

Siemens PLM Software

NX CAM 12.0: Smooth Cutting in Corners Except the Last Pass

Smooth all corners except for the last cutting pass.

About NX CAM

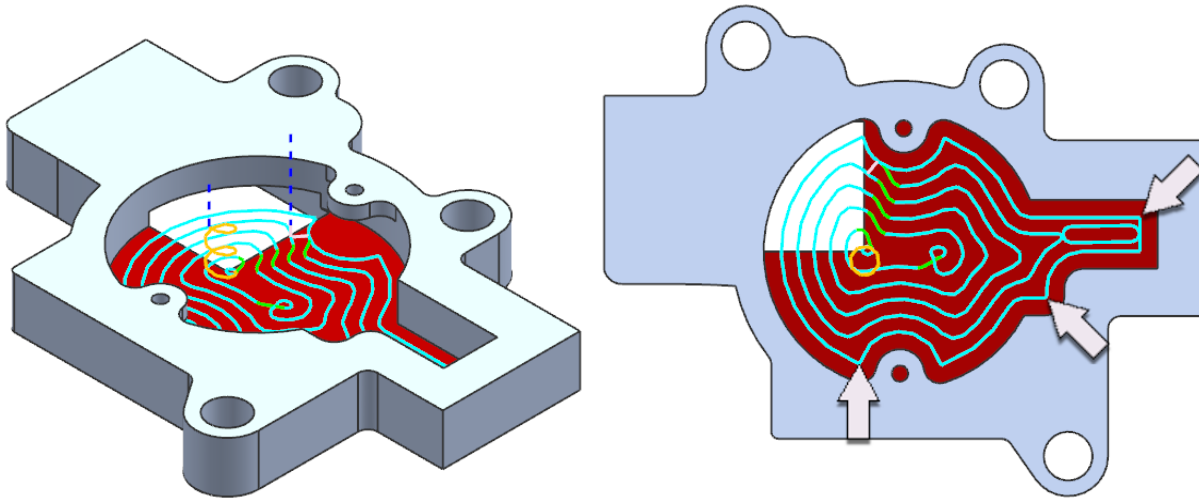
NX™ CAM software has helped many of the world's leading manufacturers and job shops produce better parts faster. You can also achieve similar benefits by making use of the unique advantages NX CAM offers.

This is one of many hands-on demonstrations designed to introduce you to the powerful capabilities in NX CAM 12.0. In order to run this demonstration, you will need access to NX CAM 12.0.

Visit the [NX Manufacturing Forum](#) to learn more, ask questions, and share comments about NX CAM.

Hands-on Demonstration: Smooth Cutting in Corners Except the Last Pass

You can now smooth corners for all but the last cutting pass in Planar and Cavity Milling operations. This allows you to smoothly and efficiently machine the volume while minimize the un-machined material left in the corners by the last pass.

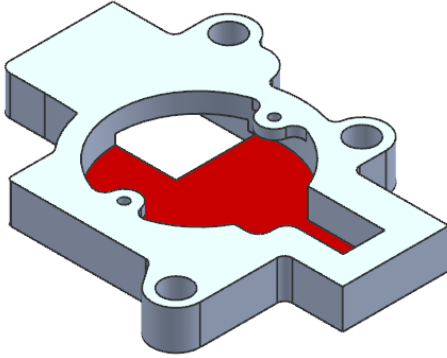


Prerequisites:

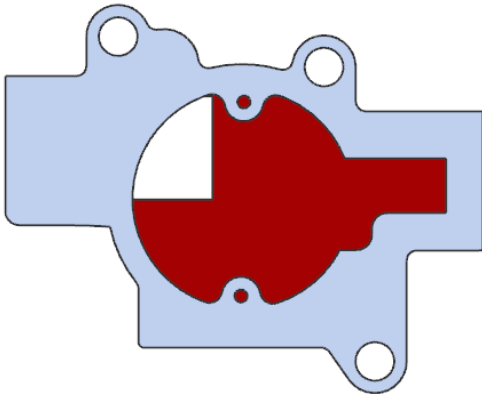
1. You will need access to **NX CAM 12.0** in order to run this demonstration.
2. If you haven't done so already, download and unzip **smooth_all_but_last_pass.7z**.

