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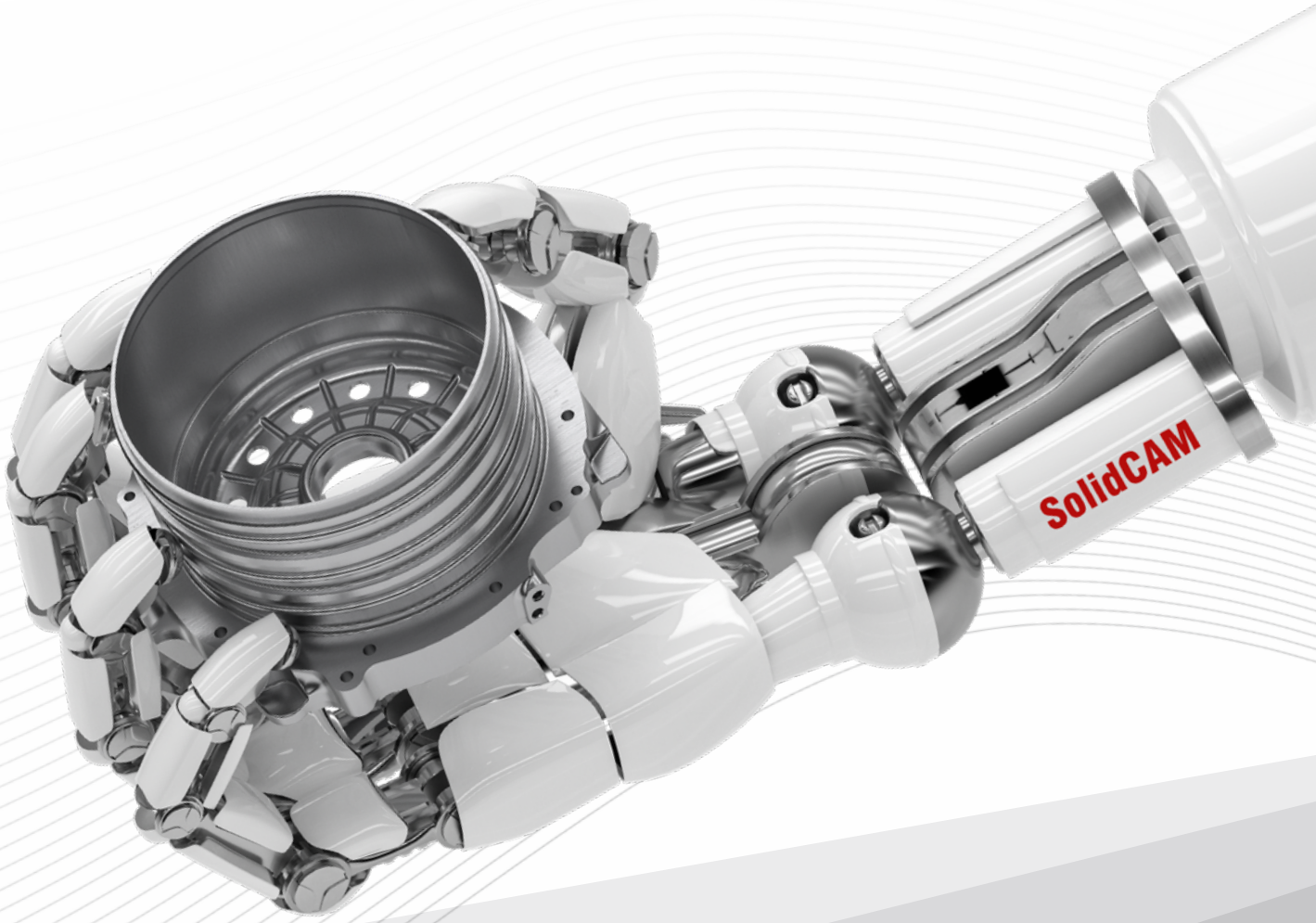
THE FUTURE OF CAM

SolidCAM

The Future of CAM in Your Shop Today!

