What's NEW in VERICUT 9.3.2

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March 3, 2023

Dear VERICUT® User:

Thank you for your continued investment in VERICUT, an important part of your NC programming and machining process!

VERICUT 9.3.2 features Tool Manager enhancements, new tooling interfaces, enhanced processing speed, and much more. These changes and more will be described in the following pages. Please take a moment to review what's new and improved in this release.

Maintenance and Licensing Information

NOTE: This software requires VERICUT 9.3 licensing and Sentinel 9.8.1 License Server installation.

To Get a License – use the link below to submit a License Request:
http://www.cgtech.com/vericut_support/request-license/.

Licensing is sent via email only.

VERICUT 9.3.2 runs on 64-bit Windows, and is supported on Windows 10 computers. It is not available for 32-bit Windows computers.

Software maintenance keeps you on the cutting edge - CGTech provides update software to customers with current software maintenance. Your continued maintenance ensures that you have the most advanced verification technology available. If your maintenance has expired, please contact your CGTech representative (http://www.cgtech.com/about/contact-us/).

Sincerely,

Ely Wahbeh

CGTech VERICUT Product Manager

Enhancements and Changes in V9.3.2

Machine Collision Detection Warning

In this release, users may encounter a new warning message:
*… Warning: Machine Collision Detection for Design component: "Design" is set to ignore in Setup: 1…*

This is a warning to let users know that the project is configured to ignore machine collision with the design.
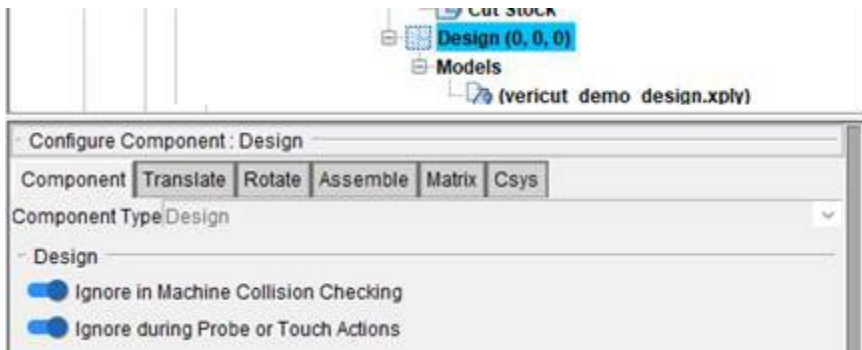
This enhancement was implemented after several requests by users back in version 9.1.2. However, the initial implementation did not include the warning. With this release, we feel it is important for users to know when collisions are ignored.

Users will get this warning message only if a defined collision pair includes a design component:
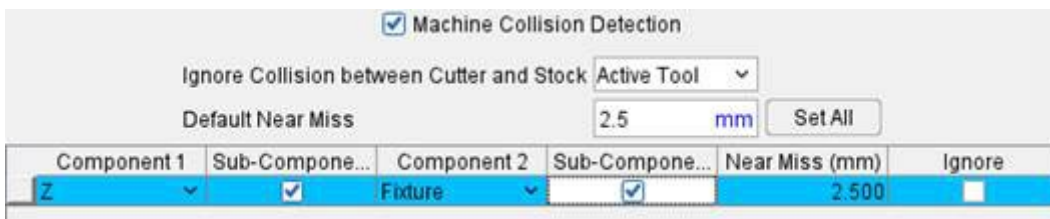
There are several ways to prevent the error message from showing up:
1. Toggle switch off (not checked) to ignore
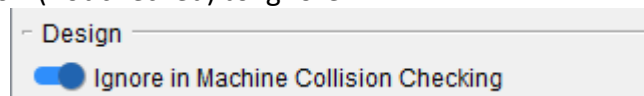
2. Remove the Design component from the machine collision table pair.
3. Disable the Design component form the Project tree (This will not affect Auto-DIFF).

This change should only affect saved projects from version 9.1.2 to 9.3.1. Any other version project should continue to work as it did in those versions.

Verification

CAS (collision avoidance system) users now can read in VCT model file into older version of VERICUT. A new utility is also available to convert older V9X VCT model files.

G-Code Processing

HeidCondPGM can switch between AlphaNumeric and Text arguments.

OptiOutputIJKWithCircleMotion macro added to output additional Opti code formats.

SiemensAXISToCompName macro added to assist in configuration of accel and decel settings.

Reports

Stock envelope options have been added to Reports.

Licensing

All interfaces now work with the commuter license.

Documentation

VERICUT Release Notes have more granular topic navigation, New Macro section links each macro to its respective documentation (HTML version of Release Notes only), and link to videos of new features has been added to the first page as well.

Problems Resolved in V9.3.2

Verification

An issue related to stock sometimes disappearing after being saved has been corrected.

An issue of slowed simulation time has been resolved.

Issues of slowed loading time have been resolved.

Issues of unexpected termination have been corrected.

An issue of AUTO-DIFF producing differing results by surface comparison method has been resolved.

An issue of false holder collision messages generating when speed slider is above 100% has been corrected.

Optimization

An issue of erroneous generations of message "Error – unable to check out feature in OptiPath" has been corrected.

Tool Manager

An issue related to Hole making tools with 2 inserts generating incorrect error messages has been resolved.

An issue of changing the Tool reference number accidentally duplicating the Tool has been corrected.

An issue of probe stylus diameter not being editable in Tool Manager has been corrected.

X-Caliper

And issue of Annotated Dimensions not being movable in Tool Manager has been resolved.

Reports

An issue related to Maximum Feedrate being output as Minimum Feedrate has been corrected.

VDAF

An issue of Assembly Manager being unable to import assemblies into VDAF has been corrected.

