



TIME SAVINGS  
**70%**  
... AND MORE!

iMachining 2D



iMachining 3D

### iMachining Technology Wizard

Full automatic calculation of:  
Feed Rate  
Spindle Speed  
Step Over  
Depth

*"Imagine putting the knowledge and experience of hundreds of CAM and CNC masters in the palm of your hand – Experience iMachining Wizard and Toolpath!"*

### iMachining: "Truly Amazing"

This is what customers, machine tool manufacturers and tooling companies alike say about iMachining.

The revolutionary patented iMachining module from SolidCAM will make you and your CNC machines more profitable and more competitive than ever before.

#### iMachining Highlights:

- Saves 70% or more in CNC machining time
- Extends tool life dramatically
- Provides, using its unique patented Technology Wizard, optimal feeds and speeds, taking into account the toolpath, stock and tool material and machine specifications

SolidCAM with iMachining is the only CAM system that takes out the guesswork from defining the cutting conditions and automatically provides the optimum values for cutting.

iMachining provides unbelievable savings and increased efficiency in your milling CNC operations, translating into profits and success.

### Unique iMachining Technology Wizard

- The industry's first and ONLY True Wizard that automatically produces optimized Feeds, Speeds, Depth and Width of cuts to ensure first part success
- Using the patented "Controlled Tool Load" technology, the iMachining toolpath ensures that the cutting conditions set by the Wizard are strictly adhered to
- The "iMachining Level Slider" lets the user choose from 8 selectable levels to automatically adjust for "real-world" fixture, tool holding and machine conditions

### Customers rave about iMachining!

*"iMachining WOW"* - Deka Reserach

*"We're thrilled - it's just incredible"* - ProKASRO Mechatronics

*"The cost savings are very big"* - Galander Medical

*"Time saved is incredible"* - Mechanical Products

*"Every day we don't use SolidCAM iMachining we are losing money!"* - Rotary Airlock



**SolidCAM**  
The Leaders in Integrated CAM

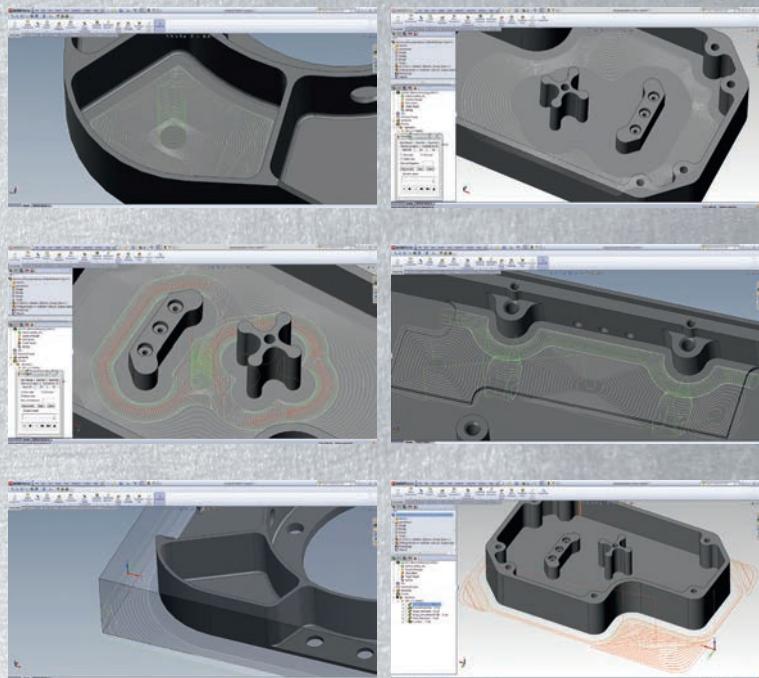
[www.solidcam.com](http://www.solidcam.com)

*"For fast material removal, iMachining blows my mind."*

Lars Waldeisen, Engineering Manager, Valley Machine & Engineering

## Why users say "WOW!" – Unique iMachining toolpath features:

**Morphing spirals** – Unlike a simple spiral toolpath, iMachining employs an advanced morphing spiral that gradually conforms to the geometry of the feature being machined, maximizing "tool in the cut" time.



**Moating** – Islands are separated and large areas are subdivided, using iMachining's patent pending moating technology, to maximize morphed spiral cutting and to minimize the tool jumping around inside pockets.

**No wasted motion** – All iMachining toolpaths cut stock to be removed, and never cut "air". From the initial approach, right to the last cut, a dynamically updated stock representation makes sure every toolpath actually cuts material. "Smart repositioning" is applied, at cut depth, to move the tool from one cut to another, only retracting when absolutely necessary.

