

Family Table of Skeleton

Skeleton models can maintain their own family tables. This means that assemblies can maintain different skeleton instances across a family table. So we can create a Family Table of the assembly to represent the design optional deviations, or a family of similar assemblies.

Exercise 1

In this exercise you will learn how to use the family table of a skeleton model to create multiple configuration of a product.

Set the working directory to VERNIER_CALIPER folder and open VERNIER150.ASM

The assembly will appear as shown below.

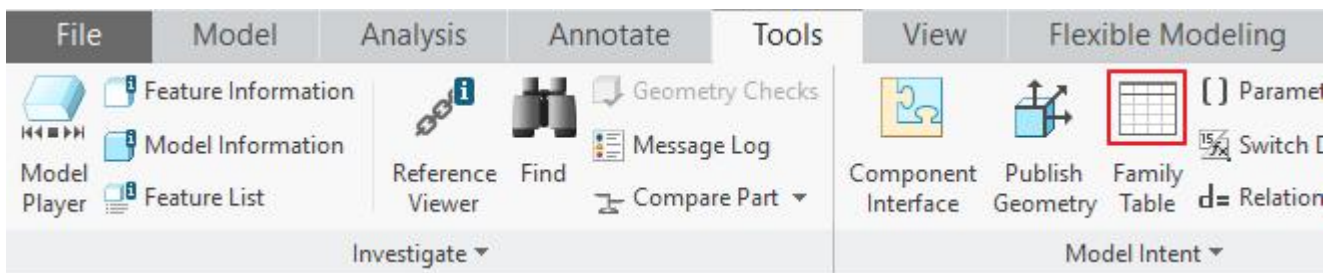


⇒ Creating Family Table Instance of Skeleton Model

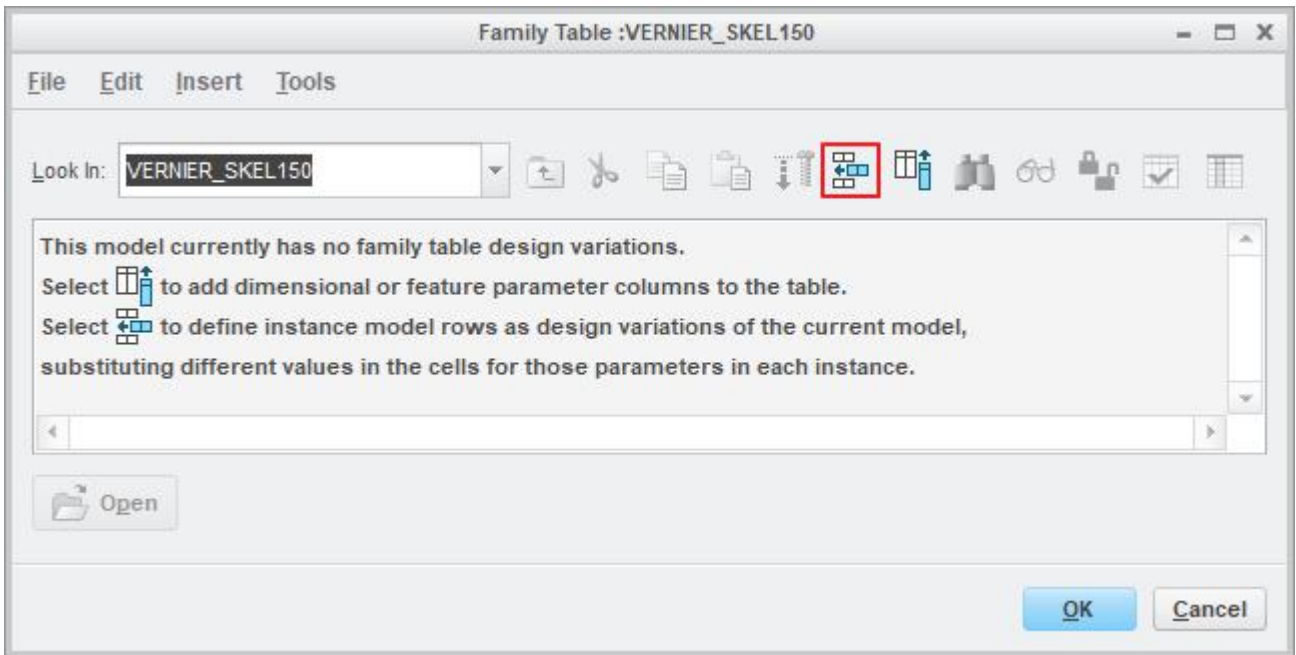
Now we will create a family table instance of the skeleton model

So open the VERNIER_SKEL150.PRT in a new window.

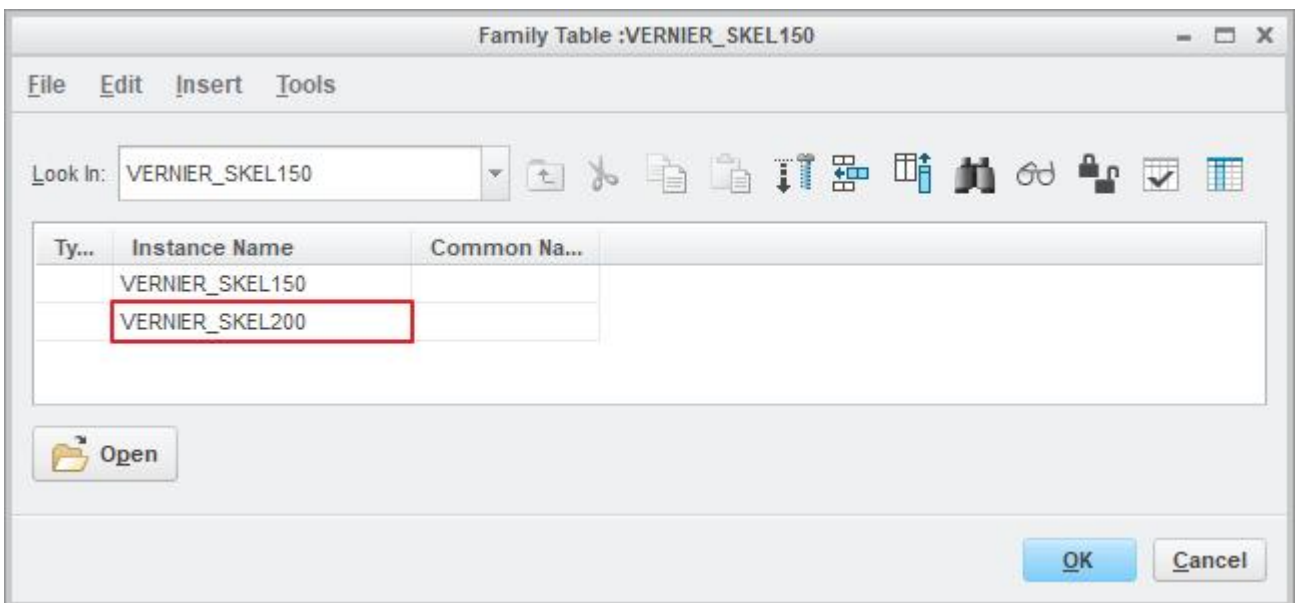
Pick  on Tools tab and Family Table dialog box will appear.



