

# Channel Letter Bending Machine Operation Manual

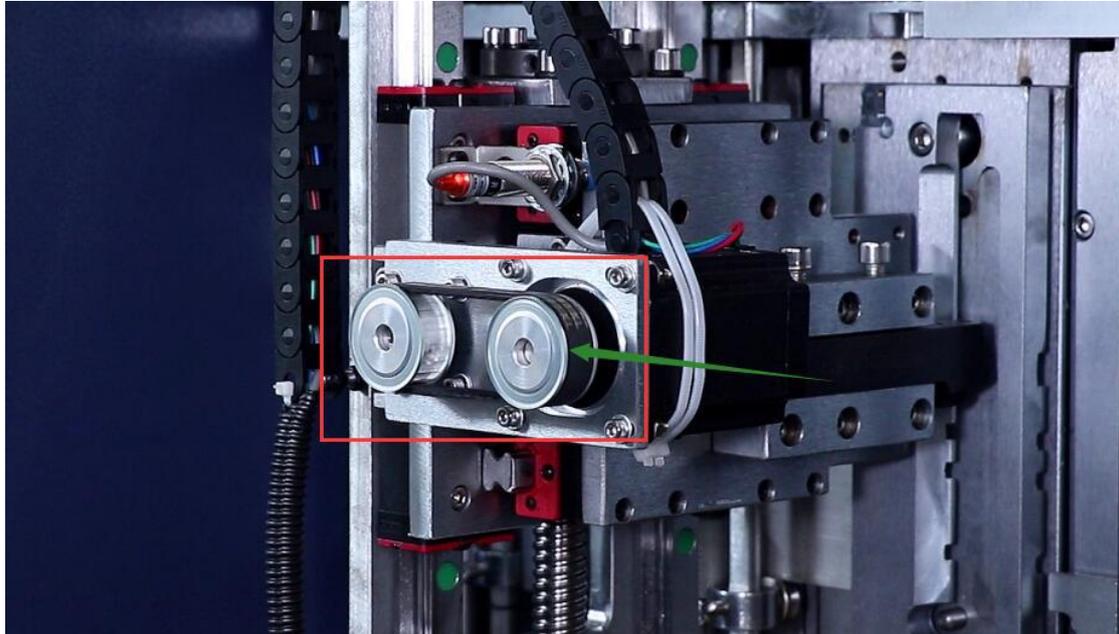
1.The first step , we need to connect power and air input (air pressure about 0.4-0.6mpa)



2.Turn on the machine



3. Use your hand to touch this belt, if this belt is loose and easy to rotate, that means now it's the aluminum model. If this belt is fixed and hard to rotate, that means now it's the stainless model.

