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# Composite Applications

 Vericut

[vericut.com](http://vericut.com)



# Vericut Composite Applications

Vericut's pair of composite manufacturing software modules help manufacturers minimize material waste, and accurately simulate and verify the surface and fibers of a composite component.

## Why Choose Vericut Composites Applications?

### Eliminate Time-Consuming Manual Processes

Vericut Composite Programming (VCP) digitally recreates the surface layering of fibers across the component, a task traditionally done by hand, which can be time-consuming and labor-intensive.

### Achieve Hyper-Accurate Layers Every Time

Vericut Composite Simulation (VCS) can simulate up to 500 individual composite fiber layers, ensuring each layer is perfectly positioned for optimal cutting performance.

### Minimize the Risk of Collisions

VCS takes the pain out of your process by alerting you if your composite piece, tool path, or cutting geometry gets too close to the machine door windows - minimizing the chance of a costly collision or machine crash.





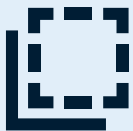
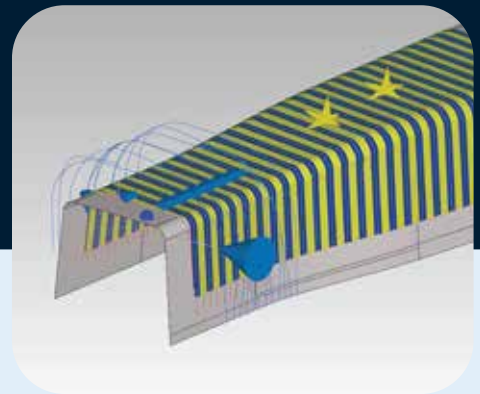
There are occasions that we send our people home, turn the lights out and run our finished programs for the first time with nobody there. That's how confident we are in Vericut.



**Jerry Anthony**  
President - UCAR Composites, Inc.



## Vericut Composites Programming (VCP)



- Give composite part designers complete control over their part
- Allow designers to create and experiment with various AFP path options
- Measure and evaluate the effects of AFP path trajectory, material steering, surface curvature, course convergence and other process constraints
- Program probing, knife trimming paths, laser projection, and Automated Tape Laying (ATL) machines
- Create NC code for any machine vendor, including Electroimpact, MTorres, Accudyne, AFPT, and others



## Create CAD surfaces and ply boundary information with exceptional detail

VCP reads ply information, surface models, and geometries from a huge selection of external CAD programs, including CATIA STEP, Siemens NX, SAT, Pro E, Creo, Solid-Works and ACIS.

VCP can add material to fill the plies based on user-defined manufacturing standards and requirements, and then link the layup paths into specific sequences, generating NC programs for the automated layup machine.

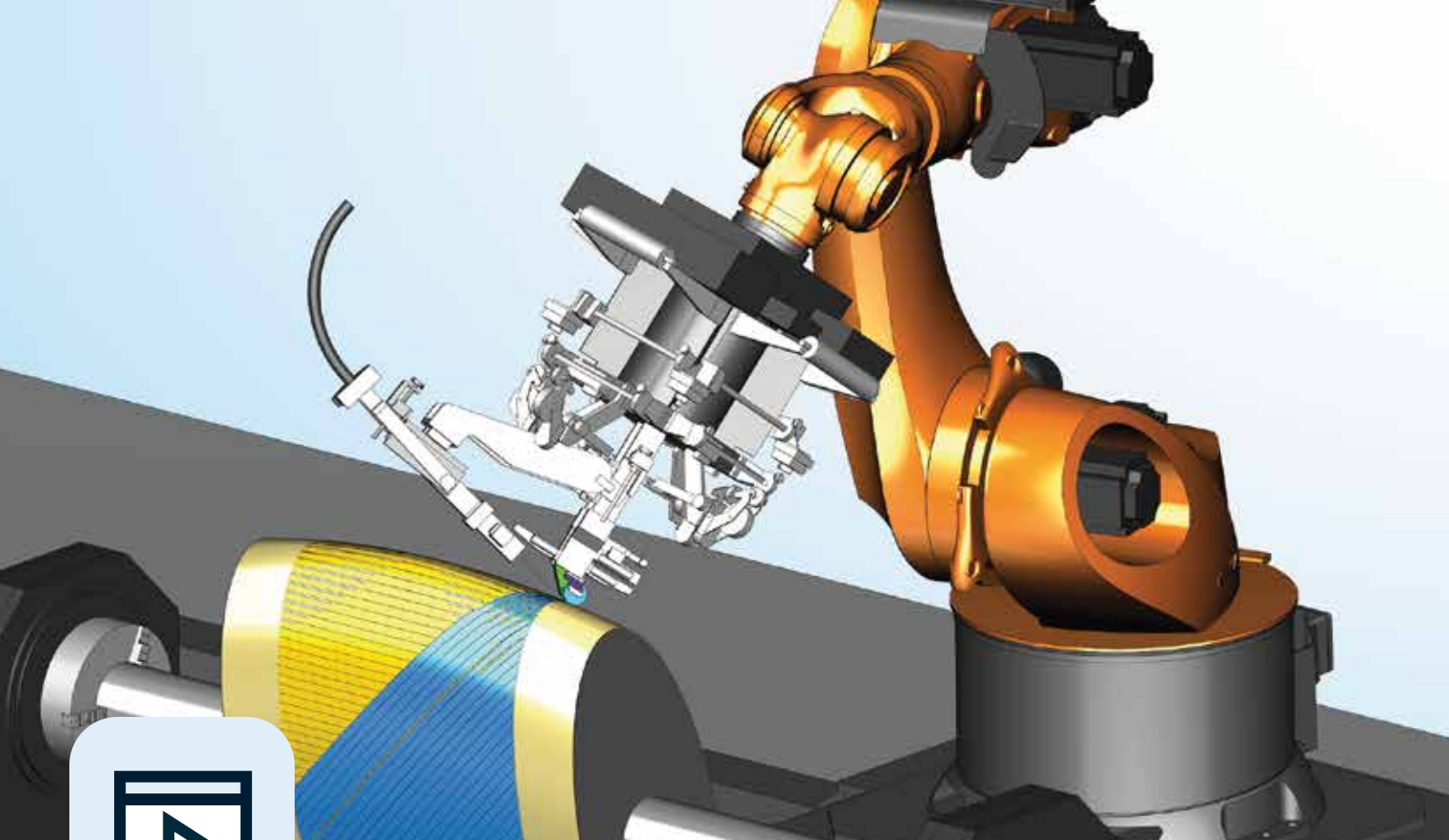
## Design Custom Geometries for Your Composites