Pick  to add a row in the family table

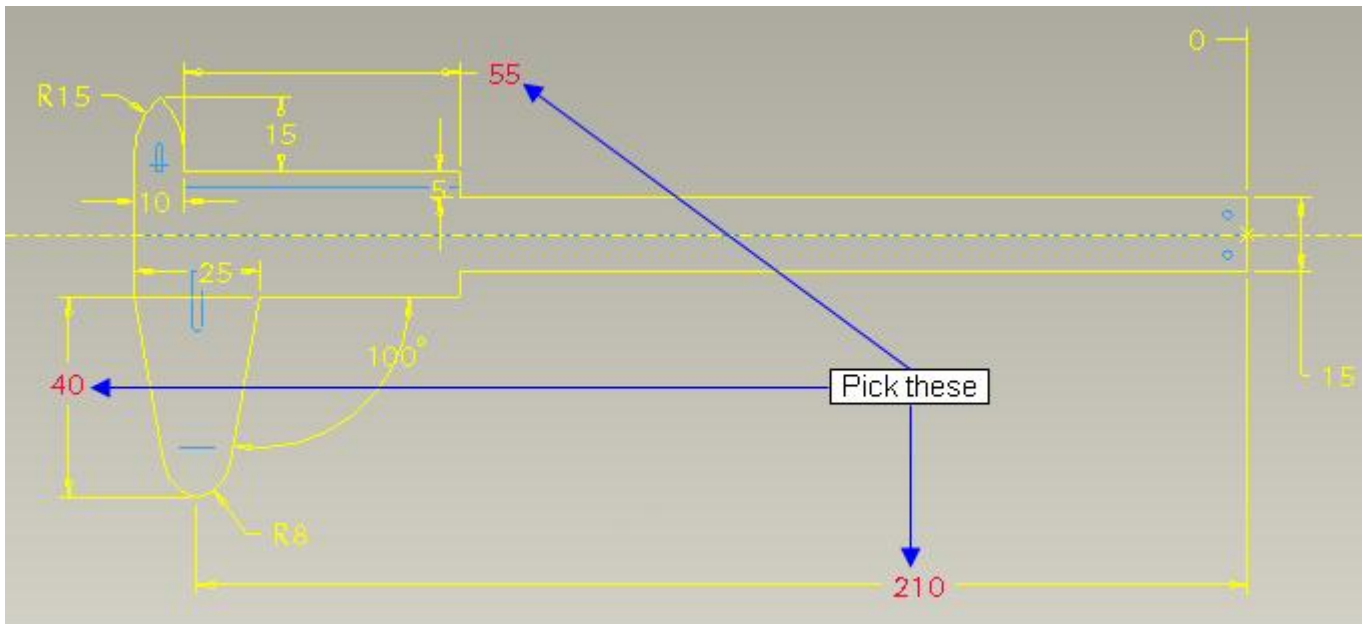


Enter **VERNIER_SKEL200** as the name of the new instance as shown below.

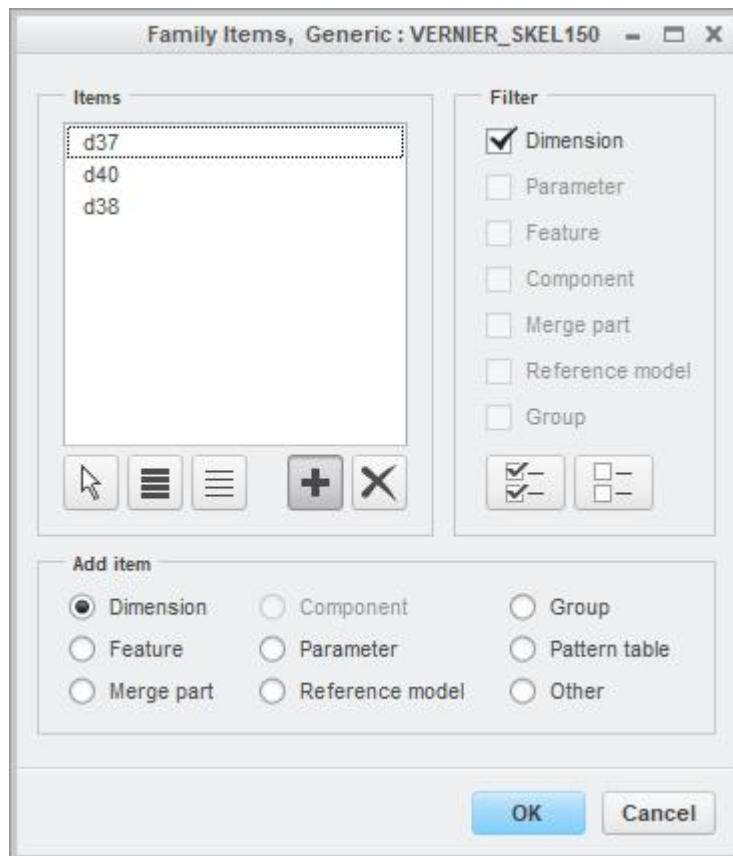


Pick the icon [icon] to add new table columns and Family Items dialog box will appear. Pick on the part so that dimensions appear on screen.

Pick the following (highlighted in red) dimensions on screen.