New Macros in V9.3.2

AutosetTableAxisFrames2
MountToolIDIndex
OptiOutputIJKWithCircleMotion
RollerMotionCrossingTol
SiemensAMIRROR
SiemensAROT
SiemensASCALE
SiemensATRANS
SiemensAXISToCompName
SiemensFrameAxisArgument
SiemensFrameLogic
SiemensG58G59
SiemensISFILEOption
SiemensMIRROR
SiemensROT
SiemensRPL
SiemensSCALE
SiemensTRANS
SiemensUpdateActBFrame
SiemensUpdateActframe
SiemensUpdateActframeReset
SiemensUpdateActframeSuppress
ToolChangeAlphaIfDiffMachineSub2

VERICUT 9.3.1 Release Notes

Enhancements and Changes in V9.3.1

Verification

Status window has new Cutting Conditions, Connectivity, and Tool group options.

Work Offsets section added to Status panel.

Auto Save feature added to AUTO-DIFF Options.

An issue of cutter compensation producing incorrect movements has been corrected.

Tool Description can now be logged as a variable.

"Eligible for Coolant Thru" options have been added to **SetDynamicVars**.

Global option added to User-Defined Variables feature.

Since 9.1.2, options to ignore collision checking and probing of the Design components have been present in the Project Tree. This enables users to change the default setting and perform collision or probing checking of the design model.

Optimization

Feedrates now have the option of not displaying decimal points if the output number is a whole number

Tool Manager

Automatic Driven Point Offset Z option added to Tool Manager.

Hide/Show Tool Components renamed to Expand/Contract Children.

Modifying stick outs automatically updates Driven Point and Gage Offset features.

A new "Reset Tool Wear limits when any active wear limit is exceeded" option has been added to tool wear limits in Stock Material Records.

Support added for Assembly Manager that includes encryption, ability to focus on selected/models, CSYS enhancements, and improved File Summary features.

G-Code Processing

New conditionals to process greater than (>), less than (<), and equal to (=) signs, such as such were added for features such as to support OMV controls

X-Caliper

C-Sink features now provides info on the Major Diameter of C-Sink holes.

Reports

"Tool Cutting Distance" option has been added to Reports.

Report tables "Alternate Background Color between Rows" option alternates row colors.

VDAF

The ability to set specific colors has been added to the Simulated Locations feature.

Simulated Locations can now export the simulated normal of IGES files.

Added Export Trace options to IGES files.

Added Option Check Box "Visible Location Columns Only" in the output file selection box to only output visible location related columns to fastener location file.

Robots

Support has been added for KRL relative motion commands.

Problems Resolved in V9.3.1

Verification

Issues with unexpected termination have been resolved.

An issue of the Logger window Color option not functioning has been corrected.

An issue where Tool drop-downs failed to load in NC Program Preview has been corrected.

An issue of toolpaths disappearing in NC Program Review has been corrected.

An issue of cutting conditions failing to record has been resolved.

Issues of reading tool library files causing slower than expected loading time have been resolved.

An issue of empty fields displaying in the Status window has been corrected.

An issue of Chip Thickness not updating has been corrected.

An issue of deleted detached stock reappearing on zoom in has been corrected.

An issue of holder components changing position unexpectedly has been corrected.

An issue of cutter compensation not working with Multi Tool Stations has been corrected.

The Tool Component Radius Center icon has been made more visible in Dark Mode.

An issue with Near Over Travel Limit warning not generating properly has been corrected.

A false report of gouging has been corrected.

An issue of cut stock database not generating properly has been resolved.

An issue of material removal not working properly after the model was added to an existing cut stock has been fixed.

An issue of tools passing through stock without generating a warning has been corrected.

Optimization

An issue of "Prompt While Cutting" option producing incorrect Stock Material Records has been resolved.

An issue of Force Graphs not graphing certain tools has been corrected.

Tool Manager

Copy/pasted tool components no longer share a linked Driven Point.

An issue of Revolve Profile not working has been corrected.

Issues of tools not populating correctly and not being editable on import has been resolved.

Issues of Tool Search slowdown have been resolved.

An issue of Probe tool data not saving properly has been corrected.

An issue of stock material incorrectly affecting tool diameter has been resolved.

An issue where Stock Material Records could not be edited has been corrected.

G-Code Processing

An issue of End of Block Processing variables missing has been corrected.

An issue of G-Code Reports missing Setup sections has been corrected.

X-Caliper

An issue of Feature/History displaying incorrect information has been corrected.

An issue of Air Distance getting incorrect measurements has been corrected.

Reports

An issue of data needlessly duplicating in reports has been corrected.

An issue of Volume Removal Rate displaying incorrectly on Reports has been corrected.

An issue of View Capture table only displaying the most recent capture instead of all captures has been corrected.

An issue of save file prompt sometimes failing to generate when closing Reports has been corrected.

An issue of user tags not outputting properly has been corrected.

Reviewer

An issue of unexpected termination has been corrected.

Robots

Issues of Robots positioning incorrectly have been resolved.

Documentation

SetComponentVisibilityState macro updated to include Text option.

New Macros in V9.3.1

AutoCalcCircleEndpoints
CircleMaxAdjustmentRatio
CompositeValueOption
IJKVectorModalOnOff
RelationalOffsetsLocationUpdate
ReferencePointDirect
RotaryDirShortestDist5
RotaryDirShortestDist6
SiemensShadowCheck
SubEofErrorOfOff
SubroutineSequenceEndReturn

VERICUT 9.3 Release Highlights

Tool Manager

Tool Manager in 9.3 includes a Tool Performance Database (TPD) that programmers can refer to in order to learn starting values for spindle speed. They can also learn feed rates to use with cutters in a wide range of stock materials. TPD offers data for solid round tools, indexable mill cutters, and turning inserts.

