



Autodesk Inventor Tutorials

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Custom Parameters in iParts

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This lesson will introduce the topic of custom parameters. Custom parameters allow an iPart to take on user driven values. Say you have an iPart of various sizes of steel angle but you want the user to be able to define a custom length. You could never list all of the values possible in an iPart table. The custom parameters allow the user to define the length after selecting other iPart parameters.

For our example we will use an existing iPart. This aluminum extrusion was provided by Charles Bliss. You can get the part from his website <http://www.cbliss.com/inventor>. You could just as easily use your own parts. We assume you have read the first few lessons and know how to construct a basic iPart.

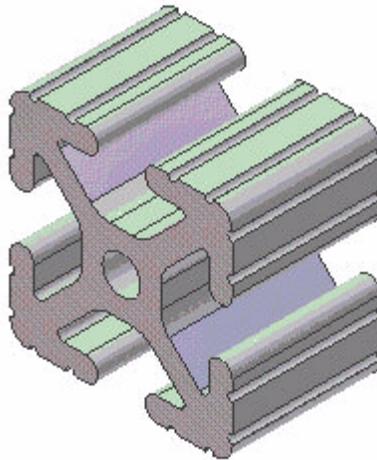


Figure 1 - Aluminum Extrusion Model

Open the part and then RMB on the table and select Edit Table. In the parameters name column find the parameters that you want to be custom. In this case it's the length of the part named **Extrude**. RMB on the parameter and you will see that the *Custom Parameter Column* tool is checked. This indicates that this parameter will be custom and hence user driven. (see Figure 2)

Checking this column allows for the user to enter any value for the length of the part. The other option is to still allow the user to define the parameter but limit their choices. Also on the RMB menu is **Specify Range for Column**. This allows you to limit the choices that the user has for the parameter. (see Figure 3)

You can specify two end points or only a minimum or maximum value. This is similar to the way iFeatures work. (see **Introduction to iFeatures**)

