

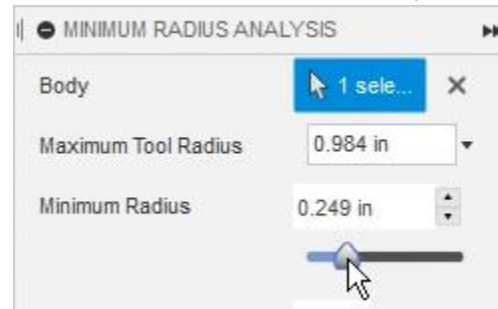
Lesson: Identify Types of Pockets

In this lesson, you'll inspect a model to determine the tool needed to cut its geometry.

Learning Objectives

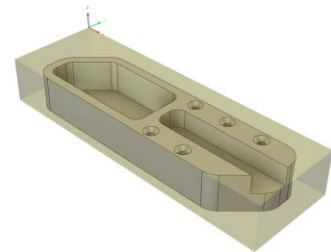
- Demonstrate how to identify pockets.
- Use Measure to find minimum internal radii.

- Use Minimum Radius Analysis.

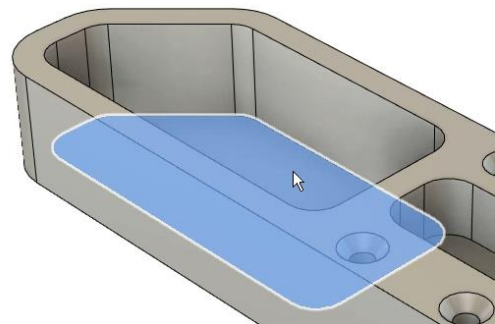


The completed exercise

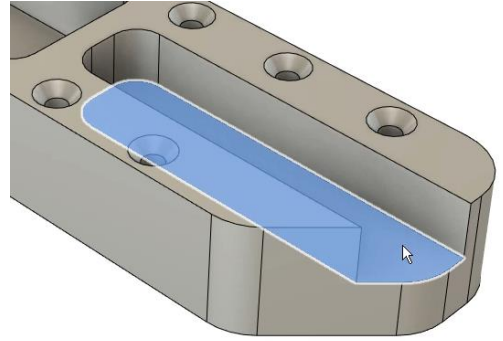
1. Continue with the *Introduction to Milling* file from the previous module. If you had any difficulties with the file up to this point, you can upload the supplied *Introduction to Milling Pockets.f3d* file.



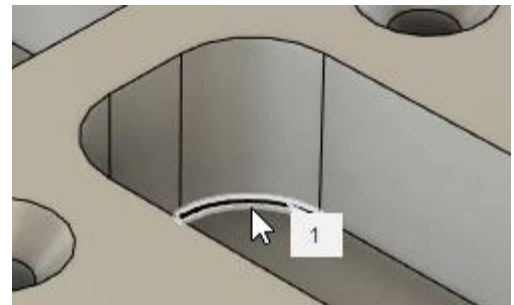
2. The model has two types of pockets. The pocket shown in the image on the right is an internal pocket or a closed pocket.



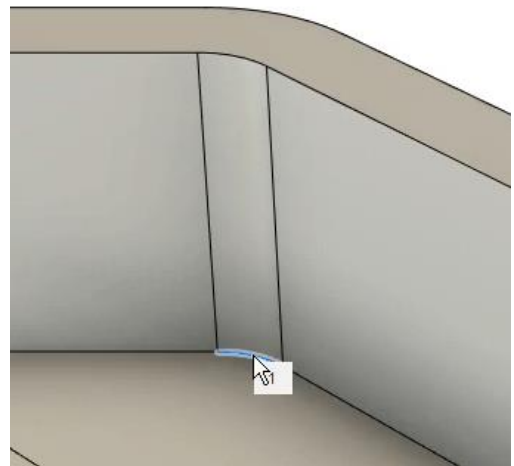
3. The second pocket, shown in the image on the right, is an open pocket. The open pocket is not completely enclosed. The tool can enter the pocket from the side instead of having to plunge from the top.



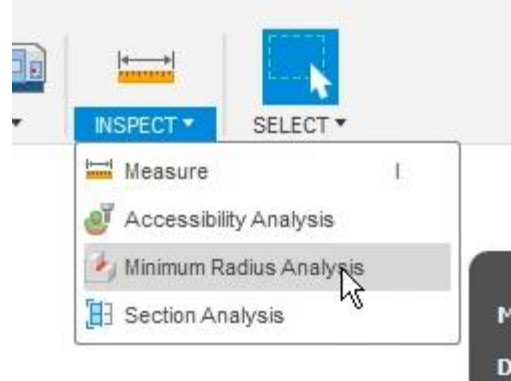
4. Before creating an operation to cut the pockets, measure the smallest radius to determine the tools that should be used to cut the geometry. Click Inspect> Measure and measure the radii in each pocket. For the open pocket, the radius is 0.25 inches. A 0.5 inch tool is exactly the right diameter to cut this geometry. Because the tool is the exact size of the radius, the tool could chatter against the stock. A slightly smaller tool will need to be selected.



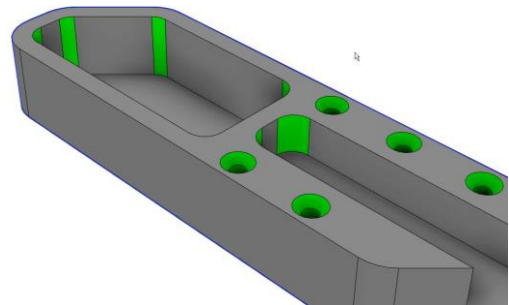
5. Measure the radii in the closed pocket and note that they have the same radius as the open pocket.



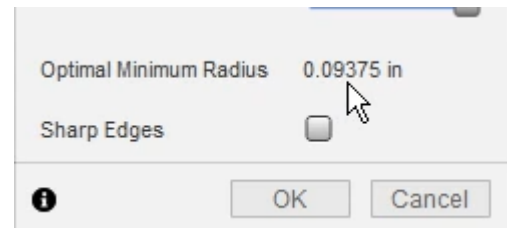
6. To measure the part's radii using a different method, click Inspect> Minimum Radius Analysis.



7. For the dialog's Body selection, choose the model in the Canvas. The model's radii are automatically detected and analyzed.



8. The suggested tool size is listed in the dialog. However, this is taking the countersunk holes into consideration.



9. Drag the dialog's Minimum Radius slider until the countersunk holes turn red. Once the countersunk holes turn red, note the value listed above the Minimum Radius slider. The tool's minimum radius to cut the green radii is 0.249 inches. Click the dialog's Cancel to end the analysis. Save the file and continue to the next module.