The complete CAM Solution, with revolutionary iMachining, MillTurn and Swiss-Type, seamlessly integrated in SOLIDWORKS® and Inventor®



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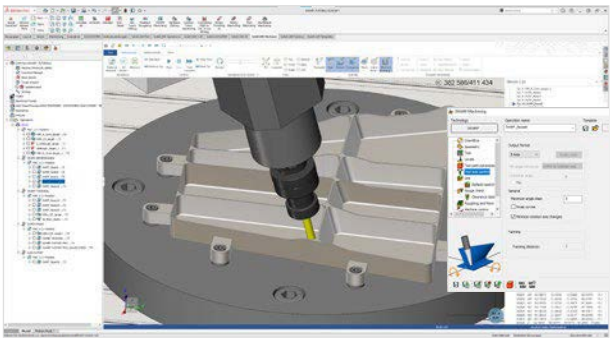
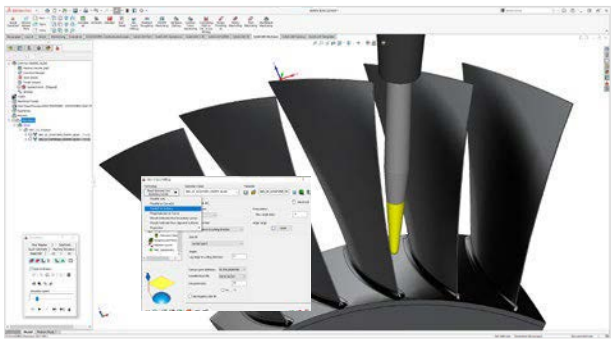
SIMULTANEOUS 5-AXIS MILLING

Impeller Manufacturing





Circular-segment cutters with barrel-, oval- and tapered geometry are being supported in SolidCAM

Benefit from the most tested and proven 5-Axis machining tool paths in the industry, with a user-friendly interface, collision checking and the most advanced control over all aspects of the tool path:

- Wide variety of Simultaneous 5X cutting strategies
- Flow line cutting produces a toolpath that follows the natural shape of the component
- Multi-surface finish machining keeps the tool normal to the surface (or with specified lead and lag) to provide a smooth surface finish
- Advanced tool tilting control and direct control on side tilting and lead/lag angles
- Automatic collision avoidance strategies that check each part of both the tool and holder
- Multi-axis rest roughing efficiently removes the remaining material of the larger cutter diameter used previously
- Realistic full 3D machine simulation with comprehensive collision and axis limits checking

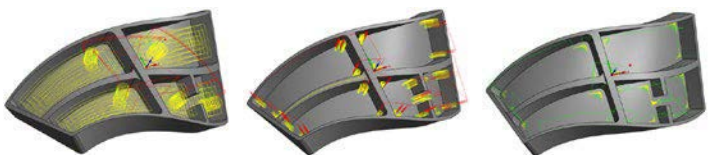
Flexibility and Control

Each 5-Axis machining strategy provides sophisticated options for approach/link control and tool axis control.

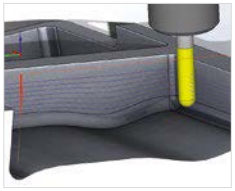
Link and approach moves are fully gouge protected and different strategies may be used depending on the distance of the link move. SolidCAM also provides options for control over lead/lag and side tilt angles to give complete control over the final toolpath.

Collision Avoidance for Tool and Holder

Collision avoidance is supported for both the tool and holder, and a range of strategies is offered for avoiding collisions. The Machine Simulation provides complete visualization of the gouge checking.

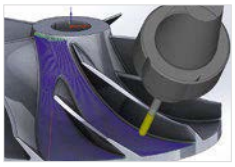


SWARF Machining



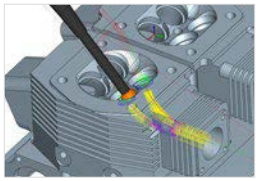
With SWARF machining, the tool is being tilted over to cut with its lateral surface. SWARF cutting utilizes the complete cutting length of the tool, resulting in better surface quality and shorter machining time.

Multi-Blade Machining



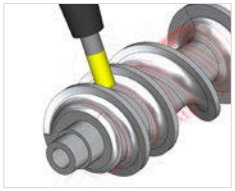
The Multi-blade machining operation easily handles impellers and bladed disks, with multiple strategies to efficiently rough and finish each part of these complex shapes, which are being used in many industries.