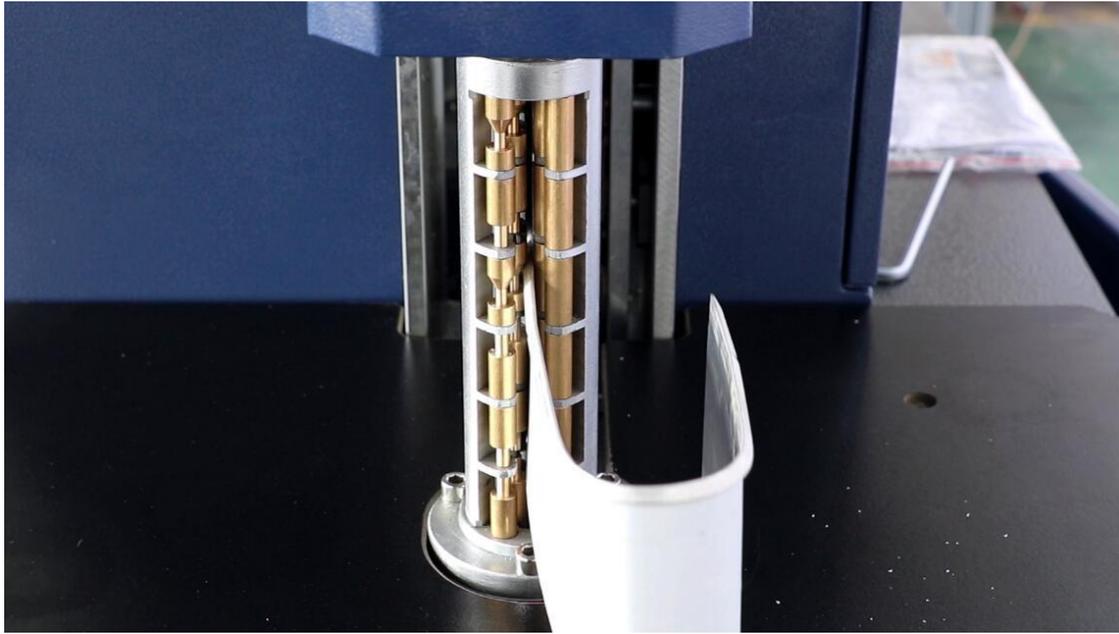


4. Next we test the aluminum first, press this button to transform model.

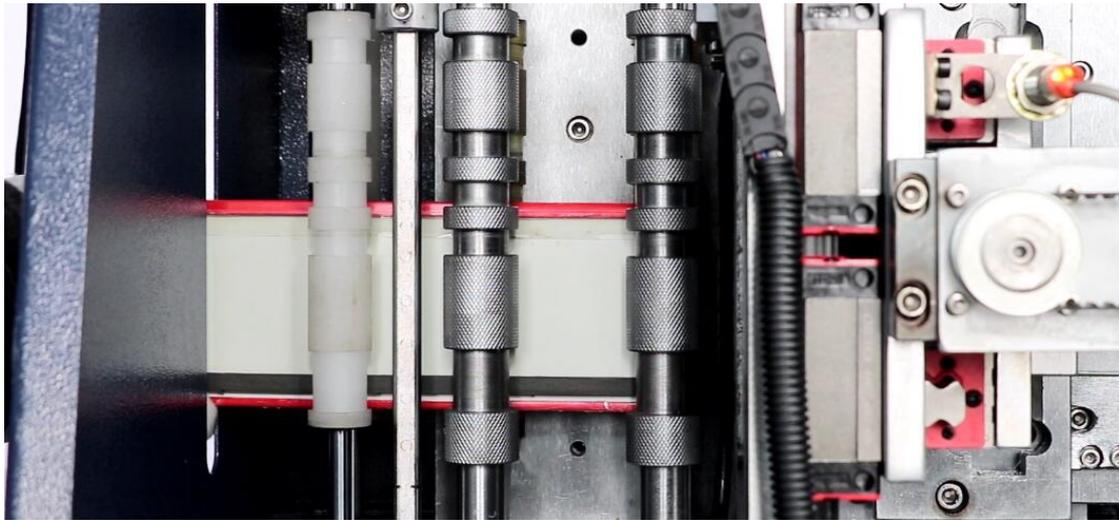
So after you pressing, feel that belt, make sure that belt is loose. (aluminum model)



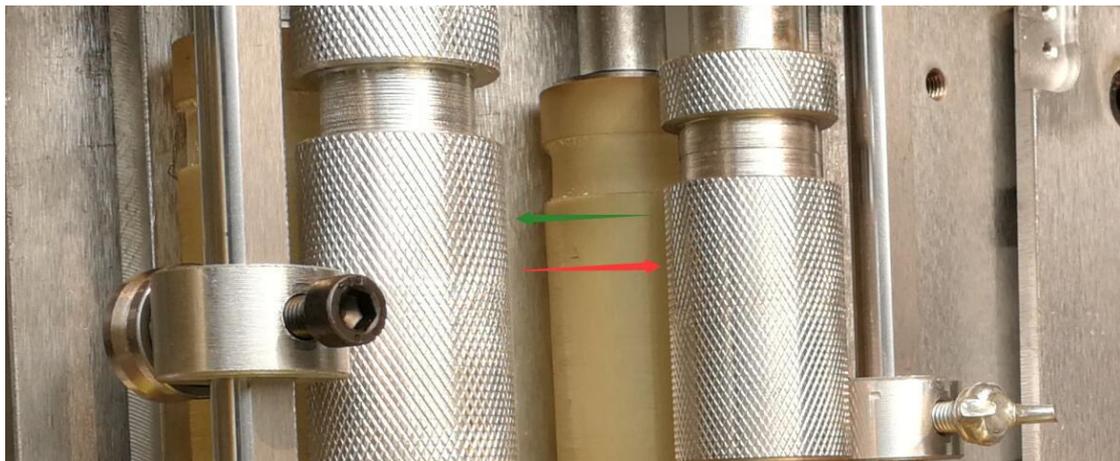
This bender is for aluminum .



