102-RN-19000

64bit version

FFCAM 2019

Release Notes

MAKINO

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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(7) Screens used in this manual:

- Screens shown in this manual may vary depending on the model.
- Screens shown in this manual may slightly differ from the actual display.

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1. FFCAM Release Notes

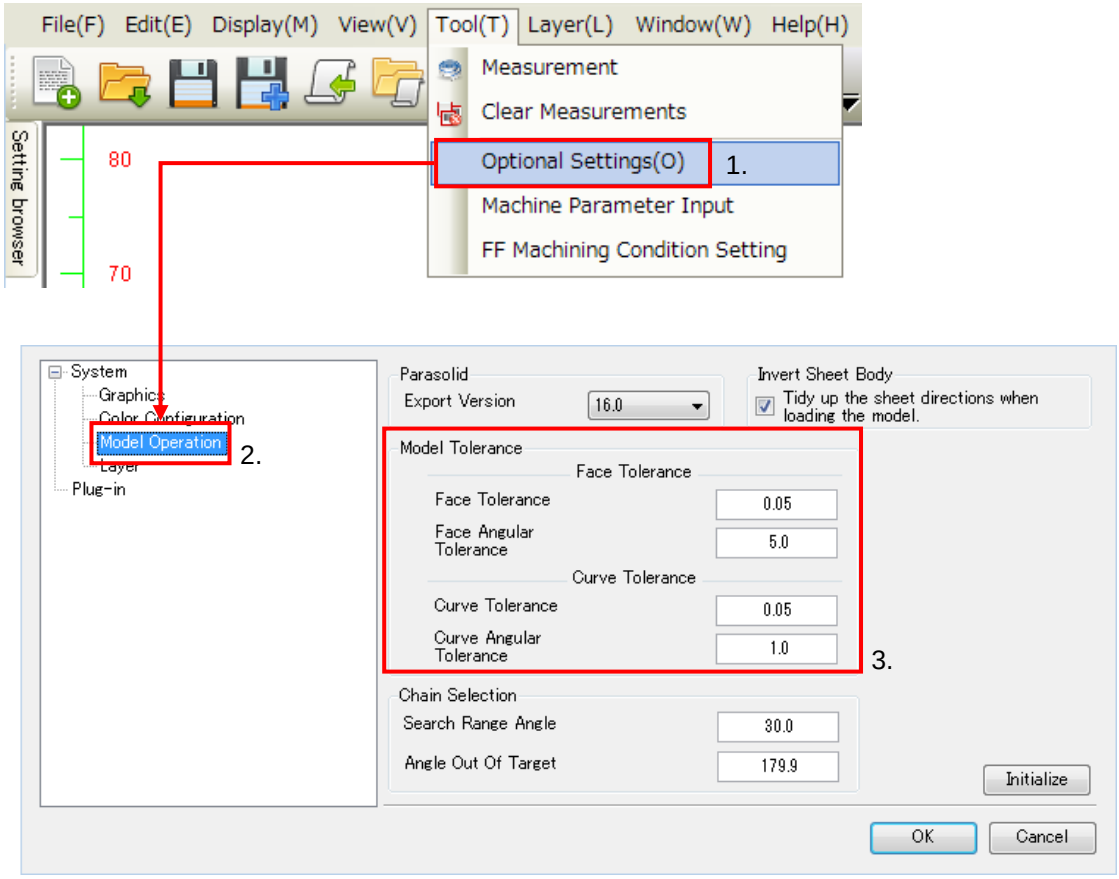
1.1 Restrictions on Functions

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.

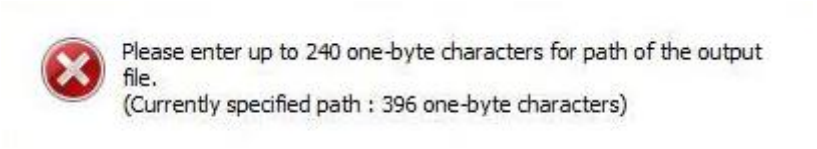
When "Helical" needs to be set for Tilt Infeed Motion, confirm that the following conditions are satisfied:

- 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.



