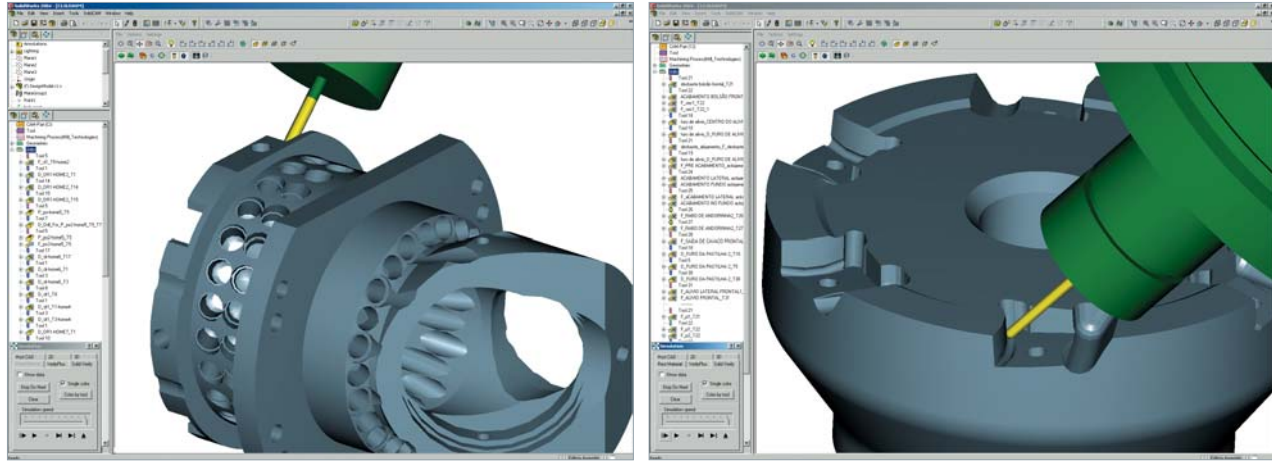# SolidCAM

The Gold-certified integrated CAM-Engine for **SolidWorks**

3+2 Multi-Sided Machining

With SolidCAM, programming and machining of multi-sided parts on 4- and 5-Axis machining centers is efficient and profitable. SolidCAM rotates the SolidWorks model to the user-defined machining planes and automatically calculates all necessary shifts and tilts for the 3D machining homes. SolidCAM enables flexible set-ups and reduces the need for special clamping jigs. You can define your 2.5D and 3D machining operations on any face and check them using SolidCAM's advanced toolpath verification. The output are ready-to-run programs for your 4/5-axis CNC-machine.

