Contents

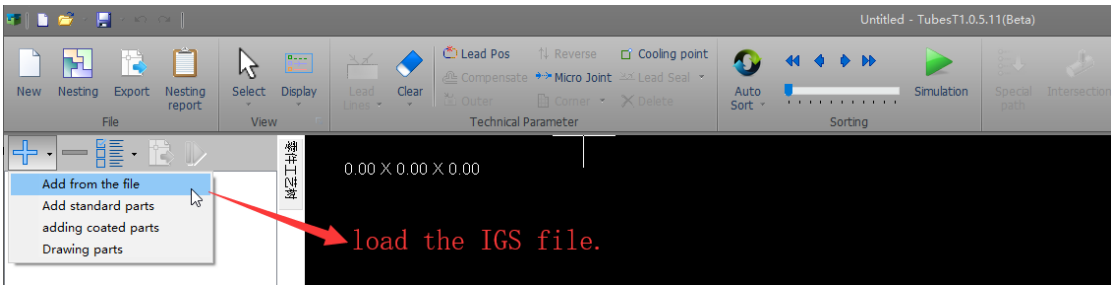
Preface

Tubest can realize functions including drawing object, importing file, setting cutting technique and quick nesting before processing the tube material, which is the complementary product to CypTube.

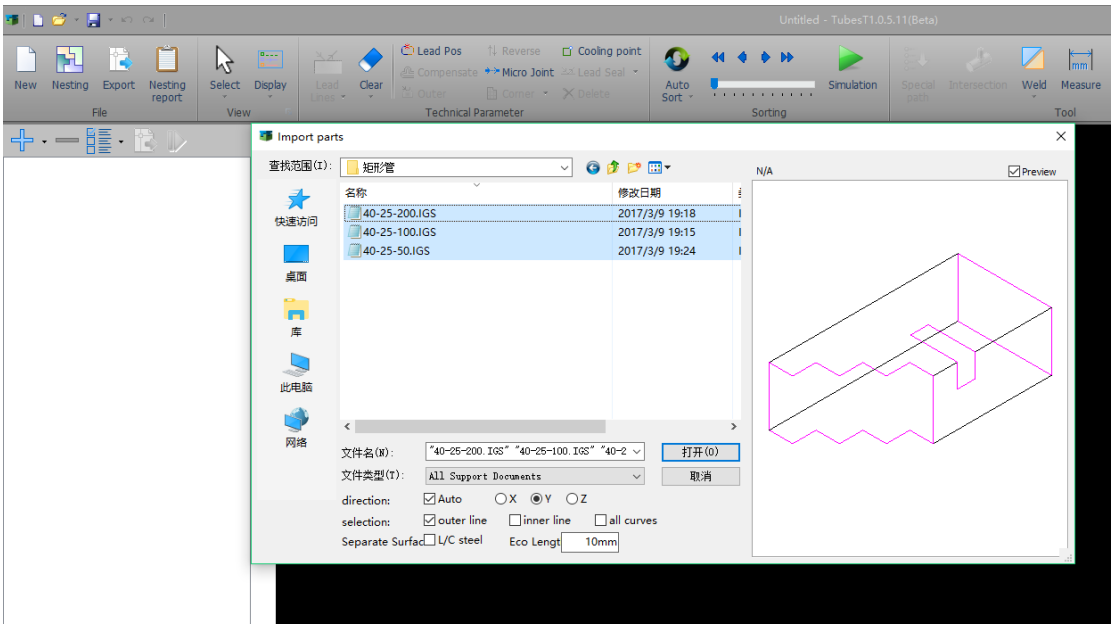
This description is only a brief introduction to the core functions of Tubest software. If you have any questions about the CypTube functions involved in the text, please refer to the CypTube laser cutting software user manual.

1. Import graphic file

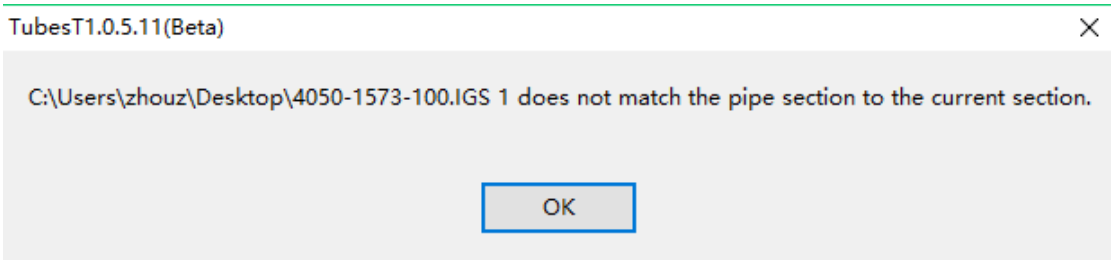
Click the "  " on the left side of the interface, select "Add from file" in pull-down menu to load the IGS file.



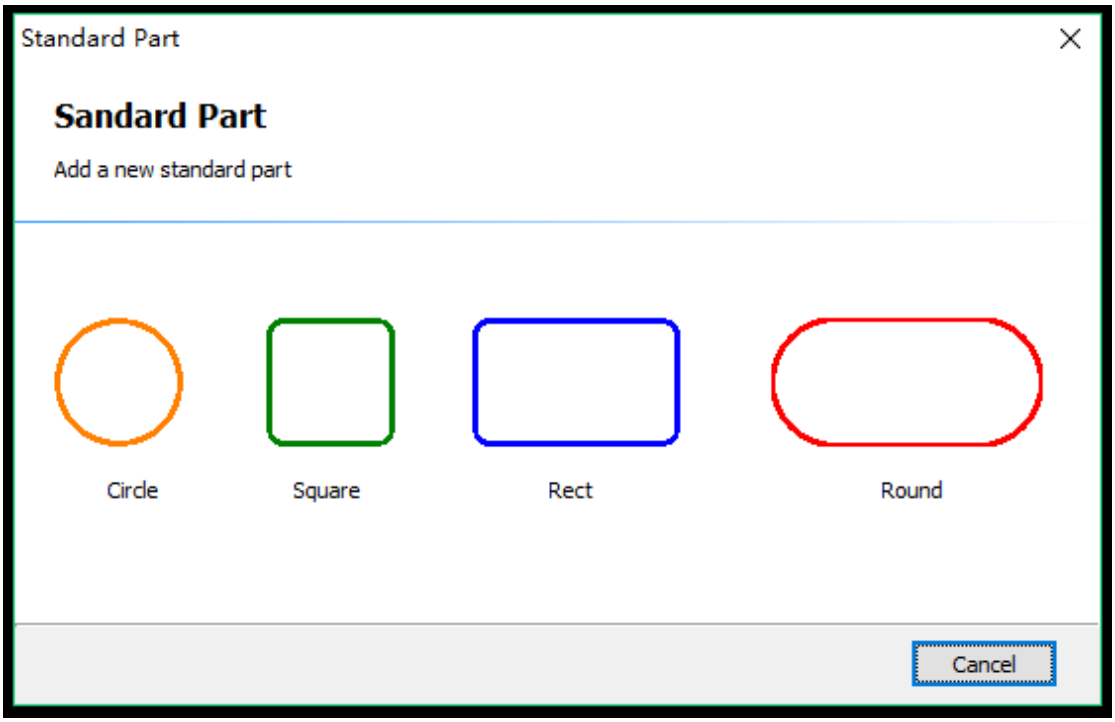
Select the IGS file in "Import Object" dialog box(you can frame select to bulk-import the object);the preview window on the right side of the open file dialog box will help you find the file quickly.



