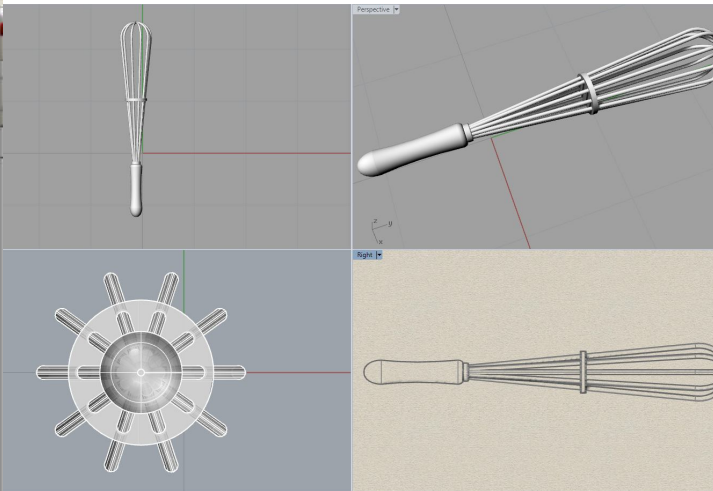
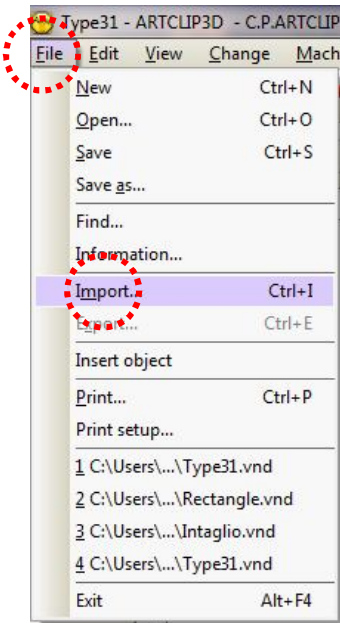


How to create a Surface Mesh from 3D Wireframe Surfaces?

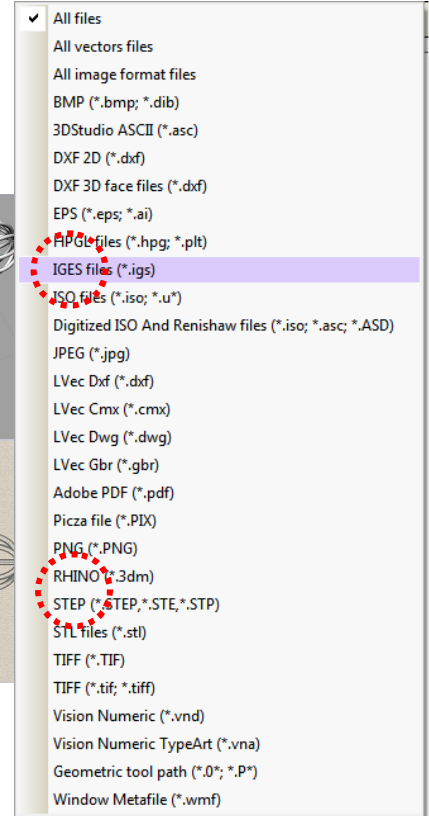
With ArtClip3D you have access to an important number of import types and this advantage allows you bringing 3D designs from most of the high end CAD solutions on the market so you can machine them in the Computer Aided Manufacturing Module of ArtClip3D (CAM). This tutorial shows you how to transform those files into 3D machining to run them on your CNC.

- **Importing a 3D model**

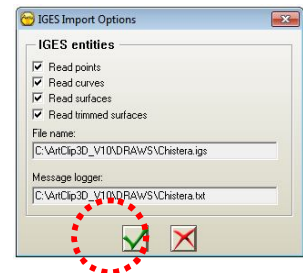
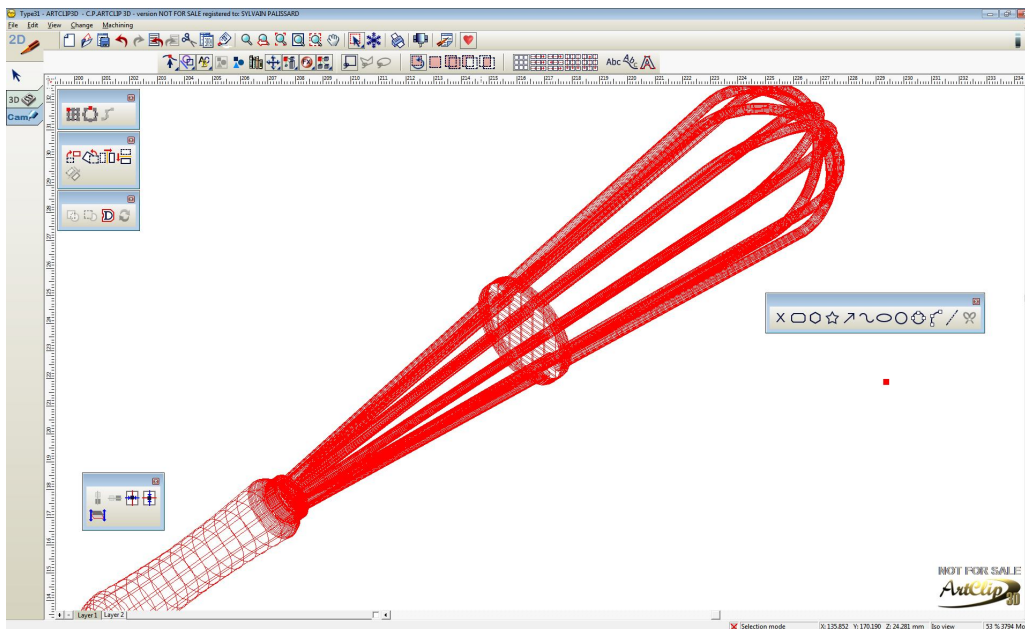
Click on the **File** menu and Select the **Import...** command (**CTRL+i**).