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

1.2 Function Revision (Addition/Change) History

FFCAM 2019.0.0

Machining functions

DUG No.	Description
2018-1266	In the 2D contour machining and the core pocket machining, circular interpolation output during the 3+2 axis Machining is handled.
-	When the lens barrel tool is designated, the contour line face cutting machining function is made available.
-	When the lens barrel tool is designated, stock storage and stock loading were made available.
-	In the stock model storage process, the calculation speed in the multi thread was improved.

Operation functions

DUG No.	Description
2014-2943 2016-0980 2016-1468 2017-1079	The function to designate the forwarding direction of the cutting path was added.
2015-2675 2016-0974	Function to designate the 3+2 axis direction without being bound by the machine configuration was added.
2018-1013	Function to acquire the pre-machining tool and finishing allowance was added to the corner R machining.
-	Mode to simultaneously calculate five axes based on the three axes path block length during the conversion calculation of three axes and five axes was added. In this added function, operation is conducted without designating “Maximum transfer amount of one block” of the simultaneous five axes machining parameter.
2018-1268	Function to designate the tool tip contacting position during cutting was added to the simultaneous five axes machining parameter.
-	Function to designate the common machining start point was added in the drilling machining.
-	The input area of the explanatory comment of the process data was added.
-	The input area size of the explanatory comment of the machining data was enlarged.

2016-0752	While FFCAM machining tree view process is selected, functions of batch path calculation and batch registration were enabled.
-	In the CL simulation, machine indication was made available while executing the measuring function and displaying the machining geometry.
2018-0036	During an execution of the machining posture description, drawing the coordinate axis which indicates the part file origin point was added.
2015-2443 2018-1179 2018-2073	Function to automatically set the working folder path of the newly created screen to the folder path of the designated geometry data was added.
-	The initial value of the folder path which the geometry data of the newly created screen was changed to the FFCAM Sample folder path.
2018-0750	Function to open the FFCAM xMtn data calculation result folder was added.
2014-0263 2014-2995 2017-1066 2018-1177	Thumbnail indication of xMtn file in Explorer was made available.
-	Indication of the xMtn file description in Explorer was made available.
2018-1336	“Blank,” “Blank inversion,” and “Blank cancel” were added to the tool bar of FFCAM.
-	Tool tip was added to each designation parameter of the Machining condition setting screen.
-	The setting guidance image in the Tool setting screen was updated.
-	In the professional data output screen, specifying the tolerance of the outputting STL file (machining geometry and material) was made available.
-	The input section of the machining geometry and material on the Professional data output screen was changed.
-	The CSG interface was integrated in the professional data output function. Therefore, the CSG interface button was made not displayed on the FFCAM tool bar.
-	In the hole position acquisition function in the machining creating wizard, a function to set the hole direction toward the designation point was added.
-	In the hole position acquisition function in the machining creating wizard, a function to set the hole direction toward the center of the box was added.
	In the filtering function of the hole position result in the machining creating wizard, a filtering function for the hole positions attributing to the surface was added.
2017-2348	The initial value of “Decimal point output” in the machining parameter was changed to “Yes.”

2014-0888 2014-2291	HSKE50 and HSKF63 were added to “Spindle nose” of the machining parameter.
-	The initial value of the graphics driver on the Option setting screen was changed to “Auto.”

Post Processor

DUG No.	Description
-	At the circular interpolation path and the minute arc near the path tolerance, a process to convert from the circular interpolation to the straight line interpolation was improved.
-	In the POST edit screen, “Rotating angle around X axis,” “Rotating angle around Y axis,” and “Rotating angle around Z axis” were added.
-	“Tool comment” was added on the POST edit screen.
-	“Inclined infeed operation” was added to the POST edit screen.

Installer

DUG No.	Description
-	The professional data output function was made standard specification.
-	When a hairline finishing function is installed, creating a shortcut icon on the desktop was made available.

1.3 Correction of Problems

FFCAM 2019.0.0

Machining function

DUG No.	Description
2019-0001	When the “Scallop height fixed movement” function was used, a problem that the path is not normally output was corrected.
-	When a calculation is conducted by designating Z step “scallop height” while a lens barrel tool is used, a path is not output. This problem was corrected.
-	When the lens barrel tool is used, the path becomes too minute if “Scallop height” and “Along-section” of Z step are used together. This problem was corrected.
-	In the high function mode of the contour projection machining, some path are not output.

