

64bit version

# FFCAM 2023

## Release Notes



Promise of Performance

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## Introduction

This manual is described about the release note of Makino Milling Machine product FFCAM.

Please read it through before using FFCAM.

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  - Screens shown in this manual may slightly differ from the actual display.

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# 1. FFCAM Release Notes

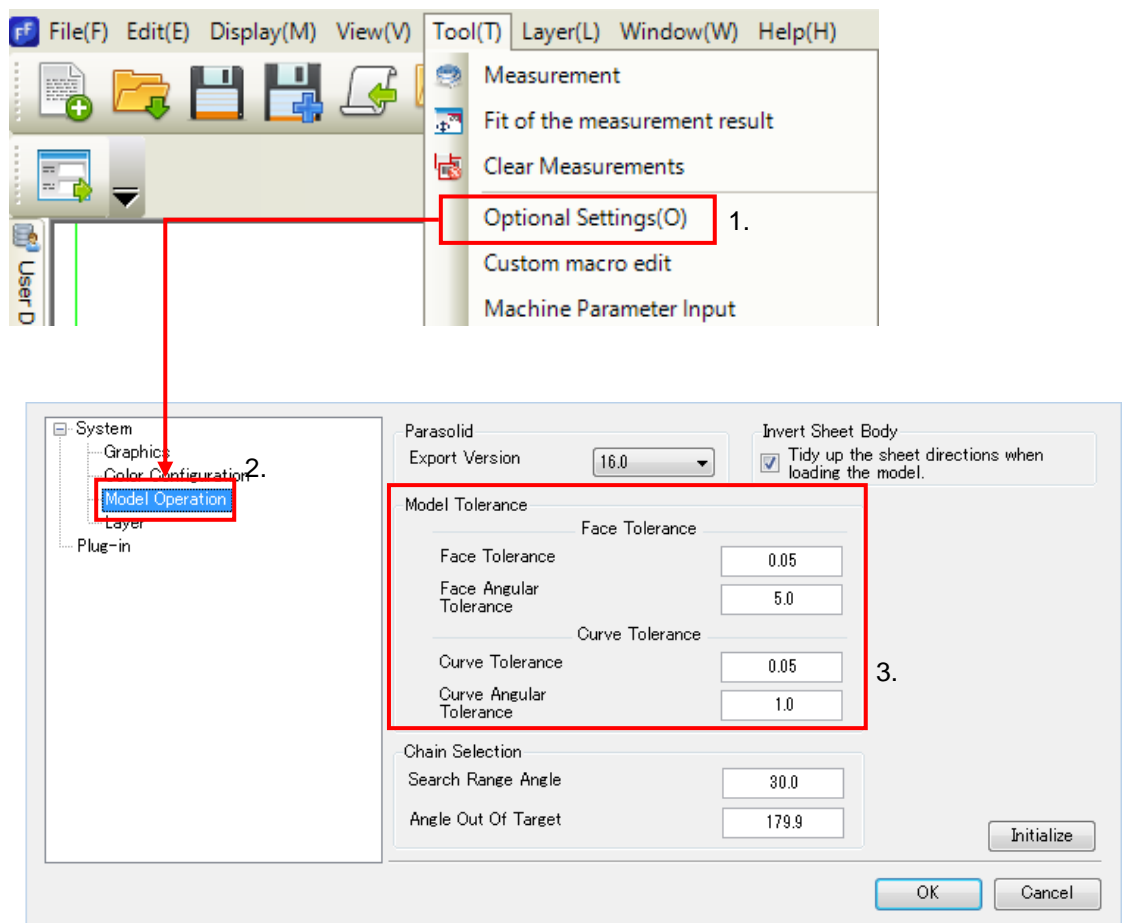
## 1.1 Restrictions on Functions

### 1.1.1 CAM function

(1) An error may occur during importing the model data by the graphic driver, and then the FFCAM operation is disabled. In such a case, increase the “Model Tolerance” value of the system parameters.

- The recommended tolerance value can be set by pressing the “Initialize” button.
- The recommended tolerance value for a Face and a Curve is 0.05 respectively. Depending on the model size and personal computer performance, and a bigger value may be input.

Setting Procedure:



- (2) When "Helical" is specified for Tilt Infeed Motion in machining with a round insert face mill, a toolpath may be generated with collision between the bottom of the face mill and the workpiece even if the function to "Avoid cutting by the bottom of Round Insert cutter" is selected.