Port Machining



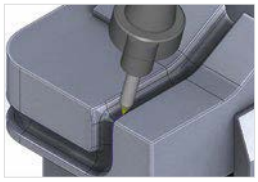
With this 5X operation you can machine intake and exhaust ducts as well as inlets or outlets of pumps, in castings or steel blocks with tapered lollipop tools. Roughing and finishing operations can be quickly and easily defined and reliably simulated with complete collision control of the entire tool and holder.

Screw Machining



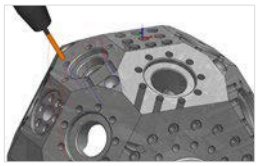
This operation generates 4-Axis rotary roughing and finishing tool path for screws using bull nose, ball nose or flat end mills.

Contour 5-Axis Machining



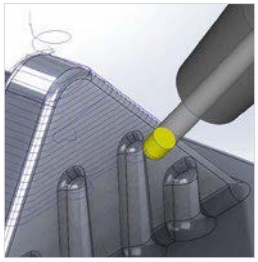
The Contour 5-Axis machining strategy tilts the tool along a chained 3D profile drive curve, while aligning the tool axis according to defined tilt lines, making it ideal for generating 5-axis toolpath for deburring and trimming.

Multi-Axis Drilling



The Multi-Axis Drilling operation uses SolidCAM's automatic hole recognition and then performs drilling, tapping or boring cycles, at any hole direction, easily and quickly. All the advanced linking, tilting and collision avoidance strategies are available in this operation.

Convert HSM to Sim. 5-Axis

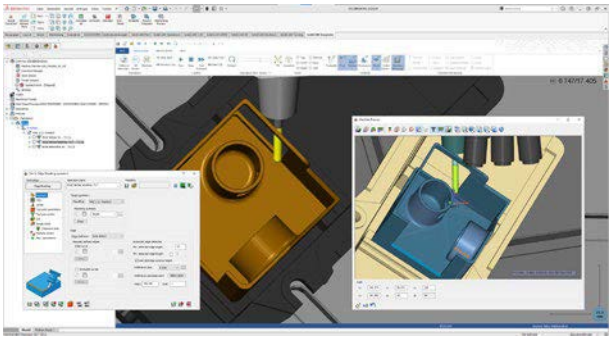


The Convert HSM to Sim. 5-Axis milling operation converts HSM 3D toolpaths to full 5-Axis collision-protected toolpaths. This will maintain optimum contact point between the tool and the part and enables the use of shorter tools for more stability and rigidity.

SIMULTANEOUS 5-AXIS MILLING

Simultaneous 5X Edge Breaking

After machining a CAM part, a burr can sometimes be found that have straight edges or non-tangent outer surface topologies. This occurs when the tool chips the metal off the edge and it can ruin the functionality of the part, or endanger the user because it is razor sharp – removing it is the best option.

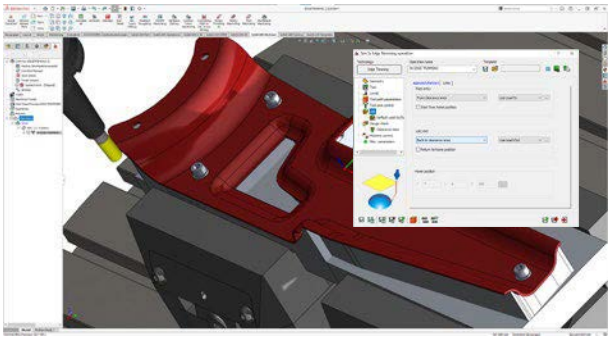


SolidCAM's Edge Breaking operation creates a deburring tool path on the outer edges of a part geometry. The position of the tool relative to the edge is always the bi-vector between the two surfaces of that edge.

- Enables creation of a fully automatic tool path by just selecting the part geometry
- Additional features include Automatic Feature Detection, Linking, Lead-In and Collision avoidance
- Ball mill cutters and quality geometry input (mesh) are required for the detection feature to work properly.