	This problem was corrected.
-	In the high function mode of the contour projection machining, when “Guide cutting” of the projection machining parameter is made effective, the contour cutting path is output in the unnecessary sections. This problem was corrected.
-	When the offset surface is designated in the projection machining, the “Bottom corner R” path is not output. This problem was corrected.
2018-1612 2018-1793 2019-0129	When “Follow (high-feed machining)” is used in the Contour face cut machining, some paths are not output. This problem was corrected.
2018-2228 2018-2401	When “Follow (high-feed machining) is used in the Contour face cutting machining, a path which bites the machining geometry is output. This problem was corrected.
-	When the “Precedence 5 axes movement” function is enabled in the simultaneous five axes machining parameter, and when 3 axes and 5 axes conversion calculation is executed, the function sometimes is not processed. This problem was corrected.
2018-1216	The calculation time of 3 axes and 5 axes conversion takes longer than the former version of FFCAM. This problem was corrected.
2017-1614	During the calculation of simultaneous five axes machining, the interference check model is not properly created. Therefore, the inference avoidance function does not work properly, and inappropriate path is sometimes output. This problem was corrected.
-	When the value same as the holder clearance is used for the shank clearance, the interference avoidance function of the simultaneous five axes machining is not processed properly. This problem was improved.
2018-0514 2018-1757	When a one-byte space is added to the beginning or the end of the machining name, an error is output during calculation of the simultaneous five axes machining. This problem was corrected.

Operation functions

DUG No.	Description
2018-1269	In the “axis standard” of tool axis control in the simultaneous five axes movement, the identical position can be selected for “two points” of the Reference axis. This problem was corrected.
-	The neck diameter of the boring tool is not checked.
-	"When the path calculation is conducted with the Stock Save made effective, a parameter check message for a machining parameter not displayed on the screen is displayed. This problem was corrected.

-	In the machining data of the core pocket contour machining copied in the machining tree view, when “Movement type” of the Contour face cutting machining is changed, the core pocket contour machining which is a source for copying is changed to the same value. This problem was corrected.
2018-2332	In “2D contour machining,” executing the “Delete (including an output file)” function does not delete the output file. This problem was corrected.
2018-1092	When the tool select screen is displayed and then closed without changing parameters, some parameters sometimes are changed. This problem was corrected.
2018-1995	While creating machining with FFCAM2018.2, when the tool select screen to specify a holder is started up, “Favorite” tab screen opens as the first screen. It was corrected since the specification became different from the former version.
-	On the Tool setting screen for CL edit and Overhang length division when a holder stage is added, the screen behavior becomes different from the Tool select screen. This problem was corrected.
-	When the cutter data of multi-step shank is opened on the Cutter edit screen on the Tool DB maintenance screen, an inappropriate value is displayed at the specified section of the shank dimension value. This problem was corrected.
-	On the Tool edit screen of the Tool DB maintenance screen, changing a holder or an overhang length is changed, the actual tool length becomes incorrect value. This problem was corrected.
2018-1500 2018-2098	The tool database file (csv) sometimes cannot be properly loaded to the Tool DB maintenance screen. This problem was corrected.
2015-0028	When the tool data file exported from the tool DB maintenance screen of FFCAM2018 is imported to the Tool DB maintenance screen of the same version, the Tool data cannot be loaded properly. This problem was corrected.
-	After any operation is conducted while several FFCAM setting screens are opened, when different FFCAM data file is opened and operated on the screen, FFCAM sometimes abnormally ends. This problem was corrected.
2017-0030 2017-1524 2017-2395 2018-0167	During the CL simulation, FFCAM sometimes ends abnormally. This problem was corrected.
2018-2052	When all CL registered in the CL list is deleted in the CL simulation, push-in state of the “Tool display” button is canceled. This problem was corrected.

