



# ADD 3DP COMPONENT

ADD MULTI

ADD ASSEMBLY

Tutorial\_V3: 14,0200,1599,1024(SP2)

In this exercise we will examine the different options available when adding multiple parts and when adding an assembly.

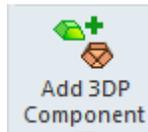
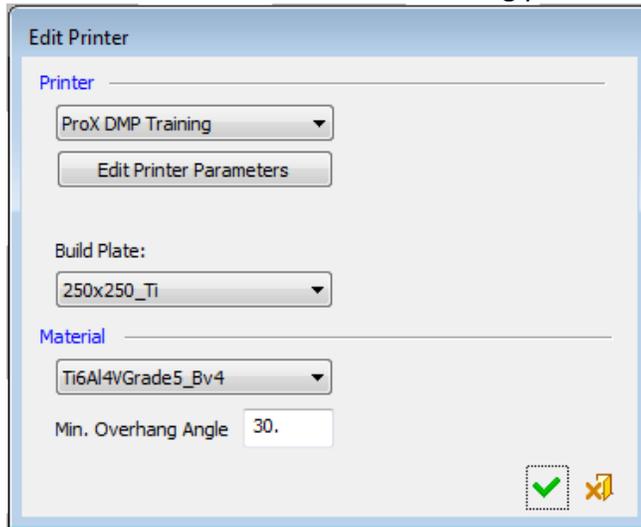
## Part 1 – Add Multi 3DP Components

Assume that you want to print a multi object in a way that they can't be printed separately and constructed later

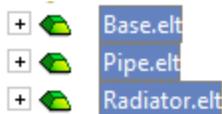


1. Open 3DXpert
2. Select New 3D printing project

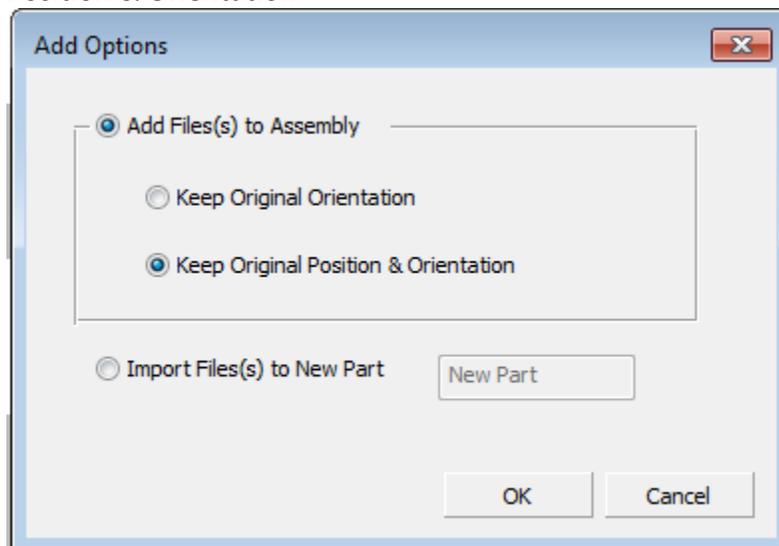
3. Select Edit Printer and set the following parameters



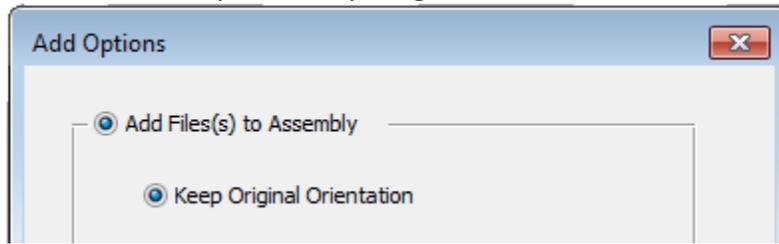
4. Select
5. Select the 3 parts (Base, Pipe and Radiator)



