

The unique, revolutionary Milling technology

iMachining[®]

patent by SolidCAM

TIME SAVINGS
70%
... AND MORE!

The Revolutionary CNC Milling Technology – Integrated in Siemens **NX**



Finally, all the promises of a TRUE REVOLUTION in CNC machining are actually delivered – breakthrough Technology brought to Reality by iMachining!



Saves 70% and More in CNC Machining Time



Drastically extends Cutting Tool Life



Avoids Guesswork: Optimum CNC Settings with the unique iMachining Technology Wizard



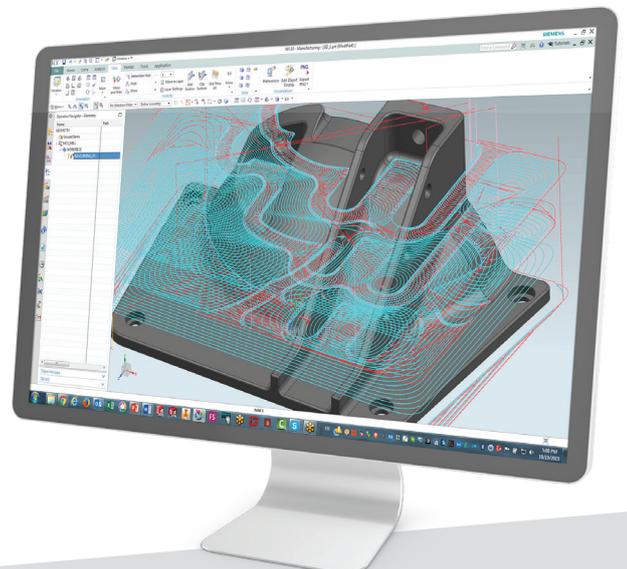
Immense Savings in Programming Time

Customers Reaction to iMachining: "Simply Amazing"

