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Basic Utility Operations User Guide

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About the Basic Utility Operations

This small document is for users of the **Turning** and **Mill/Turn** products. When you use GibbsCAM Basic Utility Operations, you can easily generate commands: for Bar Feed, for Tailstock, and for Part Catcher. You must have a custom post processor to make use of Basic Utility Operations functionality.

The individual functions that can be programmed with Basic Utility Operations depend upon your needs and input to the CAMBRIO Post department. Each post and accompanying template will be different, depending upon the machine associated with the post.

Installation

You should have received a post package that contains a new custom post processor and a template file. Extract these items to the GibbsCAM application folder.

The extracted items will include two folders: `Posts\`, and `Utility Templates\`. The `Posts\` folder can be moved to another location. The `Utility Templates\` folder must reside in the GibbsCAM application folder.

Installing Post Packages by Drag-and-Drop or File > Open

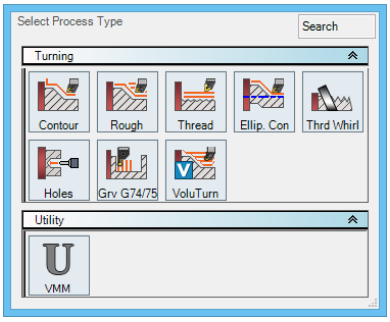
When you receive a post processor package as a `.zip` file from the GibbsCAM Post department, you can install it simply by dragging it onto a running instance of GibbsCAM or using File > Open. This extracts the contents of the package and copies files to the appropriate locations under the `ProgramData\` folder:

- MDDs are extracted to the `MDD\` subfolder of the global data folder – normally `C:\ProgramData\CAMBRIO\GibbsCAM\<version>\MDD\`
- VMMs are extracted to the `VMM\` subfolder of the global data folder – normally `C:\ProgramData\CAMBRIO\GibbsCAM\<version>\VMM\`
- Post files are extracted to the `Posts\` subfolder of the global data folder – normally `C:\ProgramData\CAMBRIO\GibbsCAM\<version>\Posts\`
- Certain other special-purpose files (such as `.txt` files for `GCode Files\` and macro files for `CustomDrillCycles\`) are also extracted to the correct folders.

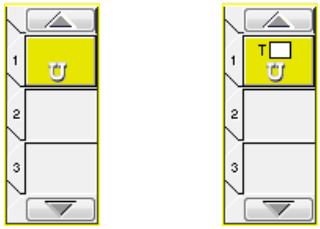
When a post package is installed in this way, if the target folder already contains `.mdd` or `.vmm` files with identical names, the pre-existing versions are overwritten.

Interface and Use

When GibbsCAM is re-launched after installing the `Utility Templates\` folder, the system is capable of producing posts that support Basic Utility Operations in Turning and Mill/Turn parts. When a Turning or Mill/Turn part is being created, the process palette will now include the Basic Utility Operation tile. Simply drag the tile to a position in the Process list.



Tooling

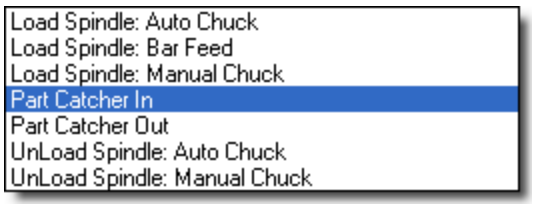


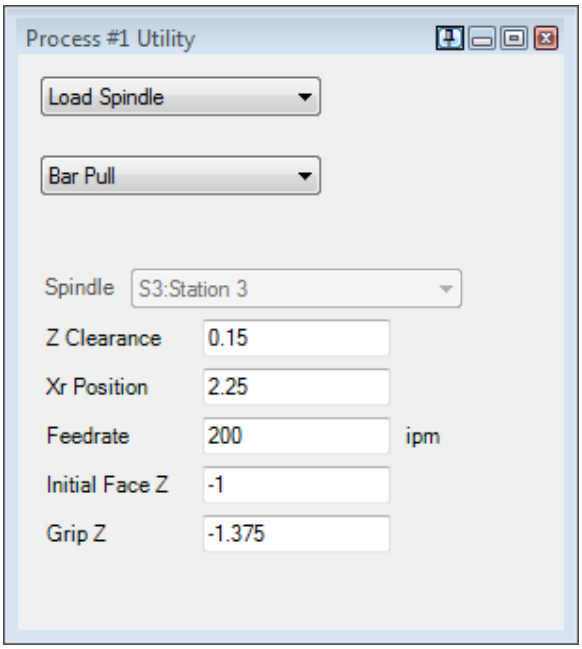
No tool required Tool required

Tools are required by some Basic Utility operations, but not by all. This is determined by your machine's configuration and is set in the template. If a tool is required, you will not be able to generate the operation until a tool is assigned to the process. Any type and size of tool may be used; what is important is what position number you wish to use. Simply drag a tool to the process tile.