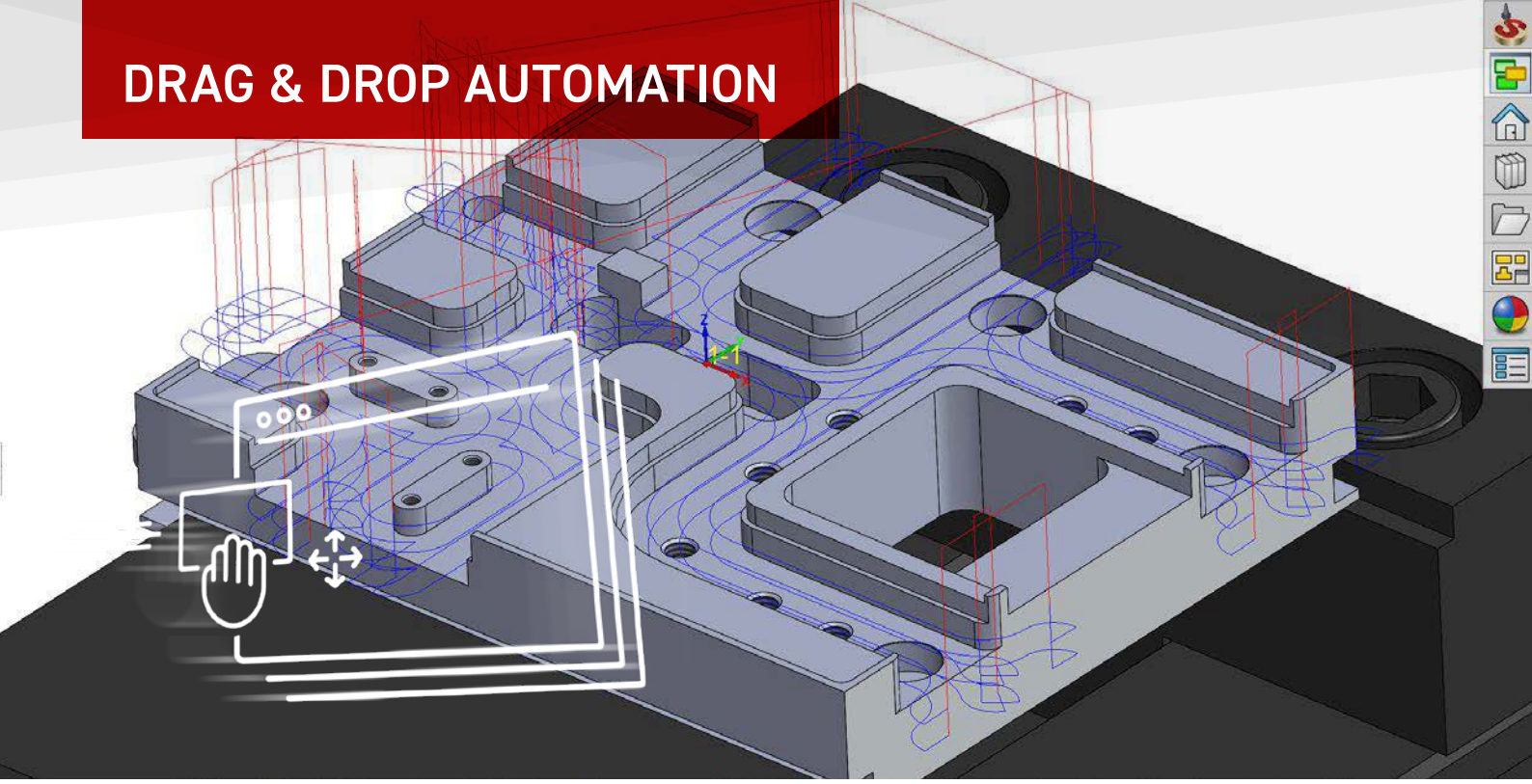
Simultaneous 5X Edge Trimming

SolidCAM's Edge Trimming operation efficiently machines parts that require edge trimming to get their final shape. The operation uses a highly automated algorithm to create a tool path to trim the edge thin materials.