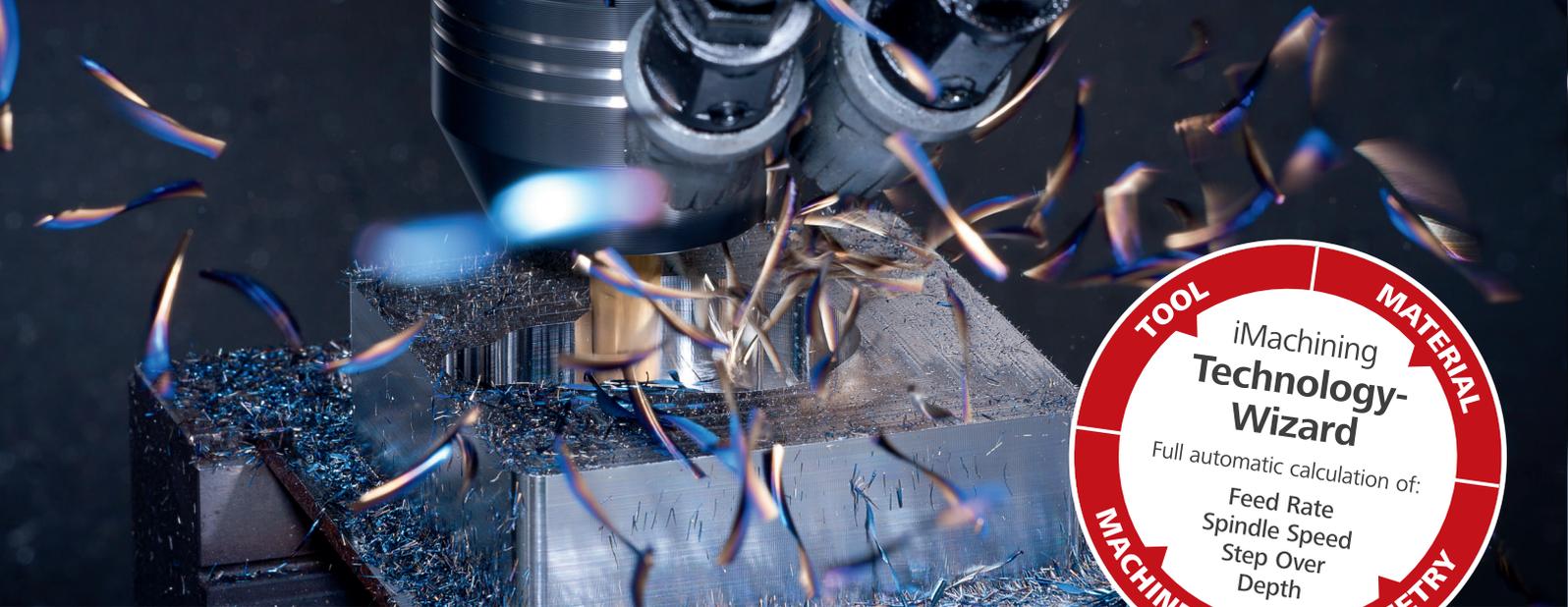


"My hope is that not too many people learn about iMachining because it is my biggest competitive edge!"

Greg Burns | Burns Machinery



imachining4nx.com



Seamless Integration of iMachining in Siemens NX

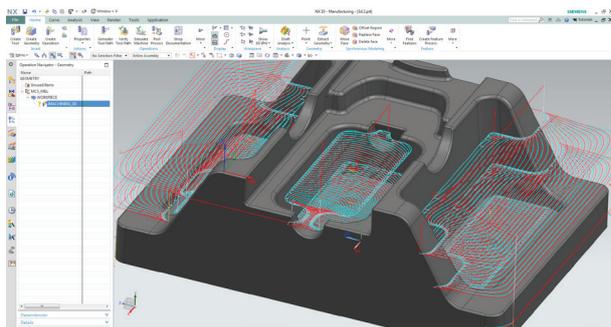
The proven iMachining technology is available as an integrated plugin for Siemens NX. CAM users can insert iMachining 2D and 3D operations directly inside NX CAM, using all NX functionality.

Saves 70% and more in CNC Machining Time

The unique iMachining toolpath, with fully optimized feeds & speeds, keeps the cutter at maximum efficiency and ensures a maximum material removal rate. Exact stock rest material machining and finish cuts eliminate air cutting and unnecessary tool retracts.

Dramatically extends Tool Life

With iMachining, the average Tool life increases by 5 times or more. Machining at full depth-of-cut ensures that the entire tool is utilized rather than only the bottom part. Optimum cutting conditions reduce tool wear and increase process stability to avoid uncontrolled tool breakage, especially when using small and fragile tools, eliminating the cost of premium and specialty tooling for hard materials.

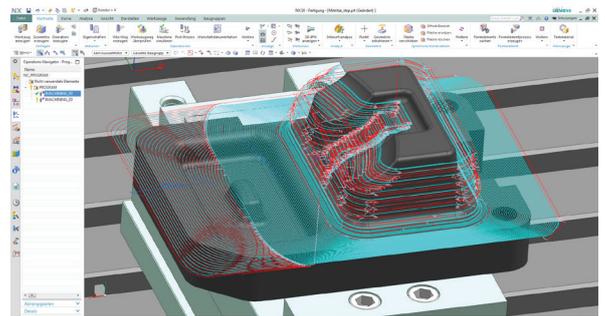


iMachining Technology Wizard

iMachining's exclusive, patented Technology Wizard takes out the guesswork by automatically fine tuning conditions for optimal cutting values. The industry's first and only TRUE Wizard uses an advanced technology that automatically produces optimized feeds, speeds, depth and width of cuts – all specifically for your CNC machines, materials and tools.