If you're not using external ply software, VCP allows you to create your own unique geometries. Customize axis systems, points, lines, and curves, and add thickness to your form for subsequent sequences.

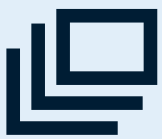
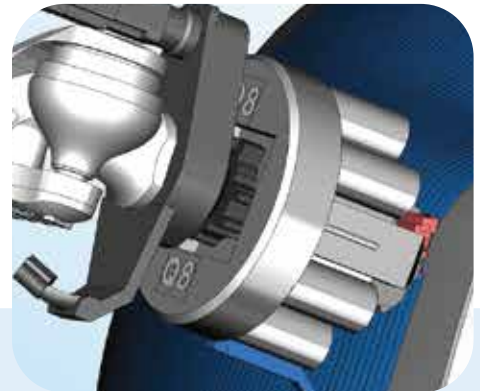
## Generate Tailored Layup Paths

Every composite application is unique, and VCP enables you to generate layup paths that are specific to your needs. Whether it's rosette projection at specified angles, parallel to the guiding curve, or following the natural structure of the form, VCP has you covered.





## Vericut Composites Simulation (VCS)



- Validate the actual NC program that will run on the layup equipment
- Identify issues, such as: collisions, NC syntax errors, and material placement quality
- Use VERICUT virtual machine and control emulation to simulate the layup machinery
- Measure and inspect the simulated part to ensure the NC program follows manufacturing standards and requirements
- Export reports of machine warnings and errors generated during simulation

## Simulate automated composites manufacturing work environments in hyper-detail

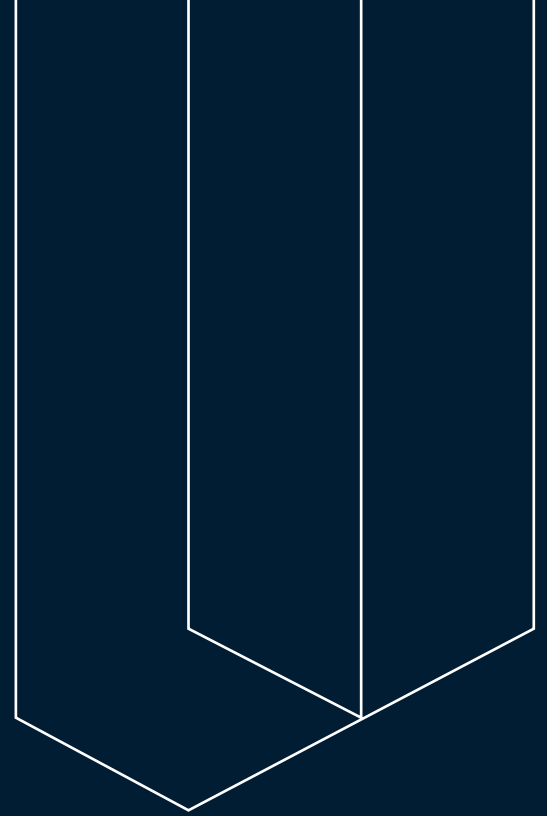
VCS allows manufacturers to read, validate, and accurately simulate NC programs that will be used on layup equipment. It can simulate up to 500 individual composite fiber layers, ensuring precise outcomes.

## Verify Rollers and Paths for Precise Cutting

VCS helps manufacturers verify the compaction roller process, form conformance, and direction, analyzing orientation, path accuracy, layering sequences, and compaction axis travel.

## Measure and Inspect Added Material

When additional material needs to be added, VCS precisely measures and inspects it, ensuring the newly layered composite part is free from defects such as overlaps, gaps, or other issues that could lead to faulty runs or machine crashes.





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System requirements are subject to change.

See the Vericut website for the most up-to-date product information and system requirements.

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