Notice:If the cross section of the tube is not identical with that of parts when import the IGS file, this will lead to a import failure.The log in bottom right will pop up"IGS section does not match the pipe section to the current section".

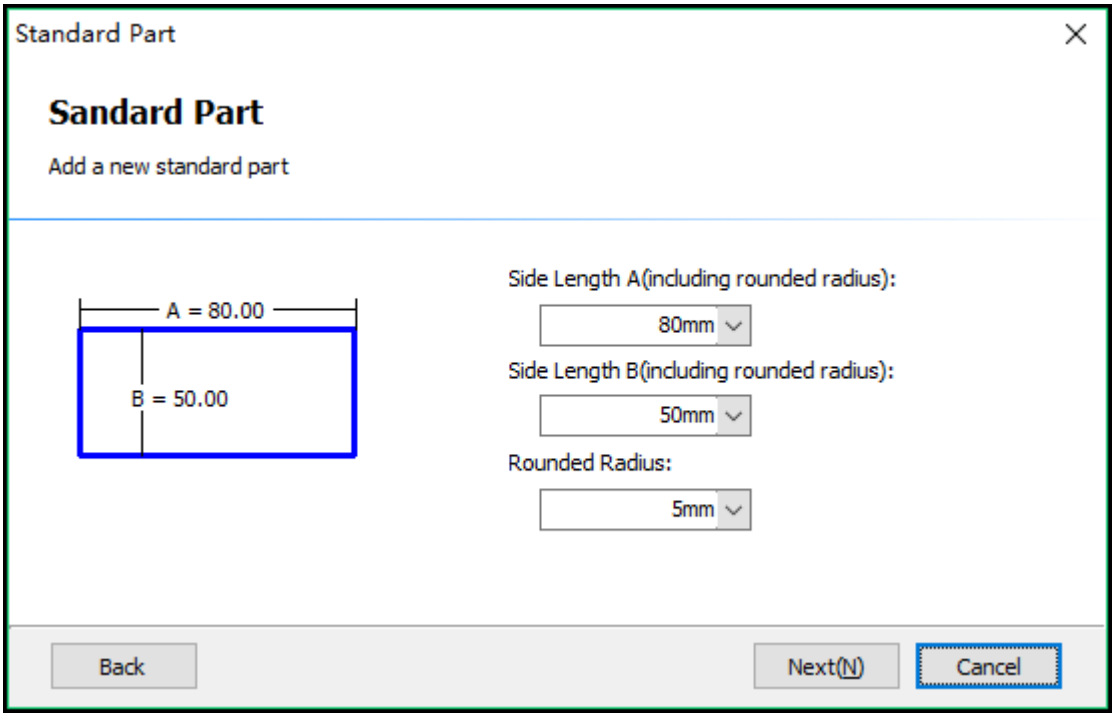


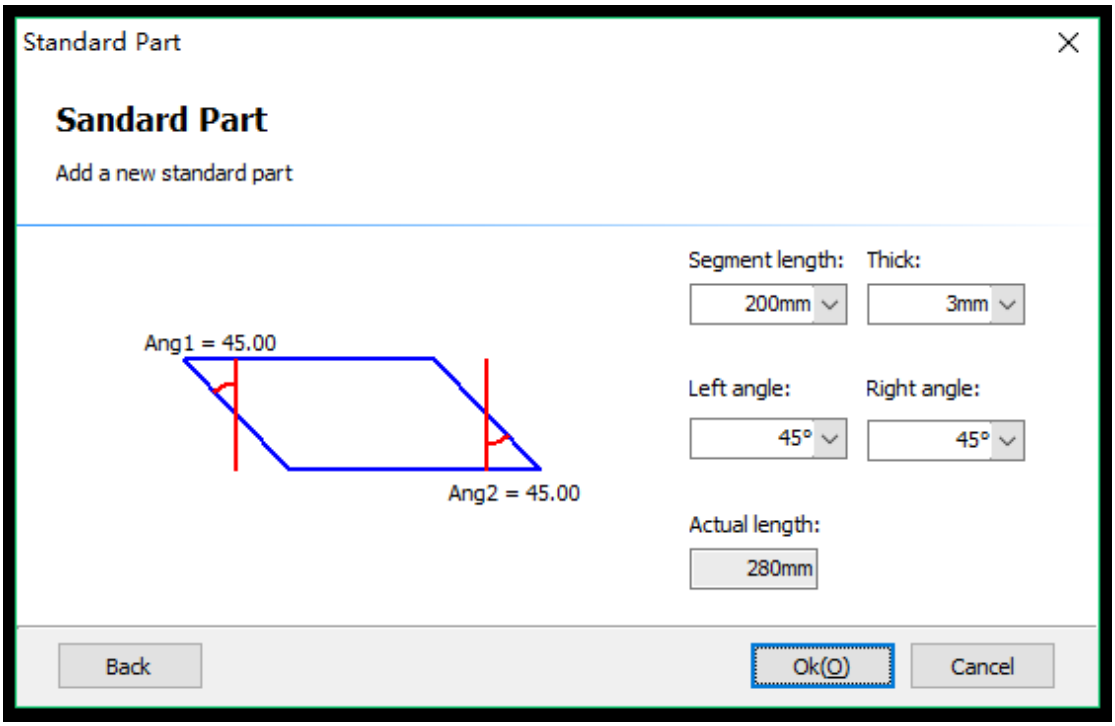
If you want to draw a part in Tubest, click the "  "on the left side and select "Add standard parts" or "Add coated parts".



For example, if you are going to draw a rectangular tube, select "Rect" above;then input the length A and length B including fillet radius to create a rectangular section. Click "Next" save the setting.

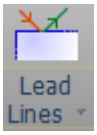
Then input "pipe length", "thickness", "left angle", "right angle", "total length" to complete the parameter setting.