For this reason, set "Along-route" at Tilt Infeed Motion when using a round insert face mill.

When "Helical" needs to be set for Tilt Infeed Motion, confirm that the following conditions are satisfied:

- Helical Radius > bottom diameter of the round insert face mill
- Helical Infeed Tilt < Max cut angle of the round insert face mill

- (3) When toolpath is calculated after moving or copying the machining model, the wrong toolpath will be calculated. The reason is that the previous intermediate data is used. After moving or copying the machining model, be sure to re-register the machining model before calculating toolpath.

- (4) The output file name, generated with batch and having many machining, is limited to 240 single byte characters.

If it exceeds the limit, the following message is displayed.



Please enter up to 240 one-byte characters for path of the output file.  
(Currently specified path : 396 one-byte characters)

- (5) Over four machining definition files cannot be opened at the same time.

## 1.2 Function Revision (Addition/Change) History

### FFCAM 2023.0.0

#### Machining functions

DUG No.	Description
2013-1801 2016-0941 2016-1318 2017-1346 2018-0794 2018-1118 2018-1281 2019-0719 2019-0720 2020-0784 2020-0785 2021-0561 2021-0626 2021-1692 2022-0545	Chamfer and light chamfer machining functions have been added.
2015-1860 2017-1140 2018-1315 2019-1348	Auto Recognize Horizontal Plane function at the Contour Face Cut Machining was modified.

#### Operation functions

DUG No.	Description
-	FFCAM supports Windows11.
2021-0832 2021-1724	FFCAM supports the software license.
2018-0494	When the process and machining data in the template are copied to the tree view, automatic acquisition of the model element has been made available based on the filter information of the model element function for the corresponding data.
2015-2266	The function to rearrange the holes position in a zigzag order has been added to drilling.

2018-0806 2022-0187	
-	The macro variable defined in the Custom macro edit screen has been made available on the Encrypt macro edit screen.
-	Macro function to output a discretionary message has been added.
-	The machining parameters which support the parameter macro have been increased.
2021-0550 2021-0670	For the Excel Processing instruction sheet function, the function to rearrange the tools in a machining order has been added.
2021-0549 2021-0667 2022-0686 2022-0931 2022-1700	For the Excel Processing instruction sheet function, the parameter to output to the Processing instruction sheet has been added.
-	The parameter [External Tool ID] has been added to the tool DB.
-	The tool tip has been added to the setting screens for Contour Machining and Contour Face Cut Machining.
-	[Flat] data in the Sample folder has been updated. Flat2.x_t has been added to the Sample folder.

## 1.3 Correction of Problems

### FFCAM 2023.0.0

#### Machining function

DUG No.	Description
2022-0995	When the model accuracy is set to -20 or smaller in the scallop height constant motion of the along-section function in Contour Machining, the maximum step XY direction becomes smaller than the specified value. This problem was corrected.
2021-0654 2021-0715 2021-1368 2022-1050 2022-1190	The drilling path calculated result becomes an error in some PC. This problem was corrected.
-	In Contour Machining, Z level is sometimes machined from the lower position. This

	problem was corrected.
-	In Contour Machining, when creating a path near the vertical surface, path calculation takes long time. This problem was corrected.
-	When the stock model created by using the [Model Top Automatic Recognition] function is loaded, air cut occurs. This problem was corrected.

### Operation functions

DUG No.	Description
2022-0377 2022-0470	FFCAM ends abnormally. This problem was corrected. Memory consumption of FFCAM has been reduced.
2022-1008	When Stock model loading is valid, changing the process name abnormally ends FFCAM. This problem was corrected.
2022-0062	The [Finish Allowance of Previous Machining] value of Corner R is not saved. This problem was corrected.
-	In Contour Machining and Core Pocket Contour Machining, [Repeated Cutting Frequency] of burr removing operation is not saved. This problem was corrected.
-	When the previous machining is 2D route machining, illegal tool information is sometimes acquired from the previous machining. This problem was corrected. In addition, the screen parameter check does not work at that time. This problem was also corrected.
2022-0393	When the area setting is copied from other machining by using the copy function of Machining Area, the status sometimes returns to the status before copying. This problem was corrected.
2022-0584	When the area setting [Curve] is copied from other machining by using the copy function of Machining Area, an exception sometimes occurs. This problem was corrected.
2022-1255	[Paste] function on the mini tool bar for Machining Create cannot be used for some data. This problem was corrected.
-	When [Path Switching Angle] of Contour Projection Machining is specified with macro, the setting is not reflected to the path. This problem was corrected.
-	Even when [Feed Rate at Y Retraction] on the [Feed Rate Change] tab of machining parameter is specified, the setting is not reflected to the FFCAM machining condition setting. This problem was corrected.
2014-1109 2015-2697 2017-1484 2017-1533	When 3-axis high-speed simulation is performed in the CL simulation function, an interference is detected when there is no interference. This problem was corrected.