Demo:

1. Open **smooth_all_but_last_pass_1.prt** in NX.

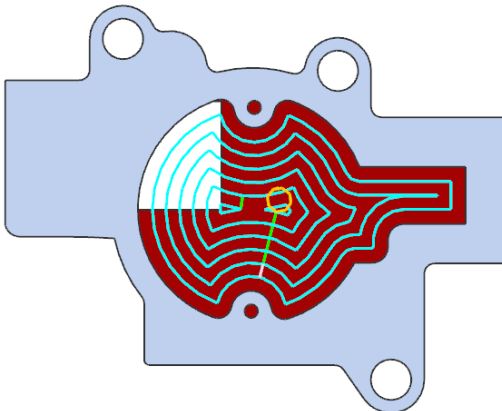



2. Change the view orientation to **Top**.

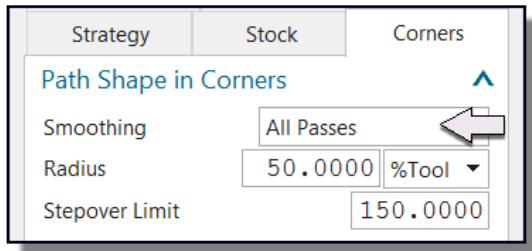



3. Double-click **CAVITY_MILL** to edit the operation.
4. Click **Replay** .

None of the corners in the tool path are smoothed because Smoothing is set to None.

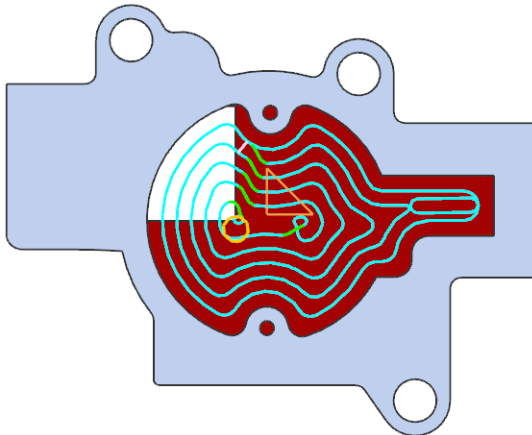




5. Click **Cutting Parameters** .
6. Select the **Corners** tab.
7. Select **All Passes** from the **Smoothing** list.



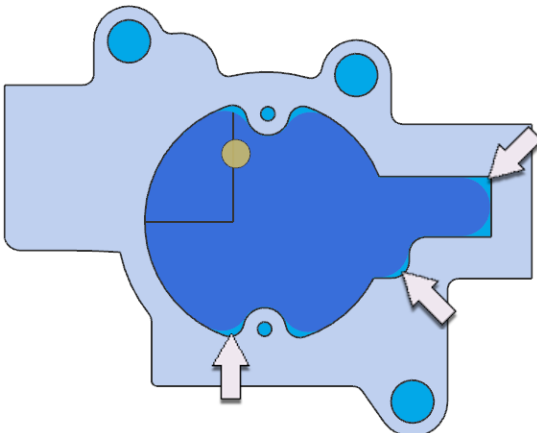
8. Click **OK**.
9. Click **Generate** .

All corners in the tool path are smoothed.



10. Click **Verify**  and select the **3D Dynamic** tab.
11. Click **Play** .

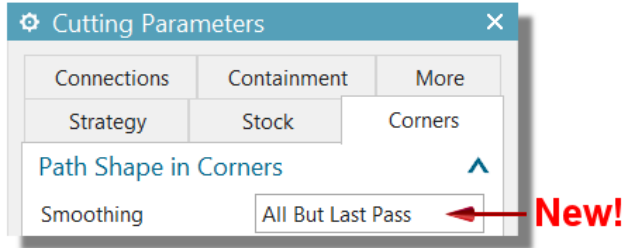
Although this option smoothly and efficiently machines the volume, excess material is left in the corners of the machined area due to smoothing in the last pass.