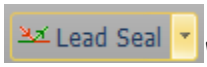


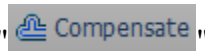


Notice:If you have imported IGS files or added standard parts after open the Tubest, when continue to add standard parts, which will remain the first cross section.

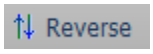
2. Technical parameter

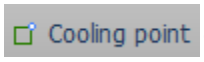
You may use most of the functions under "Technical parameter" column in the menu bar, including setting the lead-in lines and compensation, etc.You can set lead-in lines under button" 

", set seal, notch or over-cut parameters under button" 

".The button " 

" is used to set compensation. The button " 

" is used to set a micro-joint that will not be processed on the object. " 

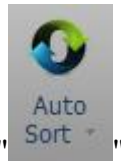
" is to reverse the machining direction of a single object selected. " 

" is to set the cooling pointClick the " 

" to enable this function and click where you want to add start point on the parts.

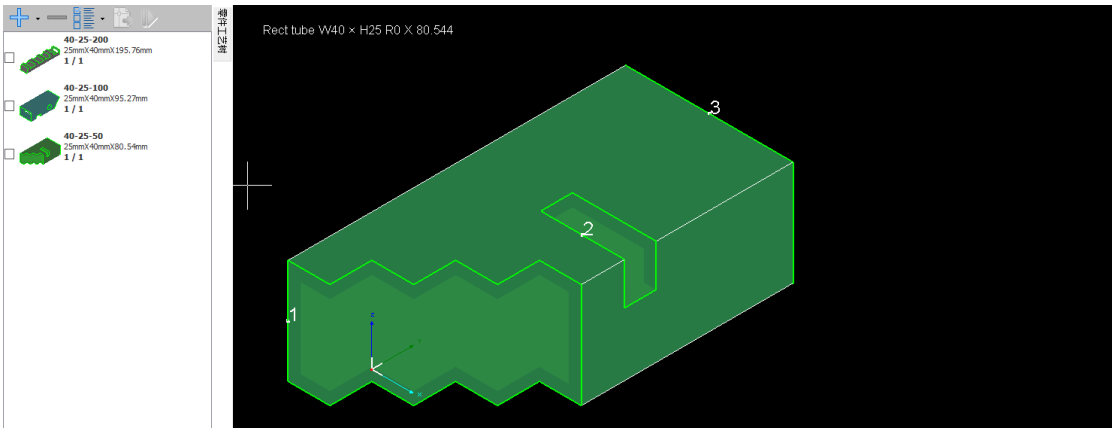
You can press Ctrl+A select all graphic and click "" to set lead-line parameter, then click OK to enable the setting.Click "" to set compensation parameters and click OK to enable the setting. The system will recognize the inner or outer line automatically.

3. Tool path planning and simulation

Click " 

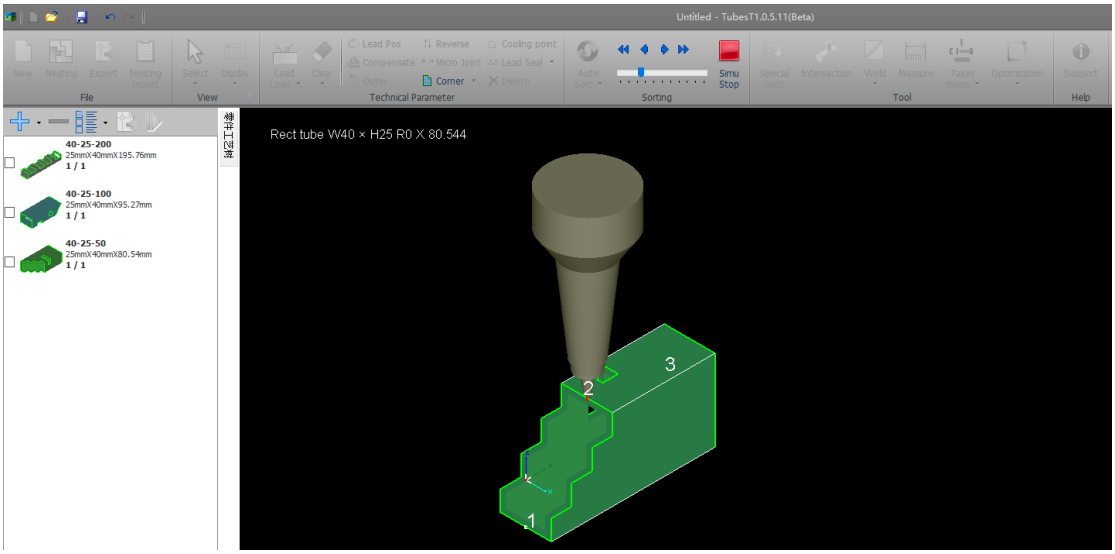
" to auto-sort the object, and you can click the drop-down menu to choose the sorting pattern as sorting by Y axis value descending or ascending.

You can also choose Manual sort mode to optimize the auto-sort result by click the graphic one by one.



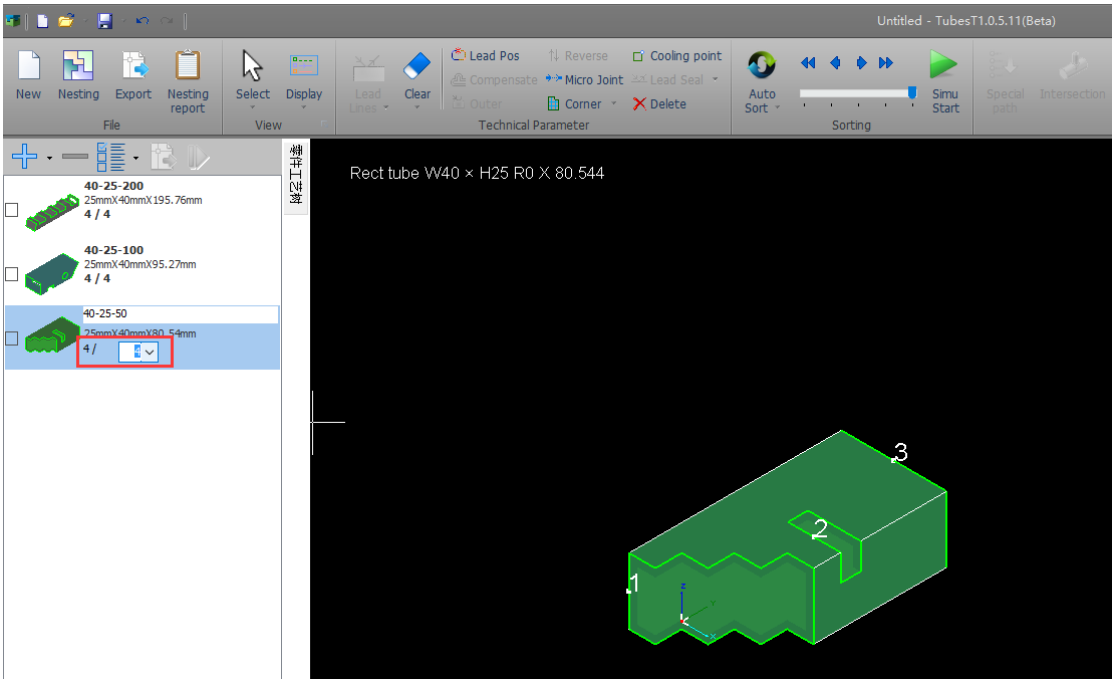
Click " 

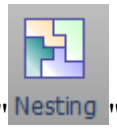
" to preview the simulated tool path of the current object.



