VERICUT® CNC Machine Simulation Software

Seamless Integration with

ESPRIT

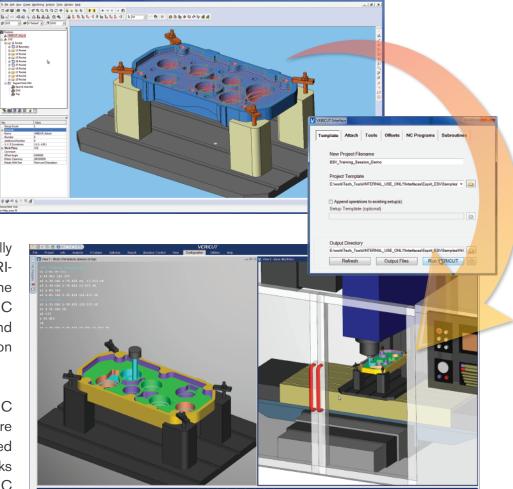
The ESPRIT-to-VERICUT Interface (ESV) integrates the two programs to help you create the most accurate and efficient NC programs possible!

The ESPRIT-to-VERICUT interface (ESV) makes verifying and optimizing NC programs and simulating CNC machines a much easier and more efficient process. All stock, fixture, and

design geometry is automatically transferred from ESPRIT to VERI-CUT in the correct orientation. The interface also outputs the NC program, tooling, machine and control data and other simulation parameters to VERICUT.

Both the kinematics and CNC control of each machine tool are accurately modeled and defined inside VERICUT, ensuring the checks mirror the exact behavior of the CNC machine. Checking the actual code

to be used by the machine and control system can eliminate both the need for on-machine CNC program prove-outs, and the possibility of a costly collision.





Why ESPRIT + VERICUT?

Provides access for ESPRIT manufacturing data in VERICUT Automates setups on VERICUT digital twin machines Verifies same G-code programs that run on CNC machines

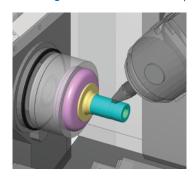


Go ahead...

CRASH YOUR MACHINE

...as long as it's in VERICUT

NC Program Verification, Inspection & Analysis, CAD Export_____



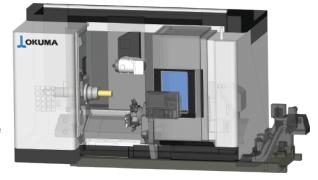
VERICUT simulates milling, drilling, turning, multi-tasking mill/turn, and EDM operations. Errors that could ruin the part, damage the fixture, or break the cutting tool are easily identified. VERICUT supports G-codes and native CAM files and includes analysis tools to measure and compare the cut part with the design model. You can model any cutter, fixture, or holder shape. During simulation you create in-process inspection instructions and export a CAD model of the "as-machined" part.

- Eliminate program errors
- Reduce scrap and rework
- Train without using a machine
- Improve documentation and presentations
- Consistently produce perfect first-time programs without manual prove-outs

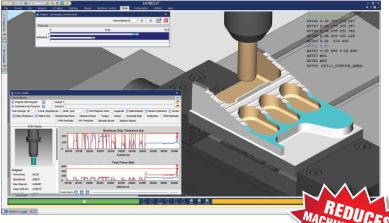
CNC Machine Simulation

A single crash can be extremely expensive, ruin the machine, and delay the entire production schedule! VERICUT enables you to simulate your CNC machines so you can detect collisions between portions of the machine, the part, fixtures and holders, etc. before any actual cutting occurs. And, because the simulation is driven by the same logic as the machine's control, it behaves exactly like the physical machine and is the most accurate collision-checking available.

- Eliminate crashes & close calls
- · Check machine capabilities
- Improve process efficiency
- Speed up machine implementation time
- Enhance documentation
- · Increase safety and improve training



Feed Rate Optimization.



VERICUT is equipped with NC program optimization capabilities. Based on the cutting tool geometry, part material, and programmed cutting conditions, VERICUT automatically determines the optimum safe feed rate for each cut. The VERICUT optimized NC program will greatly improve cutter performance resulting in significant cycle time savings, reduced tool wear, improved tool life, and better finished parts.

• Improve cutting tool performance

MACHINING TIME BY

Image: 150 18

- Prevention of undesirable cutting conditions
- Eliminate manual feed adjustments at the machine
- Utilize cutting tool technologies to their full potential
- Maximized and consistent chip thickness throughout the machining process

Maximum Chip Thickness (in)

.004

.002

0 20100 20150 20200 20250 20300 20350 20400 20450 20500 20550 20600

Subinterval

Total Force (lbf)

0 20100 20150 20200 20250 20300 20350 20400 20450 20500 20550 20600

Subinterval

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