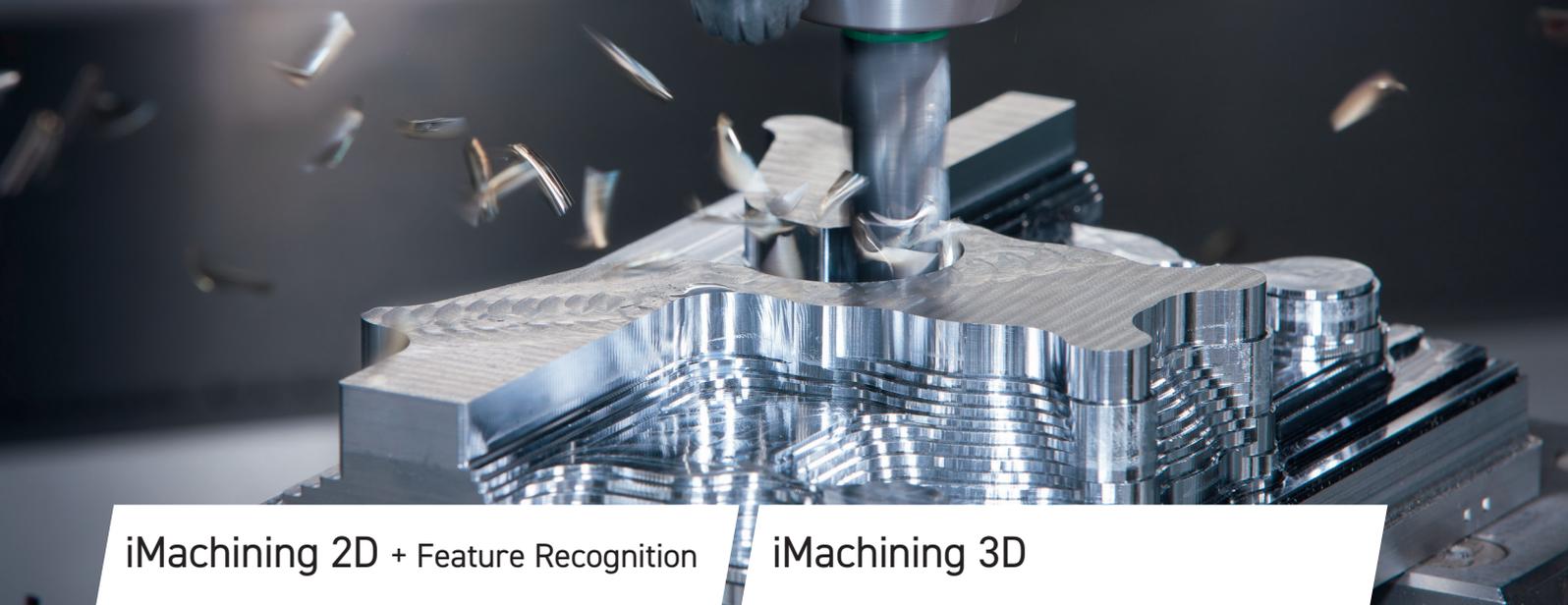
The "iMachining Level Slider" lets the user choose from 8 levels to automatically adjust for "real-world" fixture, tool holding and CNC machine conditions. The levels make it easy to overcome common challenges with spindle-rigidity, fixture-rigidity and excessive tool deflection.

iMachining's Technology Wizard is ideal for getting it perfectly dialed in, the first time.



Shortens Programming Time

The Technology-Wizard provides optimal feeds & speeds, and step-over to ensure time-saving first-part success. The much shorter and simpler programming procedure of iMachining results in greatly increased CAM productivity.



iMachining 2D + Feature Recognition

Put the knowledge and experience of hundreds of CAM and CNC masters in the palm of your hand – experience iMachining's Wizard & Toolpath!

- ▶ Select 2D geometries and quickly define iMachining operations on your part
- ▶ iMachining uses the full length of the tool to easily cut the toughest metals with the smallest diameter tools.
- ▶ iMachining Feature Recognition detects and defines part machinable features by utilizing solid model data combined with minimal input from the user.
- ▶ iMachining Recognition + Protection automatically takes into account Blank/IPW and Part geometries.

iMachining 3D

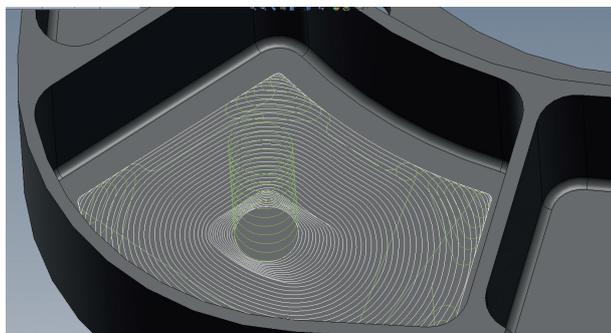
Automatic, high-speed milling tool path for optimized Roughing with “staircase reduction”, and Rest Roughing for general shaped and prismatic 3D parts.