4 Auto nesting

Set the part quantity in the left bar.



Click " 

" to set auto-nesting parameter.

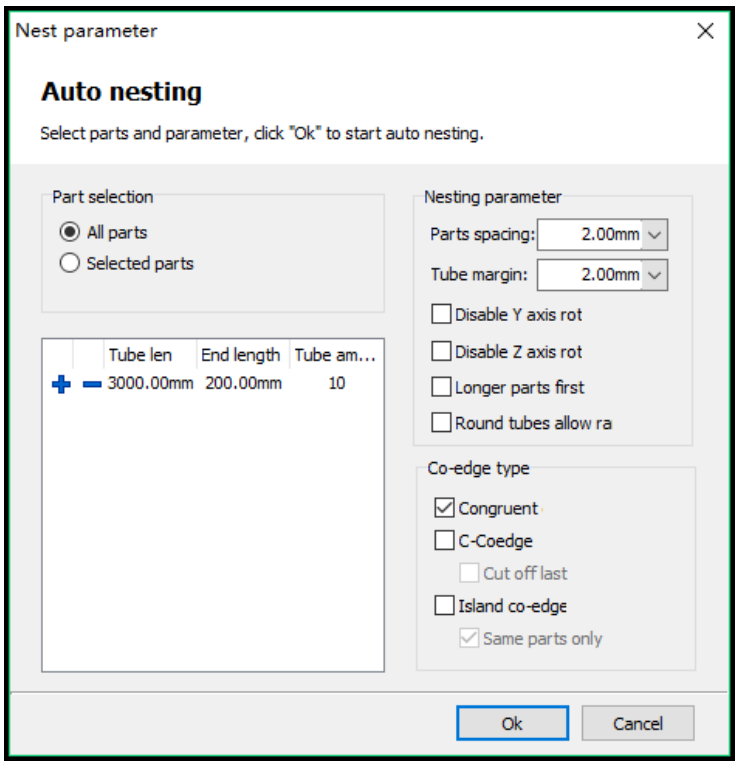
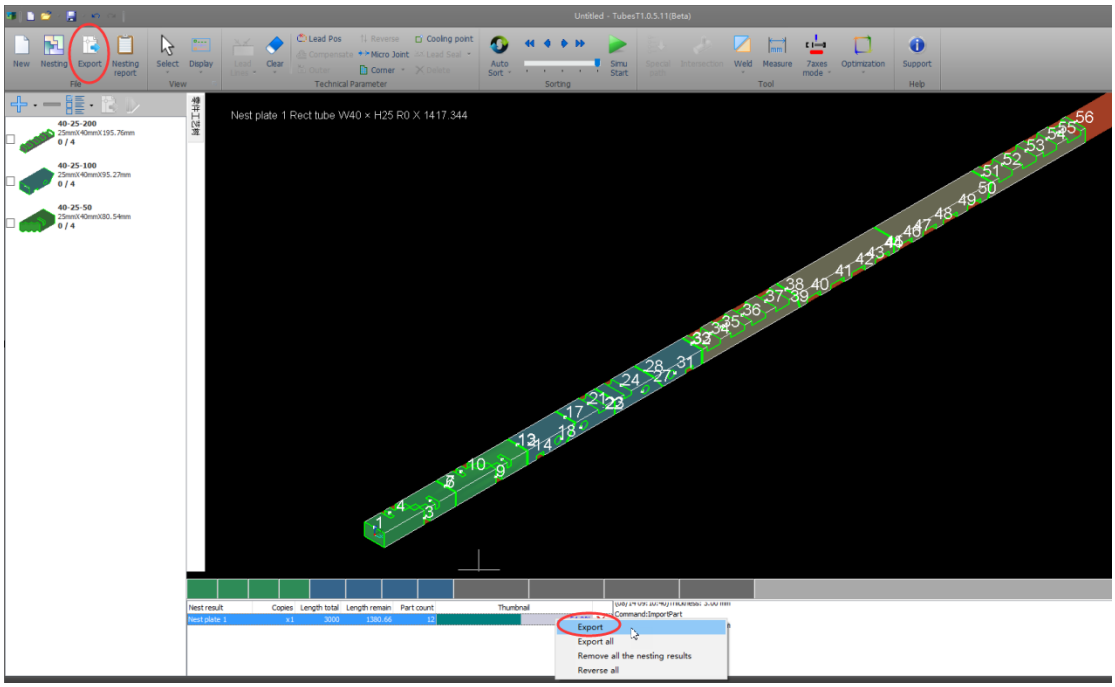
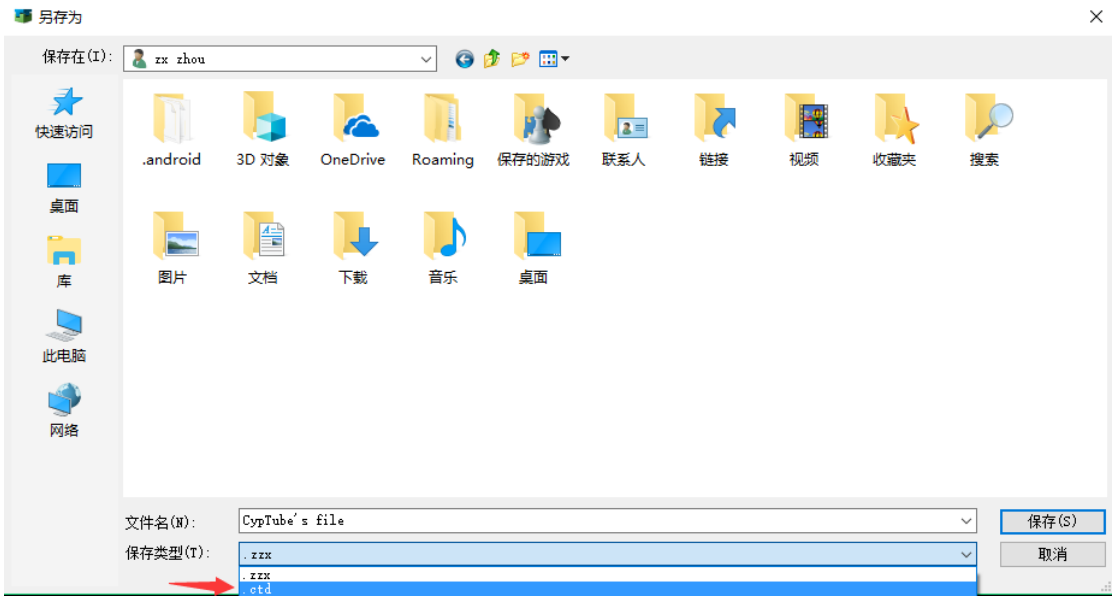


