linear motion, as appropriate, reducing the number of blocks in the program.

**VERICUT**<sup>®</sup>  
Software Solutions for Manufacturing



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Add-on modules the capabilities of expand VERICUT Mold and Die:

## VERICUT Mold and Die

### **EDM Die Sinking: Simulate and Verify EDM Die Sinking!**

*This module accurately simulates EDM die sinking operations to produce a solid model of the finished mold – so you get it right the first time! FAST!*

How many times do you check (and re-check) your mold component models, milling programs, electrode models, and electrode milling programs in order to get the proper first-time die sinking results in the shop? *If it's more than once you're wasting time and money!*

How often does an error still make it through your careful checks, causing machine down-time and lost production in the shop while you correct the error and recut the electrode? *Your customers think once is too often!*

Using "as cut" models of the rough machined mold and electrodes, detect electrode overlap, gaps, gouges, over-burn, and unburned regions. Compare the finish-burned mold/die to a CAD model of the final mold component or molded part using AUTO-DIFF.

### **Model Export: Create "As-Machined" CAD-compatible Models!**

*This module enables you to export a cut part as an in-process CAD model... complete with machined features!*

You can create the model at any stage of machining. A unique algorithm minimizes file size, while preserving features such as holes, fillets, corner radii, pockets, floors, and walls. The result is a highly accurate IGES, STL, or native CAD file.

### **AUTO-DIFF™: Perform Detailed Model Analysis!**

*This module detects gouges and excess material by comparing a design model to the "as-machined" model!*

You can compare a surface, a set of surfaces, or skin to the simulated part. You can also use 3D points from CAD or your CMM to detect errors or out-of-tolerance conditions. With the Model Export module, you can export AUTO-DIFF results as an IGES surface model. This module supports solid models from most CAD/CAM systems, and enables you to assign different colors to the design models, rough stock, and errors for easy identification.

### **Multi-Axis: Verify Multi-Axis Operations!**

*Multi-Axis simulates and verifies four and five-axis machining operations.* Tool positioning is critical in multi-axis milling operations, and as complexity of the part and the machining operation increases, so does the chance for error. No multi-axis program should be loaded on the machine before it has been verified!

*"We've eliminated the need to proof programs at the machine. We do all our prove-outs on the computer, and that keeps our machines open for production work. VERICUT enables us to speed production, reduce costs, and improve the quality of our products."*

*– Minco Tool & Mold, Inc.*

### **Mastercam-to-VERICUT Interface:**

Transfers setup information including tools, tool paths, and stock location in their proper orientation.

### **Unigraphics-to-VERICUT Interface:**

Transfers stock, fixture, and design models along with tool path and tooling information.

### **Pro/E-to-VERICUT Interface:**

Transfers tool path motions for the selected Operation or NC Sequence, tool descriptions, and reference/workpiece/fixture models.

### **CATIA V5 Interface:**

Transfers stock, fixture, and design geometry to VERICUT in the correct orientation, along with tool path, tooling, machine and control data and other simulation parameters.

### **CATIA-to-VERICUT Interface:**

Transfers CATIA geometry and converts CATIA line and arc elements into VERICUT tool definitions. Calculates translations and rotations. Exports STL data from faces, skins, surfaces, volumes, and solids.

### **WorkNC-to-VERICUT Interface:**

Transfers tool descriptions and creates stock blocks based on WorkNC settings.

### **EdgeCAM Interface:**

Transfers model, tool assembly, and NC program information to VERICUT.

*For more detailed information on CAD/CAM interfaces for VERICUT Mold and Die, contact CGTech.*



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