- Designed for the edge trimming of thin materials
- Position of the tool relative to the geometry can be defined by various options from only a 3-axis output to a more complex 5-axis output with different tool axis orientation options
- Axial shift enables the tool to be engaged with a certain value into the material
- Edge trimming can be automated or user defined, and offers a variety of corner handling functions to create a smooth tool path

DRAG & DROP AUTOMATION

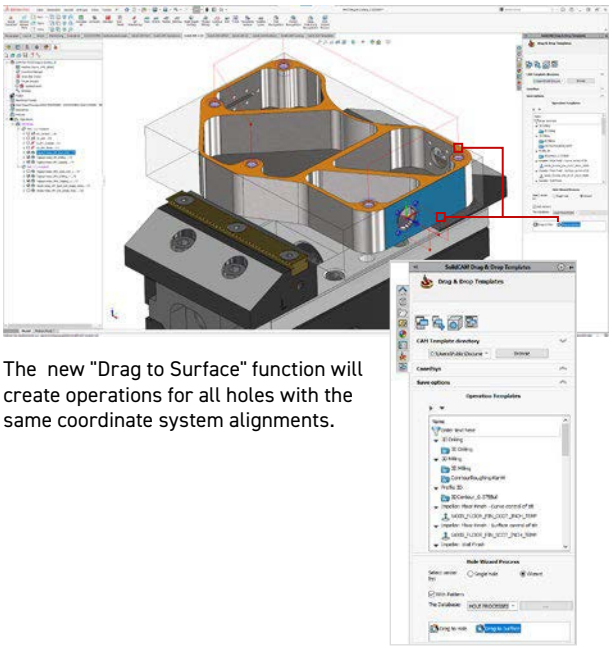


Drag & Drop Templates

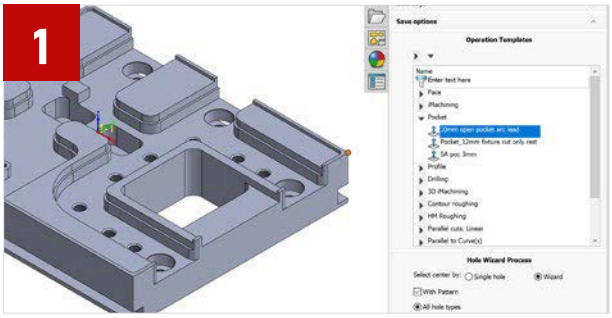
One of the most intuitive and fastest ways of programming a part is to use SolidCAM´s Drag & Drop templates. These are ready-made templates that you can drag directly onto surfaces and holes.

The templates can be created by the user directly from existing jobs and can be flexibly adapted at any time in a clearly structured database.

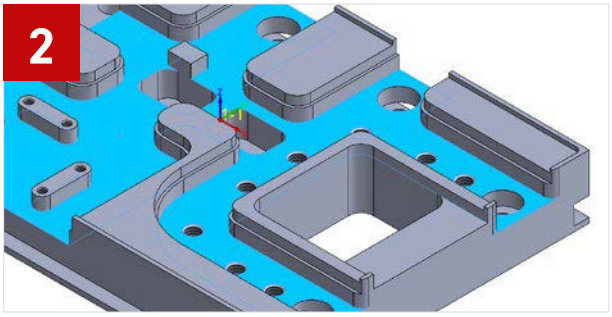
Drag & Drop is available in a wide span of Solid-CAM´s operations including 2,5D, iMachining, HSS, HSM etc.



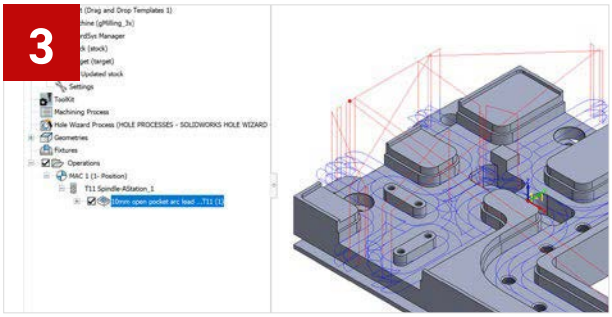
The new "Drag to Surface" function will create operations for all holes with the same coordinate system alignments.



