

64bit version

FFCAM 2020.1

Release Notes



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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

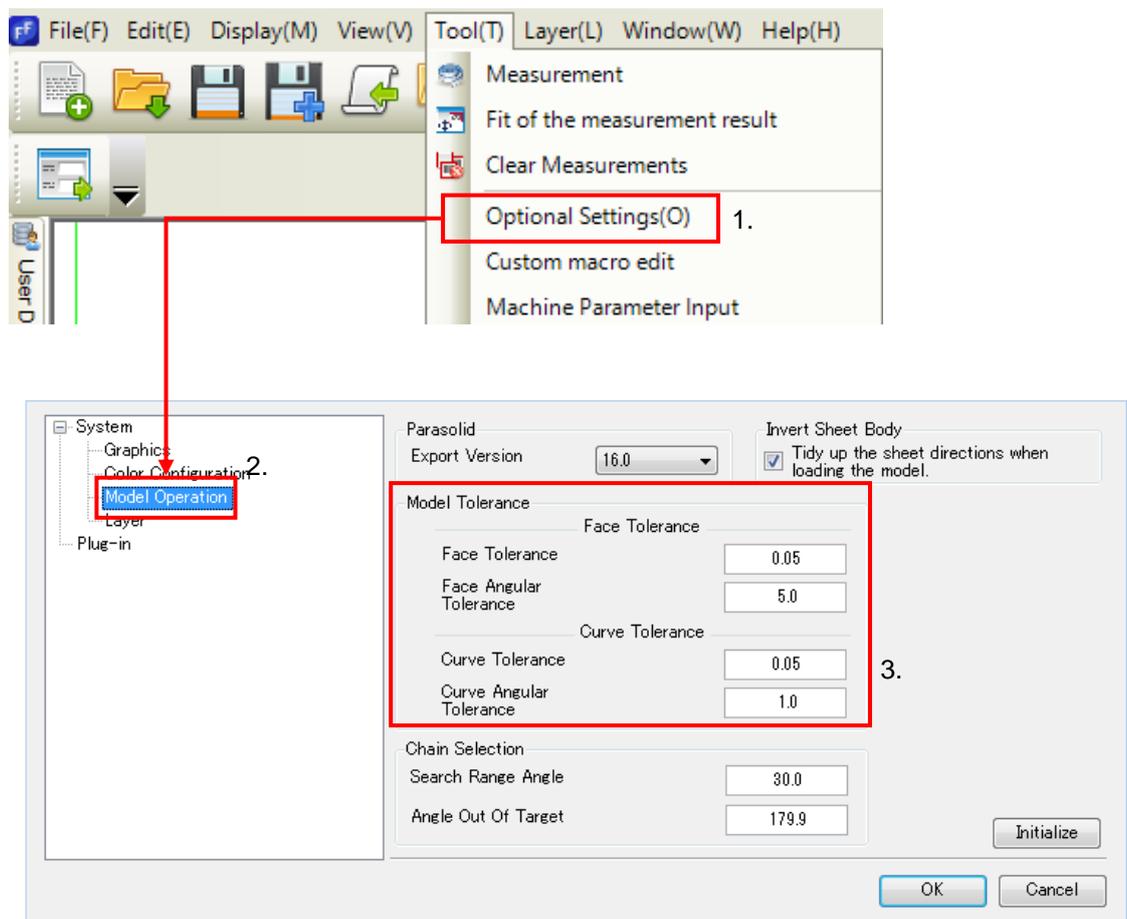
1.1 Restrictions on Functions

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

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Operation functions

DUG No.	Description
-	A function which enables to output the Machining Information in the Microsoft Excel file format was added.
-	The machining parameter which corresponds to the macro definition was improved.
-	Functions to be used in the macro definition were added.
-	For the tool type and diameter of Previous machining tool use setting in Corner R machining, the activation statuses of the Tool button and the Previous machining tool acquisition button were changed according to the parameter macro specification.
	The activation statuses of the Stock set button and the Delete button changed according to the stock file macro specification.
-	The number of characters which can be input to the explanatory comment was increased.
-	For the process name and the machining name, the name redundancy check function was added to the parameter check function.
-	The values described on the tree view process were changed to be updated after the path calculation.

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Machining functions

DUG No.	Description
2019-0001	In the contour face cut machining, the scallop constant motion function of the along-section function became available to use.
2018-0966	When the motion type in the contour projection machining is Z spiral, the cut step function was made usable.
-	In the contour face cut machining, the improved contour corner R function was made usable.
2005-1168	In the horizontal surface automatic recognition function, only horizontal surface in the

2007-1906 2008-1498 2010-1505 2012-0527 2015-1860 2016-0795 2017-1140	machining area was made recognizable.
-	Specifying the angle for the incline angle function in corner R machining was made available.
2013-1755	In the contour machining, calculation process of the machining data which specifies outside the "Cutting start position" area and the stock model loading was speeded up.
2016-1172	The calculation process of the machining data which specifies the contour corner R function was speeded up.