Table 1: Nesting parameter table1

Parameter name	Parameter description
Part spacing	The minimum distance between parts in nesting;
Tube margin	The minimum distance from parts to tube end-edge;
Congruent	To merge two edges of the parts with same cross section as one shared edge in nesting.
C-coedge	To cut the shared edge of 2 parts with weld compensation in 3 tool paths.
Island Co-edge	To realize single path cutting of shared edge with a notch on it.
Tube length	The total length of the main tube;
End length	The tailing part remains in the chuck that is not available for processing.
Tube amount	The number of tube material for nesting;

Click "Export" in menu bar or right-click the Nest result at the bottom to export the nesting file for machining. (Note: There are two types tube cutting system-Bus system and pulse system. Bus system exports zzx file for machining, pulse system exports ctd file for machining.)





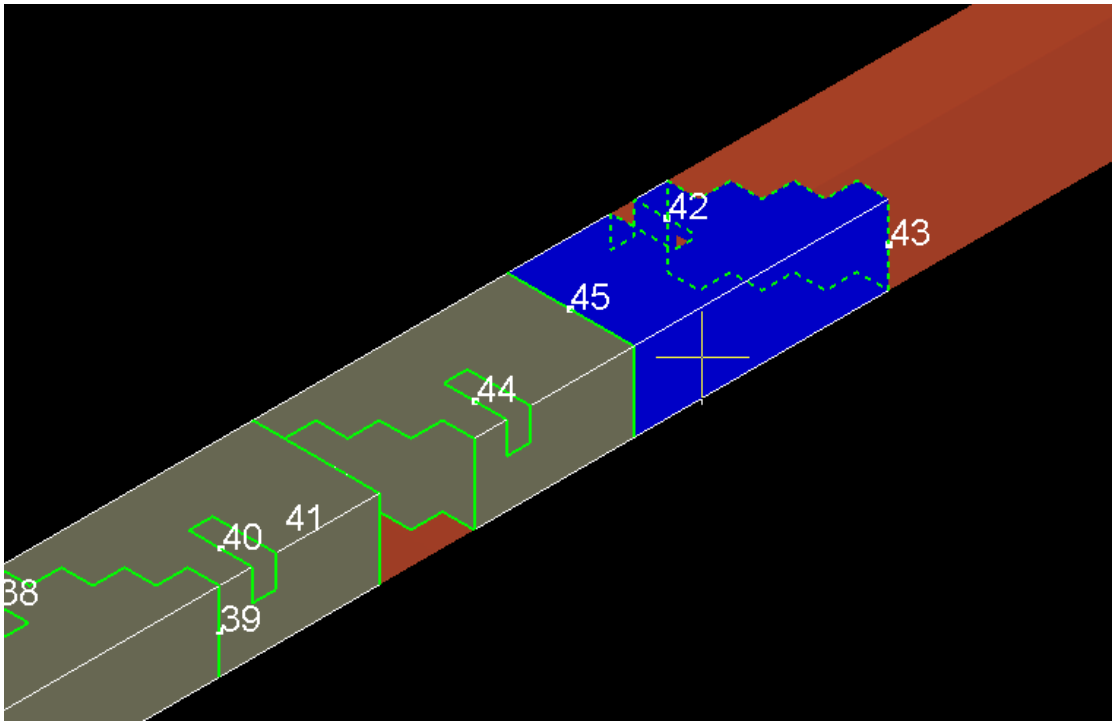
5 Manual nesting

When the first auto nesting finished and the nest result is not desirable with low utilization rate, you can also manually adjust the nest result.Add new parts in the left bar and set the quantity to each part; Then double-click the Nest result of low utilization

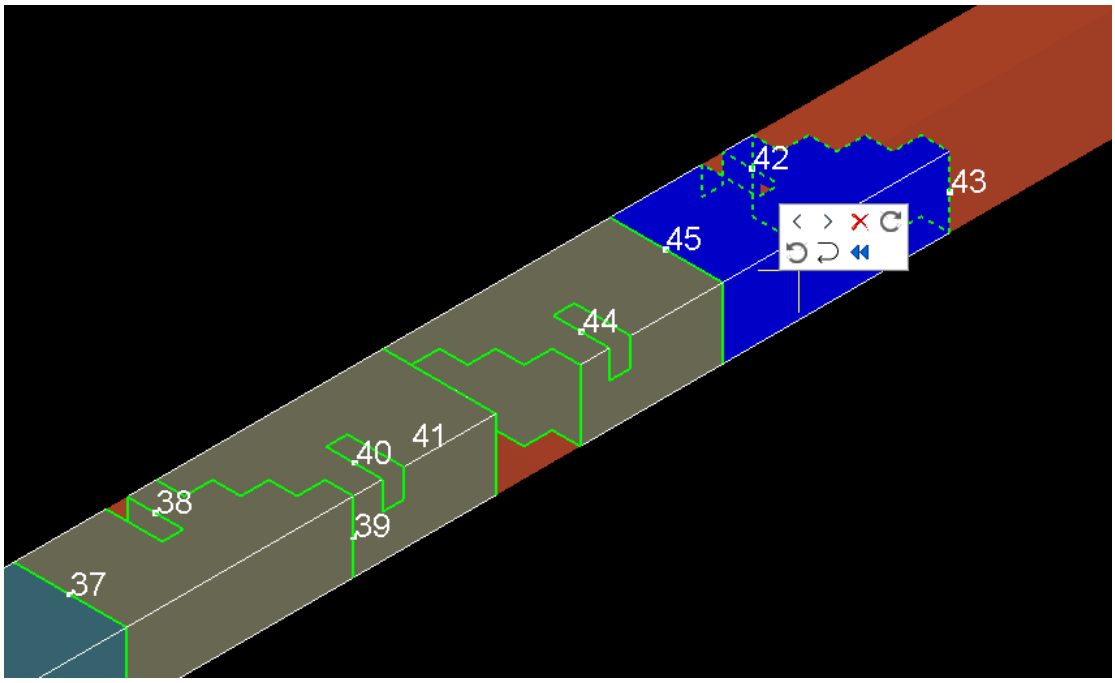
at the bottom to enable the preview mode; Select the parts in the left bar and click "  " to manually add new parts to the tube material.

