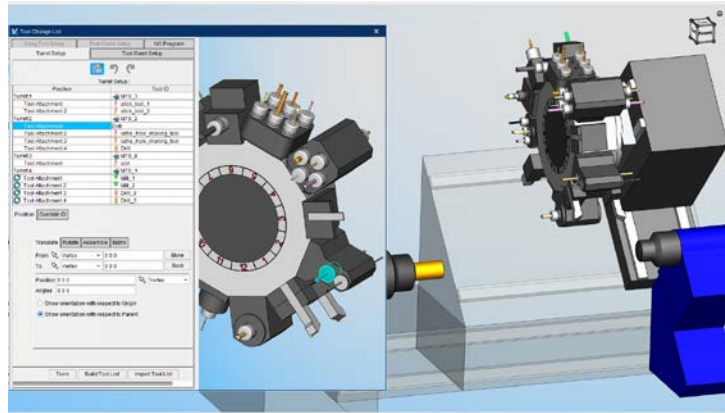


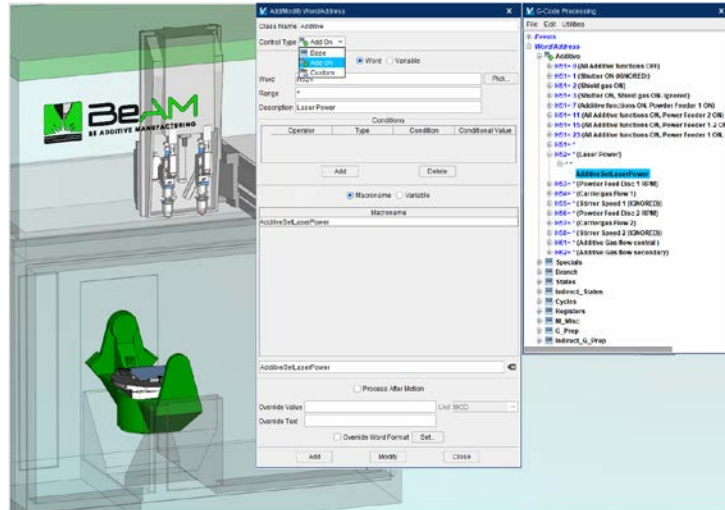
New Tool Change List Panel

Tool Change List panel is enhanced with capabilities to graphically setup tools on turrets, in tool chains, define orientations for “Flash” multi-function tools, and more. Tool change information is store in the Project file, ensuring the tools in VERICUT’s Tool Library remain “neutral” for use in other projects, and by other users.



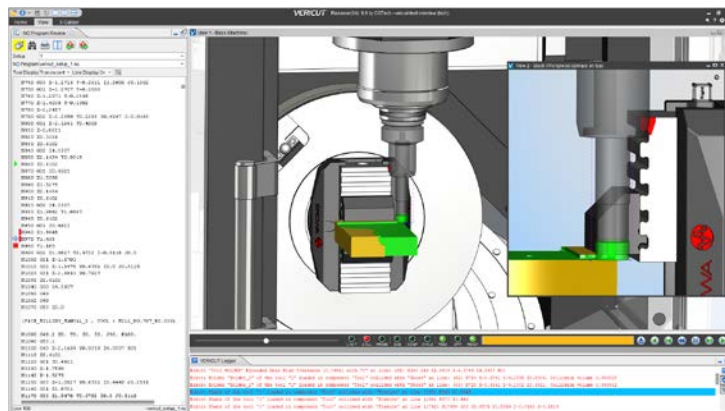
New Control File Types

Two new Control types have been introduced: Add On and Custom. These new control file types are referenced by and merged with VERICUT’s “Base” control, thereby making it faster and easier to configure builder add-on and custom NC code handling for a variety of CNC machines, and update them in the future.



Enhanced Reviewer App

VERICUT’s Reviewer application is powered by the same enhanced graphics engine featured in VERICUT Verification, and users will also immediately notice the dramatic boost in performance!