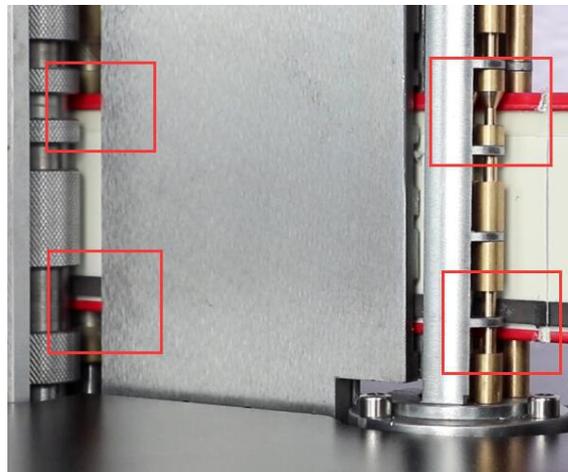
5.The first ,we need to feed the material ,manual feeding, put the material with cap side in the groove , material up and down with pressure roller fixed, material into iron drive wheel position



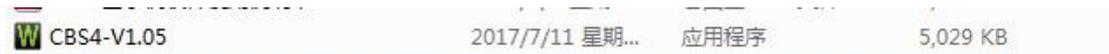
6. And we can see ,as follow picture , press the button ,the rubber wheel will loose ,and press twice , the rubber wheel will fix .when we feed the material ,we need to loose it.



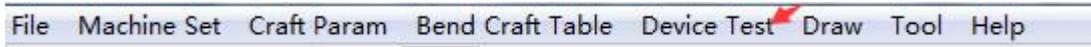
We must ensure the material reach here and make sure the cap side in the groove  
And after finish feeding , we need to fix the material ,so we must press the button again.