This data works with Machining Optimization Data (MOD) which displays a table of spindle speeds and feed rates to help programmers focus on appropriate cutting speeds and chip thickness values. These values are based on the type of cutter being used, stock workpiece material and the cutting operation method – great for learning how to machine unfamiliar materials. Recommendations for starting feed rates are highlighted in the middle of the table, with corresponding spindle speed and chip thickness values seen in the table header and left-side columns.

Tool Manager : cam_okuma_mill_aerospace-bracket_inch_003-titanium-6al4v-training.tls

Tools   X-Caliper   Report   View   Import   Utilities

Cutting Limits | Optimization

- 701 (ROUGHING-1.000-DC_.09-RE_6-ZEPF)
  - Holder
    - Cutter
      - SM=Titanium+6Al4v+HRC37, M=Default, TO=
- 702 (FINISHING-Sandvik 2F340-2540-228-SC)
- 703 (ROUGHING-Sandvik 2F340-1905-228-SC 1745)
- 704 (FINISHING-Sandvik 2F340-1905-228-SC 1745)
- 705 (FINISHING-Sandvik A316-25BM440-100CG 1030)
- 706 (Default New Tool)

Stock Material : Titanium+6Al4v+HRC37
Machine : Default
Machine Max Spindle Speed : 18000 RPM
Tool/Operation Description : ROUGHING-1.000-DC_.09-RE_6-ZEPF
Operation Method : Rough

Cutter Type : Solid Round Tool (SRT)
Units : Inch
Tool Diameter : 1 in
Teeth : 6

Cutting Limits

Cutting Limits Source: VERICUT Tool Data

		Min		Mid		Max		Default
Spindle Speed	(n)	412	RPM	687	RPM	962	RPM	☑ Default
Feedrate	(vf)	7.4	in/min	18.15	in/min	28.9	in/min	☑ Default
Feedrate Per Rev	(fn)	0.018	in/rev	0.024	in/rev	0.03	in/rev	☑ Default
Chip Thickness	(hex)	0.003	in	0.004	in	0.005	in	☑ Default
Surface Speed	(vc)	108	ft/min	180	ft/min	252	ft/min	☑ Default
Volume Removal Rate	(Q)	0	in³/min	30.3	in³/min	60.6	in³/min	☑ Default
Axial Depth of Cut	(ap)					2.1	in	☑ Default
Radial Width of Cut	(ae)					1	in	☑ Default
Ramp Angle						45	deg	☑ Default

Tool Wear

Machining Optimization Data

1 (Dc)   6 (ZEFP/Teeth)   Carbide   Straight   Rough   Titanium+6Al4v+HR...

Chip Thickness(Fz)

| Surface Speed (vc)	Spindle Speed (n)	0.0016	0.0019	0.0022	0.0025	0.0028	0.0031	0.0034	0.0037	0.004	0.0043	0.0046	0.0049	0.0052	0.0055	0.0058	0.0061
340	1298	12	14	17	19	21	24	26	28	31	33	35	38	40	42	45	47
320	1222	11	13	16	18	20	22	24	27	29	31	33	35	38	40	42	44
300	1146	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41
280	1069	10	12	14	16	17	19	21	23	25	27	29	31	33	35	37	39
260	993	9	11	13	14	16	18	20	22	23	25	27	29	30	32	34	36
240	916	8	10	12	13	15	17	18	20	22	23	25	26	28	30	31	33
220	840	8	9	11	12	14	15	17	18	20	21	23	24	26	27	29	30
200	764	7	8	10	11	12	14	15	16	18	19	21	22	23	25	26	27
180	**687**	6	7	9	10	11	12	14	15	**16**	17	18	20	21	22	23	25
160	611	5	6	8	9	10	11	12	13	14	15	16	17	19	20	21	22
140	534	5	6	7	8	8	9	10	11	12	13	14	15	16	17	18	19
120	458	4	5	6	6	7	8	9	10	11	11	12	13	14	15	15	16
100	382	3	4	5	5	6	7	7	8	9	9	10	11	11	12	13	13
80	305	2	3	4	4	5	5	6	6	7	7	8	8	9	10	10	11
60	229	2	2	3	3	3	4	4	5	5	5	6	6	7	7	7	8
40	152	1	1	2	2	2	2	3	3	3	3	4	4	4	5	5	5

Inch   Adjust Fz 0.0003   Adjust Vc 20

Tool Display

Coordinate Systems

Assembly Manager

The Assembly Manager has been given several new abilities. Build and manage component assemblies using a project tree-like structure, verify assemblies via Section views and X-Caliper measurements, and filter based on assembly description and Undo/Redo of changes made to component assemblies.

Use the Jog function to test motion directions, axes of movement, and kinematics for each assembly. There are many more enhancements such as a drag & drop assemblies to VERICUT Project Tree, Configure panel updates to describe component attributes, Travel Limits, etc. and Axes display options.
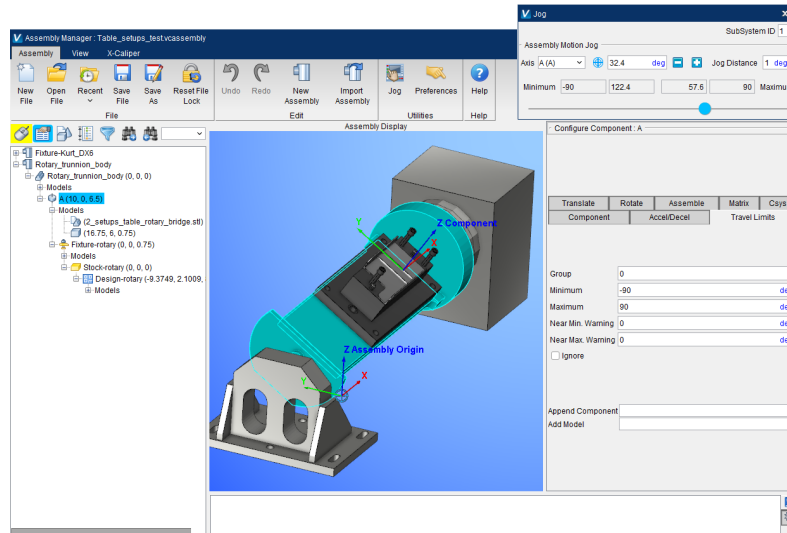
TDM Global Line Interface