Simultaneous 5-Axis Machining

Simultaneous 5-axis machining is becoming more and more popular due to the need for reduced machining times, better surface finish and improved life span of tools. SolidCAM utilizes all the advantages of Simultaneous 5-Axis machining and together with collision control and machine simulation, provides a solid base for your 5-axis solution. Intelligent and powerful 5-axis machining strategies, including swarfing and trimming, enable the use of SolidCAM for machining of complex geometry parts including mold cores and cavities, aerospace parts, cutting tools, cylinder heads, turbine blades and impellers. SolidCAM provides a realistic simulation of the complete machine tool, enabling collision checking between the tool and the machine components.
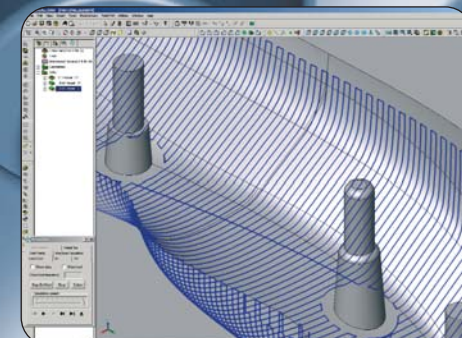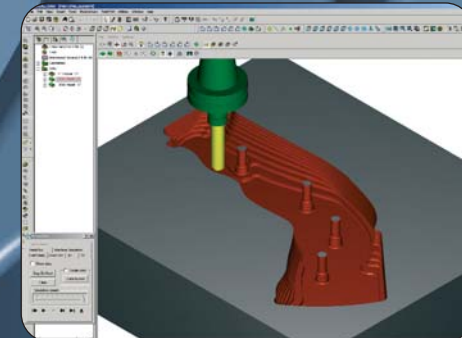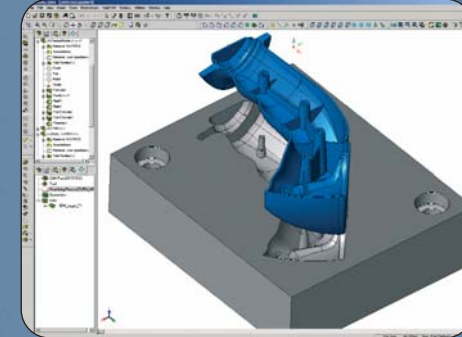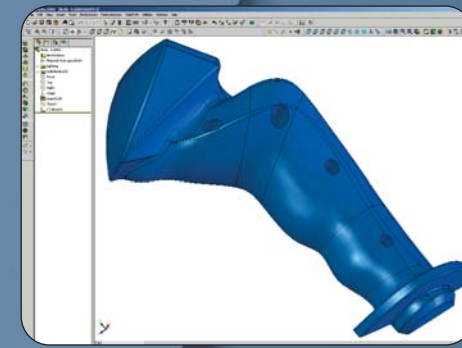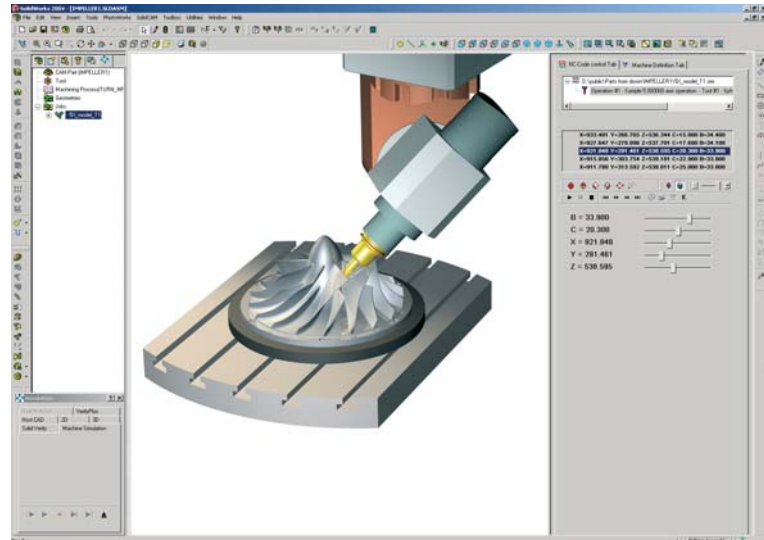
SolidCAM is the complete, 'best-in-class' Manufacturing Suite for efficient and profitable CNC-Programming inside SolidWorks.

SolidCAM is a SolidWorks Certified Gold Product for CAM. SolidCAM provides seamless single-window integration and full associativity with the SolidWorks design model.

SolidWorks Certified Gold Product

SolidWorks Certified CAM Product

- 2.5D Milling
- 3D Milling
- 3+2 Multi-Sided Machining
- Simultaneous 5-Axis Machining
- Turning + Driven Tools
- 2/4-Axis Wire-EDM

Mold of computer joystick created in SolidWorks, machined using SolidCAM's 3D Milling Module.

SolidWorks + SolidCAM: The Solid Choice

www.SolidCAM.com

The Machinist's Choice

For nearly two decades, thousands of worldwide customers have relied on the performance of innovative CAM solutions provided by SolidCAM. The hallmarks of SolidCAM are its ease-of-use combined with its powerful CAM functionality and customized post-processors that generate ready-to-go CNC-code. SolidCAM is widely used in Mechanical Manufacturing, Automotive and Aerospace industries, Electronics, Mold & Die shops and for Rapid Prototyping.
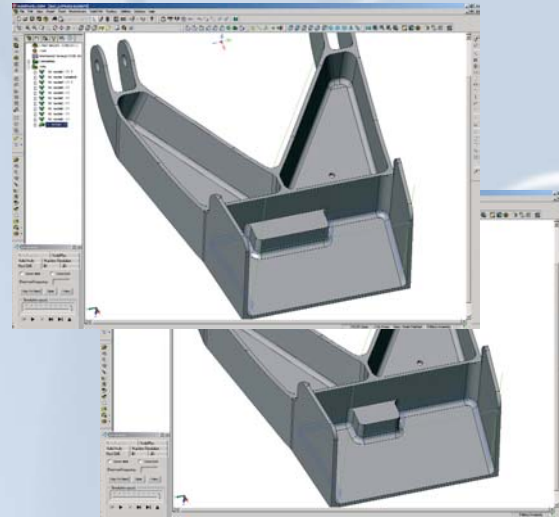
## Full Integration and Associativity