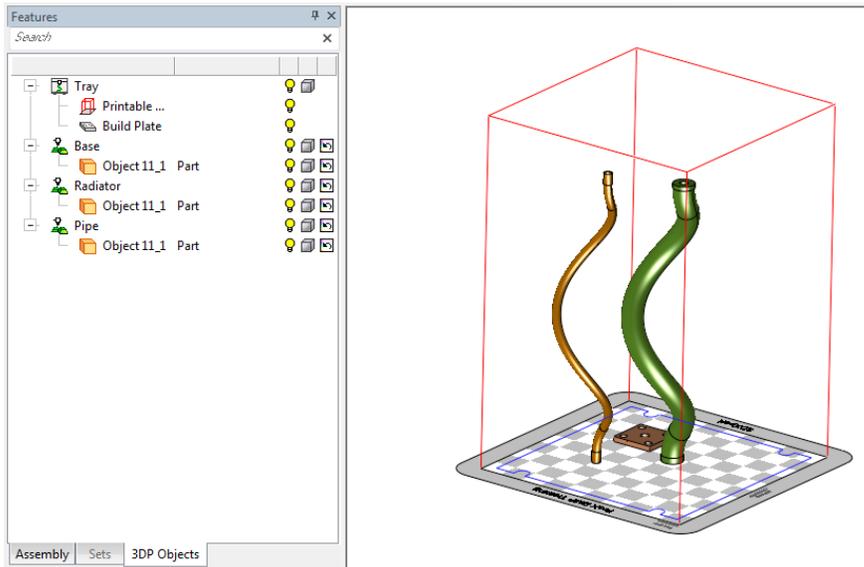
6. The Add options dialog is opened by default on the option 'Keep Original Position & Orientation'



7. Select the first option 'Keep Original Orientation' and select Ok

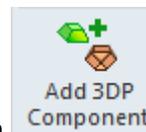


The three parts were added onto the tray as three separated parts  
 We can print these parts; however, we will not be able to Assemble them together

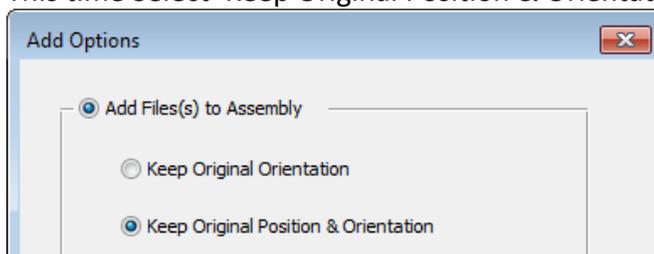


**Keep Original Orientation-** The part(s) are added in their original orientation and are positioned by the system.

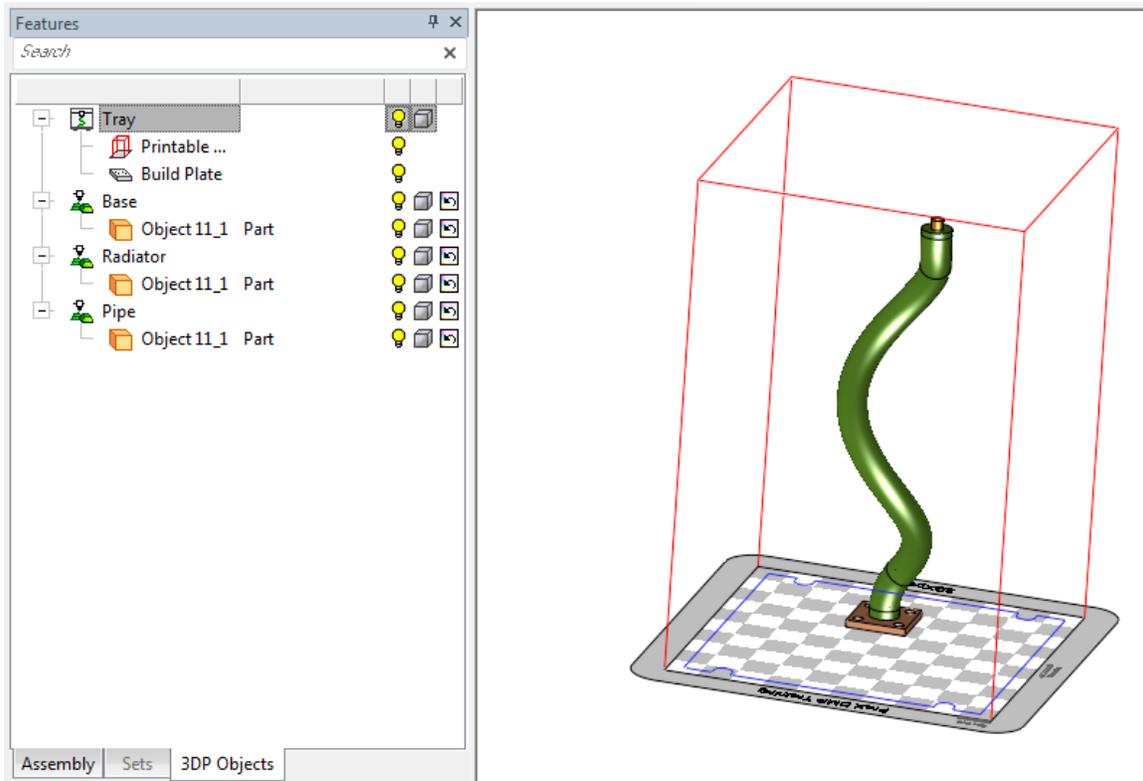
Use this option to bring each part in its original orientation.