Click the part enter the floating menu to enable the operations such as move, rotate and delete.

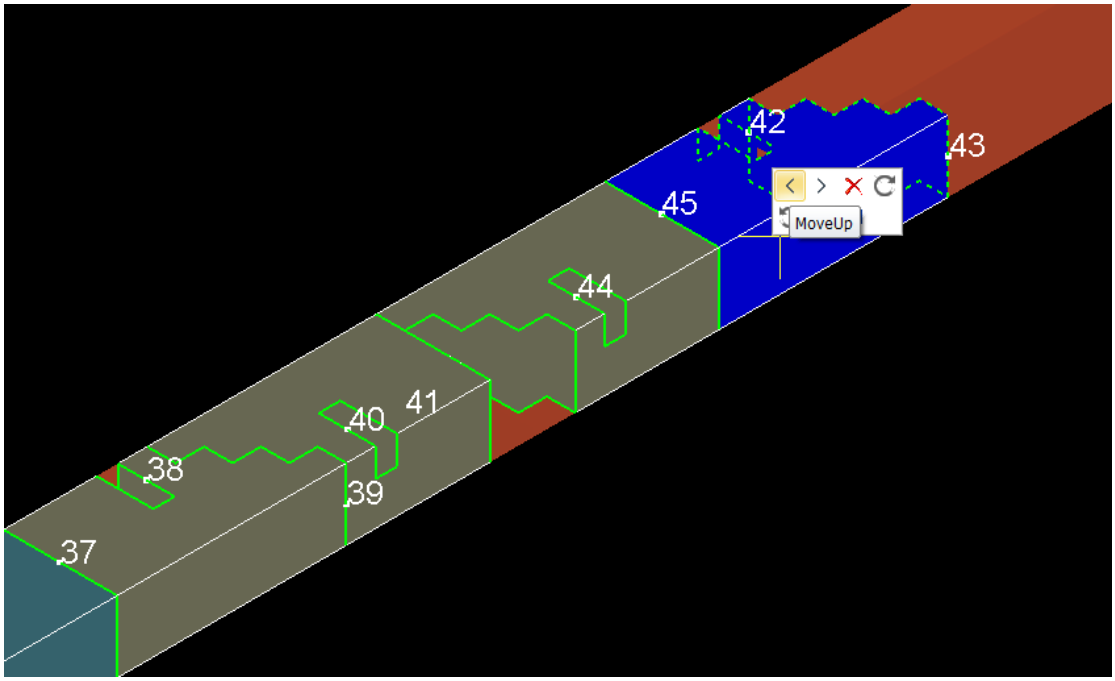
Choose the part which you want nest manually （click one surface of the part not the hole of the part with the left mouse button，the part turn to blue means it been chosen）

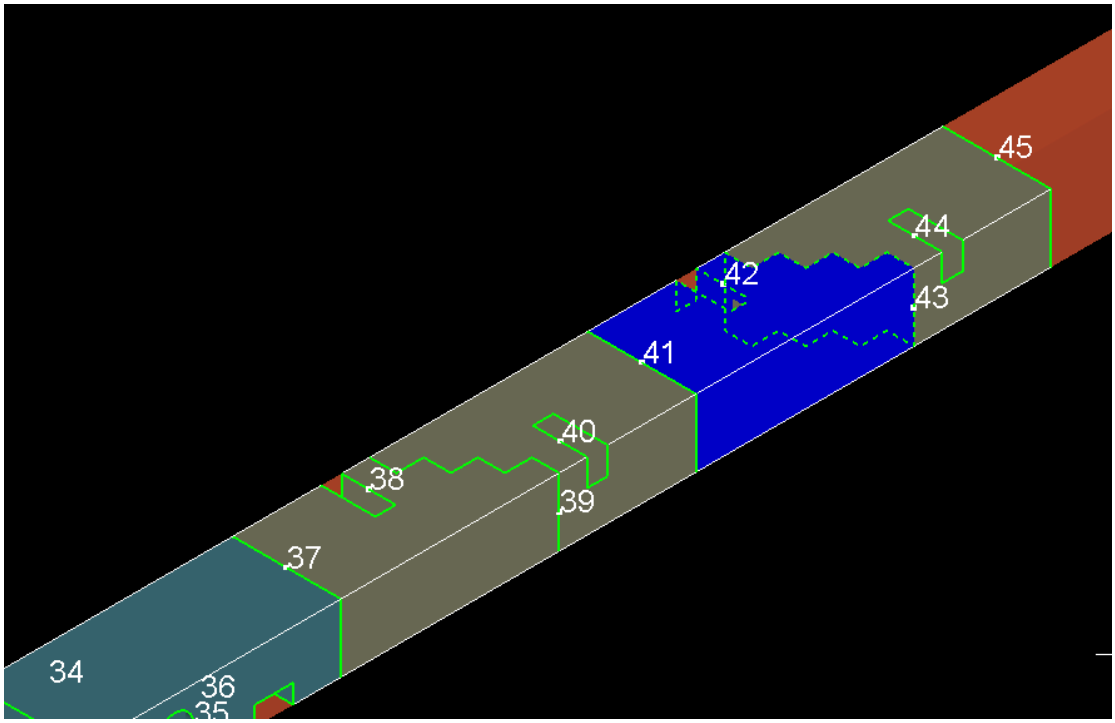


Move the mouse slowly, you will see a floating window;



Then you can move the part up to the front part.