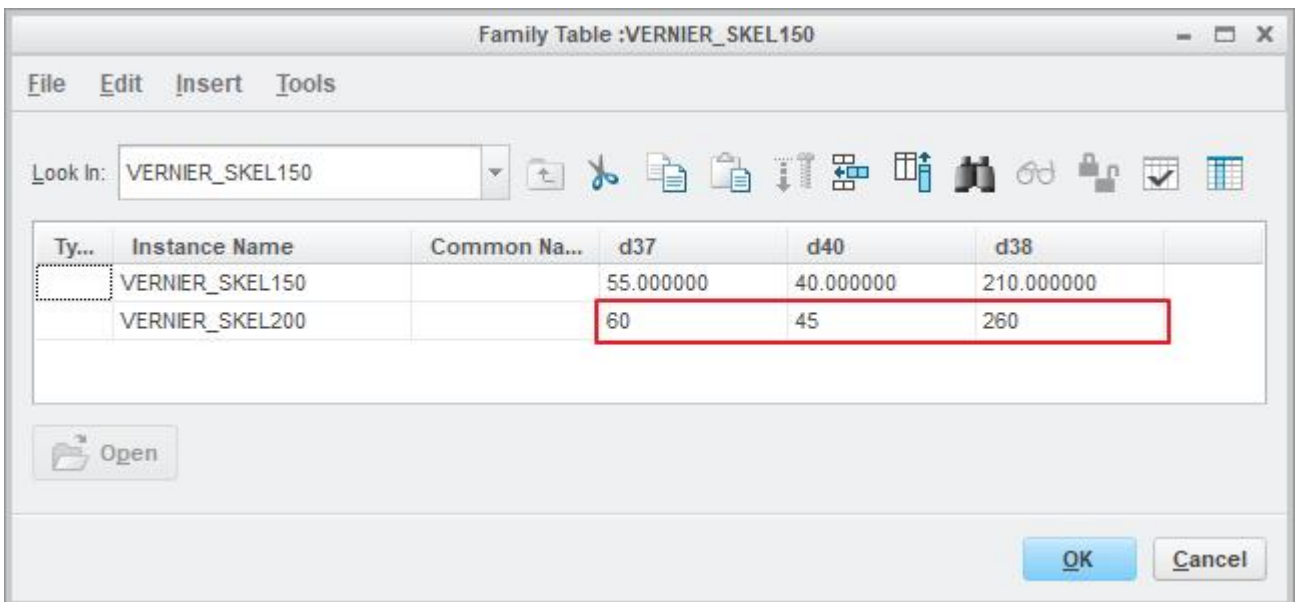


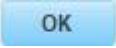
After adding the dimension, dialog box will appear as shown below.



Pick **OK** to apply and exit the dialog box.

Enter the following dimension values in the dialog box. (The order of dimensions may be different for your case. Make sure that you enter the dimensions in correct columns)




Pick  to apply and exit the dialog box.

Creating Family Table Instances of Parts

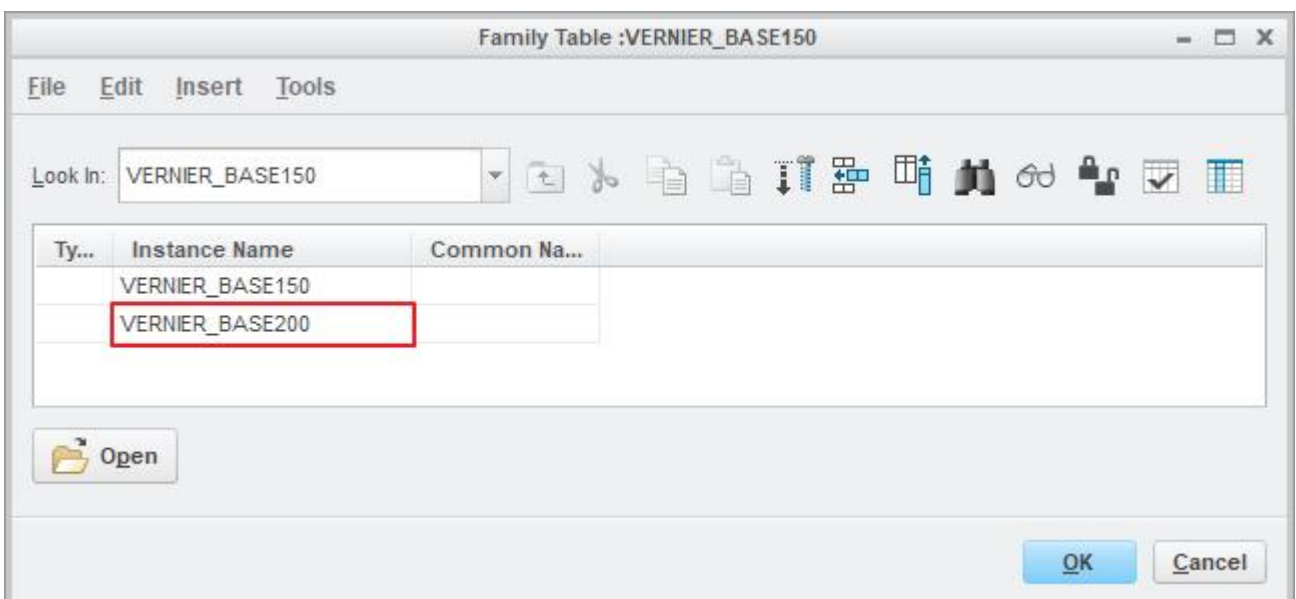
Now we will create family table instances of the individual parts.


So open the VERNIER_BASE150.PRT in a new window.

Pick  on Tools tab and Family Table dialog box will appear.

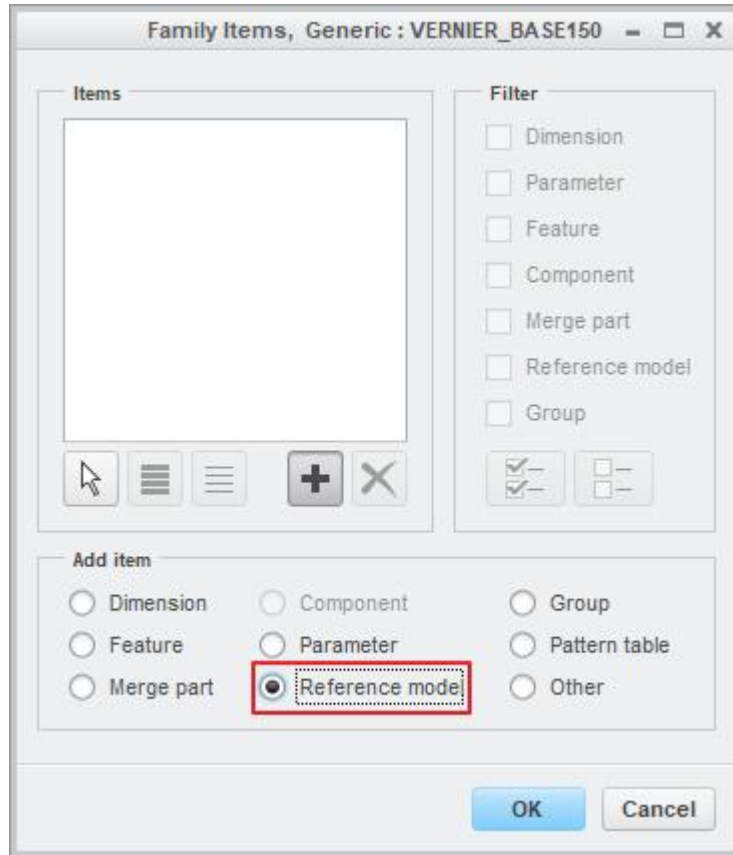
Pick  to add a row in the family table

Enter VERNIER_BASE200 as the name of the new instance as shown below.