12. Click **OK**.

13. Click **Cutting Parameters** .

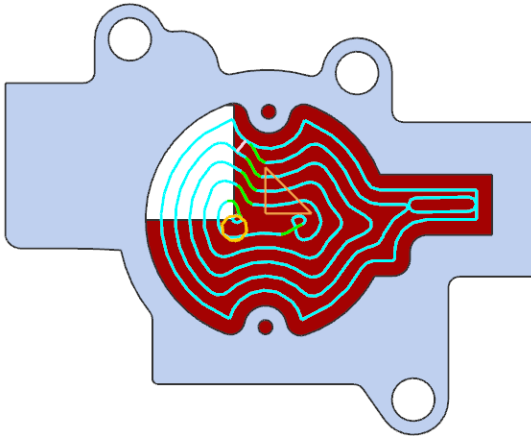
14. Select **All But Last Pass** from the **Smoothing** list. This option is new.



15. Click **OK** in the **Cutting Parameters** dialog box.

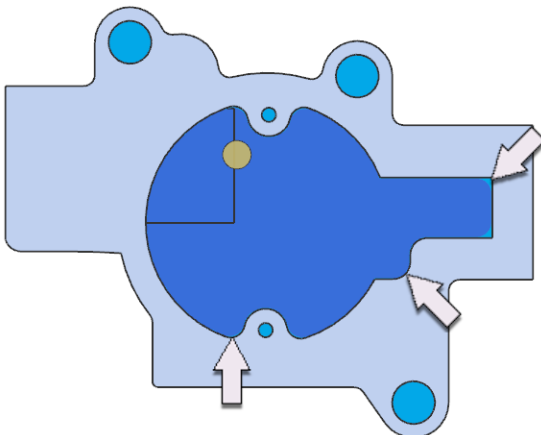
16. Click **Generate** .

All corners are smoothed except for those in the last cutting pass.



17. Click **Verify** and **Play**.

As a result, excess material is no longer left in the corners of the machined area.



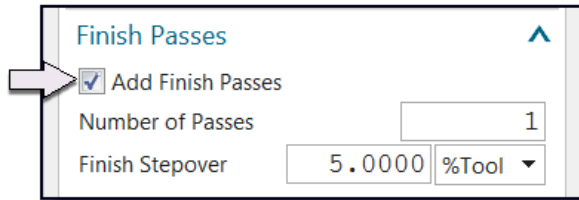
This behavior is consistent whether or not Add Finish Passes is turned on.

18. Click **OK**.


19. Click **Cutting Parameters** .

20. Select the **Strategy** tab.

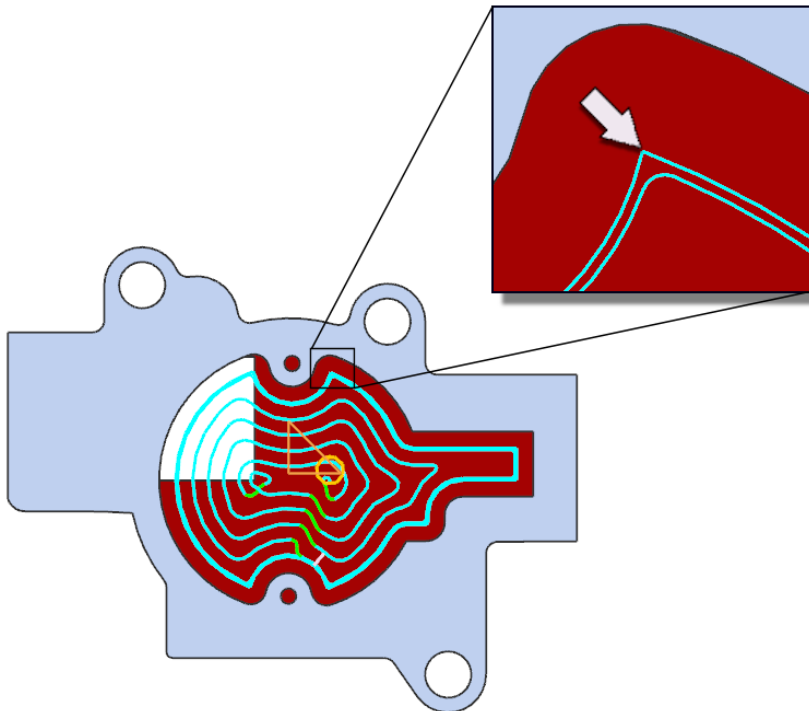
21. Select the **Add Finish Passes** check box.



