

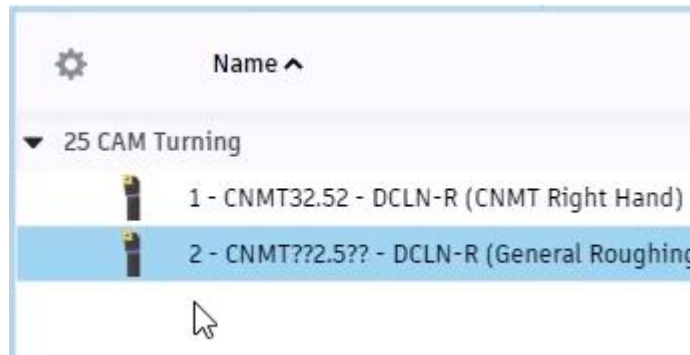
Step-by-step guide

Create a lathe tool library

Create and customize a digital tool library that can be accessed by any computer you log into.

Learning objectives:

- Create a new tool library.
- Create a custom lathe tool.
- Copy and paste tools.



The completed exercise

1. Open a new untitled design, then click your photo or initials in the screen's top right corner. Choose Preferences from the menu.

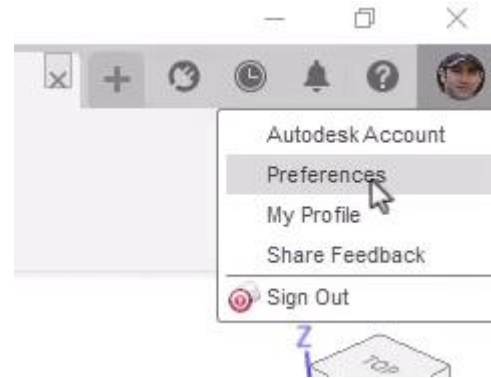


Figure 1. Open your user preferences

2. In the Preferences dialog, navigate to and select the Manufacture section.

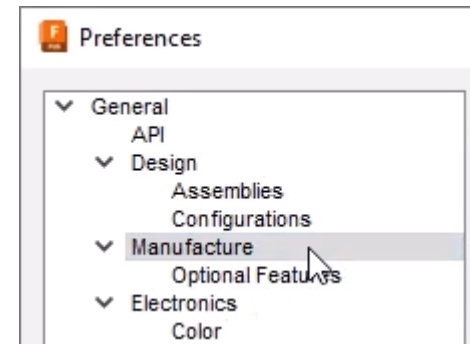


Figure 2. Select Manufacture

3. Verify that the Enable Cloud Libraries option is checked, then OK the Preferences dialog. This allows you to store tool libraries on the cloud so they can be accessed by any computer you use.

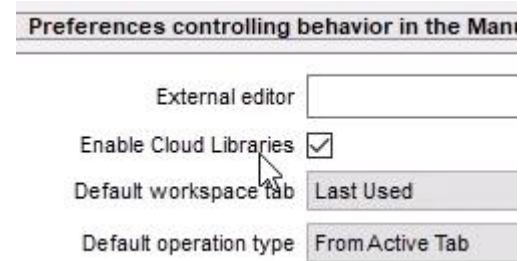


Figure 3. Enable Fusion's cloud libraries

4. Use the Workspace chooser to navigate to the Manufacture workspace.



Figure 4. Navigate to the Manufacture workspace

5. Open the Tool Library dialog by clicking Manage> Tool Library.

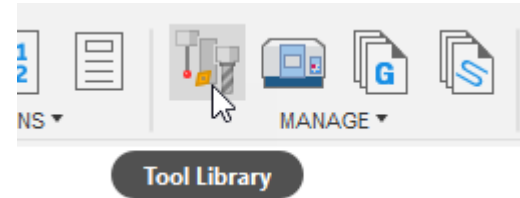


Figure 5. Open the tool libraries

6. Inside the Tool Library dialog, you can access various types of libraries. Any tools used or created in a document will be listed in the Documents section. Tool libraries are stored on your local machine can be accessed in the Local section, and stock libraries can be accessed in the Fusion Library section.