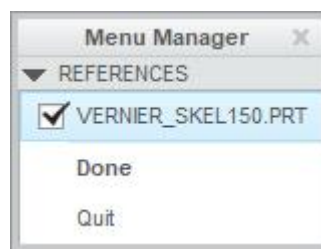


Pick the icon  to access Family Items dialog box.

Select the **Reference model** option in the dialog box as shown below.

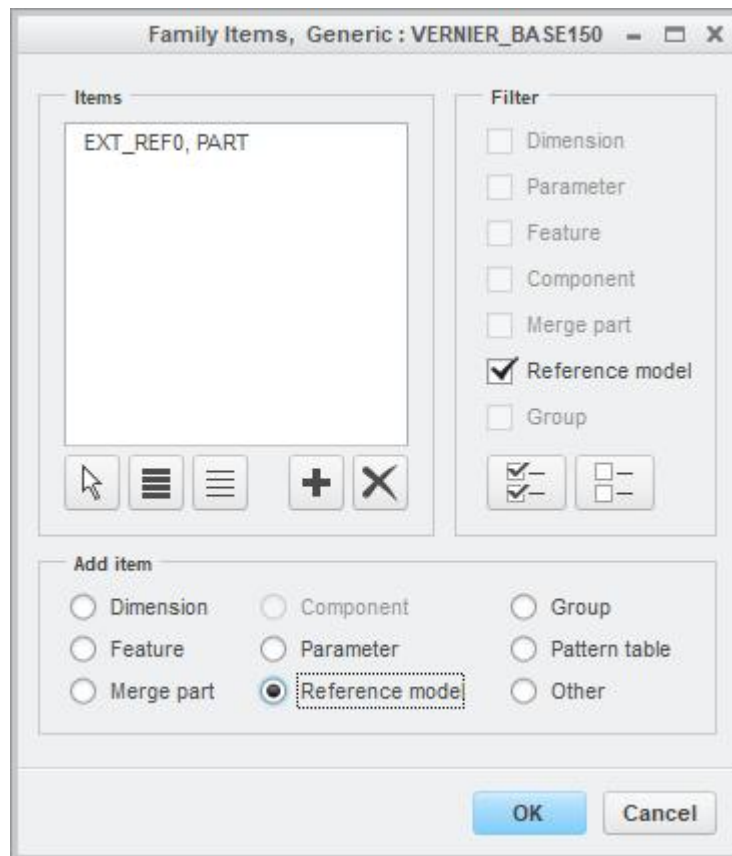


Now the system will present the list of parts referenced by the current part. Check the **VERNIER_SKEL150.PRT** and pick **Done**



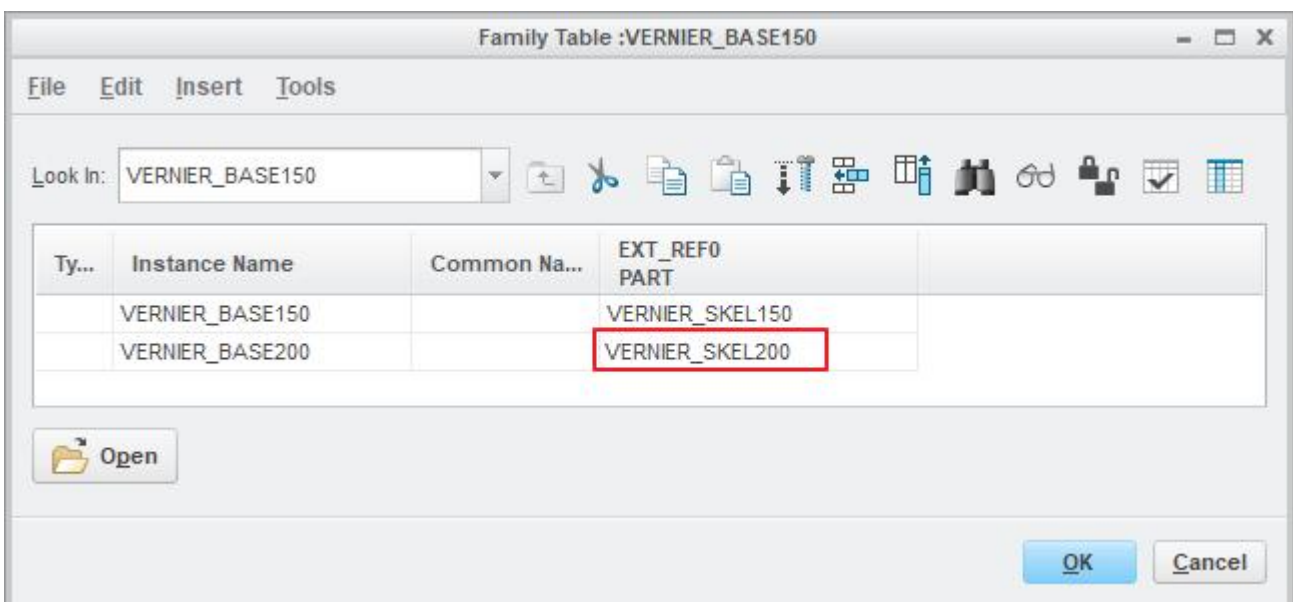
As VERNIER_BASE150 references the publish geometry feature in the skeleton so system is displaying the skeleton in this menu.

The Family Items dialog box will appear as shown below.



Pick **OK** to apply and exit the dialog box.

Enter the **VERNIER_SKEL200** as the name of reference part for the new instance as shown below.




Now this new instance (i.e. VERNIER_BASE200) will be referring the VERNIER_SKEL200 (family table instance of VERNIER_SKEL150).