2020-1100 2020-1115 2022-0824	When 5-axis detail simulation is performed in the CL simulation function, an error is output while creating an uncut model. This problem was corrected.
-	In the CL simulation function, a simulation is started by using the simulation list saved in the simulation list mode [High Speed], the simulation starts from an incorrect tool position. This problem was corrected.
2022-0829 2022-0849 2022-0886 2022-1085 2022-1126	After reposting, some repost functions become unavailable to use. This problem was corrected.
2022-0164	In the Excel Processing instruction sheet function, the data which multiple machining are calculated in a batch is used, the output result of the tool list becomes illegal. This problem was corrected.
-	In the Overhang Length Division function, when a tool with the combined holder is used, the execution result sometimes becomes an error. This problem was corrected.
2021-0910	When the STL is imported with the [Model Import] function, the STL is not loaded to the proper layer. This problem was corrected.
2022-1593	When the IGES is imported with the [Model Import] function, part of the curve falls out. This problem was corrected.
2022-1082	When the STEP is imported with the [Model Import] function, part of the plane falls out. This problem was corrected.
2022-0986 2022-1944 2022-2015	With NX, the model which the plane is divided is saved as STEP. When the corresponding model is imported with the Model Import function, the plane does not become the divided condition. This problem was corrected.
-	The color pallet modified for FFCAM2021 is not supported in the [Change Color] function. This problem was corrected.
2021-1100	There is no [Insertion Statement] in the tree view hole machining line. This problem was corrected.
-	At the grids on the setting screens for Route Machining, 3D curve machining, and 3D equi-pitch open machining, there are unnecessary columns. This problem was corrected.
-	Tool chips are not displayed in [Control Flat Surface Machining] of Contour Projection Machining. This problem was corrected.
-	German version. Indications of the [Tool Usage Range Setting] function is cut and not displayed wholly. This problem was corrected.

-	Indications of the parameter [L/D] on the Tool setting screen for drilling is cut and not displayed wholly. This problem was corrected.
-	There is an erroneous description on the guide drawing of the chamfering tool on the Tool setting screen. This problem was corrected.
2022-0905 2022-1199	An illegal value is sometimes displayed in [Machining Time] on the tree view. This problem was corrected.
2022-0742 2022-0935	The result of path calculation is an error, and [CL] of the tree view is displayed incorrectly. This problem was corrected.
-	On the machine drawing in the CL simulation function, the displayed work setting screen button is cut and not displayed wholly. This problem was corrected.
-	While the detail simulation is executed in the CL simulation function, the tool chip of Abort button is hidden. This problem was corrected.
-	Buttons on the CL simulation function can be edited on the User setting screen. This problem was corrected.
-	The [Color Select Filter] setting item on the Option setting screen is cut and not displayed wholly. This problem was corrected.
-	The line feed code in the tool chip comment is not effective and displayed in one line. This problem was corrected.
-	English version. When the FFCAM font size is changed to 9 pt, the screen is cut and not displayed wholly. This problem was corrected.
2022-0638	When a machine is drawn with the machine structure setting of the machine parameter, the screen display becomes illegal. This problem was corrected.
-	When the screen pin of the setting browser is invalid, the screen is not correctly displayed nor updated. This problem was corrected.
-	In the CSG interface output function, an error is output while executing a function. This problem was corrected.
2022-1011	When [Server] is invalid in the OS service function, FF.Boot does not start. This problem was corrected.
2020-1837 2021-0503 2022-1587	In the Tool DB recover function, the process complete message is not displayed. This problem was corrected.
2022-1328	In the data migration tool, FFCamV.9 data is not recovered. This problem was corrected.
-	In the FFCAM log file, specified message files are output as NotFound. This problem was corrected.

**Post Processor**

DUG No.	Description
2022-1744	In the drilling fixed cycle in incremental output, it was corrected to always output R value and Z value without treating as modal for the safety.

**Manual**

DUG No.	Description
2022-0957	The Help image is not displayed in some OS. This problem was corrected.