-	When the log display of the cutting work is executed while the machine is drawn in the CL simulation, the cutting work is drawn at a wrong position. This problem was corrected.
-	When a CL list with several same CL files are registered is loaded in the CL simulation, a result different from the formerly simulated result is displayed on the screen. This problem was corrected.
2018-0492 2018-0493	When the transfer amount of one block of CL is small in the CL simulation, the cutting depth calculation function sometimes does not work properly. This problem was corrected.
-	When an overhang length is calculated with the minimum tool length specified in the CL simulation, a proper calculation becomes not possible depending on the tool geometry. This problem was corrected.
-	When the CL simulation of the simultaneous five axes machining is paused and then resumed, the machine posture instructed by CL sometimes cannot be acquired. This problem was corrected.
2018-2314	In “Simulation” tab on the Simulation repost screen, “Automatic numbering of the output file name” screen does not open depending on the screen operation. This problem was corrected.
2018-1773	In the repost information, when the CL list of which the several same CL files are registered is executed with “Output to one NC,” only files for one process are output to NC. This problem was corrected.
2018-0697 2018-1920	When xMtn file of FFCAM is saved with a different name, the output folder path in the repost information screen is not changed to the target folder for saving. This problem was corrected.
2018-1938 2018-2053	In FFCAM2018.2, after creating NC in the repost information, a problem that the start process becomes unavailable to use was corrected.
-	When the CL created with the tool center setting in the repost information to the CL list and NC is output, the indication of path output position of the CL list becomes the tool tip. This problem was corrected.
2018-1849	When numbers of “T,” “D,” and “H” of the CL data processed by the CL divide function are changed, reposting cannot be executed. This problem was corrected.
-	In the CL divide function, the Cancel button displayed during processing of the last CL in the CL list was incorrect. This problem was corrected.
2018-2051	When the lens barrel tool is selected in the CL divide function, normal execution is not possible. This problem was corrected.

-	The CL of which CL divide was conducted in the CL edit cannot be read. This problem was corrected.
-	When the CL divide function is executed after an execution of the overhang length divide, the setting used for the overhang length divide was deleted. This problem was corrected.
-	In the CL divide, an error content of the hole machining data was incorrect. This problem was corrected.
-	An English word was included in the CL divide function screen. This problem was corrected.
-	When the insertion statement is input on the process insertion statement setting screen in the CL edit function and the screen is closed and re-opened, an error is displayed. This problem was corrected.
2018-1996	In FFCAM2018.2, the screen is instantaneously displayed on the model display screen when the screen is operated. This problem was corrected.
-	When a user signs out with FF.Boot remained activated on PC, and when a user logs in PC with a different account, starting up FF.Boot with the new account becomes unavailable. This problem was corrected.
-	Depending on the width of the Simultaneous five axes operation screen, some smoothing “Rotate axis” label indication on that screen is inappropriate. This problem was corrected.
-	When starting up FFCAM, loading the screen layout file fails, and unexceptional condition occurs. This problem was corrected.
-	On the Professional data output screen, the setting name sometimes cannot be deleted. This problem was corrected.
-	On FFCAM English version, the label indication of the Professional data output screen is inappropriate. This problem was corrected.
2018-1264	In the filtering function, “Direction,” of the hole position result of the Machining creation wizard, the hole direction which does not match the specified direction was being filtered. This problem was corrected.
2018-2162	In the hole position acquisition function in the machining creation wizard, the hole sometimes cannot be properly recognized depending on the hole position on the model. This problem was corrected.
2018-2353	In some machining data of the template file, the initial value of the Uncut model setting, “Clearance,” was inappropriate. This problem was corrected.
2018-1580	The machine configuration setting of the machine parameter, DA300, was incorrect. This problem was corrected.

-	The parameter name of “Spindle nose” in the machine parameter is incorrect. This problem was corrected.
-	The explanation of “Spindle nose” in the machine parameter in the simplified Chinese character version and the traditional Chinese character version of FFCAM are incorrect. This problem was corrected.
2017-1166	When the STEP file is converted to the Parasolid data, one surface of the model is dropped. This problem was corrected.

Post Processor

DUG No.	Description
-	The title of the message box displayed when the POST edit screen is saved is incorrect. This problem was corrected.
-	In the specific machine configuration, post processing is not possible. This problem was corrected.
-	In the machine configuration including the angle head, outputting the incline surface machining order is not possible while the rotate axis is not rotating. This problem was corrected.
2018-0564	When the post file is opened in the POST edit screen in FFCAM2018, indication of the list of output parameters becomes inappropriate by the post file. This problem was corrected.

Installer

DUG No.	Description
-	When installing FFCAMDB, when installing with the default path remained, part of the folder name becomes the lower case letters. This problem was corrected.