Operation functions

DUG No.	Description
2014-0737 2014-1226 2015-0894 2015-2438 2016-1106 2018-1019 2019-0942	The function which can be defined with a macro of the machining parameter was added.
-	When drawing the tool in the Tool select screen, specifying the overhang length and the under neck length of the tool was became available with the mouse operation.
-	While drawing the tool, interfere check between the tool and the machining geometry was made available.
2015-2656 2018-0802	Contact point drawing of the tool was made available.
2019-0326	The batch registration of the guide wires of 2D contour machining was made available.
2017-1871	During the registration of the guide wire in the 2D contour machining, the maximum and minimum machining heights were set to be displayed with the specified calculation machining coordinate system.
2015-1611 2016-0750 2018-2066	On the Repost screen, the function to create the main program was added.

-	The display content of the start process on the Simulation repost screen was improved.
2018-0558	By selecting several machining data, the undercut section display function was made usable.
2019-0254	The size of drawn free point element was made changeable.
2019-0366	To the measurement function, a function to measure with a cylinder was added.
2018-0473	A function to move the note of the measurement result within the screen was added.
2019-0366	The name of the measurement function which is "Box hide" was changed to "Boundary hide."
-	Copying the xMtn process and machining data opened in FFCAM to other xMtn was made available.
2018-1666	The continuous copying of the value on the tree view to the several machining was made available.
-	Because the drawing library no longer supports Open GL, OpenGL was deleted from the Option setting screen graphics.
-	In the Option setting screen, specifying Template folder path became available.
2019-1050	The tool chip of the profile approach motion on the Avoid, approach, and cut setting screen was improved.
2018-0795	The STL model loading function was integrated into the model loading function. Due to this integration, the STL model loading function was deleted from the FFCAM tool bar.
-	Parasolid V31.0 is now supported.

Post Processor

DUG No.	Description
2018-0584	The search function was added to the POST edit screen.
-	The function to newly create the main program was added to the POST edit screen.

Installer

DUG No.	Description
-	While uninstalling FFCAM, deleting Template folder was changed to not deleting.

1.3 Correction of Problems

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Machining function

DUG No.	Description
2019-1667 2017-1234	Even when the overlap of 2D profile machining is set invalid, that is used as a valid value in the calculation. This problem was corrected.

Operation functions

DUG No.	Description
2019-1880	In the CL simulation, the rotating direction of arc cutting becomes a reverse direction by specifying the machine indexing direction. This problem was corrected.
-	When a macro is specified to the parameters of along-surface machining and route machining, the specified macro is not processed correctly. This problem was corrected.
-	Even when the macro expression specified on the Custom macro edit screen is correct, an error message is output when saving on the screen. This problem was corrected.
-	When a macro expression specified on the Custom macro edit screen contains a line feed, the macro cannot be processed correctly. This problem was corrected.
-	The screen size and screen display position relating to the macro are not saved. This problem was corrected.
2020-0615	When the CR section machining mode of the Corner R machining is changed from "Contour + Along-area" to "Contour," the tilt angle of "Contour" in the CR section machining mode indicates an illegal value. This problem was corrected.
2019-1798	When the stl file is specified by the stock model intake function, the file format cannot be identified correctly. This problem was corrected.
-	When a process name or a machining name contains a dot, the stock model file name becomes inappropriate. This problem was corrected.
2020-0025	"When the Tool of a different Parameter in the same T Number is set, the operation is discontinued." function on the Option set screen does not function correctly in some combinations of machining. This problem was corrected.
-	When the motion type of the route approach motion on the 2D route machining is changed, a value of the Z direction tilt angle is not retained. This problem was corrected.
2020-0189	On the Tool select screen, when the machining data is set with the center drill by specifying the pencil neck shape, if the tool is drawn with the CL display function, the

	straight shape is adopted. This problem was corrected.
2020-0710 2020-0691	The selected table cannot be deleted by the operation on the Tool DB maintenance screen. This problem was corrected.
2020-0709	The standard table on the Tool DB maintenance screen can be exported. This problem was corrected.
2019-0624 2019-0600	In the professional data output function, symbols "-" and "_" cannot be used for the project name. This problem was corrected.
-	When the flat Z tolerance input value of the flat face machining is illegal, the displayed tool chip message becomes inappropriate. This problem was corrected.
2020-0706	MAKINO.MosServerSetting.exe of FFCAM 2019 and 2020 does not start up. This problem was corrected.