22. Click **OK**.

23. Click **Generate** .

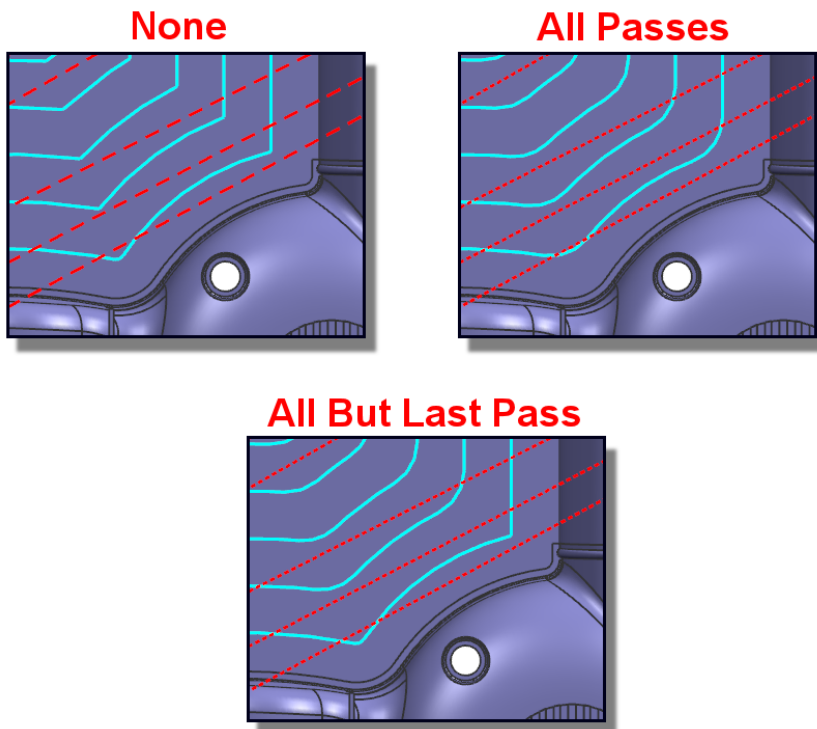
All passes except the finish pass (the last pass) are smoothed.



24. Click **OK**.

25. Click **OK** to complete the operation.

26. Open **smooth_all_but_last_pass_2.prt** and observe how the various Smoothing options affect the tool path.



27. Continue practicing using the other operations in this part.
28. When you are finished, close the part without saving.

Siemens Industry Software

Headquarters

Granite Park One
5800 Granite Parkway
Suite 600
Plano, TX 75024
USA
+1 972 987 3000

Americas

Granite Park One
5800 Granite Parkway
Suite 600
Plano, TX 75024
USA
+1 314 264 8499

Europe

Stephenson House
Sir William Siemens Square
Frimley, Camberley
Surrey, GU16 8QD
+44 (0) 1276 413200

Asia-Pacific

Suites 4301-4302, 43/F
AIA Kowloon Tower, Landmark East
100 How Ming Street
Kwun Tong, Kowloon
Hong Kong
+852 2230 3308

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