Lesson: Create a Revolve

In this lesson, you’ll explore using the Revolve tool and a sketch to create solid geometry.

Learning Objectives

- Use Revolve.
- Modify feature properties.

The completed exercise

1. Upload and open the supplied file “Revolved Coupler.f3d”.

2. The sketch in this file can be revolved to create either a solid part or a surface body. The process for creating either is the same. A closed profile is required for creating a solid part, but an open profile can be used to create a surface body. In the Solid tab, click Create> Revolve.
3. When the Revolve tool is opened, the sketch profiles automatically selected because it is the only sketch in the file. An axis of revolution needs to be selected for the revolve. For the control panel’s Axis selection, choose the long straight line indicated in the image on the right.

4. A preview appears in the canvas to illustrate the revolve. Click the OK button in the control panel to accept the revolve.

5. After the revolve has been created, the input selections can be edited. Right-click on the Revolve1 feature in the timeline and select the Edit Feature option.
6. In the control panel, click the X icon next to the Axis selection to clear the selection.

7. The axis of resolution does not have to be a sketched entity. For the new selection, choose the X axis indicated in the image on the right. Click the OK button in the control panel.

8. The new revolve uses the X axis as its axis of revolution.
9. A revolve does not have to be revolved 360°. Edit the Sketch1 feature. In the control panel, change the Type selection to the Angle option. Enter a value of 90° into the Angle field. The selections are used to create a body that is revolved only 90°. Change the Type selection back to the Full option and click the OK button. Navigate to a home view of the model, then save the file and continue to the next module.