With the single-window integration of SolidCAM in SolidWorks, all machining operations can be defined, calculated and verified without leaving the SolidWorks assembly environment. All 2D and 3D geometries used for machining are fully associative to the SolidWorks design model. In a single CAM-part, several SolidWorks configurations can be used. Each configuration can represent an independent state or production step of a workpiece. When the geometry used to define a machining operation is changed in the SolidWorks design, SolidCAM enables the user to automatically synchronize all machining operations with the updated geometry. The full associativity to the SolidWorks design model reduces errors when the model changes and facilitates the process where updates are received for models already machined.

Advanced CAM-Intelligence

SolidCAM's Automatic Feature Recognition and Machining (AFRM) module automates the manufacturing of parts with multiple drills and complex holes. SolidCAM automatically recognizes all the hole features in the solid model and generates the tool path for the machining using knowledge-based Machining Processes stored in the Technology database. Manufacturing can be automated and all shop personnel can benefit from the expertise of the most skilled programmer who creates the knowledge database. While providing CNC-programming automation to the user, the AFRM technology still gives the user optional control over all machining parameters.
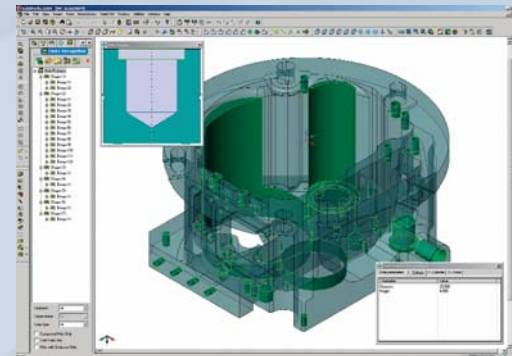
## Visualization and Machining of Rest Material throughout the complete Manufacturing Process