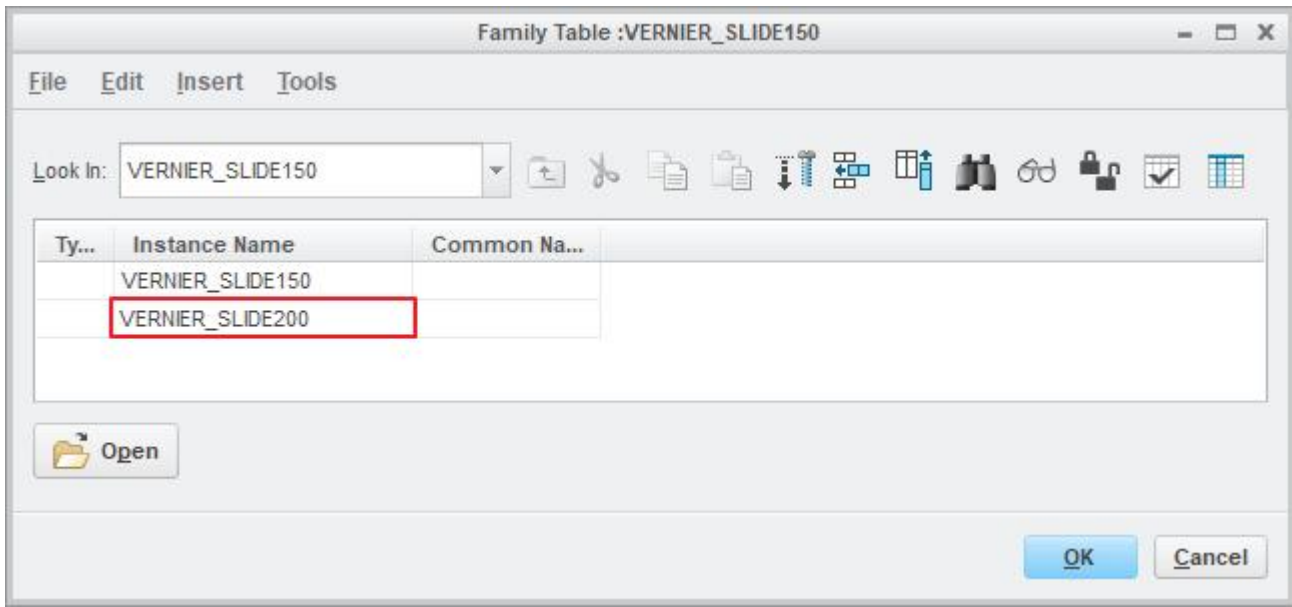
Pick **OK** to apply and exit the dialog box.


Now open the VERNIER_SLIDE150.PRT in a new window.

Pick  on Tools tab and Family Table dialog box will appear.

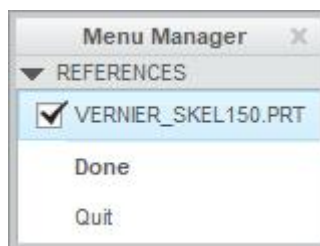
Pick  to add a row in the family table

Enter VERNIER_SLIDE200 as the name of the new instance as shown below.



Pick the icon  to access Family Items dialog box.

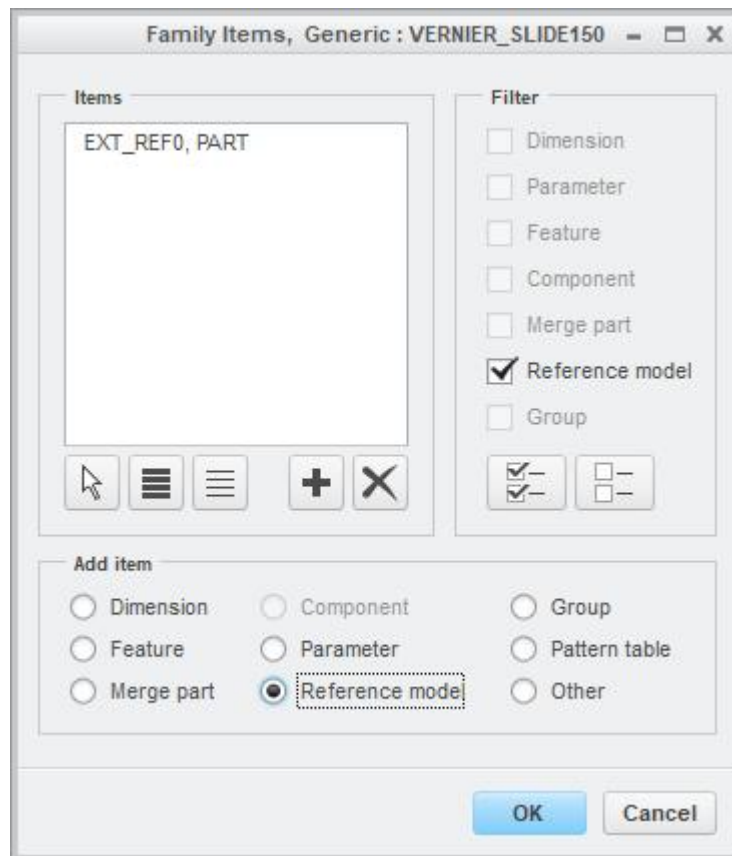
Select the **Reference model** option in the dialog box and check the **VERNIER_SKEL150.PRT**

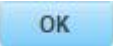


As VERNIER_SLIDE150 references the publish geometry feature in the skeleton so system is displaying the skeleton in this menu.