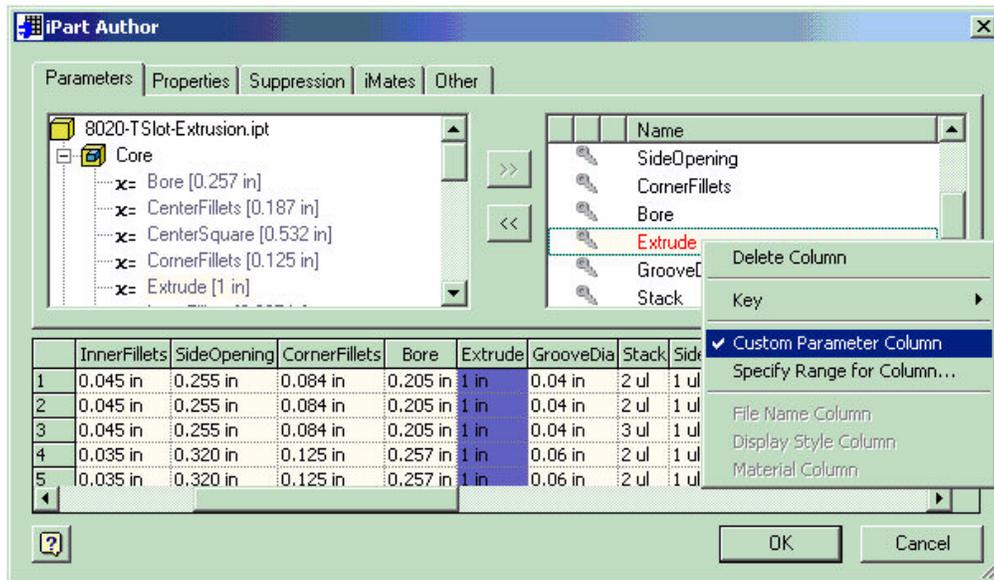


Figure 2 – Custom Parameters is Checked

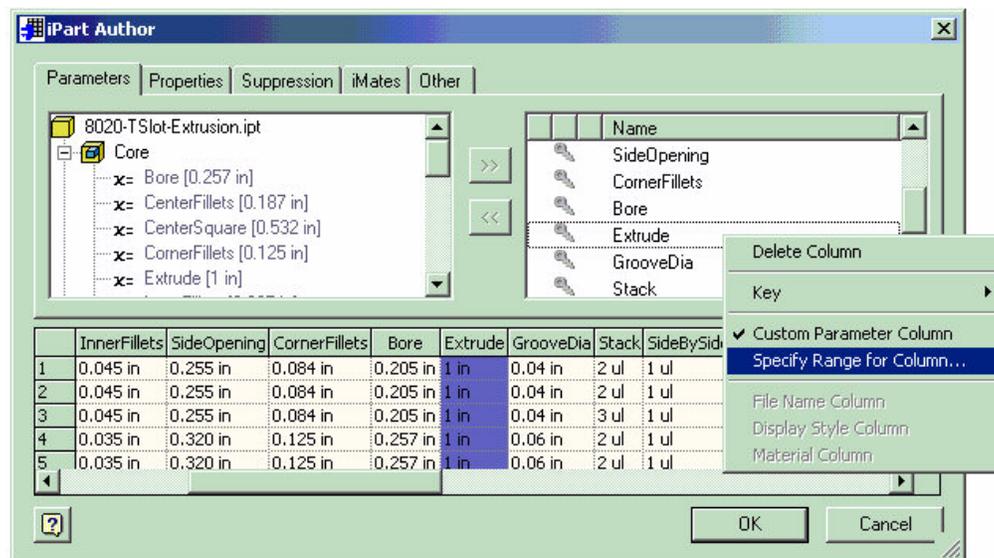


Figure 3 - Specifying Range for Parameter

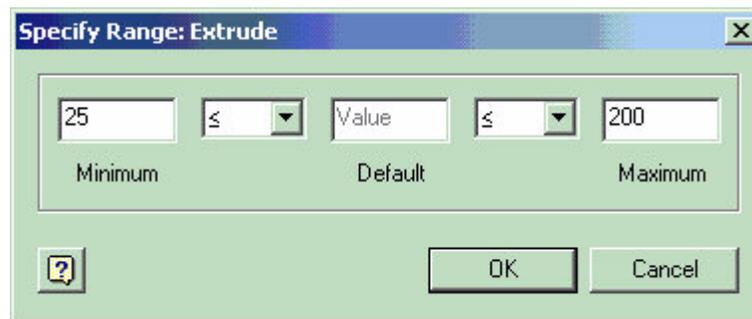


Figure 4 - Range Dialogue Box

In our example we limited the value to between 25mm and 200mm. For now however, uncheck **Specify Range for Column** and recheck **Custom Parameter Column**. We are now ready to place the iPart. Open an assembly and choose place component. Choose this iPart. You will be presented with a dialogue similar to Figure 5.