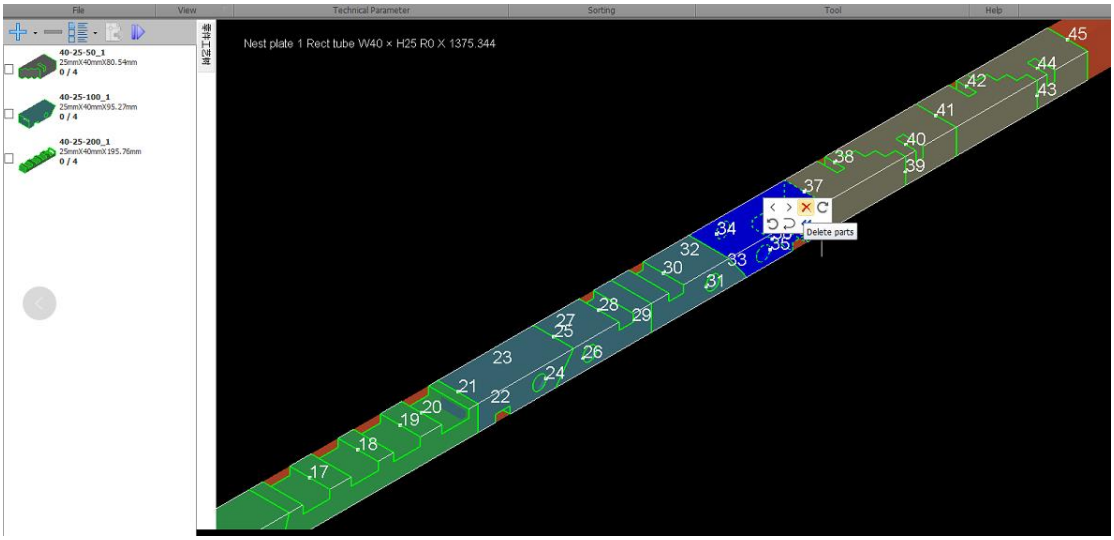




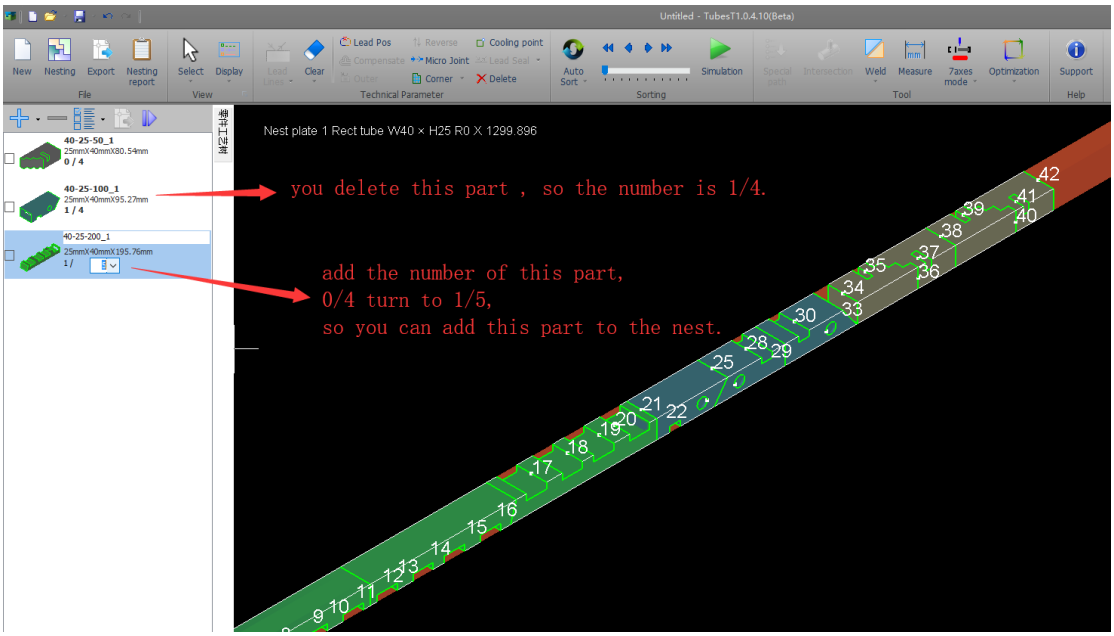
You can move up& down; delete; CW & CCW rotate;

How to remove the part from the nest and replace it with another one.

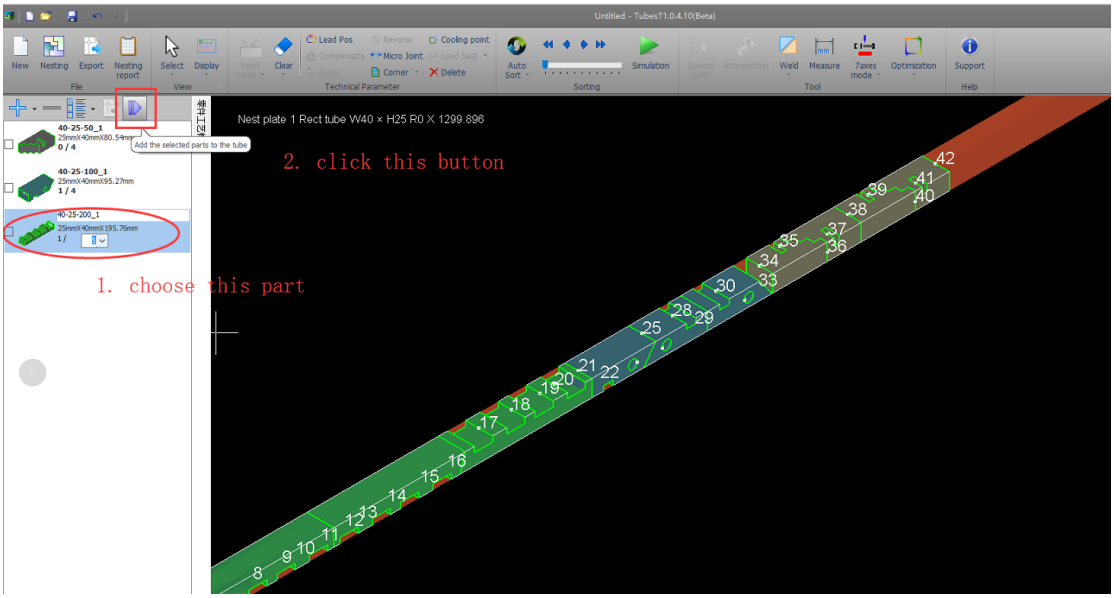
Choose the part and delete it.