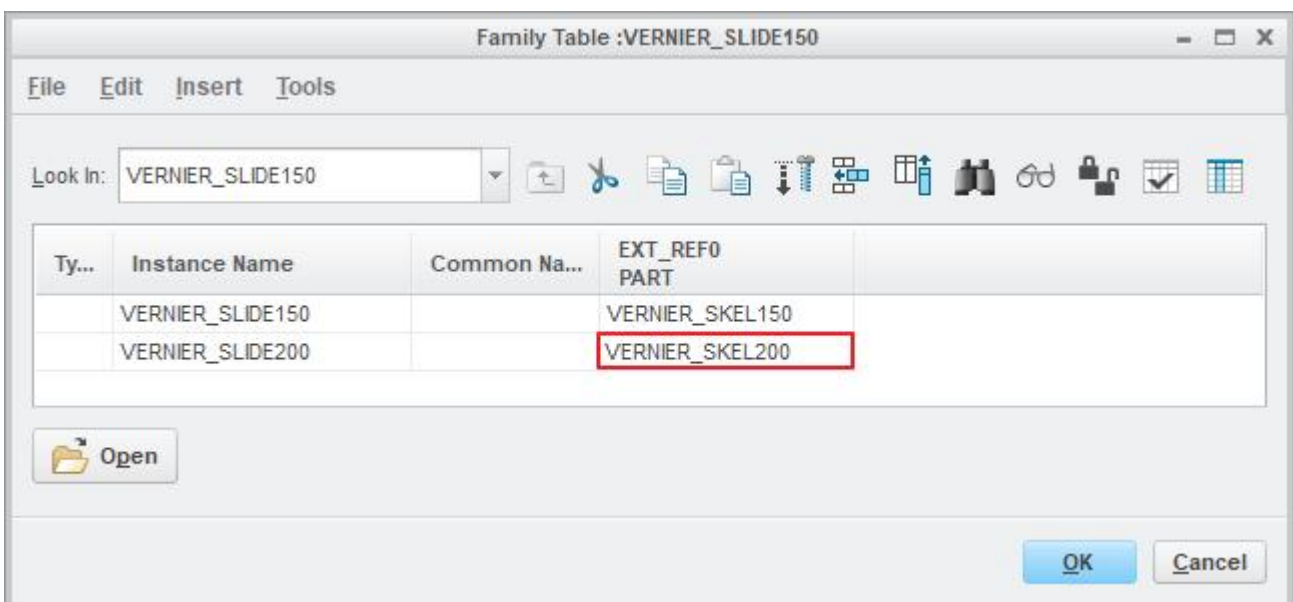
Then pick **Done**

The Family Items dialog box will appear as shown below.

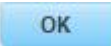


Pick  to apply and exit the dialog box.

Enter the **VERNIER_SKEL200** as the name of external referenced part for the new instance as shown below.




Now this new instance (i.e. VERNIER_SLIDE200) will be referring the VERNIER_SKEL200 (family table instance of VERNIER_SKEL150).

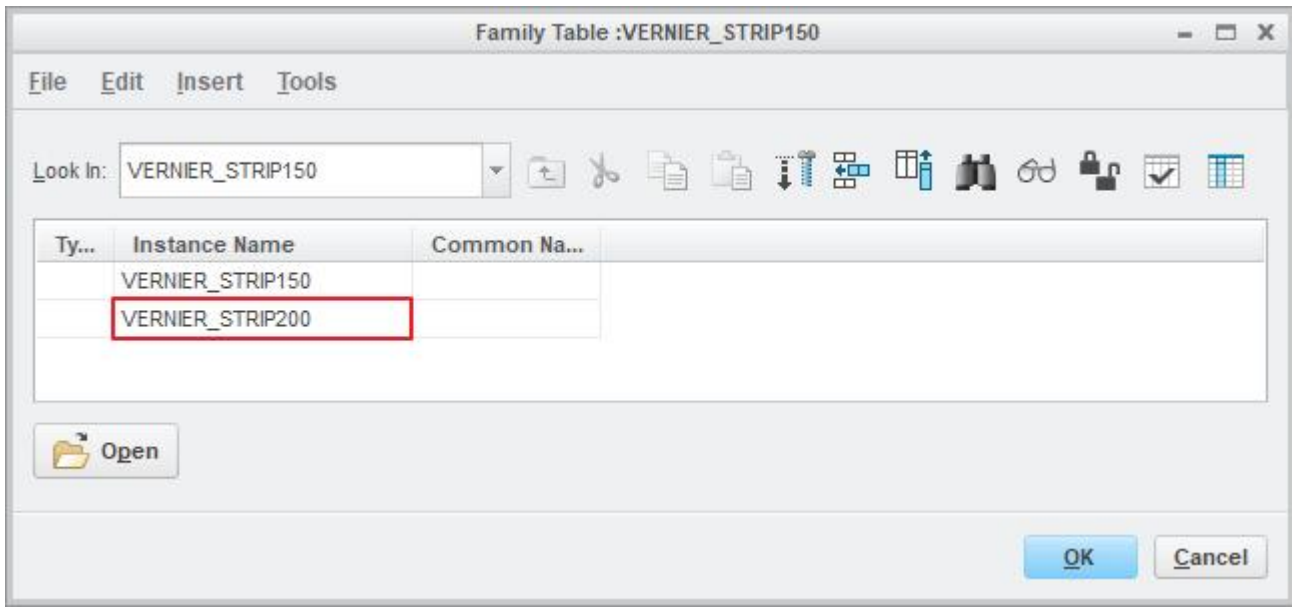
Pick  to apply and exit the dialog box.

Now open the VERNIER_STRIP150.PRT in a new window.

Pick  on Tools tab and Family Table dialog box will appear.

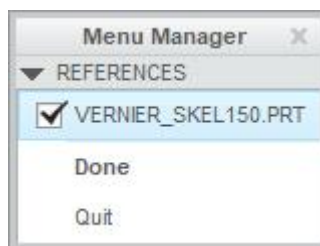
Pick  to add a row in the family table

Enter VERNIER_STRIP200 as the name of the new instance as shown below.



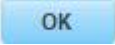
Pick  to access Family Items dialog box.

Select the **Reference model** option in the dialog box and check the **VERNIER_SKEL150.PRT**