The **TDM Global Line Interface** enables VERICUT users to connect with TDM's new Global Line web-based tool management system. Similar to the TDM "classic" interface, the TDM Global Line Interface reads TDM's tool lists, and creates 3D tool assemblies with cutting "Technology" data for use in VERICUT simulation and optimization.
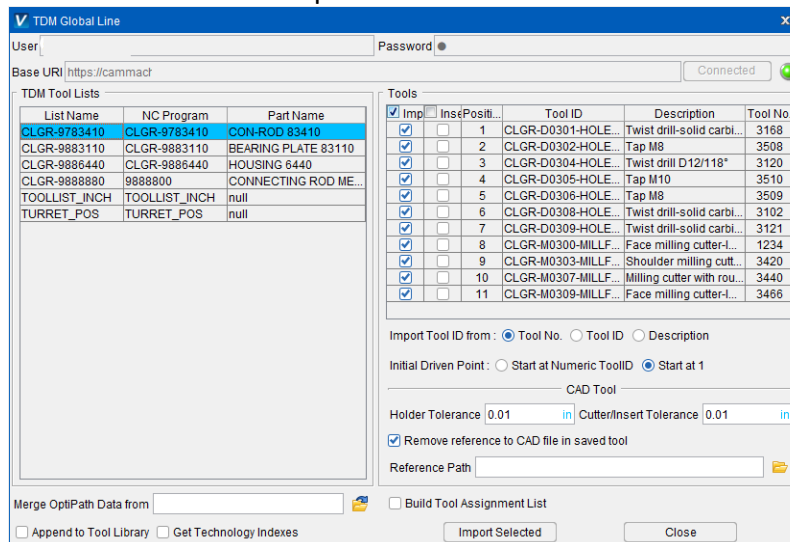
Status and HUD Improvements

The Status window and Head Up Display (HUD) have been enhanced so users can streamline the machining and simulation information presented in these features.

Locations tables offer more control over columns and registers that are visible, and "Field Visibility Edit Mode" enables concurrent editing Status and HUD configurations.

Users can lock and unlock the visibility of status groups to retain a familiar layout for future VERICUT sessions.
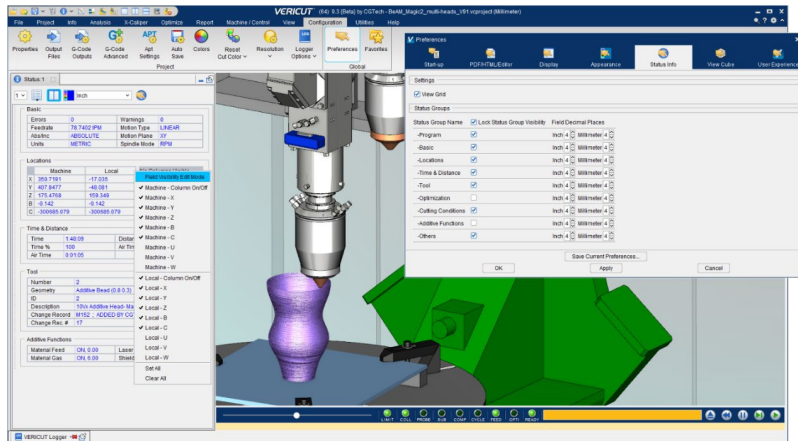
CNC Machine Connectivity

A new **CNC Machine Connect** module enables VERICUT users to pair VERICUT to real CNC machines. This is used to achieve a more accurate Digital Twin of the real asset on the shop floor and verify that key aspects of the machine setup match the setup information that was verified and stored in a VERICUT project.

If mismatches are identified, CNC Machine Connect updates VERICUT with values from the real CNC machine and can rerun the simulation to verify the updated simulation session.
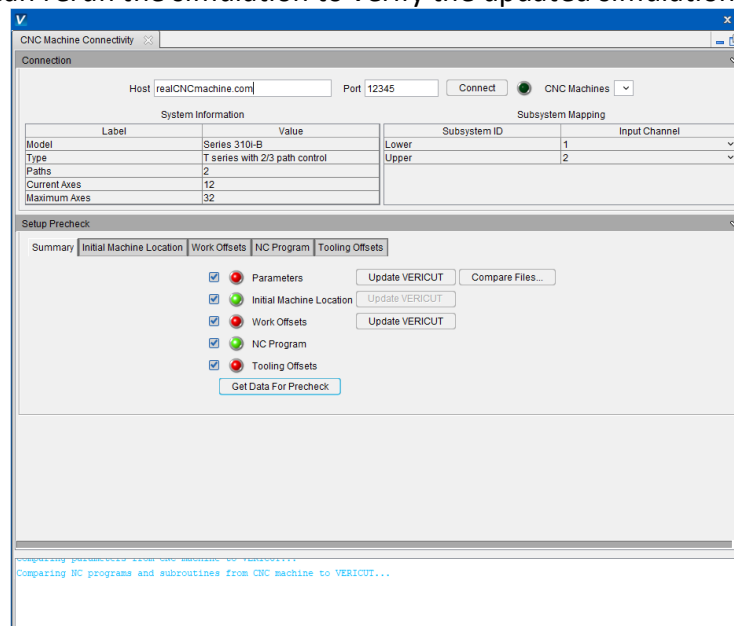
Dark Mode

