# What's New in GibbsCAM 2025

Simply Powerful. Powerfully Simple.

- GibbsCAM 2025 incorporates cutting-edge turning technologies, equipping their clients with AI capabilities, and offering convenient access to extensive manufacturing and tooling expertise. The integration of Sandvik's cutting-edge technology continues, starting with Sandvik Coromant PrimeTurning™, the implementation of Y-axis turning, and now Sandvik OptiThreading™. This leads to a significant improvement of efficiency and productivity, both in engineering as well as in production. GibbsCAM continued to work towards its goal of becoming the CAM solution of choice for Sandvik Coromant turning technologies.

Unlocking the full potential of turning

- With the insert positioned in the Y-Z plane, Y-axis Turning effectively directs the primary cutting forces into the milling spindle, providing exceptional stability. This yields superior chip control, improved surface finish, and increased cutting speeds. Furthermore, the inclusion of a

For both Y-Axis Turning and OptiThreading™, GibbsCAM 2025 offers best-in-class programming strategies unlocking the full potential of these fantastic technologies.
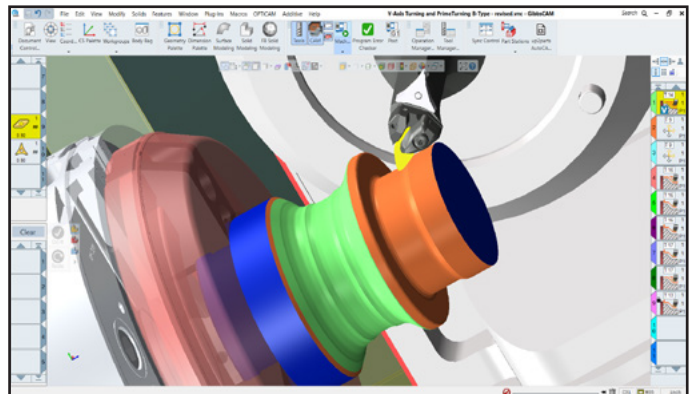
Y-axis Turning enhances stability, chip control, surface finish, and cutting speeds.

third axis for tool rotation allows for optimal positioning of the tool, enabling the cutting of intricate shapes with a single tool. This also enables a seamless "sweeping" motion for cutting complex shapes, preventing any blend marks and ensuring precise control of the insert wiper effect.
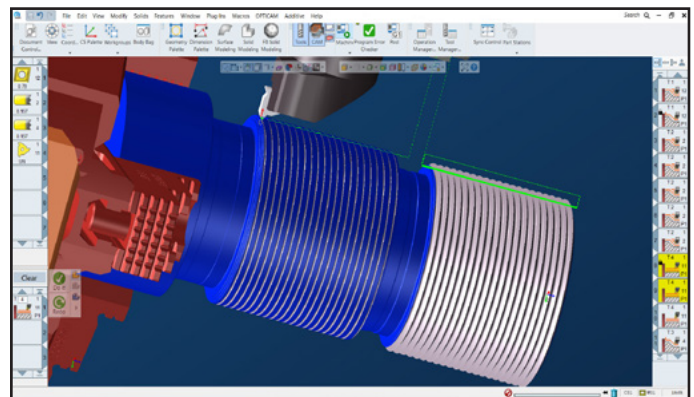
Sandvik Coromant OptiThreading™

- GibbsCAM's new turning strategy for OptiThreading™ enables controlled chip breaking to eliminate long stringy chips that can damage a component's surface and interfere with the cutting zone. It is just as suitable for simple threads as it is for cutting complex thread profiles, in high-strength alloys or exotic materials.