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Operation functions

DUG No.	Description
2020-0104 2020-0421	The simulation speed of the CL simulation is slow. This problem was corrected.
-	In the rest model color set of CL simulation, when the uncut amount is the same as the model tolerance, the rest model color is not drawn in the simulation result. This problem was corrected.
-	In the CL simulation, "Simulation Operation Failed." message is sometimes displayed. This problem was corrected.
2020-0109	When an error message is displayed after the macro name and the macro expression are input and the save button is clicked on the Custom macro edit screen, operations of FFCAM becomes unavailable. This problem was corrected.
-	When the tool radius (MCcutterRadius) of the variables list is used on the Custom macro edit screen, the value becomes a half value of the tool radius regardless of the tool type. This problem was corrected.
2020-0138	When a function "POW" is used on the Custom macro edit screen, illegal macro expression is determined even when the number of digits of the calculation value is less than 15. This problem was corrected.
2020-0072 2020-0096	When the Chain selection screen is displayed, view operation becomes not possible. This problem was corrected.

2020-0125	
2020-0229	
2020-0374	

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Machining function

DUG No.	Description
2019-0767 2019-0768 2019-0774	In the contour machining, interfere of the tool occurs. This problem was corrected.
2019-0087	When the surface vertical standard and the incline angle of "Axis control method" was specified in the 5-axis along surface machining, the tool path was not output according to the value of the specified incline angle. This problem was corrected.
2019-0228	The calculation fails in the 5-axis conversion in the contour projection machining. This problem was corrected.
2019-0256	When the 5-axis conversion is conducted in the contour projection machining, the tool path of the projection section is not output. This problem was corrected.

Operation functions

DUG No.	Description
-	When the view screen is closed while One-click masking screen is displayed, an exceptional error occurs. This problem was corrected.
-	When "Back" button is operated in series after the "There is no candidate." message is displayed by the chain select function on the Model element select screen, an exceptional error occurs. This problem was corrected.
-	While starting up the Path direction specification screen, clicking "Rotate" button on the tool bar with the mouse for several times disables the mouse button operations. This problem was corrected.
2019-0265	The "Tool load reduction cut" function which cannot be used in the project machining was displayed on the screen. This function was deleted from the screen.
-	When the holder name loaded from the tool DB was longer than 17 letters, it was corrected to make the folder name in 16 letters by deleting the letters after the 17th letter.

-	On the Machining direction and machining origin specification screen for the drilling, changing the coordinate value of the origin does not move the origin drawn on the screen. This problem was corrected.
2019-0666	On the Machining parameter setting screen, executing "Acquisition of tool in pre-processing," changing the machining name, and executing "Acquisition of tool in pre-processing" again sets inappropriate values to the tool diameter and the finishing allowance. This problem was corrected.
-	On the Machining parameter setting screen, while an error provider is displayed in the tool diameter of "Pre-machining tool," "Acquisition of pre-machining tool" is executed. After an execution, a value larger than 0 is input to the tool diameter; however, the error provider remains. This problem was corrected.
-	In "Acquisition of pre-machining tool" on the Machining parameter setting screen, when the Tool DB screen is cancelled, 0 is set to the tool diameter. This problem was corrected.
-	When "Acquisition of pre-machining tool" on the Machining parameter setting screen is executed, if the diameter of the acquired tool is 0, an error is not output in the parameter check. This problem was corrected.
2019-0668	The parameter check of the "machining name" on the Machining setting screen is not correctly processed. This problem was corrected.
-	After opening the Avoid, approach, and cut setting screen, sometimes moving to other setting screen becomes unavailable. This problem was corrected.
-	In the machining work setting, the indicator color of the box dimension value and the coordinate axis color of the absolute coordinate system are different. This problem was corrected.
-	On the machining creation tree view, copying the tool data of simultaneous 5-axis machining by the right-click menu and pasting the data to other machining, an exceptional error occurs. This problem was corrected.
-	For the process comment and machining comment on the machining creation tree view, the processing specifications for checking the number of letters are different. This problem was corrected.
2018-1228 2019-0231	When the flat end mill is specified in the simultaneous 5-axis machining, 0 cannot be specified to the finishing allowance. This problem was corrected.
2017-0467	When the Parameter setting screen is opened from the tree view of machining creation, the screen is automatically scrolled to the top of the machining list. This problem was corrected.