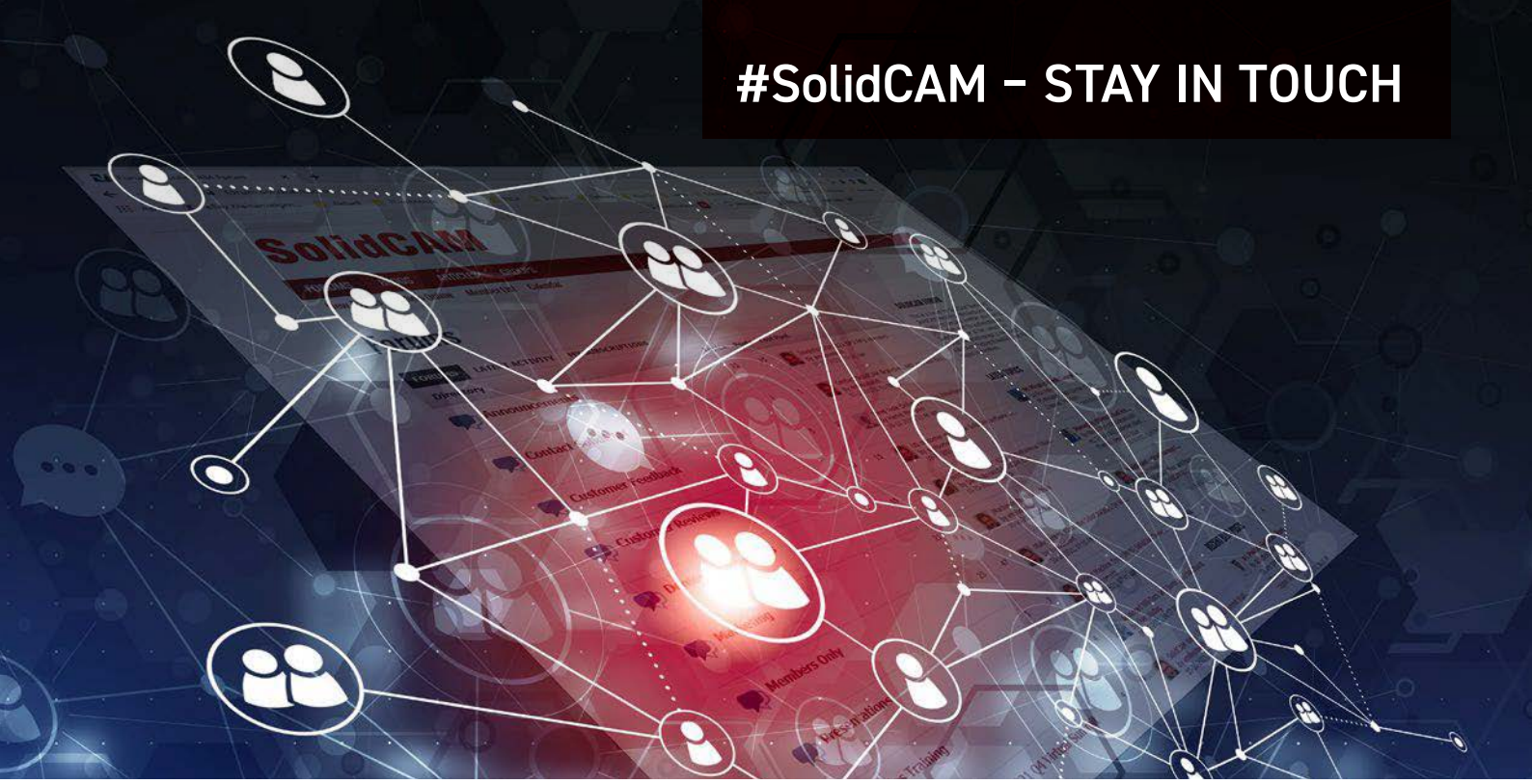
Grab operation template from template directory



Drag the template to the face to be machined



A new Operation is added to the CAM Manager operation tree and the toolpath will be calculated

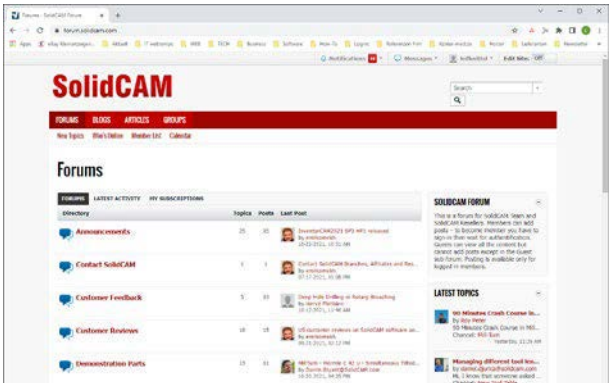


#SolidCAM – STAY IN TOUCH

Welcome to the SolidCAM Forum

We believe that up-to-date information for our customers and resellers is a priority, so we launched the SolidCAM forum, where everyone can get in depth information about SolidCAM products and future developments.