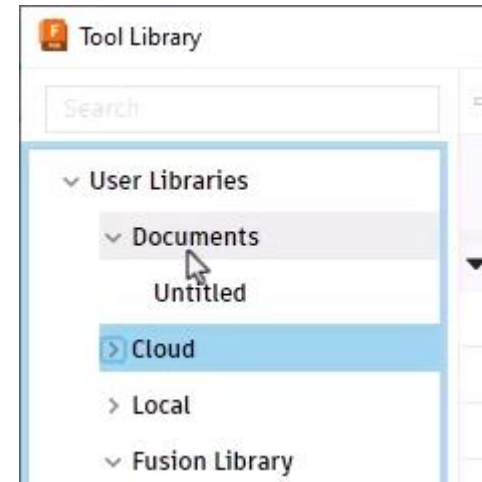


Figure 6. Explore the various library types

7. You can create a new cloud library that can be accessed from any computer you use. To do this, right-click the Cloud section and choose New library from the menu.

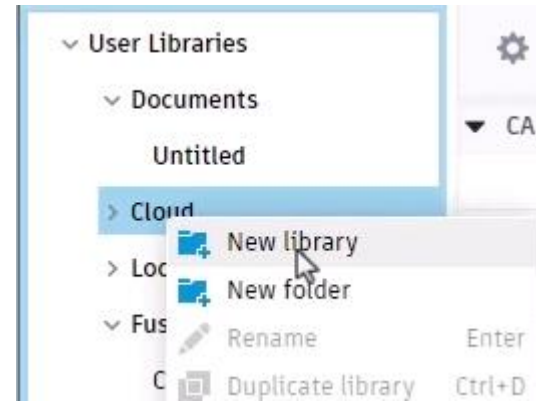


Figure 7. Create a new Cloud library

8. Rename the new library. For the purposes of this documentation, the new library is named 25 CAM Turning.

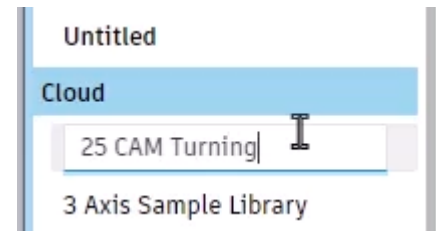


Figure 8. Rename the new library

9. Select the Vendor section and notice that several vendors have loaded their tool information into Fusion.

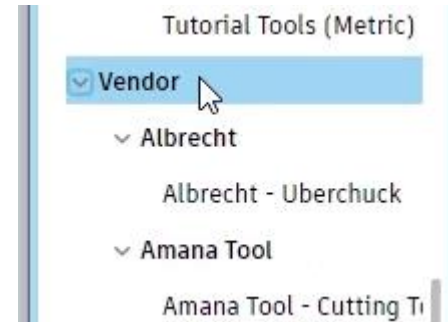


Figure 9. Select the Vendor section

10. Filter the tools by selecting the Turning option in the Tool category section.

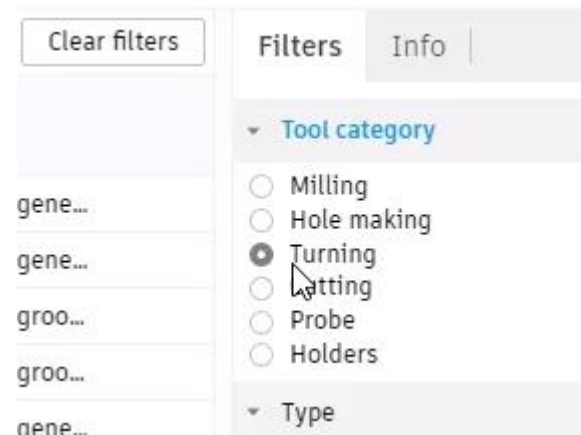


Figure 10. Filter the tools

11. Select the tool and notice the dialog displays many of the tool's details.