(Image from third party software)

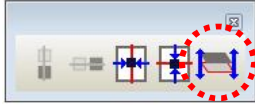


Select the 3D Surface file you want to import in ArtClip3D. You can choose the Chistera.IGS file presents in the DRAW directory of ArtClip3D installation, the process will remain the same for any wireframe file as this one shown here with a whisk.

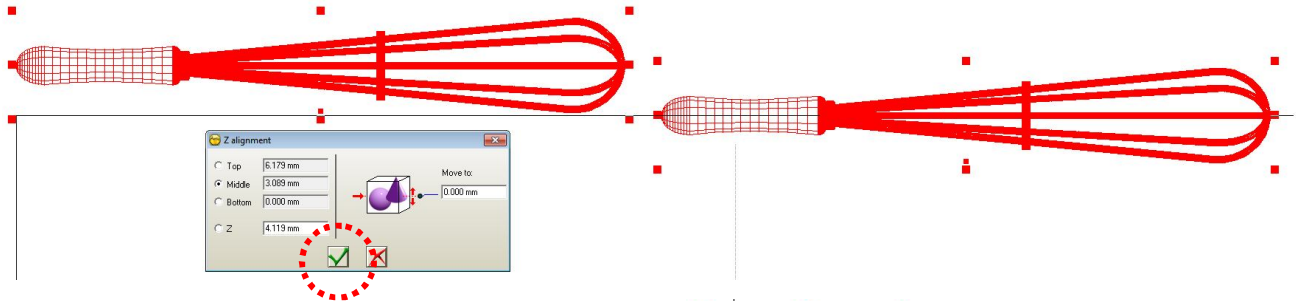


At the time of the importation you can chose to bring different entities from the 3D files if present within the exportation made. For instance the points, most commonly for vector defined from starting point and end point. You can also bring curves, surfaces and trimmed surfaces.

Once imported, you can check the representation within the graphical interface, using the CTRL+1/2/3/4/5 shortcut keys. For instance below is shown the CTRL+2 view with an imported file made at the bottom of the 3D (Z=0).



You can move the imported object along Z to define where in the space you would like to see it. Using the Z positioning tool you can set the Z middle of the object to seat at Z=0 giving the result on the right. This will allow machining only what the CNC 3 axes is capable of and optimize your 3D machining on the side edges.



(With the Z positioning you can set any top, middle, bottom positions to any Z).