7. Next we open software :CBS4-V1.05 (aluminum)

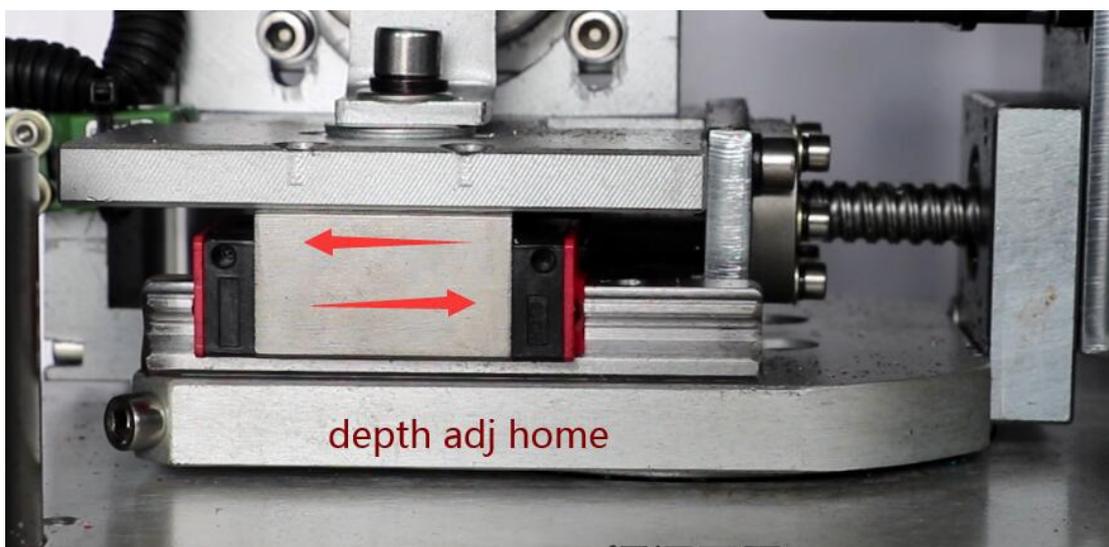
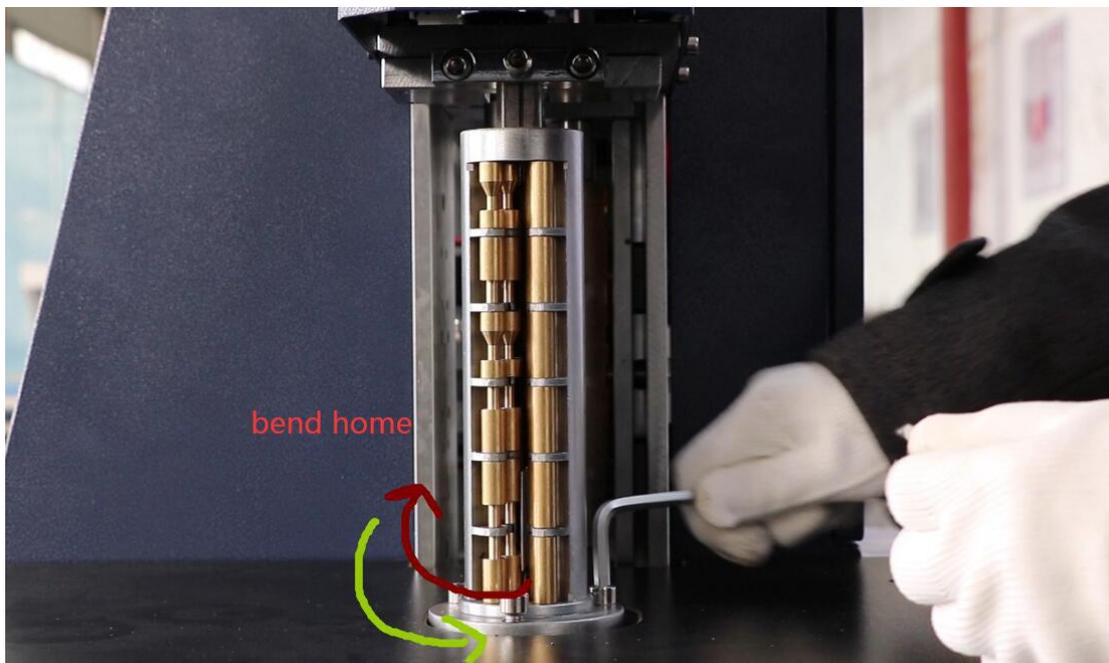