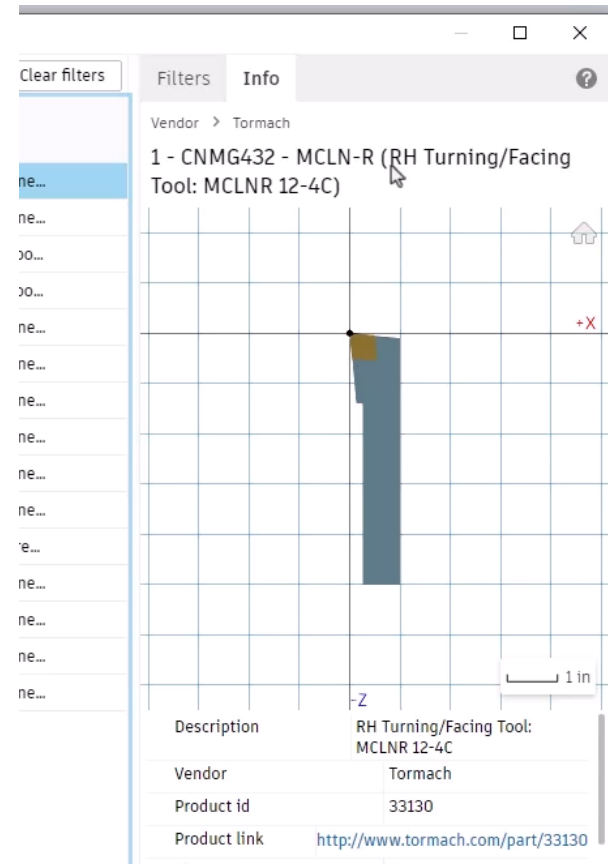


Figure 11. Inspect a tool

- 12.** Activate the Fusion Library option in the dialog's left column and make sure the Turning filter that you applied in Step 10 is still active.

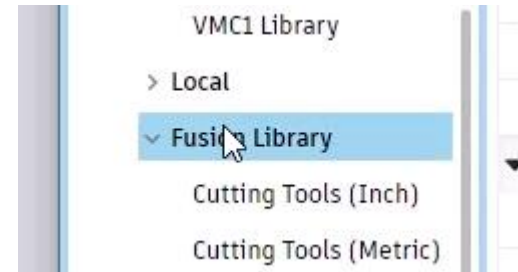


Figure 12. Activate the Fusion libraries

- 13.** Locate and select the CNMT32.52 – DCLN-R tool shown in the image on the right.

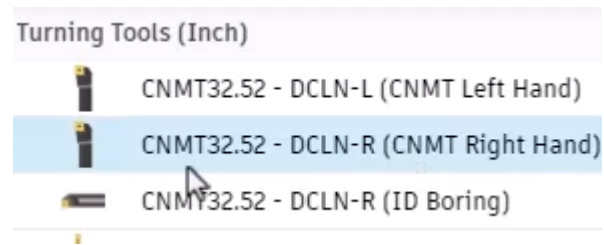


Figure 13. Select a tool

- 14.** Notice that you can click and drag the tool preview to rotate it. Continue to explore the tool's listed parameters.

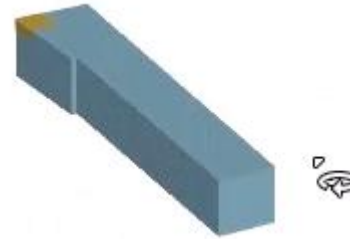


Figure 14. Inspect the tool

- 15.** After you've explored the tool's information and you're sure you selected the correct tool, right-click it and choose Copy tool from the menu.

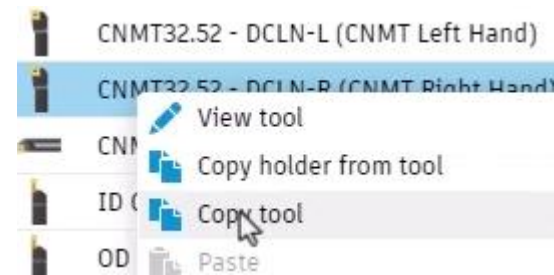


Figure 15. Copy the tool

- 16.** Return to the 25 CAM Turning tool library that you created in Step 8.

