Inventor 2011 Tutorials
iLogic Vessel - Part 3
Shell Development

Part 3 of the iLogic Vessel Tutorial continues with the development of the shell. The objective will be to create a shell that is driven by the dimensions in the parent assembly. Once complete, you will understand how to use parameters, and dimensions to control the shell for use in iLogic vessel assemblies.

Create a new part using *%ProgramFiles%\Autodesk\Inventor 2011\Templates\Vessels\vessel.ipt* as the template. Save the file as *Shell.ipt*.

You can download the files here. Extract the contents to the iLogicTutorial workspace.

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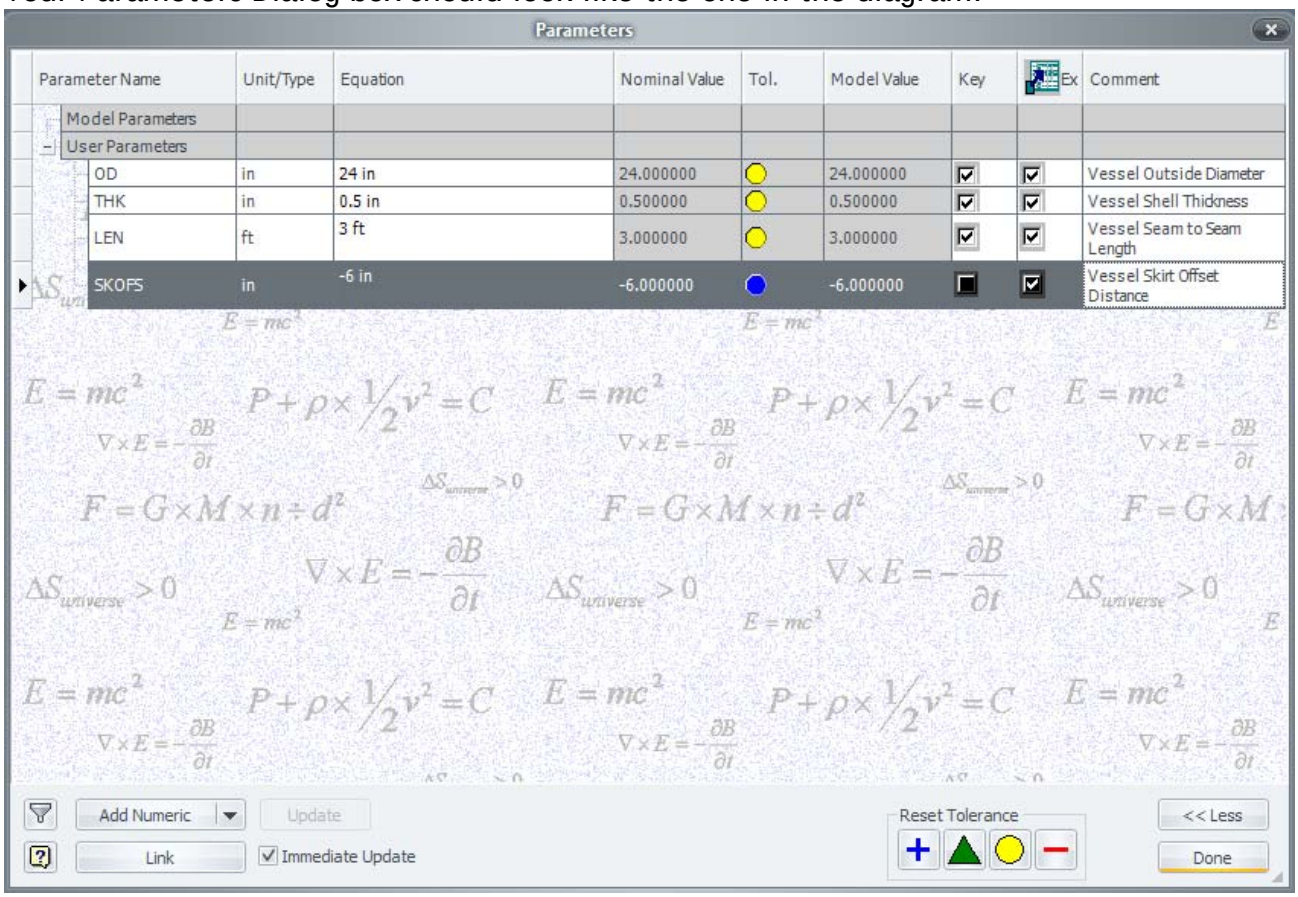
Shell Parameter Configuration