VERICUT now support a Dark Mode color theme (Configuration tab > Preferences) for users that prefer darker colors for easing eye strain and provide more striking views of the simulation.
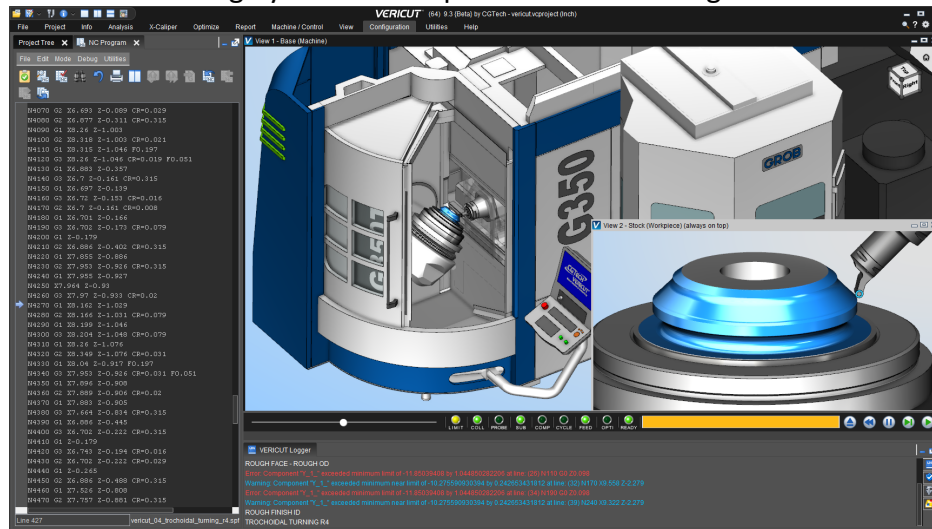

Force Optimization Improvements

Achieve better machined part quality, as well as longer tool and spindle life by limiting tool deflection through Force optimization.

- Deflection calculations in 9.3 are expanded to account for the entire rotating tool assembly, including holders, indexable mills and CAD model assemblies used as tools.
- Users can add maximum Volume Removal Rate (VRR) as a limit, along with any other optimization limit.
- Improved analysis and optimization for solid round tools and complex cutters.
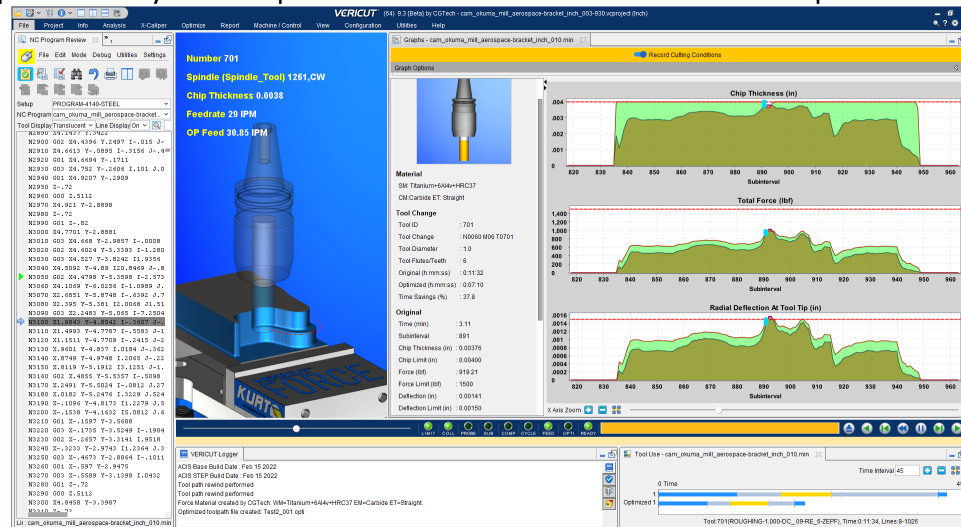
Quick action icons

Several quick action icons have been added to VERICUT's menu ribbons that can be used to quickly repeat operations such as AUTO-DIFF compare, analyze or optimize, export cut stock models, or reset simulation colors- without having to open corresponding configuration windows. When selected, the quick actions simply repeats the operation as configured.
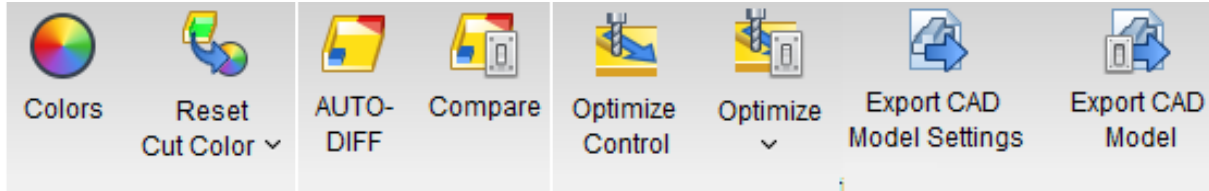