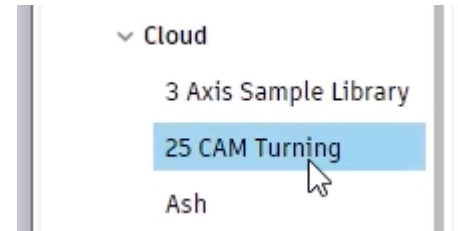


Figure 16. Return to the custom tool library

- 17.** Right-click inside the tool library and choose Paste tool from the menu.

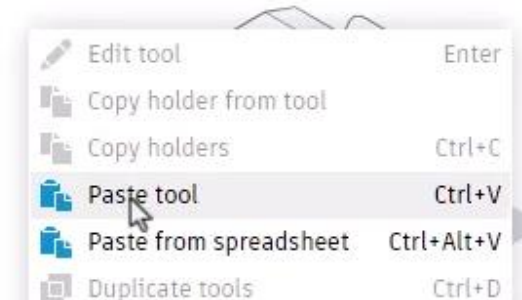


Figure 17. Paste the copied tool into the library

- 18.** Notice that the copied tool is pasted into your custom tool library.

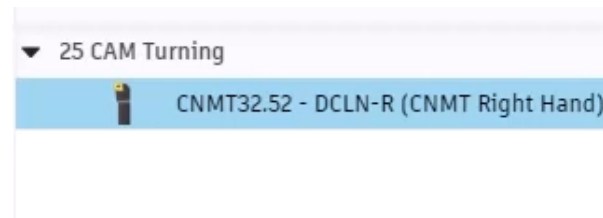


Figure 18. Inspect the result

19. Right-click the tool and choose Edit tool from the menu.



Figure 19. Edit the pasted tool

20. Note the various ways you can edit the tool's copy, then navigate to the Post processor tab. Enter **1** into the Number box to note that this tool is in the tool holder's #1 slot. Click the Tool Library dialog's Accept.

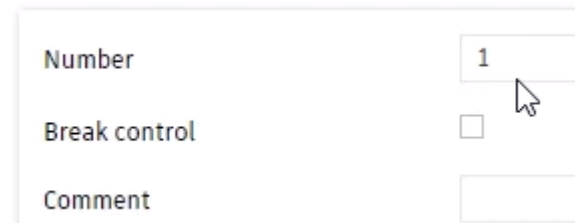


Figure 20. Change the tool's number

21. Notice that the new tool is now displayed with a 1 beside it. Instead of modifying a copied tool, you can also create completely new tools. Click the plus icon shown in the image on the right.

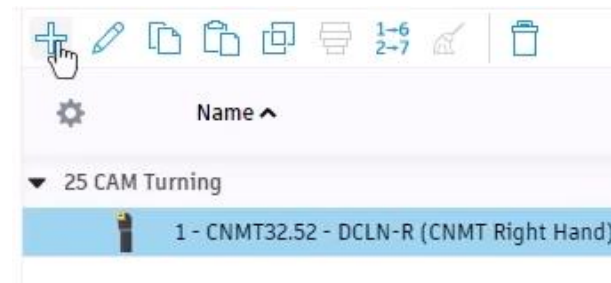


Figure 21. Create a new tool

22. Choose the Turning general tool from the Turning section

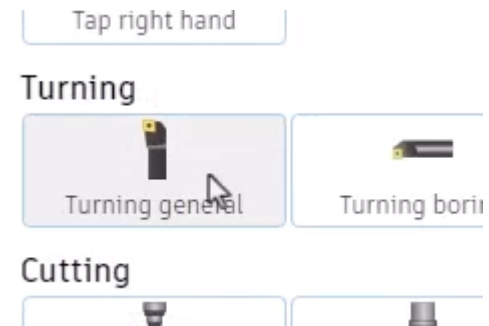


Figure 22. Choose the Turning general tool type

23. On the General tab, enter **General Roughing Lathe** into the Description box.

Description	<input type="text" value="General Roughing Lathe"/>
Vendor	<input type="text"/>
Product id	<input type="text"/>
Product link	<input type="text"/>