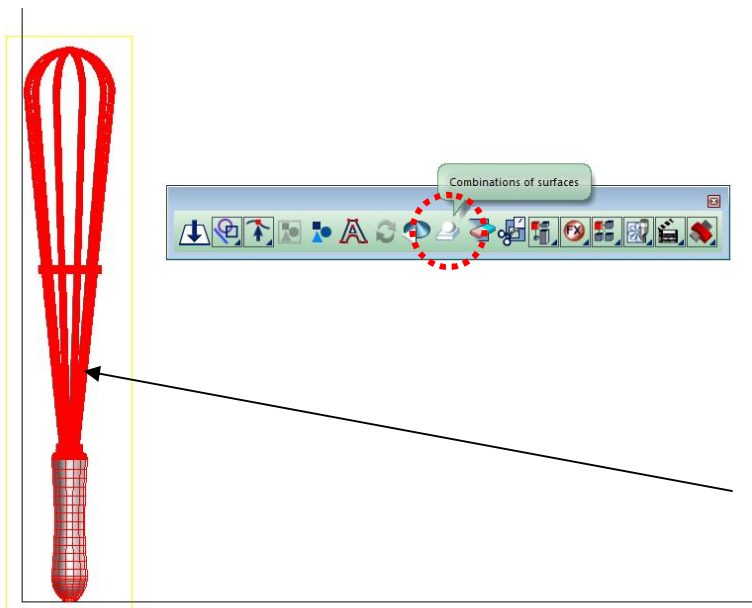
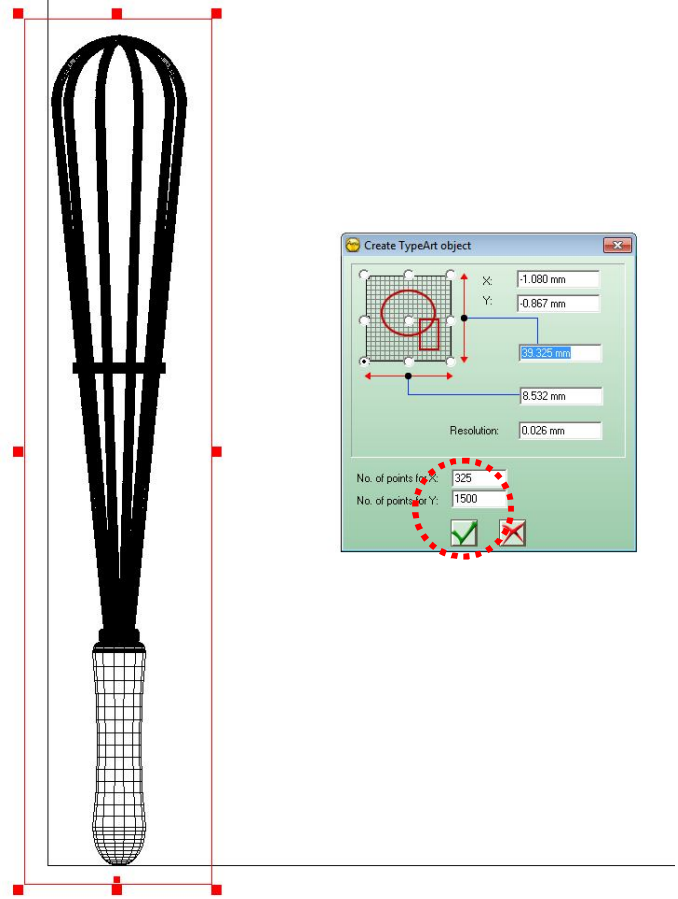
Then, back to the top view (CTRL+1). The usual 3D area definition step is needed:

Build a rectangle surrounding the 3D object. Click the 3D Tab.



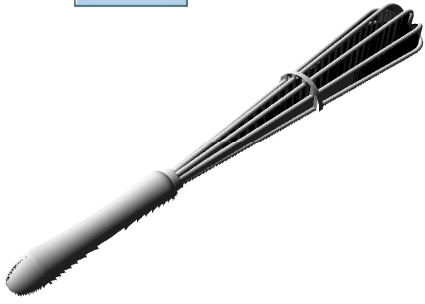
Set the resolution to at least 1500 pixels to one of the field (here along Y being the most important number).

Validate the resolution by clicking on the check mark.

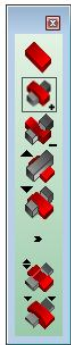
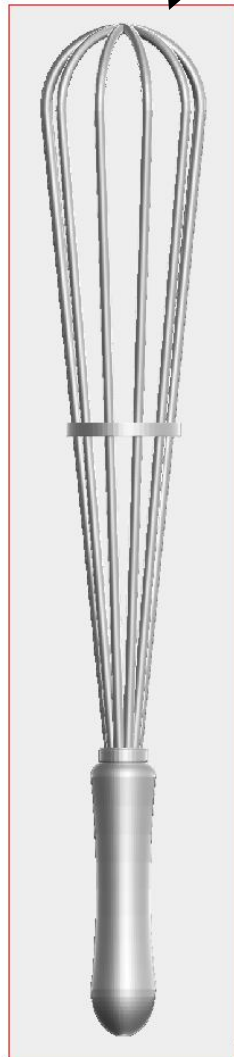


Once in the 3D Module, select the 3D object so it turns red, (usually it is already combined if not make sure to create 1 combined group of surfaces) and click the "Combination of surfaces" tool.

The combination as a result will create a skin all over the selected 3D object making it viewable in the 3D Viewer.



Then to define the lower 3D limit to be machined you can set a Facet with the Face(t) tool by selecting the rectangle created for the 3D area definition.



Frequently Asked Questions

- ***Why am I not getting anything on screen after I imported my 3D File?***

It may happen that your file is not having any information in it. This might be due to the way the export from the third party Software has been made. Check how the file imports back to the other CAD and if it gives no result then you know the export was not good.

It may also happen that the export files were set on a series of layers. Make sure to check any additional layers created while the importation was made.

- ***Why is it not possible to apply a TypeArt toolpath or any other toolpath on a Wireframe Surface?***

The Wireframes surfaces are not by default workable in ArtClip3D. The main reason is that the wireframe surfaces are made of a certain type of surfaces that tool definition in the CAM module would not interpret properly with the right compensations. The TypeArt toolpath allows the compensation of tools on the surfaces thus creating a more accurate and reliable toolpath to be sent to the CNC.

- ***Can I export a TypeArt as an IGS, or under any wireframe Surface type format?***

No. The conversion from MESH to Wireframe is not possible in ArtClip3D. However we have other solutions available that can fit this type of application. Do not hesitate to contact us and we will be glad to let you know the other options available.