Check out **forum.solidcam.com** for more details or get the **SolidCAM Forum App** available for IOS and Android from the App-Store & Google Playstore.



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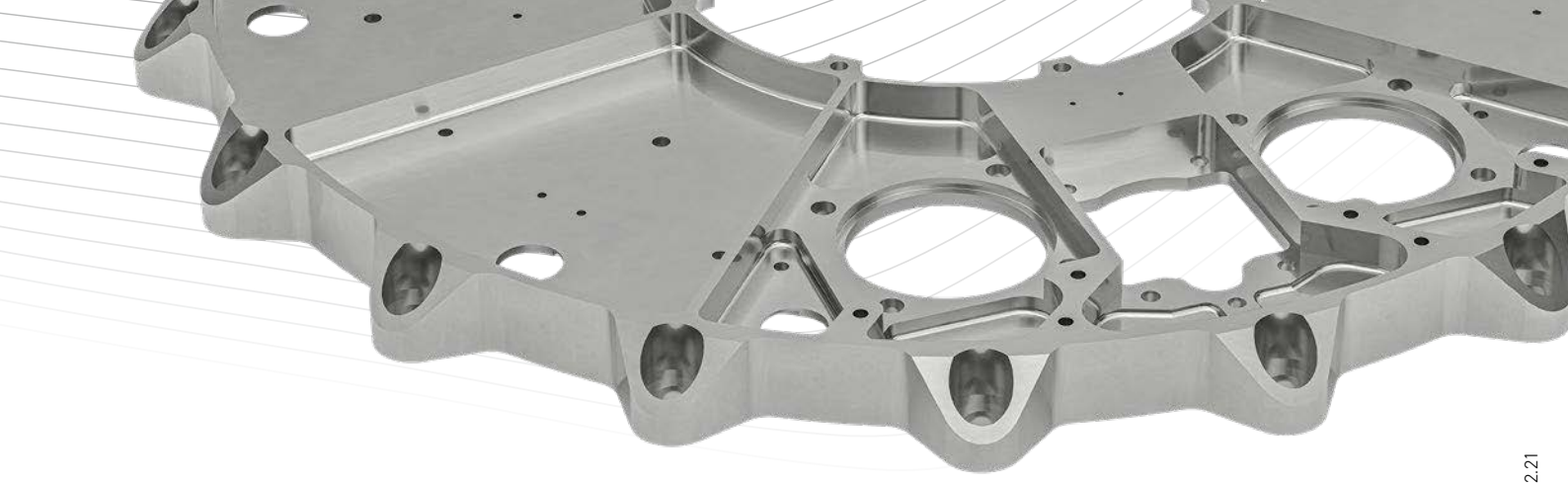

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The Leaders in Integrated CAM

The unique, revolutionary Milling Technology
iMachining®
patent by SolidCAM

MILLTURN
SolidCAM Power for Turn-Mill | Mill-Turn | Swiss-Type

> My personal goal was to be able to program all CNC machining operations consistently with a single CAM system. The biggest challenge here was to bring the Swiss-type lathes on board. Thanks to the extensive support provided by SolidCAM, that also worked out wonderfully!"

Steffen Rudischhauser | Managing Director
Rudischhauser Surgical Instruments & Implants Manufacturing GmbH | rudischhauser.com

> What matters to us are the structure and quality of the generated CNC programs that go to the machine, as well as how quickly and easily they can be generated. The service at SolidCAM is unparalleled. The technicians have done a great job with the post-processors for our complex Bumotec machines. And if we ever have a problem, someone from the support team is immediately offering help. These days, that isn't a given; it's unique!"

Stjepan Matacun | Production Manager
Stuckenbrock Medizintechnik GmbH

> After only two weeks with SolidCAM we had more success than with the previous CAM system after three years. We can now program the most complex workpieces much faster. Creating the tools is much easier and I can already program a part even if the final tool data is not yet completely available. This was not possible in the past."

Franz Fuchs | CNC & CAM Programming
Hefter Maschinenbau GmbH & Co. KG | hefter.de

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