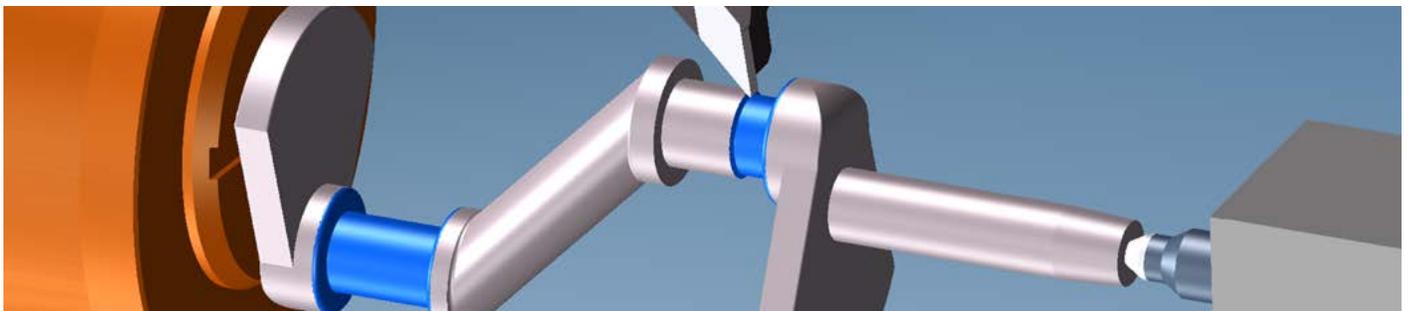


# Introducing GibbsCAM 13

GibbsCAM 13 delivers many new capabilities to improve and accelerate every part of the programming process, taking parts from concept to creation in record time. Improvements in the user interface simplify visualization of large and complex programs and continue to encourage customization, creating the most efficient programming environment. New broaching processes, turning toolpath strategies, as well as face milling improvements streamline CNC programming and put more control in the programmer's hands.



## SYSTEMWIDE ENHANCEMENTS

### Streamlined User Experience

GibbsCAM 13 continues to deliver a streamlined, customizable, and ultra-efficient user interface with new features to help you manage large and complex part programs.

- Op Tile Stacking: Users are now able to see the Operation Tiles in a compact format. They can be grouped by specific process or manually.
- Built-in G-code Editor: The new G-Code editor enables you to visualize your code before sending it to the machine. Fully customize text color and size, easily identify tool changes, rapid moves, individual flows and subroutines.
- Expanded Status Bar Functionality: Important information about the file such as workgroup, active coordinate system, and units, are easily found in the status bar.

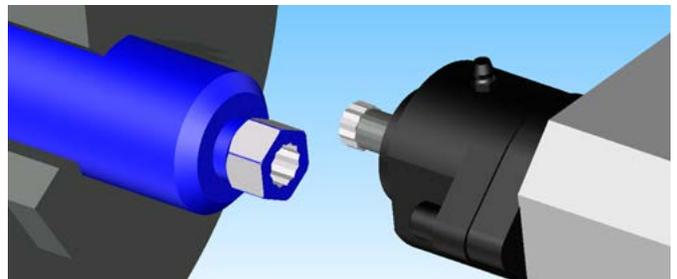
### Broaching

GibbsCAM 13 includes brand-new functionality for broaching. Program and simulate both linear and rotary broaches right inside the GibbsCAM interface. A full set of broaching tools are included, or a user can create custom broaches. Full broaching capabilities are available for milling and turning.

- Linear Broaching: Both internal and external linear broaching are supported.
- Rotary Broaching: Also called "wobble broaching", this an ideal way to create polygonal or custom closed shapes.