Model selection/focus features

A new right mouse button menu option "Focus on Selected Models" has been added to enable users to temporarily hide extraneous models from the graphics display, to more easily access the selected model. The hidden models are quickly and easily restored via using the [Esc] key, or the right mouse button menu option "Remove Focus on Models". Another modeling convenience added is Right+Left mouse button then drag to create a region box that graphically selects all the model(s) within the region.
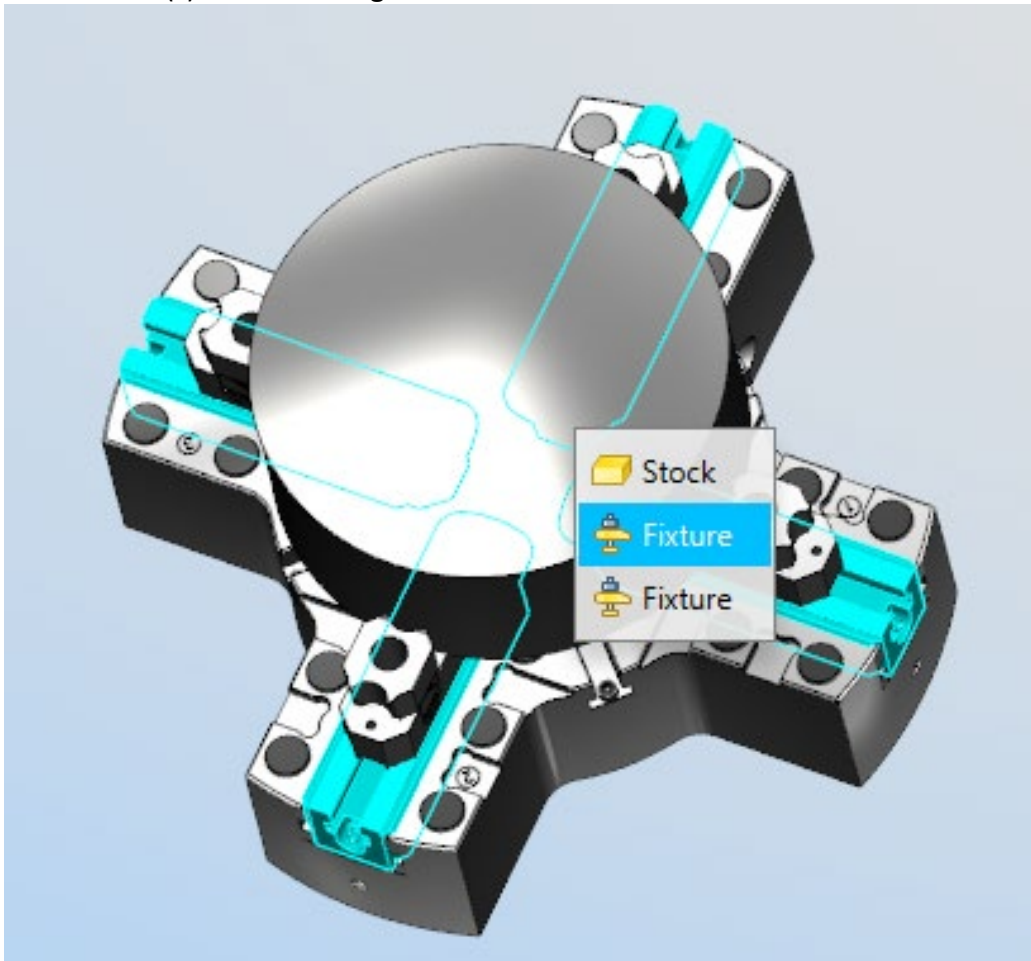
Miscellaneous Major Enhancements

- AutoSave: export Cut Stock file formats other than VCT.
- Tab removal: improved tab severance.
- Major enhancement to VERICUT core in term of speed and accuracy.
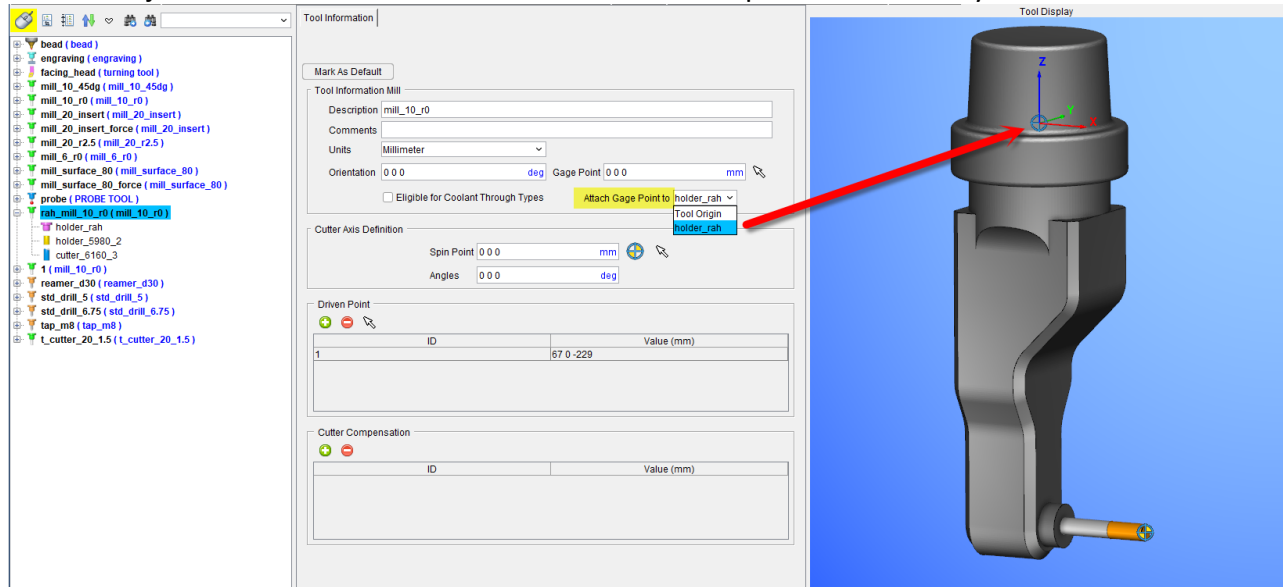
Enhancements and Changes in V9.3

Verification

Speed improvement on refine display for turned parts

AutoSave: export Cut Stock file formats other than VCT.