## Fastest Cycle Times

- Dynamically controlled cutting conditions ensure constant tool load and therefore enables faster cycle times
- Uses more Spiral cuts to increase the Material Removal Rate
- Machine deeper at the fastest fully optimized Feeds and Speeds
- Eliminates air cutting and unnecessary tool retracts

## Unmatched Hard Material Machining

- The patented "Controlled Cutting Angle" algorithm defines the tool trajectory to maintain the cutting angle range, generating the desired morphing spiral and maintaining a constant cutting force
- This algorithm achieves the maximum possible material removal rate for a given machining set-up

## Longer Tool Life

- "Controlled Step Over" and continually adjusted feed rates reduce tool wear and "tool rubbing" situations
- No "overloading" or "shocks", prevents premature wear and chipped flutes
- Increased depth of cut spreads the cutting over a longer part of the flute, increasing tool life

## Outstanding Small Tool Performance

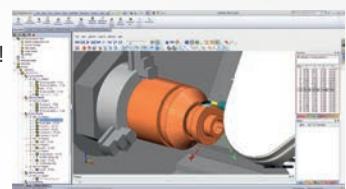
- The patented "Controlled Tool Load" strategy maintains constant forces on the tool, eliminating mechanical and thermal shocks to the tool and increases accuracy
- Precise cutting-angle management in tight corners ensures the tool is never over-engaged

## iRest Roughing & 2D iFinish

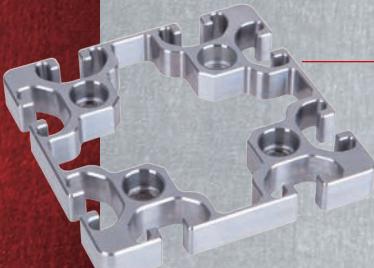
- iMachining, with its iRough, iRest and iFinish provides a complete machining solution for 2.5D milling
- Multiple iRest cycles, with decreasing tool diameters, reduce cycle time dramatically
- iFinish pre-machines all necessary areas, ensuring that the final finish pass can be taken at full cut depth and feed, without chatter in corners

## iMachining for 4-Axis & Mill-Turn

- Program 4-axis wrap cuts with iMachining technology!
- iMachining allows you to overcome rigidity issues of problematic fixturing in Mill-Turn machines



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... AND MORE!



#### CONNECTOR PLATE

Stock: 150 x 100 mm, Height: 30 mm  
Material: 16MnCr5 (1.7131) Steel  
Min. Radius: 1.5 mm  
Chamfer on all edges  
Regular cutting time: 25 min  
iMachining time: 9:30 min  
**Time Savings: 62%**

#### 3D MOLD

Material: 16MnCr5, 180 x 130 x 55 mm  
Tool: Carbide Endmill 16 mm, 4 flutes  
S max: 9141 U/min  
F max: 4650 mm/min  
Chip Thickness: Constantly 0.15 mm  
Regular cutting time: 32 min  
iMachining time: 4:51 min  
**Time Savings: 85 %**

#### UNBELIEVABLE?

Seeing is Believing! Visit us on YouTube at [www.youtube.com/SolidCAMiMachining](http://www.youtube.com/SolidCAMiMachining) and see our latest exciting videos.



iMachining 3D is the powerful 3D module of the growing iMachining product family from SolidCAM.

iMachining 3D provides amazing 3D machining results, regularly providing 70% savings in machining time, and can reach up to 90% savings.



iMachining 3D automatically produces a complete, ready to run CNC program with optimal cutting conditions, achieved by the expert Knowledge-based Technology Wizard, to rough and rest rough a complete 3D part, with True Scallop on all slopes, all in a single operation.

Combined with its full-depth step-down, intelligent step-up, localized machining and smart positioning, iMachining 3D achieves the shortest optimal cycle time for roughing and semi-finish of molds, complex 3D parts and 3D prismatic parts.

*"The wait for iMachining was worth it. I quoted a job to have about 9.5 hours of machine time, but with iMachining we can cut that time in half. At the end of the day that is more money for the shop."*

David Ramsey, Southern Machine, USA

*"We have found all the claims for iMachining to hold true for our applications in Dixon Surgical - incredible tool life, faster cycles, lighter cutting loads reducing vibration in poor workholding situations (mill-turn), and protection of small diameter cutters. The user interface is very clear and simple, and programming iMachining is faster than traditional strategies."*

Jay Dixon, Dixons Surgical Instruments Ltd., UK

*"With iMachining, even on low-performance machines, we can reach very high metal removal rates"*

Thomas Goedeke, Dreiling maschinen GmbH

#### Exclusive iMachining 3D Features:

- Simplified geometry selection – just "Pick & Go"
- Unmatched roughing of 3D surfaced and prismatic parts
- Optimized machining of each Z-Step, using proven iMachining 2D technology
- Dramatically reduced cycle times driven by "True Scallop Step-Up" and "localized machining"
- Dramatically reduced programming time of prismatic parts
- Combined with HSM Finish, provides a complete machining solution for 3D parts