8. Undo the add operation and select again
9. This time Select 'Keep Original Position & Orientation



10. This time the three parts were added in their assemble structure  
 Now, we can print the pipe and the radiator and the base together



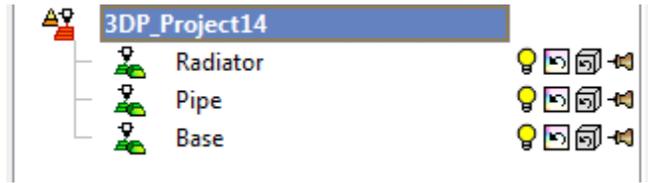
**Keep Original Position & Orientation-** The part(s) are added in their original orientation and position so that its world CS sits on the tray CS (this enables you to add several parts that are assembled correctly, if they come in their original position).

Use this option to keep the original position and orientation the part had in the original assembly. This is useful when bringing in parts from the same assembly one after the other and wanting to maintain the spatial relations between them.

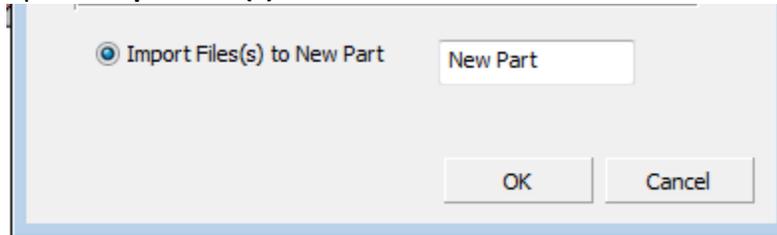


Please notice: using 'Auto Orientation' for all part will explode the assembly structure. Each part will be oriented separately.

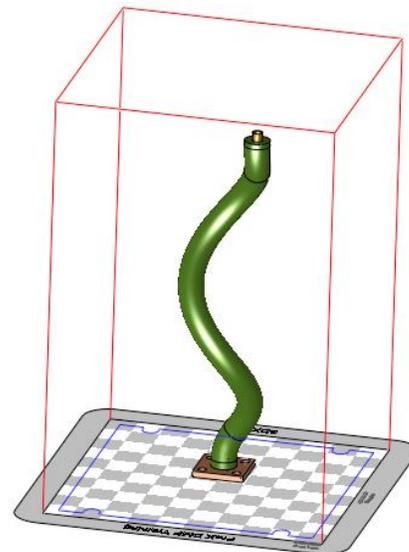
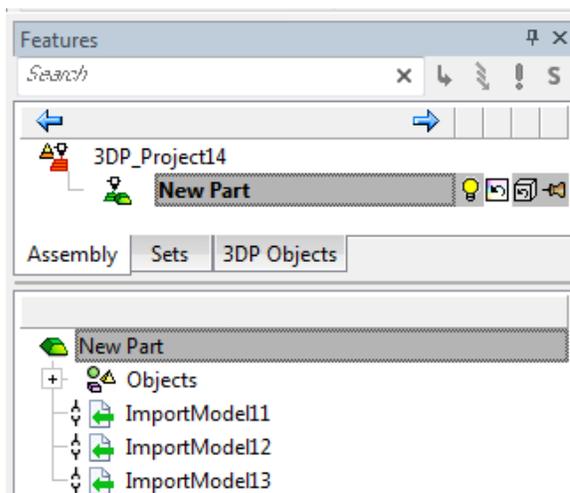
Note: using the option **Keep Original Position & Orientation** 3 parts were added.