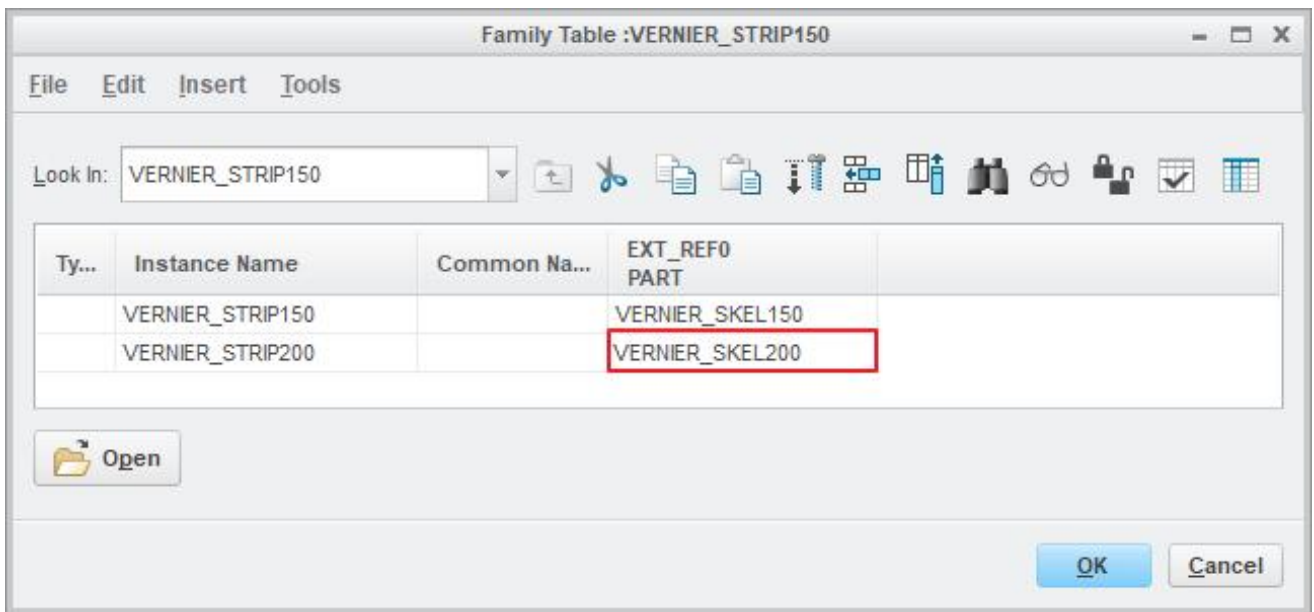


As VERNIER_STRIP150 references the publish geometry feature in the skeleton so system is displaying the skeleton in this menu.


Then pick **Done**

Pick  to apply and exit the dialog box.

Enter the **VERNIER_SKEL200** as the name of external referenced part for the new instance as shown below.



Now this new instance (i.e. VERNIER_STRIP200) will be referring the VERNIER_SKEL200 (family table instance of VERNIER_SKEL150).

Pick  to apply and exit the dialog box.

➡ Creating Family Table Instance of Assembly

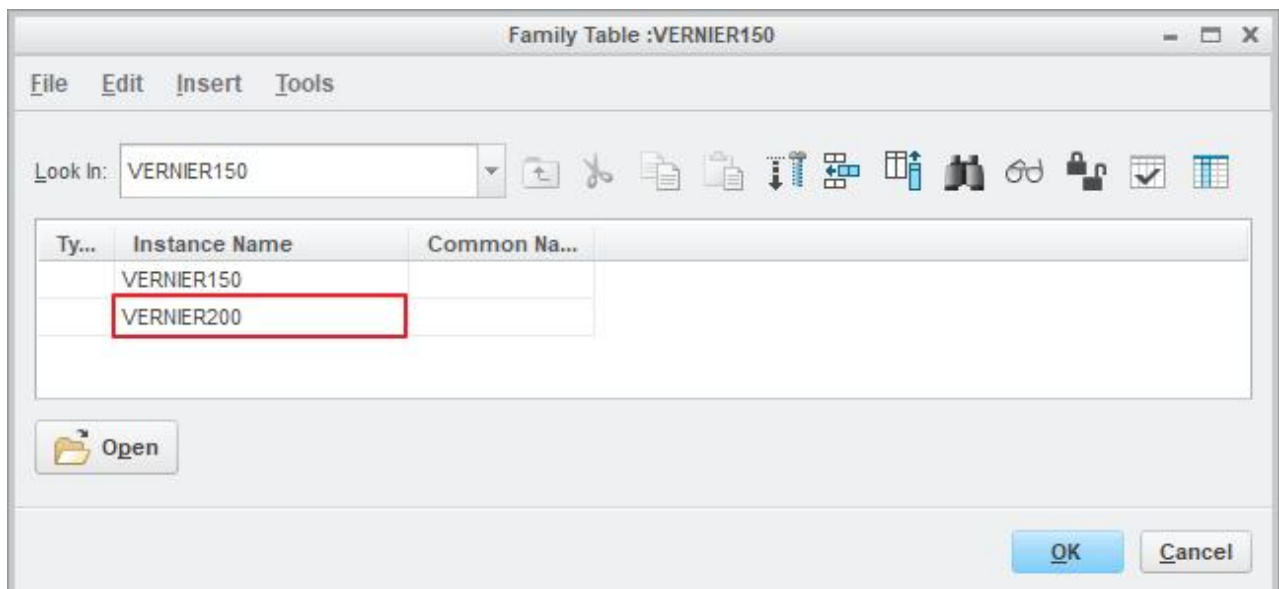
Now we will create a family table instance of the assembly.


Switch to the VERNIER150.ASM window.

Pick  on Tools tab and Family Table dialog box will appear.

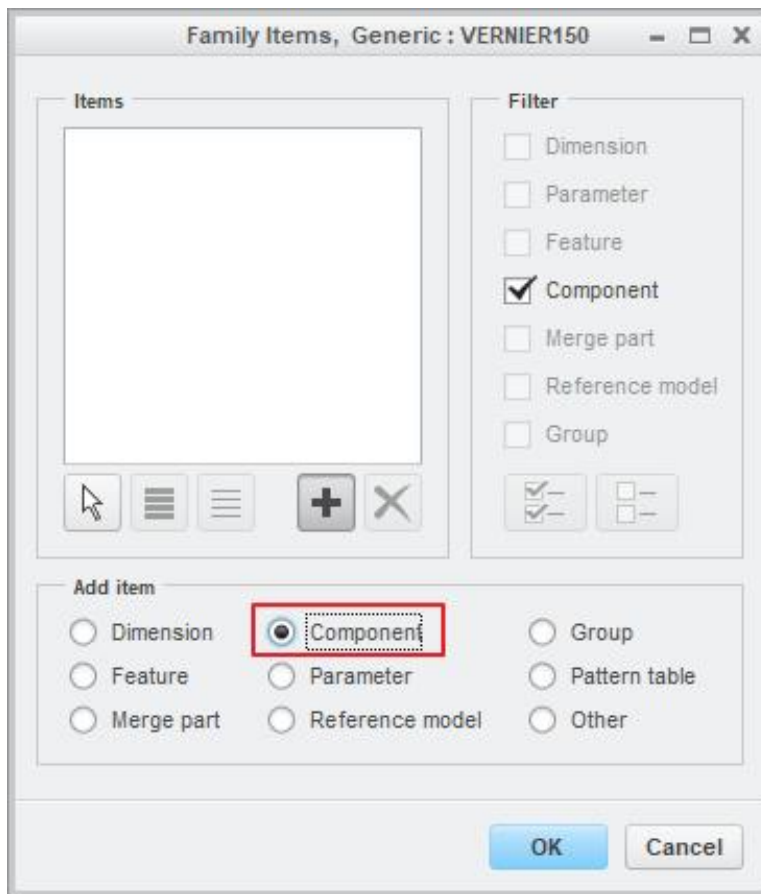
Pick  to add a row in the family table

Enter VERNIER200 as the name of the new instance as shown below.