Expanded axes limit per Subsystem from 12 to 18 axes, including (3) additional linear motion axes: U2/V2/W2, and (3) rotaries: A3/B3/C3.

Multi-select menu can be used to focus on a model by removing other visual elements in the graphic display. The original display can be restored via the [Esc] key.

RMB menu option added: "Focus on Selected Models" (restore via RMB option > "Remove Focus on Models" or [Esc] key).

RMB+LMB drag region to select model(s).

Reintroduced Slice Options tab to Export CAD Model window.

Batch Tool now has a pause function and an operation progress display bar.

Tab material removal now has "Remove Along Tool Motion Plane" and "Remove Along Tool Motion Plane" options.

An issue of parts disappearing when zooming in or out on a view has been resolved.

Cutter model minimum cutter height can be edited. When updated, the following message displays: "Minimum Cutter Height value applied, cutter shape has been updated".

Drill tools now display when material is removed when viewed in Profile view.

Optimization

Force Deflection calculation for entire spun tool assemblies, indexable insert mills/drills.

Deflection calculations for Holder-less solid cutters.

Volume Removal Limit options have been added to Force.

Implemented background color on sync wait state in Optimization Calculator graph.

Enabled manual entering of Target Chip Thickness for Force.

X-Caliper

X-Caliper can now measure the circumference of a circle.

Added "Copy Dimension Text" feature to X-Caliper dimension left mouse button menu.

Tool Manager

Machining Data Knowledgebase: new machining metrics, display in Graphs & Tooltips.

Added the ability to create coordinate systems on boring tools.

"Use as Shank" option can now be used with polisher tools.

Cutters with concave non cutting profile are enabled for Constant Chip Thickness.

Milling tool deflection without a defined holder is calculated based on the tool assumed to be what extends out of the holder.

"Attach Gage Point to" feature added. This attaches the gage point to a Holder component so that if the holder is moved in the tool assembly, the gage point stays connected in the proper relationship to the holder. The "Tool Origin" option can be used to define a static gage point location, as Tool Manager does by default in pre-V93 releases.

Attach Driven Point to enhanced to attach the driven point to a Cutter component so that if the cutter is moved in the tool assembly, the driven point stays connected in the proper relationship to the cutter. The "Tool Origin" option can be used to define a static driven point location, as Tool Manager does by default in pre-V93 releases.

Keep Shank with Cutter option added to ensure a Holder defined as a shank (Holder-shank) remains attached to the cutter, even when either object is moved. Stated another way, Tool Manager regards the Cutter+Shank as a single object when moved.

Polisher tools have been augmented to automatically include both the Polisher Limits and Polisher component for the following polisher tool types:
- Flat Bottom End Polisher
- Ball Nose End Polisher
- Taper Ball Nose End Polisher
- Bull Nose End Polisher
- Conical End Polisher
- Spherical End Polisher
- 7 Parameter
- Revolved Profile Polisher

G-Code Processing

New macro **HeidSysRead270ApplyRotationPlane** added.

The predefined KRL math functions ABS(), SQRT(), SIN(), COS(), TAN(), ACOS(), and ATAN2() are now supported in VERICUT.

An option to output an error message has been added to **SiemensWorkCoord** macro.

SetProjectInfoVars2 macro created to store additional project info.

CalcCircleData2 function added to parse input arguments CalcCircleDate function couldn't.

SiemensTCOFR enhanced to support 3rd argument to specify spindle component.

NCMacroBlockCallOption macro created to supplement **CallNCMacroBlock**.

FadalCondRWord enhanced for more accurate parsing of Fadal NC code.

VariableArgumentConcat macro added to work with Heidenhain variable logic.

Reports

Added right mouse button menu option to delete horizontal rules from a table.

Annotated Images stores Section view values.

CAD/CAM, Tooling, and Model Interfaces

CATIA
- Support added for 3DEXPERIENCE 2022.

CoroPlus Interface
- Added option to import cutting data with cutting tools, including indexable mills, drills, turning, grooving and Prime turning inserts, and some solid round tools.

EdgeCAM
- Support added for EdgeCAM 2022.

MasterCAM
- Added ability to save MCAMV window size in preferences.
- Support added for Mastercam 2023.

PROEV
- PROEV can now add multiple subroutines at a time.
- Support for Creo 9 has been added.

TDM Interface
- New TDM Global Line Interface

Robots

VERICUT can now display KRL functions and procedures in the Subroutines window, include those defined in the KRL library.

NC Program window can now display colors for KRL programs.

VDAF

Undo and Redo buttons have been added to VDAF and VDAF Programming.

Problems Resolved in V9.3

Verification

Issues related to unexpected VERICUT termination have been resolved.

An issue related to "Mode" and "Debug" tags disappearing from VCRes.local files in certain translations has been corrected.

An issue where Tool Change By List displayed incorrect tool positions has been resolved.

An issue of Turret Setup window not displaying correct orientations has been resolved.

An issue where Set Dynamic Var CurToolIndex did not work with certain cutter components has been corrected.

An issue of shank tools not being visible on alternate tools has been corrected.

An issue of file export sometimes corrupting certain configuration files has been corrected.

An issue with Heid_PolarMotionCTP and cutter compensation has been resolved.

An issue of cut stock disappearing in certain frame settings has been corrected.

An issue of endless processing has been corrected.

An issue of Commuter Tool not working as intended has been corrected.

An issue of not being able to report errors when importing failed has been corrected.

An issue related to depth of cut limit check generating false values has been corrected.

An issue of 9.1 projects not running in 9.3 has been corrected.