11. Undo the operation and add the same three parts again. This time using the option **Import File(s) to New Part**



12. Now, the result is one part with three imports in it



**Import File(s) to New Part**- Import the selected file(s) to a new part.

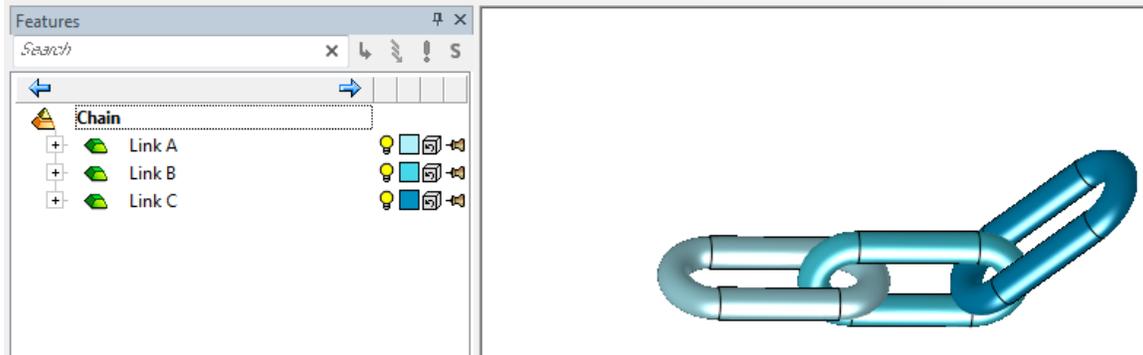
Use this option to bring in all assembly parts into a new part. This is useful when bringing in an assembly and wanting to maintain the spatial relations between its parts while combining them into a single part.

If only a single file selected and it is a part (not an assembly), this option is disabled.

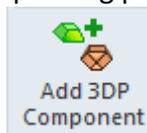
In this case, auto orientation doesn't explode the assembly structure.

## Part 2 – Add an Assembly

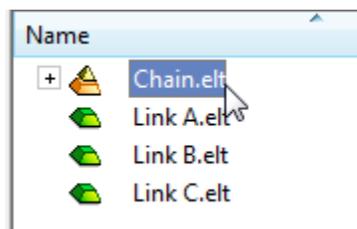
In this case we have the assembly so we can add it instead of the multiple parts



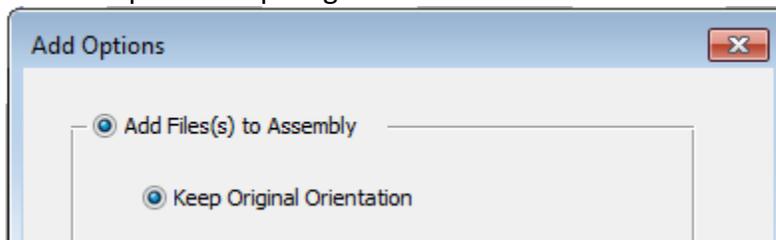
13. Open a New 3D printing project



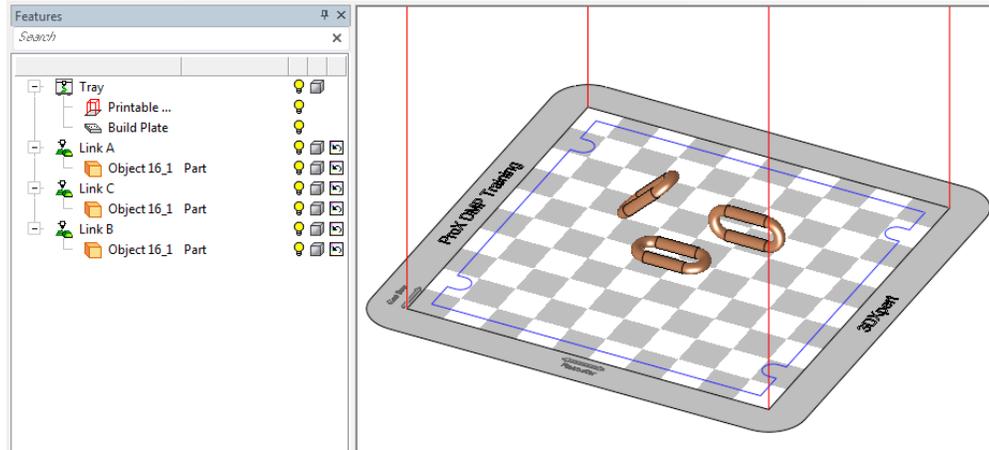
14. Select Add 3DP and pick the assembly 'Chain.elt'



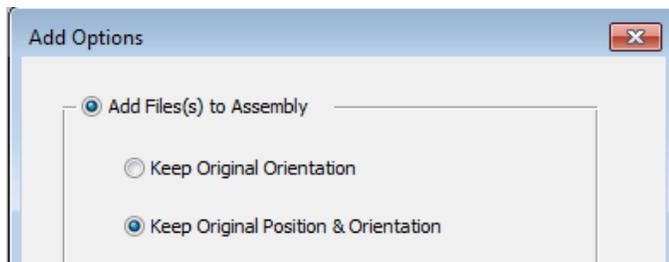
15. Use the option 'Keep Original Orientation' and select Ok