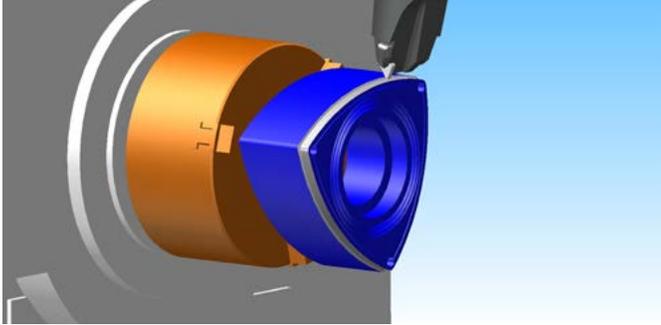
### Advanced Approach and Retract

Tool movement before and after cutting moves can be specified by selecting geometry to dictate tool movement, creating accurate and safe toolpaths when custom retracts are needed.



*Internal, external, rotary and linear broaching are now supported in GibbsCAM 13.*

## TURNING



One of the many turning enhancements is the ability to perform turning operations on non-round shapes.

### Expanded Cutting Strategies

Expanded cutting strategies give you several powerful new ways to maximize the productivity of all your CNC machines, including Multi-Task Machines (MTM).

#### Interpolation Turning:

- Cut a turning-style path by orienting a lathe insert towards a centerline while moving three linear and up to three rotary axes.
- Turning operations can now be performed on milling, boring, and turning centers with orientable spindles.
- Perform turning operations on symmetrical features that are not lined up with the center of rotation.

#### Eccentric Turning:

- Turn shapes that are off-center from, or even unaligned with, the normal center axis on milling, mill/turn, and boring machines.
- Turning operations can be executed for shapes that are not aligned with the center axis of a part, as in cutting of lobes on a crankshaft or camshaft.

#### Elliptical Turning:

- Create elliptical or other non-cylindrical shapes on your CNC machine.
- Turn parts on any machine that has accommodating axis for machining, like 4-axis mills, mill/turn, and boring machines.

### Productivity Tools

- Programmable Chip Breaking: To limit chip size, there are now two options available for chip breaking: The tool can be programmed to dwell or pull off the part.
- Auto Bar Chamfer: Define automatic chamfering of stock to eliminate burrs. Especially useful on Swiss-style machines.
- Standard ATC Toolholders: When creating a turning tool, quickly select a standard 3D toolholder for your insert with an appropriate HSK, Capto, or other ATC spindle backend.

## MILLING

### Expanded Face Milling

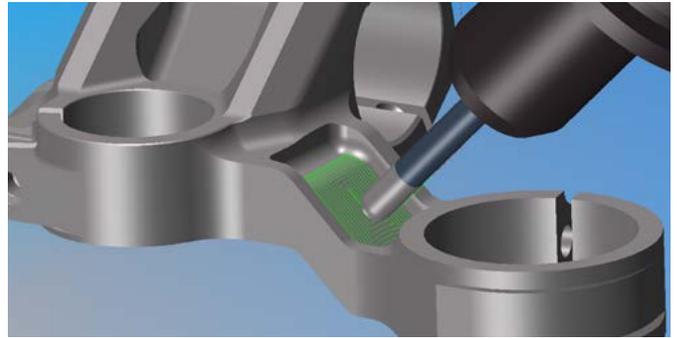
Several options have been added to allow you to prepare stock efficiently for subsequent machining operations.

- Roll In Entry: To eliminate abrupt cutting conditions, a 90-degree roll-in entry is now available.
- Round Corners: Users can choose to replace sharp corners in the facing operation with arcs, eliminating over engagement of the facing tool.
- Cut Above Stock: Generate cuts above the top of the defined stock.

### 5-Axis Milling

New 5-Axis capabilities, including support for new tool types and automatic deburring, deliver more power and functionality for complex, multi-axis machining operations.

- 3-Dimensional Cutter Radius Compensation: 3D CRC allows the spherical tool tip radius to be adjusted at machining time, eliminating the need to re-post the part program to adjust for tool wear.
- Geodesic Toolpath: Calculates an even stepover on complex surfaces and parts with undercuts.



Geodesic toolpath creation provides even stepover and scallop height on complex, organic surfaces.

- 5-Axis Deburring: Automatically program deburring operations by selecting geometry, surfaces or an entire model.
- Circle Segment Cutters: Full support for barrel, and tapered barrel shaped cutters.



Find out more at: <https://www.3dsystems.com/software/gibbscam>

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