Setting Values

The interface is a single dialog with a pull-down menu at the top and a list of item/value pairs that depends on the pull-down menu selection. The options in the pull-down menu of the Basic Utility Operation depend upon your machine's capabilities, and are set when the post and template are made.





Simply select the type of operation you want to generate. If there are variables, such as positions and speeds, they will appear in the list of item/value below the menu. For most entries in the Item list, the corresponding Value can be edited to set the position, speed, or time of the operation. However, some items are hard-coded in the template and might not be editable.

Generating and Using Operations

After you have provided a Value data entry for each Item, simply click Do It. This generates a Basic Utility Operation. Each operation type has a custom icon consisting of up to four letters. This icon identifies the type of operation being programmed.

Load Spindle - Bar Feed

Load Spindle - Automatic

Unload Spindle - Manual

After the operation is generated, you can use the accompanying post processor to generate Loads, Unloads, and so forth in your Turning and Mill/Turn parts.

Please note that programs must include at least one “real” operation (roughing, contouring, drilling, or the like). The system will not generate a program that contains only Utility Operations.

Conventions

GibbsCAM documentation uses two special fonts to represent screen text and `keystrokes or mouse actions`. Other conventions in text and graphics are used to allow quick skimming, to suppress irrelevancy, or to indicate links.

Text

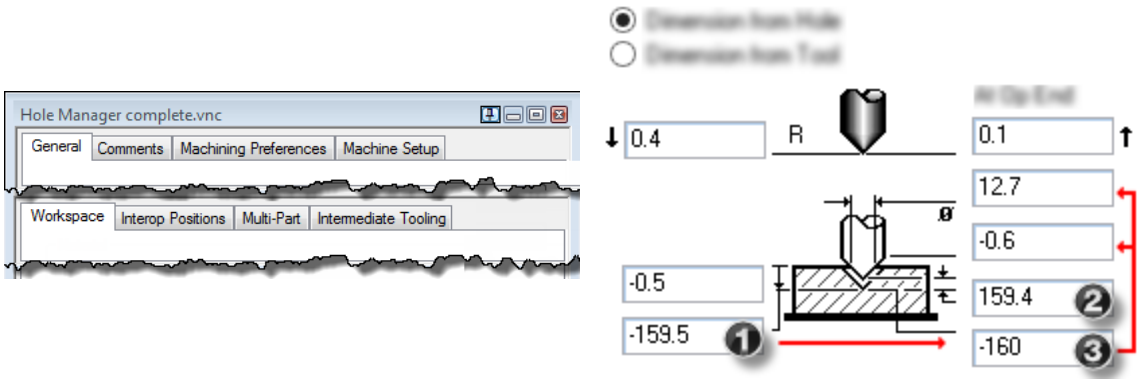
Screen text. Text with this appearance indicates text that appears in GibbsCAM or on your monitor. Typically this is a button or text for a dialog.

`Keystroke/Mouse`. Text with `this appearance` indicates a keystroke or mouse action, such as `Ctrl+C` or `right-click`.

`Code`. Text with `this appearance` indicates computer code, such as lines in a macro or a block of G-code.

Graphics

Some graphics are altered so as to de-emphasize irrelevant information. A “torn” edge signifies an intentional omission. Portions of a graphic might be blurred or dimmed to highlight the item being discussed. For example:



Annotations on a graphic are usually numbered callouts (as seen above), and sometimes include green circles, arrows, or tie-lines to focus attention on a particular portion of the graphic.

Faint green borders that outline areas within a graphic usually signify an image map. In online help or a PDF viewer, you can click a green-bordered area to follow the link.

Links to Online Resources

Link	URL	Action / Description
Go	http://www.GibbsCAM.com	Opens the main website for GibbsCAM.
Go	https://online.gibbscam.com	Opens a restricted website containing materials available for download. Requires a GibbsCAM Online Services account; to set up an account, contact GibbsCAM Support.
Go	https://store.GibbsCAM.com	Opens the website for the GibbsCAM Student Store.
Go	https://macros.gibbscam.com	Opens a wiki containing documentation and examples of GibbsCAM macros. Requires a GibbsCAM account.
Go	http://kb01.GibbsCAM.com	Opens a Knowledge Base article, **Contour Operations Using Thread Mill Tools**, that explains in detail the correct way to program Contour processes using Thread Mill tools.
Go	mailto:Support@gibbscam.com	Runs your email client to create a new message addressed to the CAMBRIO Technical Support department for GibbsCAM.
Go	mailto:Registration@gibbscam.com	Runs your email client to create a new message addressed to the CAMBRIO Registration department for GibbsCAM.
Go	mailto:Sales@gibbscam.com	Runs your email client to create a new message addressed to the CAMBRIO Sales department for GibbsCAM.
Go	http://www.autodesk.com/inventor	Opens an external website that provides more information on Autodesk Inventor products.
Go	http://www.celeritive.com	Opens an external website that provides more information on VoluMill Ultra High-Performance Toolpath (UHPT) from Celeritive Technologies.
Go	http://www.predator-software.com	Opens an external website that provides more information on a CNC editor and a virtual CNC viewer from Predator Software, Inc.