- ▶ iMachining 3D produces the shortest optimal cycle-times to rough and rest rough a complete 3D part, with full-depth step-down, intelligent step-up, localized machining and True Scallop on all slopes - all in a single operation.
- ▶ iMachining 3D uses part and in-process workpiece (IPW) geometry from previous operations to automatically recognize areas it needs to machine, eliminate “air-cuts” and optimize tool repositioning.

iMachining Wizard + iMachining Tool Path = the Ultimate Solution!

Morphing Spirals: Beyond Trochoidal Cutting

iMachining uses an advanced, patented morphing spiral that gradually conforms to the geometry of the feature being machined, rather than an old-fashioned, simple spiral tool path (racetrack). This maximizes tool to stock contact or “tool in the cut” time.



Eliminate Wasted Time & Motion

iMachining tool paths only cut the stock that needs to be removed. From the initial approach to the last cut, dynamically in process workpiece (IPW) tracking ensures every tool path actually cuts material.

Moating: Divide & Conquer

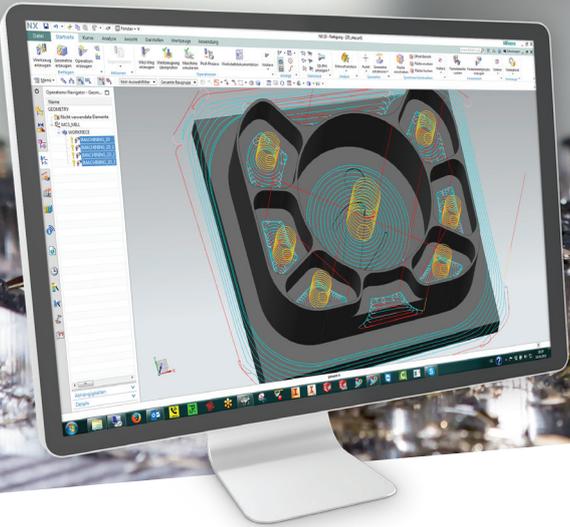
In order to most efficiently attack large areas of material removal as well as stand-alone islands, they are separated or subdivided into smaller sections using iMachining's patented Moating technology. This maximizes the efficient morphed spiral cutting.



Smart Repositioning

iMachining moves the cutting tool from one cut to another at the cut depth, only retracting when absolutely necessary.

The Power of iMachining right inside NX – a great Synergy!



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iMachining – with its unique patented “morphing spirals”, intelligent island separation and moating, achieves the shortest cycle times in any industry - in any material, on any machine.

The cutting angle constantly adjusts between a minimum and a maximum value, while the feed is dynamically adjusted to ensure constant mechanical and thermal load on the tool - providing you with the longest tool life at the highest Material Removal Rate (MRR) possible.

Since spirals have higher MRR than Trochoidal tool paths, iMachining utilizes various, patented strategies that enable it to use spirals much more often than Trochoidals.

iMachining automatically reduces vibrations to prevent excessive tool wear and also decreases the likelihood of forming temporary thin walls that often lead to costly tool damage.

Using advanced rest material knowledge, iMachining maintains the highest level of cutting tool engagement by avoiding “air-cuts” and repositioning moves.

The iMachining Technology Wizard provides automatic, optimal feed and speed values for different materials and CNC machines to ensure “first-cut” success.



“We have freed up a lot of production capacity, have significantly increased our productivity, and reduced tool costs by more than half. The investment has more than paid for itself. For us, iMachining is definitely a quantum leap.”

M. Torghelle, Liebherr, Nenzing, Austria

“We use iMachining with nearly all our products – from 2.5D-, 3D- up to indexial 5-Axis Machining. From today’s point of view, it is a no-go to work without it.”

A. Winkler, Zrinski AG, Germany

“Every day we don’t use iMachining we are losing money!”

Rotary Airlock, USA



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