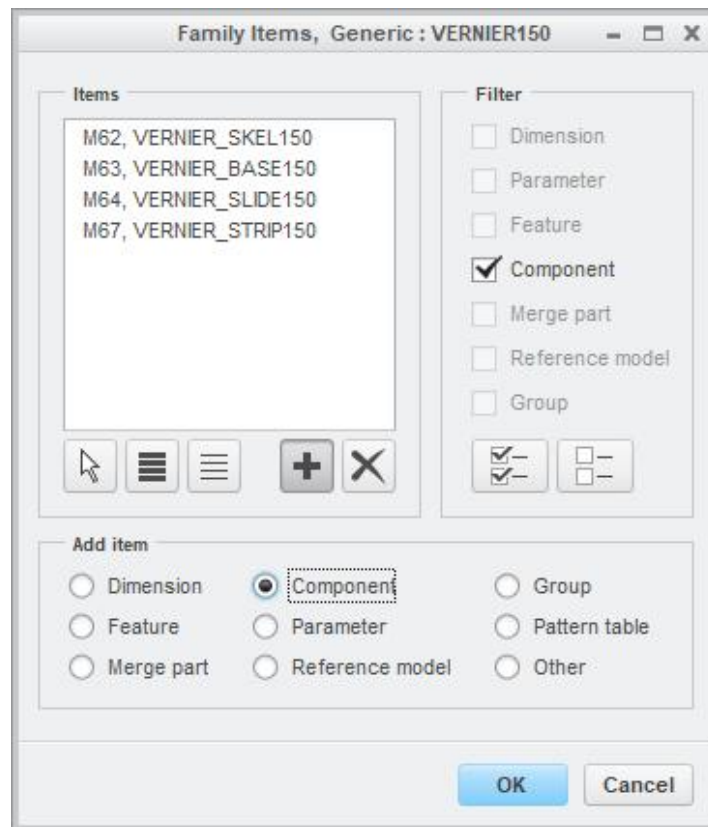
Pick the icon  to access Family Items dialog box.

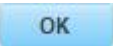
Select the **Component** option in the dialog box as shown below.



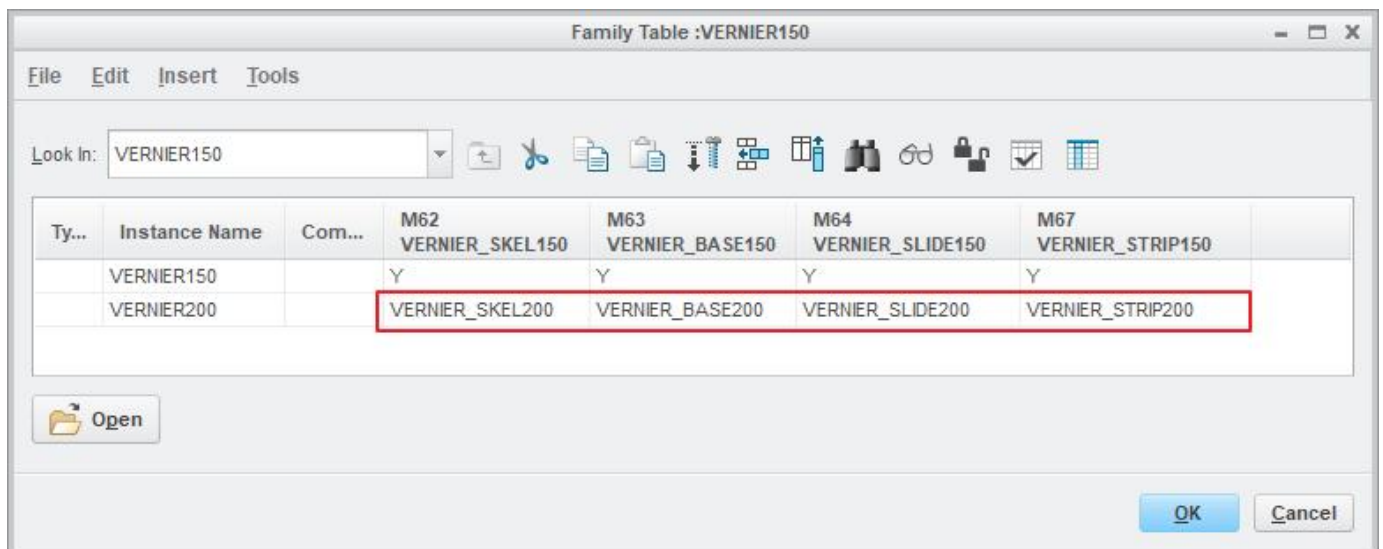
Pick the all the components (including skeleton) in the assembly one by one.


The Family Items dialog box will appear as shown below.



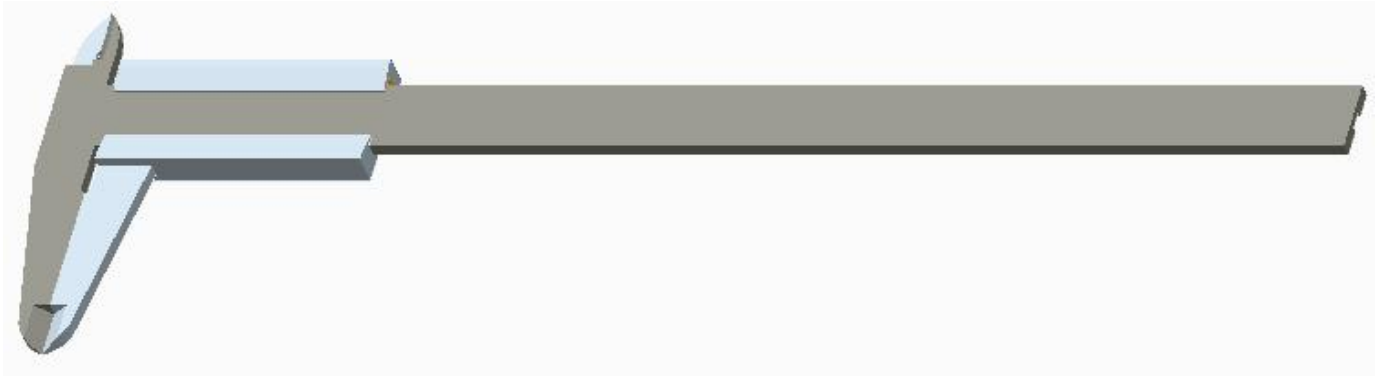
Pick  to apply and exit the dialog box.

Enter the name of the newly created instances for all parts in corresponding columns as shown below.



Pick on VERNIER200 cell and select 

The assembly will appear as shown below.



In the same way we can have as many assembly configurations as we want. This is a great way to create the multiple configuration of an assembly driven by a skeleton.