VERICUT 8.1 Streamlines Simulation

VERICUT 8.1 includes enhancements that simplify simulating a CNC machine. The new features help NC programmers analyze, optimize, and document NC programming and machining.

Enhanced Sectioning

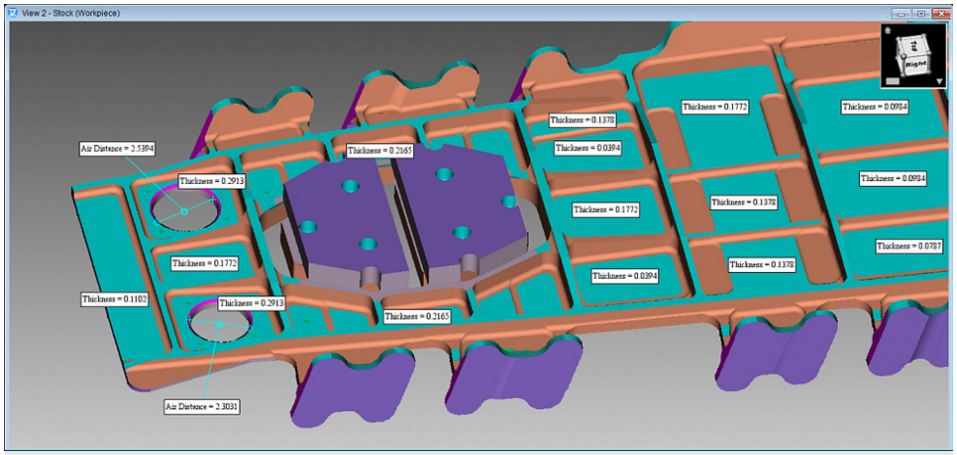
VERICUT's new Section window is easier and faster to see inside a part during simulation. This allows the user to check proper fit, and identify interference between the workpiece and machine components. Sectioning abilities in machine view help with complicated machines where visibility is challenged. Enhancements allow the simulation to be stopped, sectioned, and zoomed to achieve unobstructed viewing to pinpoint highlighted errors.

X-Caliper Dimensions

The X-Caliper measuring tool quickly creates a measurement label on the VERICUT cut stock. Label placement is customizable by the user for optimal viewing. To aid inspection, multiple dimensions are easily displayed on the part to quickly document key measurements. Images with dimensions are referenced in VERICUT reports.

Improved Report Template Editor

VERICUT's report template editor makes creating a custom report easier. Adding content directly to the report editor is simplified using standard word processing capabilities. The enhancements allow use of HTML objects, and the template editor gives the user WYSIWYG. The editor displays exactly what the report will look like while the template is created.



X-Caliper dimensions are easily displayed on the part. Measurement labels can be adjusted for optimal viewing. Multiple dimensions are able to be displayed and referenced in VERICUT reports.

Easier G-code Offset

Updated features on the G-code offsets menu make adding work offsets simple. With as little as two clicks, a new offset can be added. VERICUT verifies the work offset name to ensure it's supported by the control. Location markers were added to indicate where the offset is positioned. Offset tables are consolidated into one location under a single ribbon selection.

Force™ Optimization

VERICUT's Force module is a physics-based NC program optimization method that maximizes chip thickness. Force creates more constant cutting forces resulting in significant machining time savings.

Graphs and charts are displayed in real-time, revealing cutting conditions and forces as they are encountered by cutting tools. The data helps NC programmers identify undesirable cutting conditions represented as spikes in the graphs. Spikes display forces, chip loads, tool deflection, and material removal rates above the recommended parameters. With one click on the chart, the exact location in the NC program is marked. Simultaneously the actual cut in the graphics window is displayed. By optimizing toolpath feed rates, Force reduces machining time, prolongs tool life, and produces a higher quality finished product.

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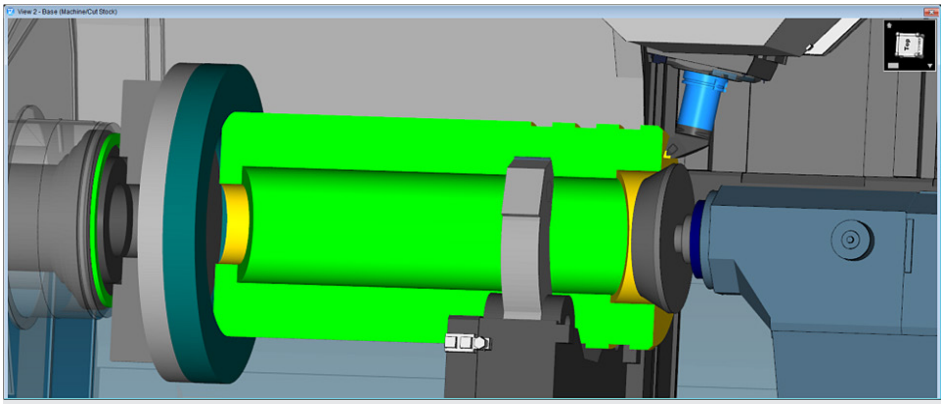
HTML Topic-based Help

The topics list was updated to simplify navigation. When a specific topic is clicked, supporting data appears below. The search bar feature supports quicker access to relevant content sorted by importance. Switching to HTML enables the use of higher resolution images and better quality examples. Side bar navigation remains an option to smooth customer transition to the new HTML format.



Enhanced Sectioning allows the NC programmer to inspect the inside of a part during simulation. This unobstructed view will help identify any potential problems with the workpiece and machine tool.

Other notable features:

- New Siemens VNCK Machine Control Panel
- Enhanced Machine/Cut Stock view display (OpenGL)
- New Coolant check
- New Check Tools scan option
- Enhanced CATV6 model selection
- Enhanced NXV identifies NX operations responsible for errors

New Teamcenter Interface

VERICUT Tool Manager imports 3D cutting tools from Siemens Teamcenter® Product Lifecycle Management (PLM) software. VERICUT connects directly to Teamcenter to reference files, avoiding the need to create external uncontrolled copies of models on a local or network drive. In the NX CAM project, all cutting tools used in a given project are listed. In one step, all 3D cutting tools for a job are imported at once into Tool Manager.

New Module: Additive

VERICUT's Additive module simulates both additive and traditional CNC machining capabilities applied in any order. Simulating both operations identifies potential problems that can occur when integrating additive methods. The user has access to detailed history stored with VERICUT's unique droplet technology, which saves programmers time by quickly identifying the source of errors with a single click. This Additive capability shows realistic laser cladding and material deposition, detects collisions between the machine and additive part, and finds errors, voids, and misplaced material.

VERICUT simulates the post-processed NC code that controls the CNC machine ensuring proper usage of Additive functions and laser parameters. Users can experiment with combining additive and metal removal processes to determine optimal safe hybrid manufacturing methods.

New Module: Grinder-Dressing

VERICUT enhances support for Grinding and Dressing operations. Users can now simulate dressing where a secondary tool is applied to a grinding wheel to freshen the grinding surface, or to change the grinding wheel cutting shape. VERICUT simulates the dynamic compensation needed while the dresser is used, even while the grinder is engaged with the part.

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CGTech always welcomes input. Regardless of where the feedback is received – the VERICUT User forum, CGTech technical support, or at one of the many VERICUT User Group meetings held around the world – we are listening. User input is what drives the vast majority of enhancements included in each VERICUT release.