1. Open the Parameters Dialog box
    a. Delete the Type Parameter, as it is not required for the Shell
    b. Add the Seam to Seam Length Parameter
        i. Click *Add Numeric*
        ii. Parameter Name: **LEN**
        iii. Unit/Type: **ft**
        iv. Equation: **3**
        v. Key: **Checked**
        vi. Export: **Unchecked**
        vii. Comment: **Vessel Seam to Seam Length**
    c. Add the Skirt offset length
        i. Click *Add Numeric*
        ii. Parameter Name: **SKOFS**
        iii. Unit/Type: **in**
        iv. Equation: **-6**
        v. Key: **Unchecked**
        vi. Export: **Unchecked**
        vii. Comment: **Vessel Skirt Offset Distance**
    d. Click *Done*

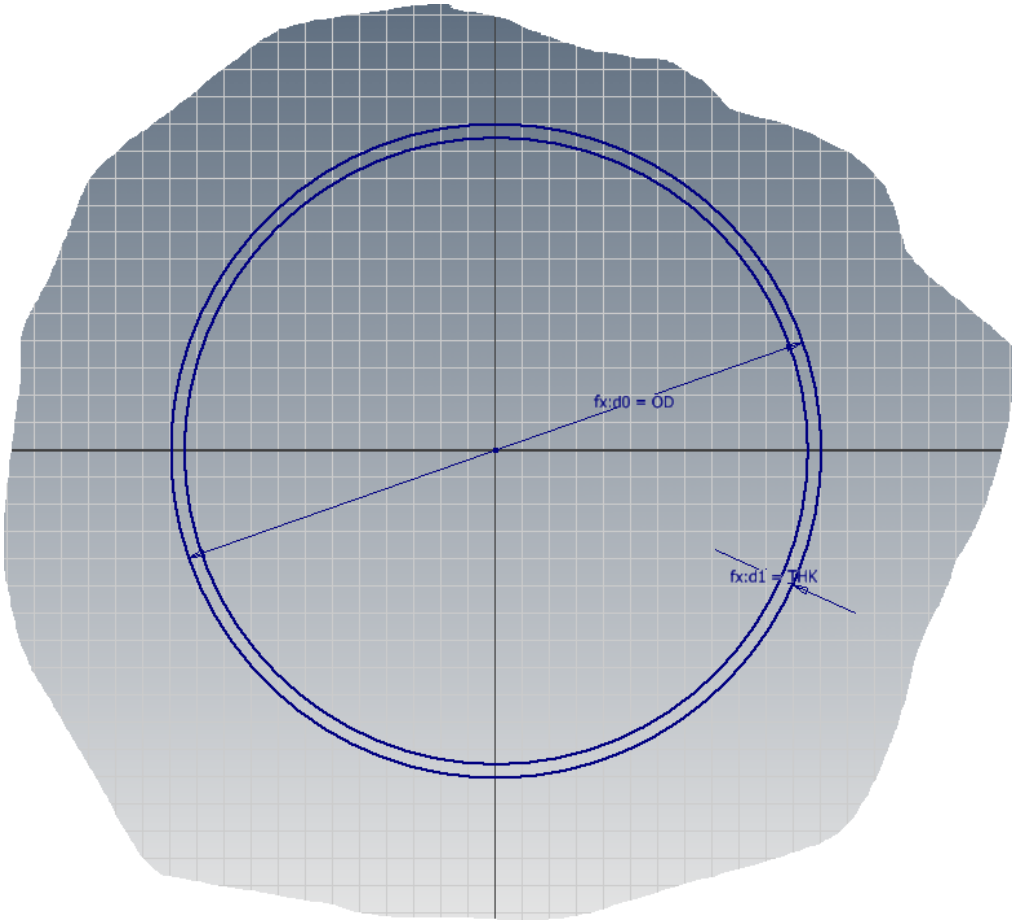
Your Parameters Dialog box should look like the one in the diagram.