An issue of incorrect Fast Feed errors generating has been corrected.

An issue of excessive processing time where the progress bar did not update has been fixed.

An issue of collision detection not working properly has been corrected.

An issue of AUTO-DIFF failing to display excesses has been corrected.

Optimization

An issue of optimization generating false feedrates has been corrected.

An issue of Force Analyze producing strange results has been corrected.

An issue of cutting resolution changing Force results has been corrected.

An issue of incorrect chip load displaying has been corrected.

An issue of Force not recognizing ramping motion has been corrected.

An issue of VERICUT not recognizing certain created Force material records has been corrected.

An issue of right-clicking on graph not displaying the tool used at click point has been corrected.

An error related to Force not properly cleaning up feedrates has been corrected.

An issue of Force .csv files partially missing data has been corrected.

An issue of Force Analyze producing radial width errors has been corrected.

An issue of Force Learn Mode failing to convert values between projects has been corrected.

Machine Simulation

An issue of collisions not displaying when Tap Tool is active has been corrected.

Issues of stock displaying incorrectly have been resolved.

An issue related to G-Code Offsets changing at random has been corrected.

An issue of false alerts generating about cutting depth on turning tools has been corrected.

An issue of cut stock turning red but not generating removal error messages has been corrected.

An issue related to Gage Offset not working with certain tools has been corrected.

An issue of rapid motion causing collisions has been corrected.

An issue of **RestoreFeedRate** macro ignoring the default federate has been corrected.

An issue of the center of rotation not matching the selected area has been corrected.

Tool Manager

An issue of Step Tool not importing correctly has been resolved.

An issue of incorrect error messages appearing when adding new holder models has been corrected.

An issue of tools generating incorrectly has been corrected.

Zoller Interface Driven Point ID no longer defaults to 1 in preference settings.

An issue related to CoroPlus's import feature has been corrected.

An issue of TDM interface failing to import Tap tools correctly has been resolved.

Reports

An issue where multi plan Setup Plan didn't appear correctly in Reports has been resolved.

An issue of Create Report not updating to new file parameters has been corrected.

An issue of Reports repeating tools has been corrected.

An issue of Report total tool time changing when using the "group by tool" feature has been corrected.

CAD/CAM, Tooling, and Model Interfaces

CATIA
- CATV.CATScript added back to CATV5 installation folder.
- An issue of 3DX not parsing regional settings properly has been corrected.

Esprit
- An issue of Esprit interface giving error on number of attached items has been corrected.
- An issue of Esprit imported tools not mounting correctly on turret positions has been corrected.

GibbsCAM
- An issue of corner radius affecting tool holder position has been corrected.
- Replaced missing GibbsCAM installer file.

MasterCAM
- An issue of MCAMV not exporting lens form cutters properly has been corrected.

NXV
- An issue of NXV failing to manage multiple driven points at once has been resolved.

PROEV
- Replaced multiple missing installation files for Creo.
- An issue with PROEV not exporting files has been resolved.
- An issue of PROEV exporting holders when it shouldn't has been corrected.
- An issue of PROEV not creating stock as directed has been resolved.
- An issue of PROEV not exporting files correctly has been resolved.

Robots

In issue of KRL debug files not reading correctly has been resolved.

Reviewer

An issue with pinch to zoom feature not working on Surface tablets has been corrected.

An issue where Surface tablet Review programs sometimes froze has been corrected.

An issue of stock disappearing when unclamped has been corrected.

An issue of Reviewer experiencing unexpected termination has been corrected.

New Macros in V9.3

A3AxisIncreMotion
A3AxisMachineMotion
A3AxisMachineRefMotion
A3AxisMotion
B3AxisIncreMotion
B3AxisMachineMotion
B3AxisMachineRefMotion
B3AxisMotion
C3AxisIncreMotion
C3AxisMachineMotion
C3AxisMachineRefMotion
C3AxisMotion
ChannelChangeSubsystemIDScan
CheckTapeLimitsOnOff
CutterCompConnectTypeSuspend
HeidSysRead270ApplyRotationalPlane
HeidSysVar2
MirrorA3
MirrorA3Cancel
MirrorA3Value
MirrorB3
MirrorB3Cancel
MirrorB3Value
MirrorC3
MirrorC3Cancel
MirrorC3Value
MountAssemblyName
MountAssemblyToCompName
NCMacroBlockCallOption

OkumaMultiSubOnOff
OkumaSubroutine
RefreshWorkShiftOffsets
RestoreFeedRate
SetProjectInfoVars2
SetRobotRotisCompPos
Siemens840DSyncInitChannel2
Siemens840DSyncStartSubChannel2
Siemens840DSyncWaitEndChannel2
Siemens840DSyncWaitMarker2
SiemensAXISFallbackOnOff
SiemensAXISRegisterAvailable
SiemensAXISToRegisterIndex
SiemensCompToVcAxisMapping3
SiemensConcatFrames2
SiemensGEOAXLogic
SiemensGetFrameMatrix
SiemensORISOL2FrameOption
SiemensXToolOffsetCompName
SiemensYToolOffsetCompName
SiemensZToolOffsetCompName
U2AxisIncremotion
U2AxisMachineMotion
U2AxisMachineRefMotion
U2AxisMotion
U2AxisMotionLimit
UnMountAssemblyComp
V2AxisIncreMotion
V2AxisMachineMotion
V2AxisMachineRefMotion
V2AxisMotion
V2AxisMotionLimit
W2AxisIncreMotion
W2AxisMachineMotion
W2AxisMachineRefMotion
W2AxisMotion
W2AxisMotionLimit
WorkCoordA3Value
WorkCoordB3Value
WorkCoordC3Value
WorkCoordU2Value
WorkCoordV2Value
WorkCoordW2Value