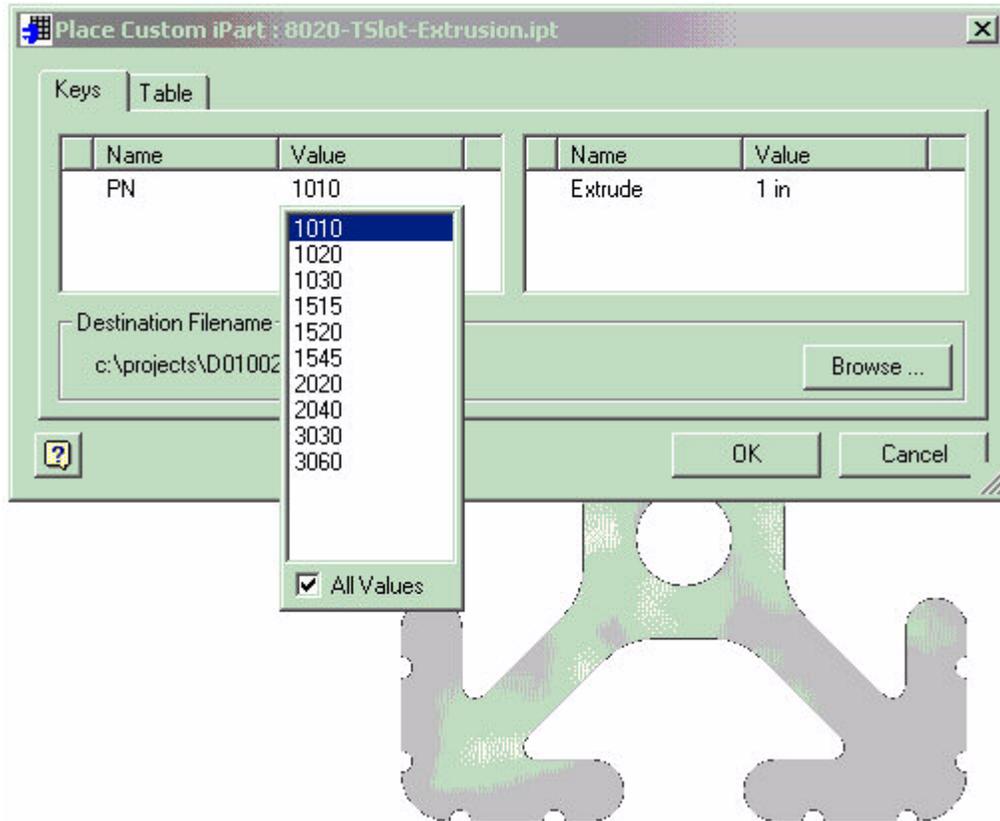


Figure 5 – Inserting iPart, Value Keys Reflected

In the first column you have the choice of which style of extrusion you want to use. This is the first and only key in the part.

Once the type of extrusion has been chosen, the value of the Extrude parameter can be specified. In this case we choose 25mm.

You should note that with custom iParts there is no way to automatically generate the filename of the child part. The user is presented with a dialogue box to name the custom part as well as pick the file's location.

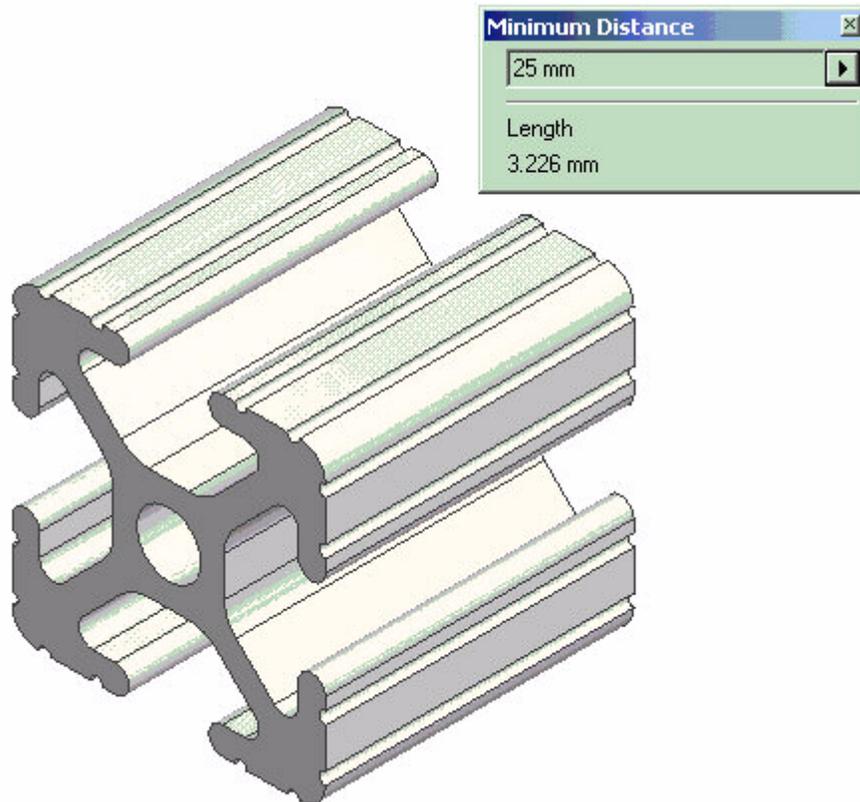


Figure 6 - Inserted iPart

Here we have our iPart child with a length of 25mm. By using custom iParts you can specify any value to be custom (not just length). You can also have multiple values set to custom to allow the user to set length and width (or any other combination of values.)