Figure 23. Enter the tool's description

24. Continue to the Insert tab to explore the ways you can customize the new tool's insert.

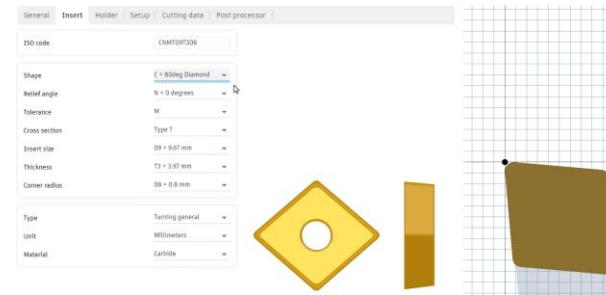


Figure 24. Note ways to customize the insert

25. Continue to the Holder tab, then choose the Inches option from the Unit menu. Use the image on the right to customize the tool's holder information.

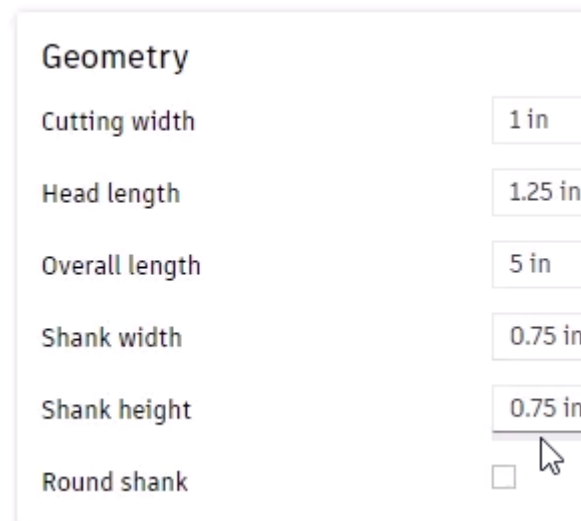
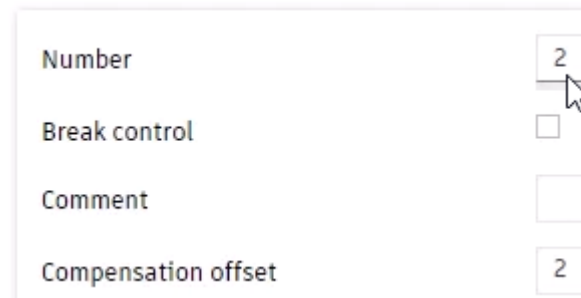


Figure 25. Customize the tool's holder

26. Continue to the Post processor tab and enter 2 into the Number box.

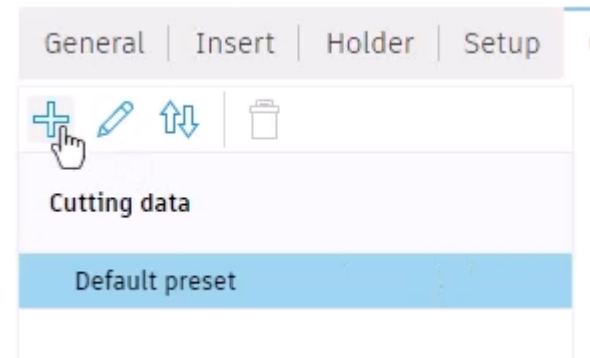


A screenshot of a software interface for a post processor. It features four rows of settings. The first row, 'Number', has a text box containing the value '2' with a mouse cursor pointing at it. The second row, 'Break control', has an unchecked checkbox. The third row, 'Comment', has an empty text box. The fourth row, 'Compensation offset', has a text box containing the value '2'.