- Using cutting data from CoroPlus® Tool Library, OptiThreading™ enables users to develop optimized thread turning tool paths that specifically overcome the challenge of chip control with these operations. This is achieved by specialized GibbsCAM tool paths that use controlled, oscillating movements in and out of the cut for interrupted cuts on all passes except the last one. The result is controlled chip control for improved component quality, faster cutting speeds and less manual work by reducing the need to manually clear long chips during the machine run cycle.
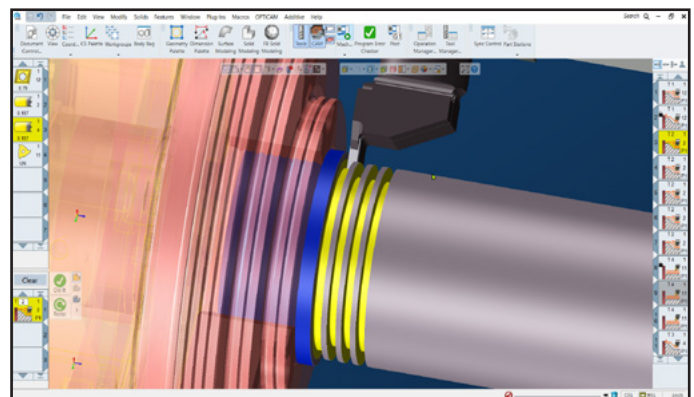
Rib Cut Plunge

- This special turning strategy for roughing reduces tool deflection, improves tool life, and guarantees excellent chip control. Within a preliminary operation the tool repeatedly plunges into the part at full engagement to create a series of cuts with each cut more than a tool-width away from the previous one. The following pass cuts the remaining ribs at a 30-50% increase in feed.
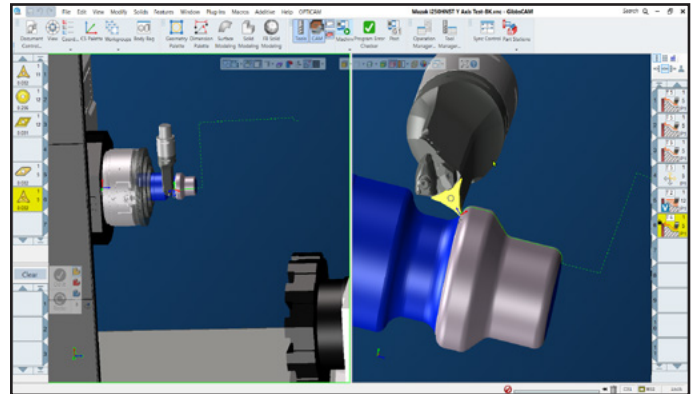
The addition of a third axis for tool rotation allows cutting of intricate shapes in a seamless motion.
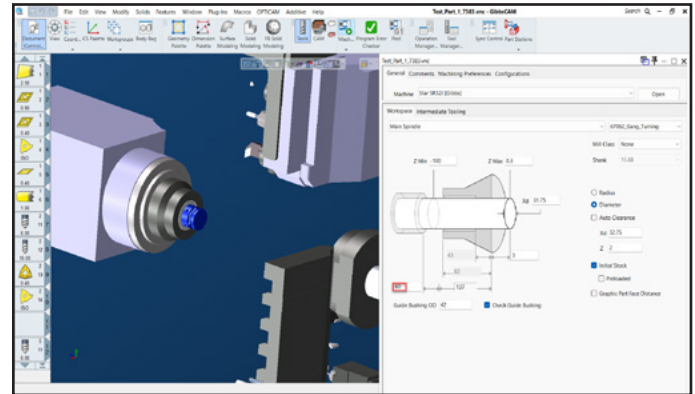

OptiThreading™ enables controlled chip breaking to eliminate long stringy chips that can damage a component's surface.

Rib Cut Plunge strategy improves roughing by starting with a series of cuts that are more than a tool width apart.

