

GRINDER-DRESSING

Reshape the grinding tool during simulation

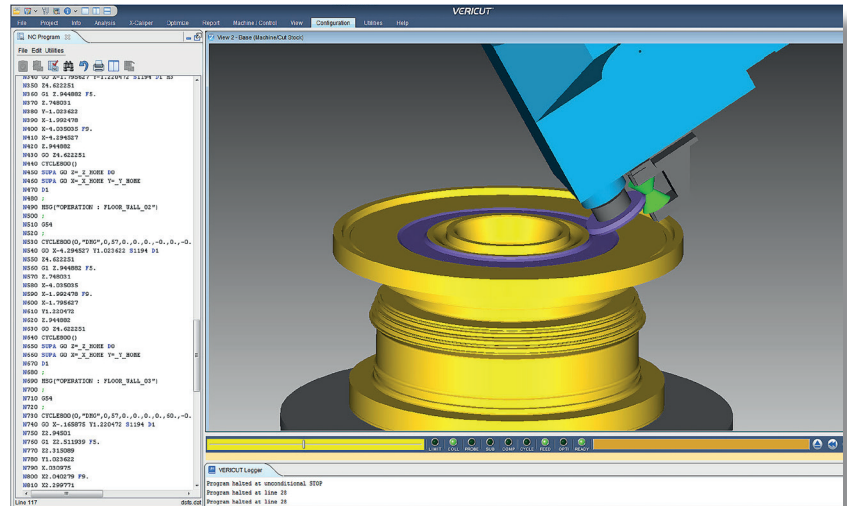
As the grinding wheel removes material on the part, it wears out. A dresser unit is periodically used to ensure the roundness of the grinding wheel and that the cutting shape is maintained. With the proper Dresser device it is possible to change the diameter of the grinding wheel or to create a new cross-section profile on the wheel. With the Grinder-Dressing module, this process can be reproduced in VERICUT.

The Grinder-Dressing module offers superior G-Code simulation for all manufacturing industries. Simulating grinding operations with a dressed grinding wheel allows users to check and verify all related processes on expensive parts and equipment.

The Grinder-Dressing module supports Continuous Grinding, In-Process Grinding and Creep Feed Grinding. This means that the grinding wheel diameter constantly changes as the part is machined, keeping the grinding wheel in a state of specified sharpness.

Benefits of the Grinder-Dressing module:

- Check dressing operations on the grinding wheel
- Check dressed grinding wheel on the part
- Check continuous dressing during grinding operations
- Check the motion of coolant nozzles for collision
- Check NC handwritten subroutines for dressing subroutines
- Measure and analyse “complex” grinding wheel shape after dressing
- Check grinding wheel size reduction



The VERICUT verification process accurately checks for errors on all 5-axis milling and turning processes no matter how complex the machining operation.

As the grinding wheel size is reduced, the machine components get closer to the part, creating a high risk of collision. VERICUT checks the clearance between the machine components and the part to be machined for potential collisions.

VERICUT simulation enables you to perform a realistic 3D simulation of the entire CNC machine envelope and validate interactions between the ever changing grinder wheel and ever changing part.

Technical Details:

- Dressing operations can be done by a spinning, non-spinning, or profile dresser.
- Two new tool types were added in Tool Manager: Grinder and Dresser. The Grinder tool is the initial shape of the grinding wheel, generally defined by a revolved profile. The Dresser tool represents the profile used to modify/restore the Grinder tool shape.