Enhancements and Changes in V9.0

Verification

Greater flexibility with views: ability to use “Picture in Picture” (small view in a large view) view layouts, multiple large views, etc.

Fit function is replaced with “Fit Selected” and will fit selected components or models, or fit all when nothing is selected.

Right-mouse menu option added to switch contents between two views.

HUD (Head Up Display) enable/disable option added in right-mouse menu.

Tools now appear red in Tool to Stock collision state, such as shank or holder interferences.

“Display Tool to Stock collisions” has been relocated from the X-Caliper tab to > Analysis tab, and made larger for improved viewing.

More flexibility in views: ability to rotate/zoom/fit/View Cube use while cutting, access more of VERICUT’s functions and manipulate windows, etc.

Section: ability to section through center axis of a hole.

: ability to section through machine components.

Section: ability to define view-specific section.

Section: dynamic sectioning that follows the Tool.

X-Caliper: “Stock/Design Distance” automatically make Design component visible when needed for measurements.

X-Caliper: ability added to measure and display dimensions in sectioned views.

AUTO-DIFF: Tool to Stock collisions (Holder and Shank collision errors) can be included with AUTO-DIFF results.

AUTO-DIFF: maintain consistent AUTO-DIFF window size between comparison methods and options, and allow window to be moved while comparing.

AUTO-DIFF: selecting a line in the AUTO-DIFF report also highlights the NC program line responsible for causing the reported issue.

NC Program branch of Project Tree can be double clicked or right-clicked to load files.

Tool Change List panel: new Turret Setup with Drag & Drop setup capability from Tool Manager. Tool position/orientation changes saved to project, instead of affecting tools defined in Tool Manager.

Tool Change List panel: support added for specifying “Flash” tool (multi-function tooling) orientation values.

VERICUT now supports native Windows File Selection and browsing capabilities.

Alpha numeric tools can now be mapped to an alternate tool using the new Tool Change List panel.

The following features have been retired from VERICUT 9 and higher releases: Curve Fit, FastMill, OptiPath “Surface Speed” optimization method, arbitrary Force Material selection (auto-selection occurs instead), Playback and AVI animation files.

The following features are not available in VERICUT 9, but are planned to be restored in a future release: Model Export “Features and Patches” method, Reviewer for I-Pad tablets.

VERICUT and Reviewer support high DPI compatibility mode for improved viewing on higher resolution screens.

Optimization

Force Charts has a new “Fill Comparison” option that identifies with fill colors where Force optimization increased (**bright green**) or decreased (**red**) the value being charted.

Force Charts keeps tools displayed even when the mouse exits the charts window.

Force-Analyze has a new option to auto-create Stock Material Records for tools that don't already have them (milling or turning).

Location of Optimization header comment records can now be located by line number in optimized output file.

Tool Manager

New OpenGL graphics greatly improves display quality of tools seen in Tool Manager.

New X-Caliper tab with nearly all of VERICUT's measurement and dimension display capabilities has been added to Tool Manager.

New 3-D “solid stock” view for Optimization Calculator showing cutter engagement.

The ability to multi-select tools has been added to Tool Manager.

New multi-line Message Logger area replaces the single-line message field in Tool Manager.

Machine Simulation

Refine Display now also works in Machine views to provide clearer views of the cut part.

Auto Refine Machine Animation performance and behavior have been greatly improved.

Improvements for robot machine building, and simulation.

G-Code Processing

ORIVECT has been enhanced to support IJK2Angles FROM/TO components.

Added support for local working plane transformation in Heidenhain iTNC530.

CAD/CAM Interfaces

Support added for MasterCAM 2020, EdgeCAM 2020, GibbsCAM 2019, Creo 6, CAMWORK 2019, and Surfcam 2019.

Installation

VERICUT supports high DPI compatibility mode for better viewing on higher resolution screens.

Reviewer

Faster load times for Review files, and dramatically faster simulation times.

Status window is updated by each NC program line processed in Reviewer.

Help Documentation

VERICUT Help is available online, enabling CGTech to provide updated Help with greater speed on a regular basis. A local copy of the Help is also installed by default.