2019-0377	In the CL edit, when the copied CL is deleted, FFCAM processing slows down. This problem was corrected.
2019-0273 2019-1169 2019-1502	The CL simulation does not simulate along the tool path but bites the machining geometry. This problem was corrected.
2016-2492 2017-1322 2017-1422 2017-2246 2018-0461	The screen darkens during an execution of CL simulation. This problem was corrected.
2019-0331 2019-0783	When other FFCAM project is opened and the simulation is conducted during the CL simulation, the screen turns to white. This problem was corrected.
-	When high speed is specified to "Simulation list mode!" in the CL simulation, if the history is displayed in the simulation list, the icon displaying the current history disappears. This problem was corrected.
2019-0382	When the cldata file output by FF/camV.8 is loaded with FFCAM2018.2, the simulation turns to an error. This problem was corrected.
2019-0439	When "Accuracy of returning one machining" is set to High speed in the CL simulation, the result of the simulation becomes the same as the result when High accuracy is set for "Accuracy of returning one machining." This problem was corrected.
2019-0479	When the machining work or the machining geometry is specified with STL, if the blank is effective, the CL simulation does not work properly. This problem was corrected.
-	In the CL simulation, if the machining posture is checked on the Machining creation screen, the FFCAM screen stops operating normally. This problem was corrected.
-	In the tool information shank of the CL simulation, only the angle has a large number of digits. This problem was corrected.
-	In the dividing setting of the CL division, the holder stages which are not editable can be deleted. This problem was corrected.
-	When the pressed status of the tool display button of the CL division is reset without an intention of the user. This problem was corrected.
-	In the "Display item edit" in the right-click menu on the Repost screen, "CL division" and "CL division setting" are not provided. This problem was corrected.
2019-0317	The value used in the "Error surface check" function is not correctly handed to processing, the function is not executed normally. This problem was corrected.

-	After validating "Box hide" of the measurement function, "Box hide" function does not correctly operate when the measurement function screen is opened for the next time. This problem was corrected.
-	When the projected plane is inclined in the "Curve creating" function, the drawn curve cannot be projected properly. This problem was corrected.
2019-1025	When zoomed in in the view operation in FFCAM2019, the seat body cannot be selected. This problem was corrected.
-	In FFCAM2019, when the model view is operated with a 3D mouse, inappropriate drawing sometime occurs. This problem was corrected.
-	In FFCAM2019, the results of the range selection of the top screen are different when the selection was made right after starting up FFCAM and when the selection was made after completion of "Sheet reverse" screen. This problem was corrected.
-	In FFCAM2019, "Select only the visible element" on the Model element select screen is not functioning. This problem was corrected.
2019-1543	In FFCAM2019, opening a model file results in drawing with a surface drop. This problem was corrected.
-	In the stock model drawing, update of the view operation drawing is late. This problem was corrected.
-	On the Processing instruction sheet layout (HTML) screen, the "Process comment" label in the document content is inappropriately indicated. This problem was corrected.
-	In the tool comment position of the csv file, the blade comment was output. This problem was corrected.
2019-0619	In the csv file, information of several NC files cannot be output. This problem was corrected.
-	When an NC file is not output in the operation, the code at the upper section of the NC file is not output to the csv file. This problem was corrected.
-	In the FFCAM operation, the log file of the Processing instruction sheet process was output. This problem was corrected.
-	After the NC data is registered to the NC data center screen, if the machining name related to the data is changed, an exceptional error occurs during startup of the NC data center screen for the machining operation simulator. This problem was corrected.
-	On the Professional data output screen, the data is not output to the specified data output destination. This problem was corrected.

-	When the PC is operated with a user account which is different from the user account used for installing FFCAM, the letter string specified in the FFCAM file property is not displayed in the explorer. This problem was corrected.
-	The parameter label indication on the Machining parameter setting screen of the plane machining is inappropriate. This problem was corrected.
-	In FFCAM traditional Chinese version, the label indication of the Professional data output screen is inappropriate. This problem was corrected.
-	In FFCAM simplified and traditional Chinese versions, the label indication of the Machining parameter setting screen is inappropriate. This problem was corrected.
-	In the help file of FFCAM, the parameter which cannot be used in the 3D curve machining was described. This problem was corrected.

Post Processor

DUG No.	Description
2014-2052	An error message notifying the maximum number of displayed digits in the FFPOST operation was unclear. This problem was corrected.
2019-0563	When the group of codes specified on the POST edit screen is empty, an operation error is output. This problem was corrected.
-	An error message notifying the 180 degree inversion of the tool vector in FFPOST operation is unclear. This problem was corrected.
2019-1118	A macro which was to be deleted on the POST edit screen is referred to in other function, the corresponding macro cannot be deleted normally. This problem was corrected.

Installer

DUG No.	Description
-	In the installer of FFCAM in the English version, simplified Chinese version, and traditional Chinese version, the Japanese version Help file for FFPOST and FFTranslator are installed. This problem was corrected.
2019-1116	Depending on the location to install FFCAM, invalid uninstallation is executed when uninstallation is tried. This problem was corrected.
-	The version of hair line finish registered in the registry was incorrect. This problem was corrected.
-	Depending on the installation order of the drivers necessary for FFCAM, installation sometimes fails. This problem was corrected.