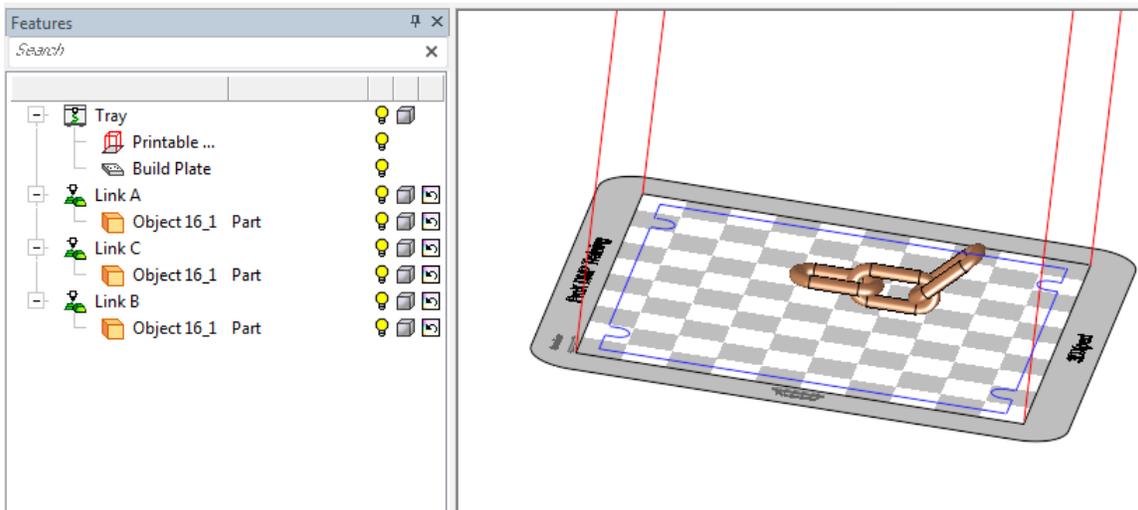
16. In this case we see that the added parts don't keep the assembly structure



17. Undo the add operation and select the chain assembly again  
This time use the option 'Keep Original Position & Orientation'

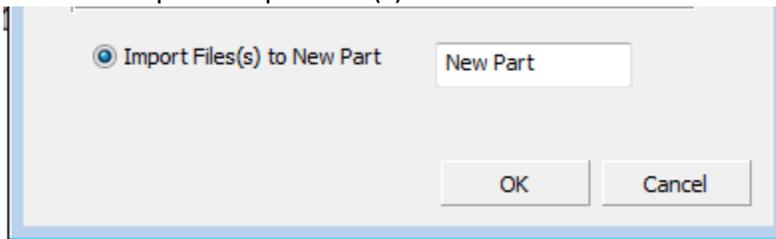


The parts were added as separate parts but the assembly structure is kept

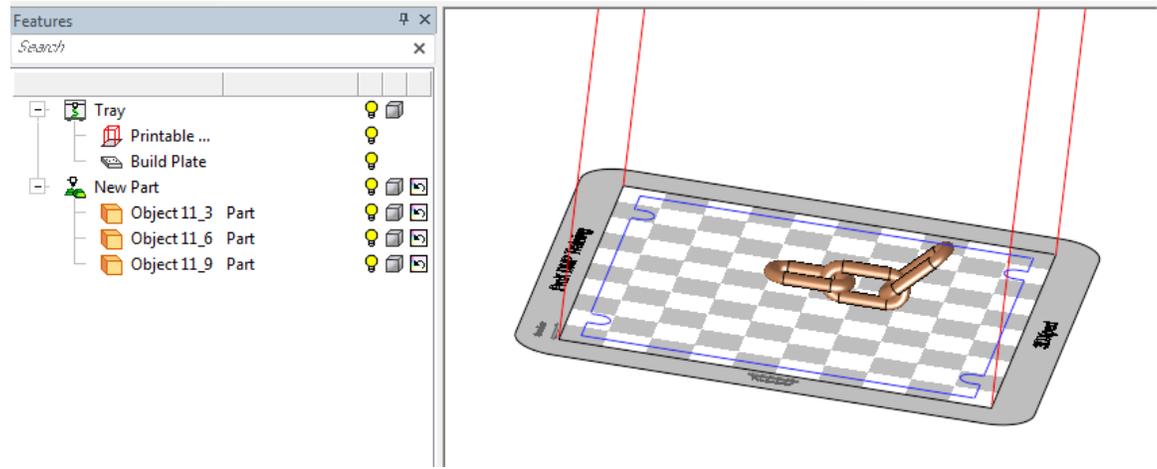


**!** Please notice: using 'Auto Orientation' for all part will explode the assembly structure. Each part will be oriented separately.

- 18. Undo the operation and add the Chain assembly again
- 19. Select the option Import File(s) to New Part



Result: one part with three objects



End of Exercise