Swiss-type machining

- As the leading CAM solution for Swiss-type machines GibbsCAM 2025 introduces a new option for the headstock origin. This allows the NC programmer to define a value for the distance between the front of the guide bushing and the headstock's 0 position. With that, the correct positioning of simulation bodies on the headstock axis becomes easier. It provides a more intuitive interface in the dynamic coordinate definitions for Swiss-style machines.
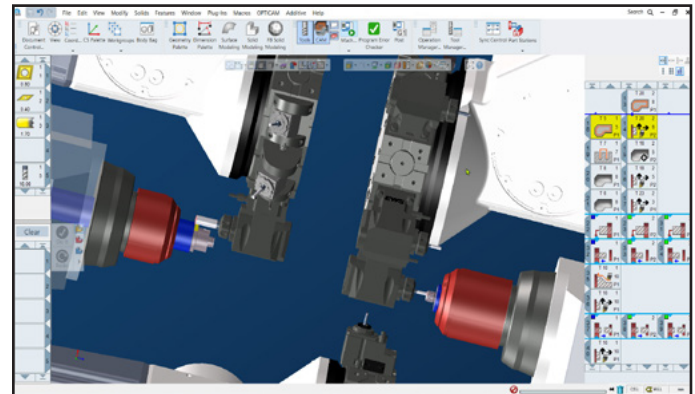
Comprehensive performance boost
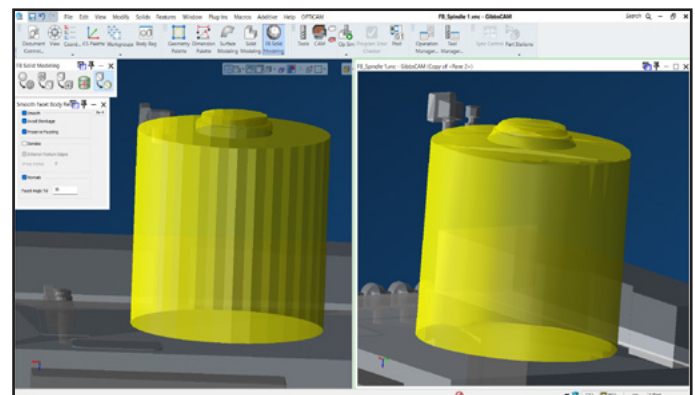
Visualization of multi flow operations

- Within its powerful Multi Task Machining solution, GibbsCAM supports the most complex MTM and Swiss machines with an unlimited number of axes in any axis orientation. To always give the user the best view on the defined multi flow operations, GibbsCAM 2025 provides new additional Operation Tile Modes to display multiple flows independent of the MTM Sync Manager. Users can choose to Show All Flows for a comprehensive view, Show Each Flow for focused management, or use Sync Flow Mode to coordinate displays across operations, improving organization and control of multi flow processes.

Facet Body Modeling

- Facet Body can play an essential role in modern CAM workflows, bridging potential gaps between design and manufacturing, enabling precise and optimized production processes. GibbsCAM 2025 provide users with powerful tools for manipulating facet body models without the need for external CAD software.

- The new Facet Body Modeling palette supports a wide range of specific editing functions, including Tesselate, Simplify, Re-facet, Heal and Smoothing of facet bodies. Many existing Solid Modeling functions now support Booleans, Slice, Separate, Offset/Shell, History, and more. With this new functionality, GibbsCAM users can now easily work with Facet Body models such as parts, machine components, fixtures, and In-process Stock Models directly within GibbsCAM.

The new option for headstock origin makes it easier to position simulation bodies on the headstock axis.

New additional "Operation Tile Modes" visualize multiple flows, independent of the MTM Sync Manager.

Facet Body Modeling supports a wide range of editing functions such as Smoothing shown above

Powerful tool management

Simulator Enhancements

- New Simulator enhancements increase user control for greater accuracy, such as the new stop option to pause the simulation before each operation. A new scrolling bar in the Sync Manager tracks simulation progress, providing real-time feedback for MTM machining operations. The innovative "Rotary Hint" option displays the spindle direction for both Turning and Milling. To enhance safety, collision detection and alerts are now activated by default.