Problems Resolved in V9.0

Verification

An issue related to when drill cycles are activated in incorrect work planes has been corrected.

Resolved an issue where the Play button Start/Stop At menu increased in width every time a new project was opened.

An issue related to AUTO-DIFF not displaying translucent options correctly has been resolved.

Translucent cut stock models remain translucent when sectioned, rotated or zoomed.

Optimization

An issue related to Force values changing for APT toolpath simulations, depending on which direction the tool is traveling has been corrected.

An issue related to Force Charts not populating ("Force charts parsing failed" error) for tools having a double-quote character (") in their names has been corrected.

Tool Manager

Imported CAD tools with inserts now set the tool's Teeth Value properly.
Standard Holemaking Tool Libraries now populate correctly.

G-Code Processing

An issue related to encrypted controls with subroutines producing errors in simulation has been corrected.

Global variables now clear on reset.

An issue related to Siemens control '\$P_UIFR' and 'CROT' Work Offset definition not working correctly has been resolved.

An error related to incorrect processing of **CycleTurnThread** has been corrected.

_STA1 has been enhanced to no longer have a limit.

Machine Simulation

An error related to Fanuc G41.2 G42.2 5-axis cutter radius compensation has been resolved.

X-Caliper

An issue related to unexpected termination when using Feature History on a threaded surface has been resolved.

Zoller Interface

Added option to select specific graphic files from ZOLLER TMS and to control the order which graphic files are read in from the Zoller Interface.

'Append to Tool Library' function is now saved to toolman.prefs file and remains modal until changed by user.

ZOLLER Interface now supports reading in STEP files to support turning tools.

ZOLLER Interface creates components with incorrect icon (holder) instead of the cutter icon.

Issue with Zoller Interface not creating driven points has been resolved.

ZOLLER Interface now reads in Technology data from the ZOLLER TMS to use in VERICUT Stock Material Records for use in Force optimization.

TDM Interface

TDM Interface creates components with incorrect icon (holder) instead of the cutter icon.

TDM Interface no longer exits when a tool assembly is read without a cutter.

Append to Tool Library function no longer creates duplicate Tool IDs.

Resolved issue with saving the TDM Interface window size incorrectly.

Issue with imported tap geometry overlaying VERICUT parametric tap is resolved.

TDM Interface now supports angled heads/live tools for use in VERICUT.

Teeth count for tools with multiple inserts display same Teeth value for all inserts.

CoroPlus Interface

Corrected issue with VERICUT exiting when reading GTC zip file.

Resolved issue where GTC note 'TRNGIBI was being defined as a milling tool but now is read in correctly as a turning tool.

Indexable end mill (GTC node MILSQI) now populates Radial Rake Angle (GAMF) field.

Resolved issue with newer formatted GTC.zip files containing multiple .p21 files that displayed components in the Tool Table.

Removed the population of Flute Length value from CoroPlus imported data.

MachiningCloud/Novo Interfaces

Added ability to read in the ID or Description from MachiningCloud/NOVO to use for Tool Manager's Tool ID

VDAF

Corrected issue with VERICUT exiting when reading GTC zip file

Resolved issue where GTC note 'TRNGIBI was being defined as a milling tool but now is read in correctly as a turning tool

New Macros in V9.0

AccelDecelLogic
ActivateAxisIfInActive
ActiveSpindleRestore
CalcCircleDataProbeRadiusOption
CirclePresentAxis
DrivenPointOffsetDirect
GageOffsetDirect2
Heid_Restore
LabelCaseSensitive
MirrorAutoReverse
MsWriteToFileHeid
Points2Normal
SetPoints
SetRelationalWorkCOordIndex
Siemens840DSubroutineProc
SiemensATRANSOption
SiemensCTRANSOption
Siemens_P_SETFRAME
TapeChaceTowsEvenOffset
TapeCacheTowsOddEven
TapeCacheTowsOddOffset
ToolCHangeHeadOrient
ToolChangeOrient
ToolChangeReport
ToolChangeReportAlpha
ToolChangeSpindleOrient