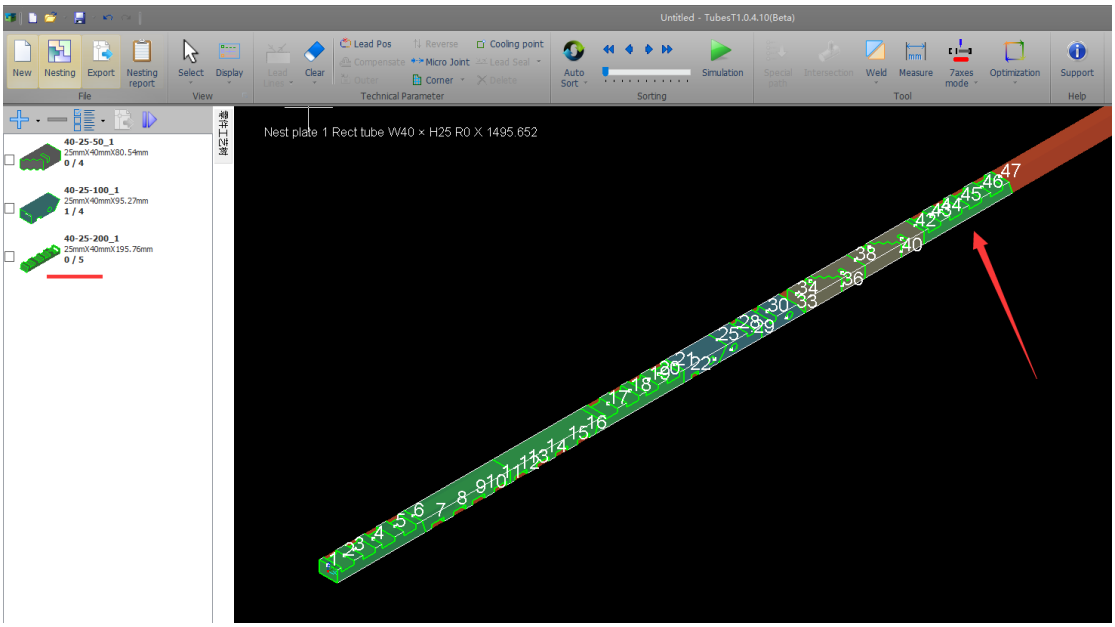
Add a new part or add the number of the another part



Choose the part ,and add it .



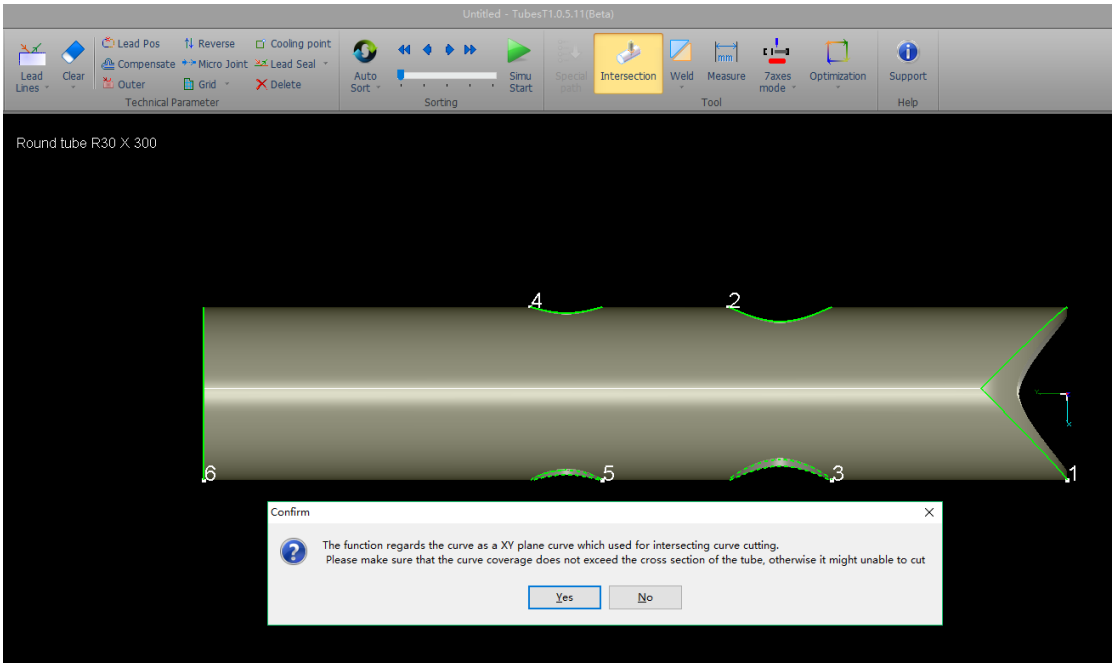
You can see the part in the nest , so you can move it to the position you want.



6 Technique setting

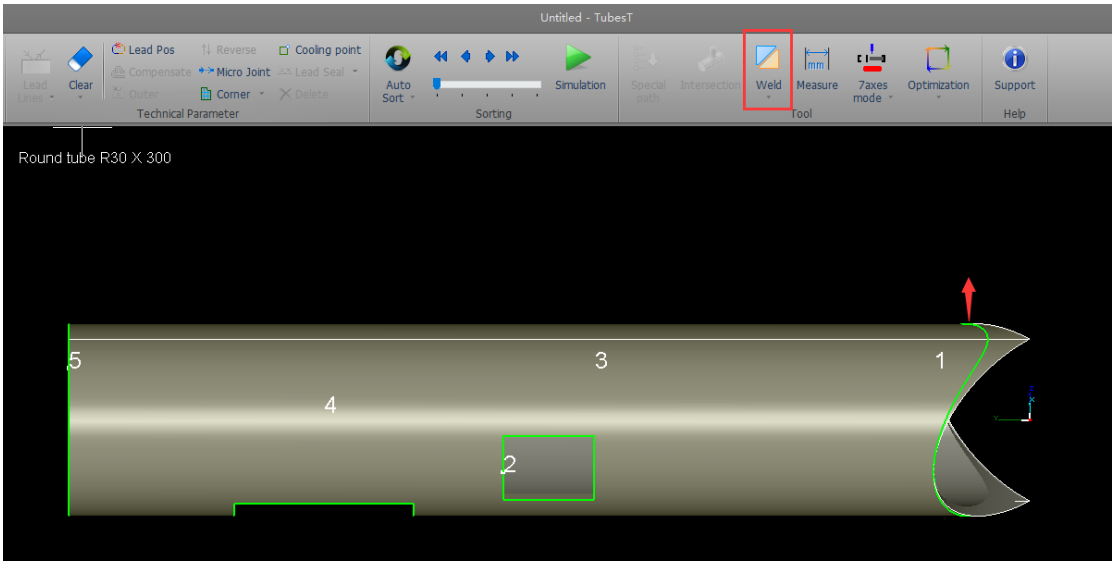
Intersection setting:Select the hole on the tube surface and click " 

" to enable the intersection setting. Then the tube will not rotate when machining.



Weld compensation setting:Select the end surface and click " 

" to generate the compensation line in white.



7 Common operations

Table 2:Shortcut button list

Operation	Parameter description
Scroll middle mouse button	To zoom in and zoom out
Drag middle mouse button	To rotate the object in any angle
Shift+ middle mouse button	Press and drag Shift+middle mouse button to rotate the object along central axis of the tube;
Ctrl+ middle mouse button	Press and drag Ctrl+ middle mouse button to translate the object;
F4	Switch to the optimal view