Stock models for machining can be defined using any 2D contour, 3D model or can be automatically derived from the target model. This option enables the user to efficiently manufacture casts or pre-fabricated workpieces. SolidCAM uses the difference between the stock and target model to calculate the roughing operations on the 3D model. After each successive machining step, the rest material will be automatically updated. At any stage of the manufacturing process, SolidCAM provides powerful functions to display, analyze and machine the remaining rest material. The rest material features are available for 2.5D, 3D and 3+2-axis multi-sided machining.
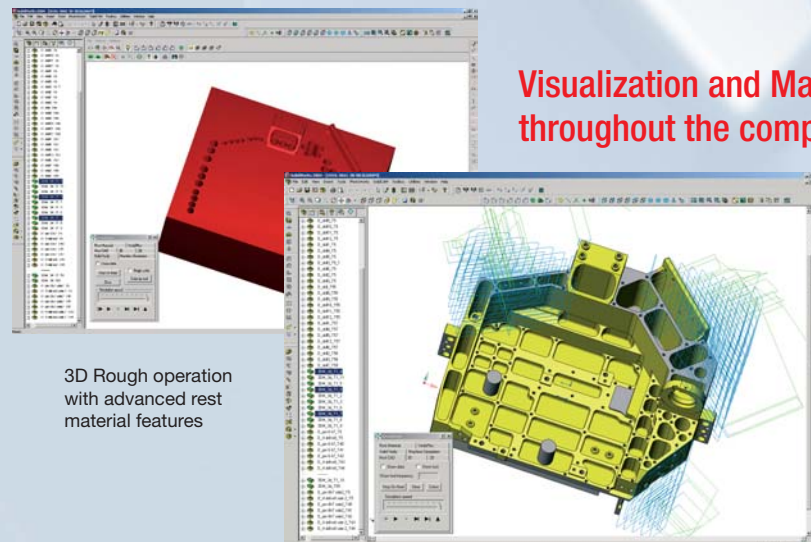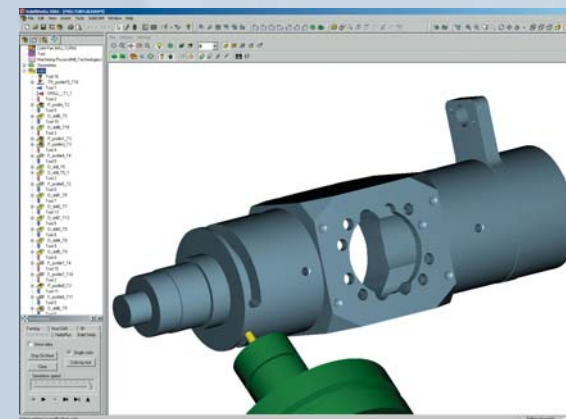
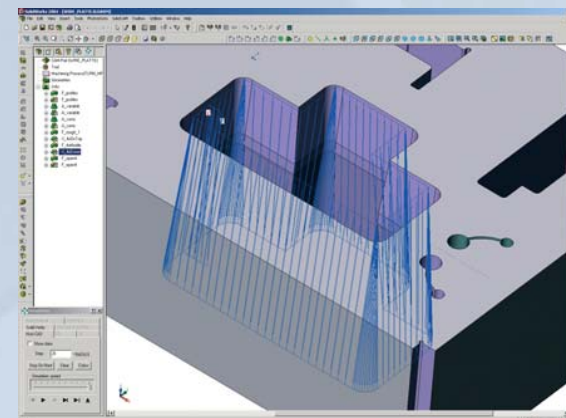3D Rough operation with advanced rest material features
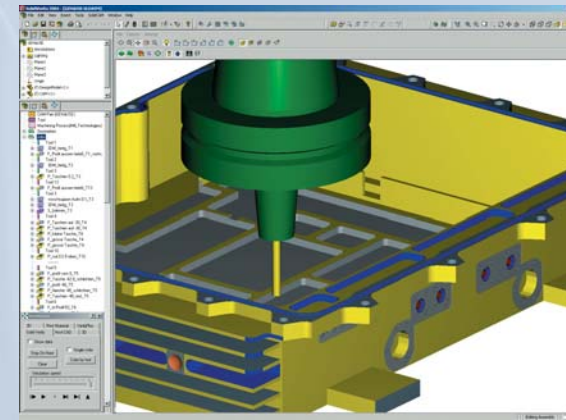
Simulation of 2.5D operations on aerospace housing
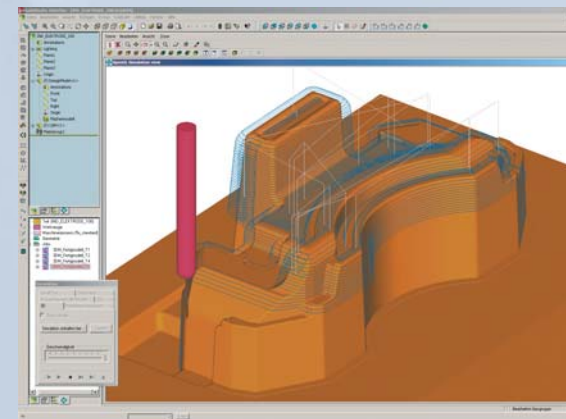
3D Constant-Z machining on electrode model

Advanced Mill-Turn application

4-axis Wire-EDM

2.5D Milling

SolidWorks models with features such as pocket cutouts, profiles and drills can be interactively turned into toolpath for profitable production on CNC-machines. Full toolpath control and powerful algorithms ensure that the user can manufacture the way he needs to. Operations can be easily reordered, moved, rotated and mirrored. SolidCAM has been tested for real-life production environments and is successfully used by thousands of manufacturing companies and job shops.

3D Milling

SolidCAM's 3D Milling can be used both for prismatic parts and for complex 3D models. For prismatic parts SolidCAM analyzes the model and automatically recognizes pockets and profiles to be machined using Z-constant machining strategies. For molds, electrodes and prototypes, SolidCAM offers powerful 3D machining, including advanced High Speed Machining strategies and integrated rest material options. No matter how complex the model, SolidCAM provides the optimal approach and roughing strategy with superior 3D finish machining for mold and die applications.

Turning + Driven Tools

SolidCAM provides maximum productivity and reduced CNC-programming time for Turning, Turning with Driven Tools and for advanced grooving applications. SolidCAM supports a large number of tool-shapes including special support for the advanced machining technologies of ISCAR's Turn-Groove tools. SolidCAM provides all milling and drilling operations for driven tools on the face or the perimeter of the stock.

2/4-Axis Wire-EDM

SolidCAM Wire-EDM handles profiles and tapers with constant and variable angles, as well as 4-axis contours. SolidCAM's intelligent algorithms prevent the falling of material pieces by automatic pocket processing. SolidCAM provides full user control of stop-points and of wire cutting conditions at any point of the profile or taper.