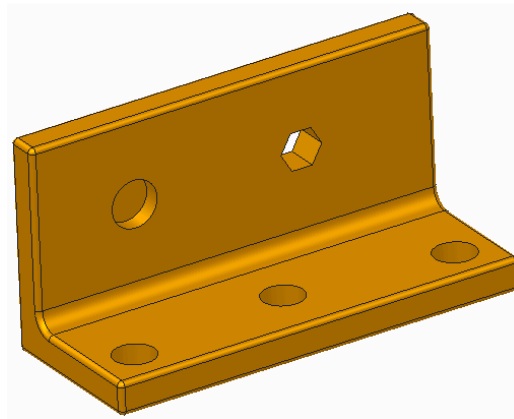


Family Table Lab

Background:

A part was requested by a customer to be an angle bracket with 3 holes, a hexagon through hole, and a depth-positioning gage hole. After the part (figure 1) was delivered, the customer requested 5 more parts with minor dimensional changes, and on the parts over 10 inches long, no depth gage hole. The design team decided that by defining a Family Table, the 5 requested parts could be built in less than a ½ hour. The Process will start with the file already loaded into Creo 2.0 design package.



Mounting_Bracket-02853

Figure 1

Part Name	Length	Height	Material Thickness	Diameter of Center Hole
Start-Part	10	5.0	.55	1.0
08450	8.0	4.5	.5	.75
16600	16.0	6.0	.625	1.0
30900	30.0	9.0	.75	1.0
06450	6.0	4.5	.5	.75
16900	16.0	9.0	.75	.875

Customer Supplied Values

The Process:

To define the new parts we are going to build the family table using the system locations for the dimensions of Length – Height – Material thickness – Diameter of the Center Hole and the feature for the Depth-Gage-Hole. There are 2 ways to do this, 1) select the system locations as needed using the system names (d3, d15, d22 etc), or we can 2) rename the system values with names that will make sense to us later (if we ever need to update/change the model). I'm going to select option 2.

- Select the bracket for editing (by double clicking on the bracket)
 - Select the 10.0 dimension – RMB and select properties
 - Change the d0 to “Length”
 - Do the same for the Height and Material Thickness
 - Double click the center hole to open this feature for editing
 - Perform the same step to rename the diameter value
- Select “Extrude_2” from the model tree and rename it to “Depth-Hole”
- Select the Tools tab from the Ribbon
 - Select the Family Table icon from the Model Intent Group
 - Select the “Add table columns” icon
 - Now its time to add dimension variables to the table
 - Select the bracket
 - Select the 10 dimension
 - Select the 5.0 dimension
 - Select the .80 dimension
 - Select the center hole
 - Select the hole diameter dimension
 - Select “Feature” from the “Add Item” section of the panel
 - Select the Depth-Hole feature
 - Select “DONE” from the Menu Manager
 - Select “OK” from the panel
 - Select the icon (5 times) to add new rows to the Table
 - Fill in the Table to match the values supplied by the customer, if the Length is over 10 inches, set the Depth-Hole column to “N”
 - If the value to be entered is the same as the value in the top row, you can leave the cell to the “*”, which means “use the top row value”

- Once all the values have been entered, Select the Verify icon to make sure all the models can be built. If not, you will need to edit the appropriate value and notify the customer for a new value to use.
- Select OK to close the Family Table Panel
- Save the Part file

Now every time you need to load the part the system will ask which of the parts you need. If the customer comes back later to request more parts of different sizes, all we need to do is open the generic part and add the appropriate rows. The system will then build the parts for us.