Order Tool Link

- Order Tool appears as a clickable link in the tool dialog for tools imported by GibbsCAM-supported tool libraries from trusted manufacturers like Sandvik Coromant, Garr Tool, Harvey Tool, and more. Upon clicking on the icon, the user will be directed to the purchase site in the Tool Library.

# Fast and effective AI support

GibbsCAM Copilot

- Accessible directly from the Online Help menu, GibbsCAM Copilot uses Microsoft Azure Open AI on top of a dedicated database. Trained by the GibbsCAM team, the Copilot offers rapid support at any time without filing a case or hunting through documentation.
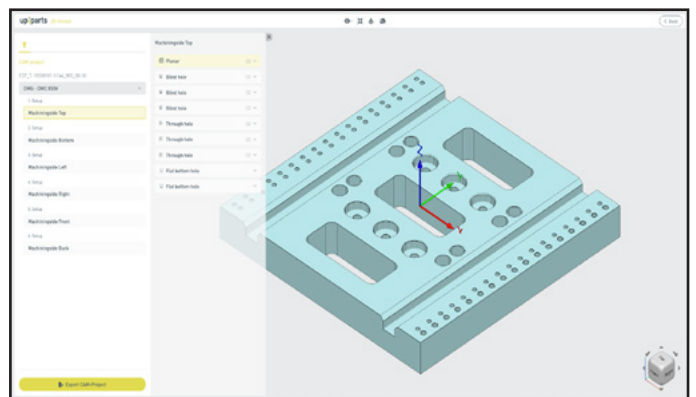
up2parts autoCAM

- This new plug-in helps to accelerate NC-programming by up to 70%. up2parts uses 3D models with tolerance information to recommend a program for six-sided machining, including clamping, machining steps, operations, and tools. With the up2parts autoCAM plugin, GibbsCAM will automatically create all the needed operations based on provided AI-driven manufacturing guidelines and instructions, generated by up2parts site.
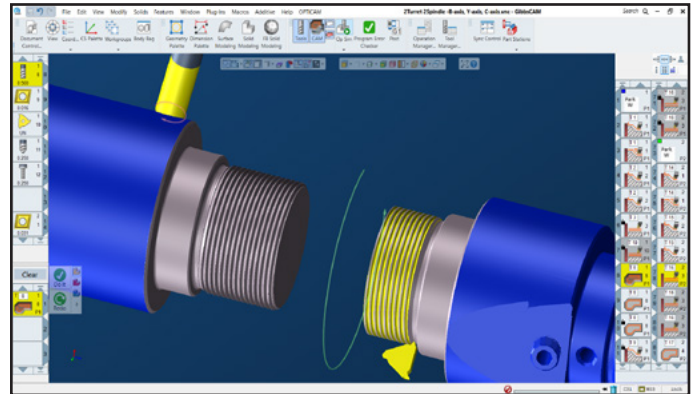
Rotary Hints in Simulation shows spindle directions for spindle heads and chucks
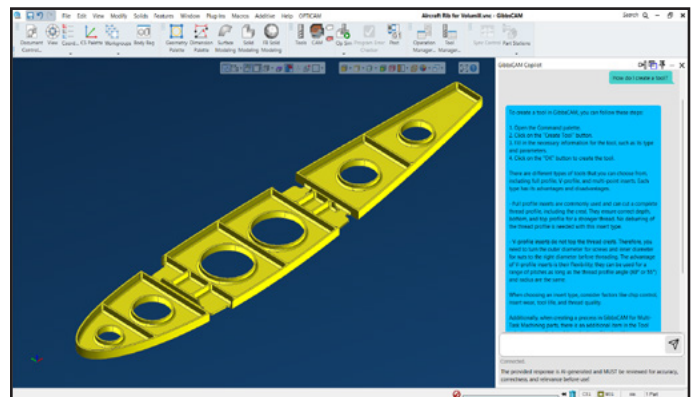
GibbsCAM Copilot offers rapid 24/7 support for user queries.

up2parts for GibbsCAM provides automated AI-driven NC programming

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