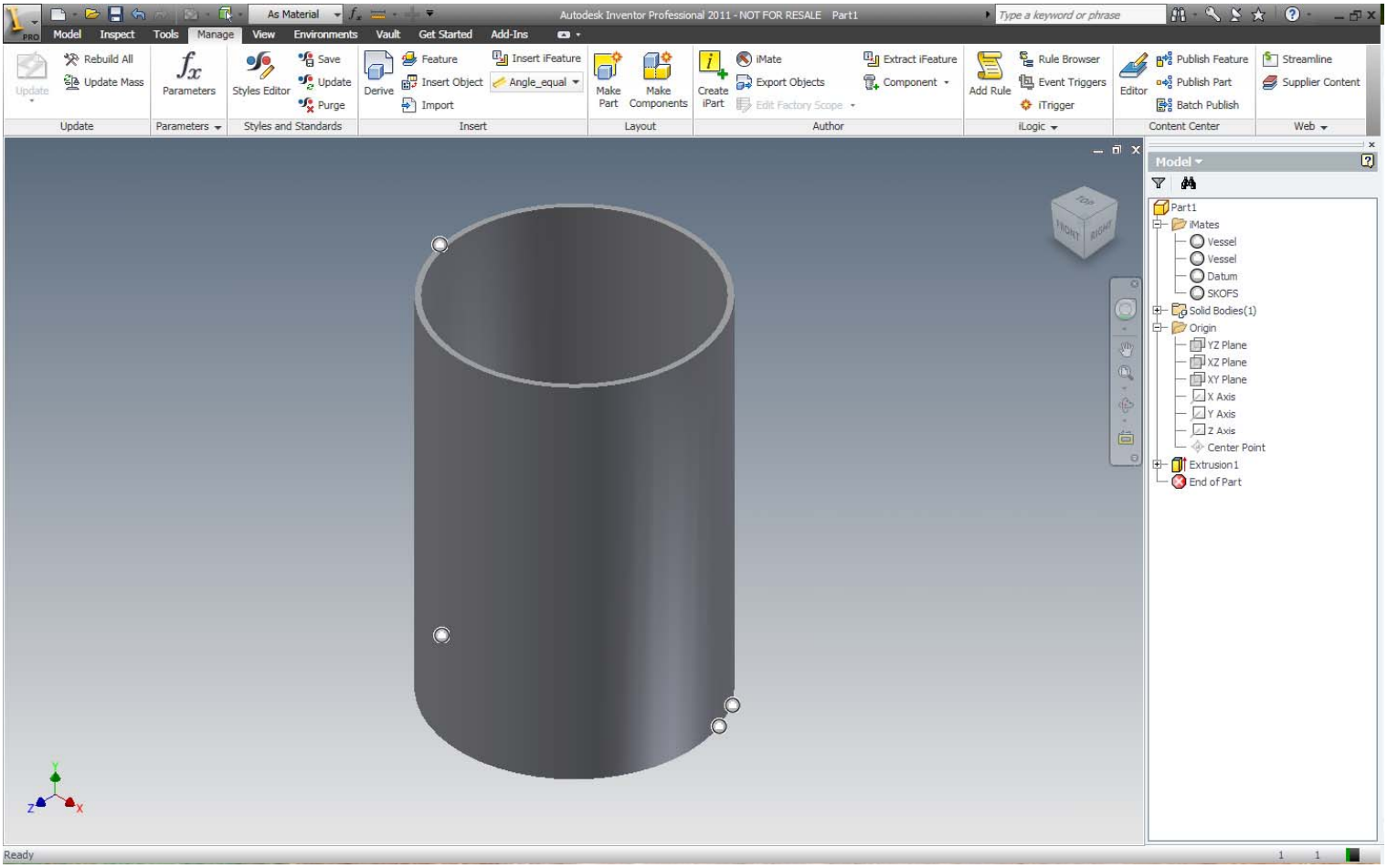


Define Shell

Create a new sketch, or redefine *sketch1* on the XZ Plane

1. Rename Sketch1 to *skShell*
2. Create the following sketch
3. Finish the sketch, and extrude the profile out from the center, using LEN and the distance
4. Rename the Extruded feature to *Shell*
5. Place two **Opposed Insert** iMates on each end of the extrusion, and rename both of them to *Vessel*
6. Place two Aligned Insert iMates on the bottom end of the shell, and rename one of them to Datum, and the other to SKOFS
7. Set the SKOFS iMate distance to **SKOFS**





Save the file, and save a copy as *Skirt.ipt*. We'll be modifying the shell for use as the skirt.