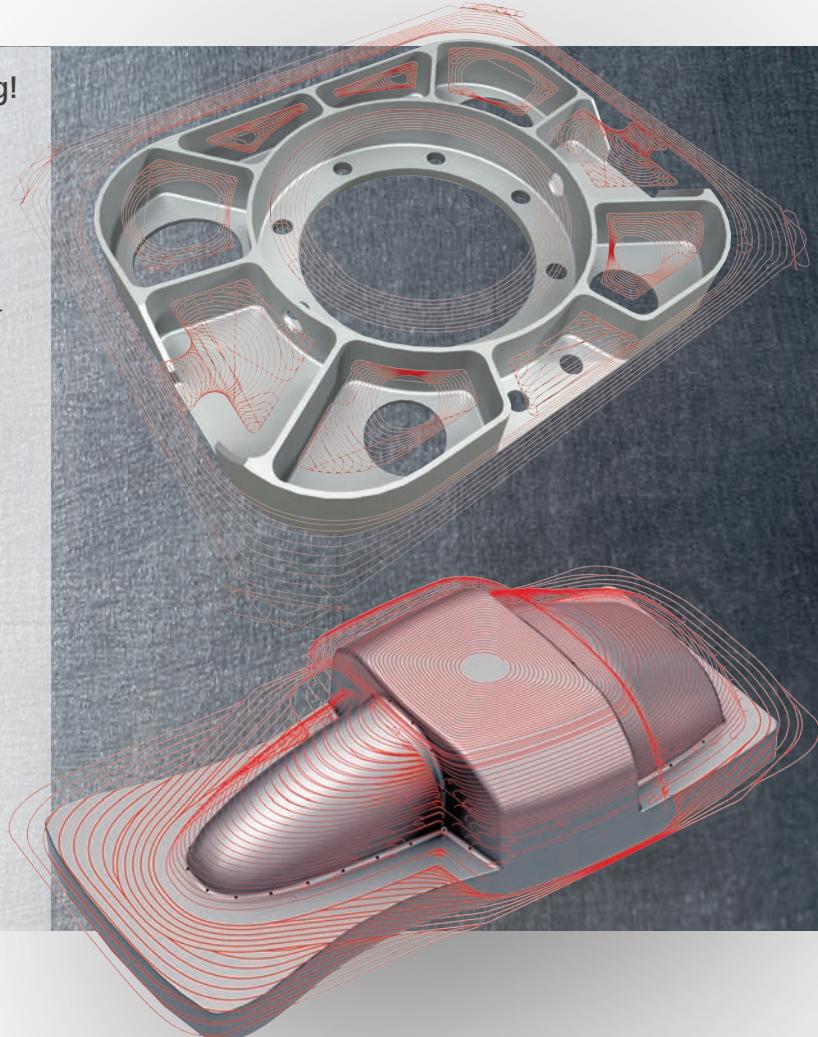
*"I can't believe how quickly I was able to program with iMachining and then it milled so quickly and smoothly"*

Tim Simpson, Valley Design, USA

## Get the best toolpath ever. Get iMachining!

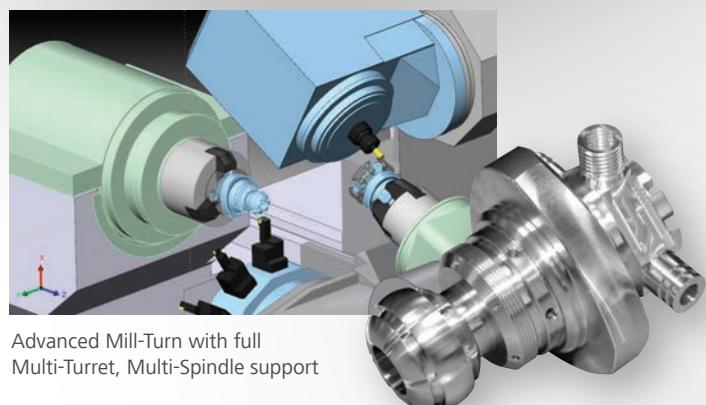
Finally, all the promises of a Revolution in CNC Machining are actually delivered with the unique, patented iMachining!

- ✓ Cycle times reduced by 70% and more ...
  - Patented "Controlled Step Over" for constant tool load - no overloading of the tool!
  - Unique Morphing spirals toolpath
  - Uses more Spiral cuts to increase the Material Removal Rate
  - Machine deeper, at the fastest fully optimized Feeds and Speeds
  - Exact stock material machining - eliminates air cutting and unnecessary tool retracts
  - Smooth, tangent toolpaths
- ✓ Dramatically longer tool life
- ✓ Supports Rest-material and Finish cuts
- ✓ Unique Technology Wizard, with automatic, optimal Feeds and Speeds
- ✓ High Programming Productivity
- ✓ Fastest Learning Curve in CAM



iMachining is the revolutionary CAM Module in SolidCAM, the complete integrated Manufacturing Solution inside SolidWorks, supporting all CNC-Technologies:

- iMachining 2D & 3D
- 2.5D Milling
- HSM - 3D High Speed Machining
- HSS - High Speed Surface Machining
- Multi-Sided Indexial Milling
- Simultaneous 5-Axis Milling
- Turning
- Advanced Mill-Turn
- Wire EDM
- Solid Probe



Advanced Mill-Turn with full Multi-Turret, Multi-Spindle support



[www.youtube.com/SolidCAMiMachining](http://www.youtube.com/SolidCAMiMachining)