Number	2
Break control	<input type="checkbox"/>
Comment	
Compensation offset	2

Figure 26. Identify the tool as Tool 2.

27. Navigate to the Cutting data tab and create a new preset by clicking the plus icon shown in the image on the right.



A screenshot of a software interface showing the 'Cutting data' tab. At the top, there are four tabs: 'General', 'Insert', 'Holder', and 'Setup', with 'Cutting data' being the active tab. Below the tabs is a toolbar with four icons: a plus sign (highlighted with a mouse cursor), a pencil, a double-headed arrow, and a trash can. Below the toolbar, there is a list of presets. The first item is 'Cutting data' in a light purple box. The second item is 'Default preset' in a blue box.

General	Insert	Holder	Setup
+ Pencil Double Arrow Trash			
Cutting data			
Default preset			

Figure 27. Create a new cutting preset

28. Rename the new cutting preset as Aluminum, then press Enter.

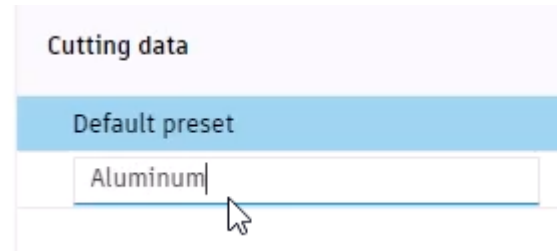


Figure 28. Rename the new cutting preset

29. With the Aluminum cutting preset selected, change the Surface speed value. Changing these values customizes the new preset's parameters.

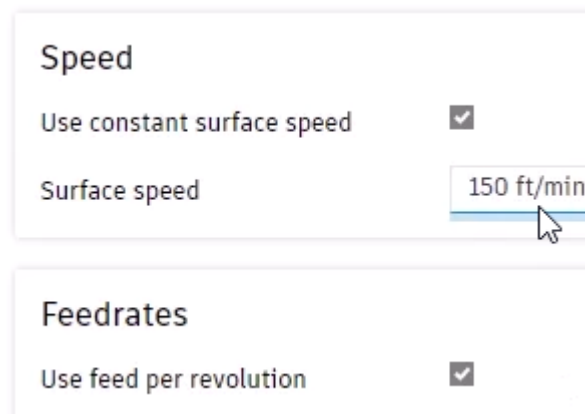


Figure 29. Change the preset's surface speed

30. After you're satisfied with the new tool's parameters, click the dialog's Accept.

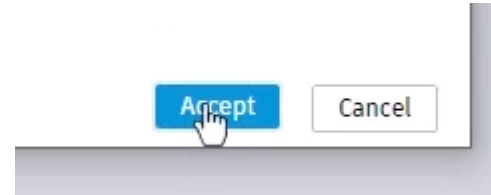


Figure 30. Click Accept

31. Notice the Cloud library now has two new tools: the first tool was copied and pasted into the library, and the second tool was created from scratch. When creating digital tools, it is very important to make sure the digital tool's parameters precisely match a physical tool's parameters. Close the Tool Library dialog. There's no need to save the design because the tools are already saved to the Cloud library.

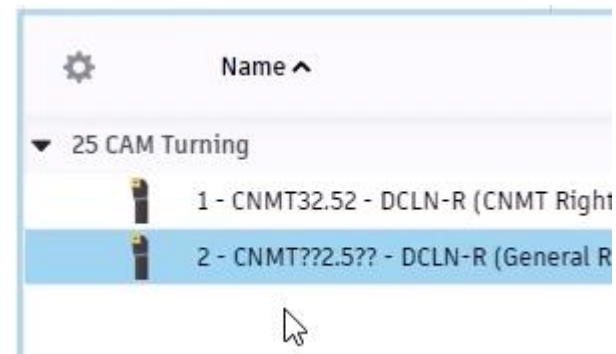


Figure 31. Inspect the tool library