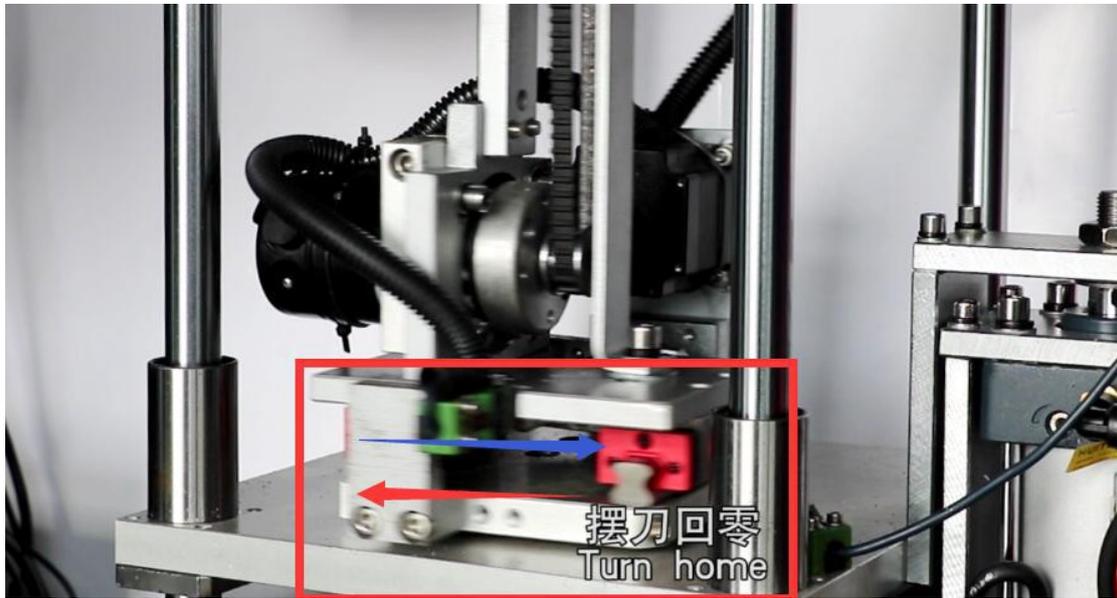
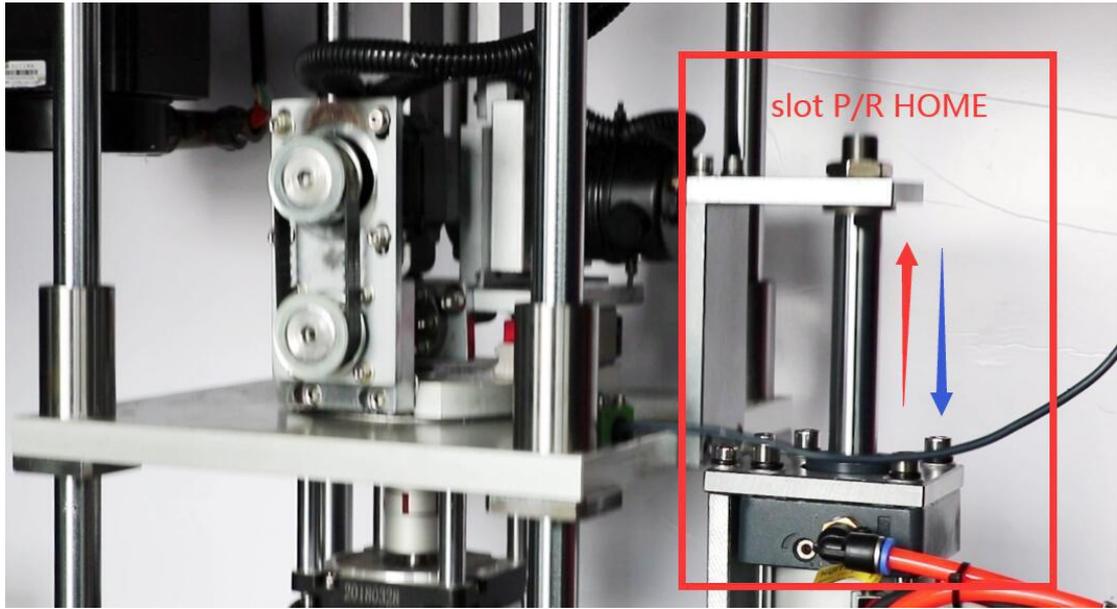
8. Open "device test"



9. Press all home button from right to left.

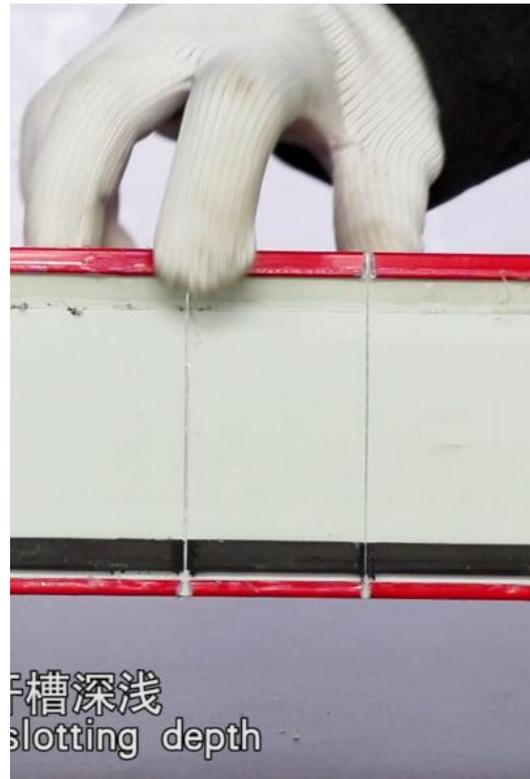
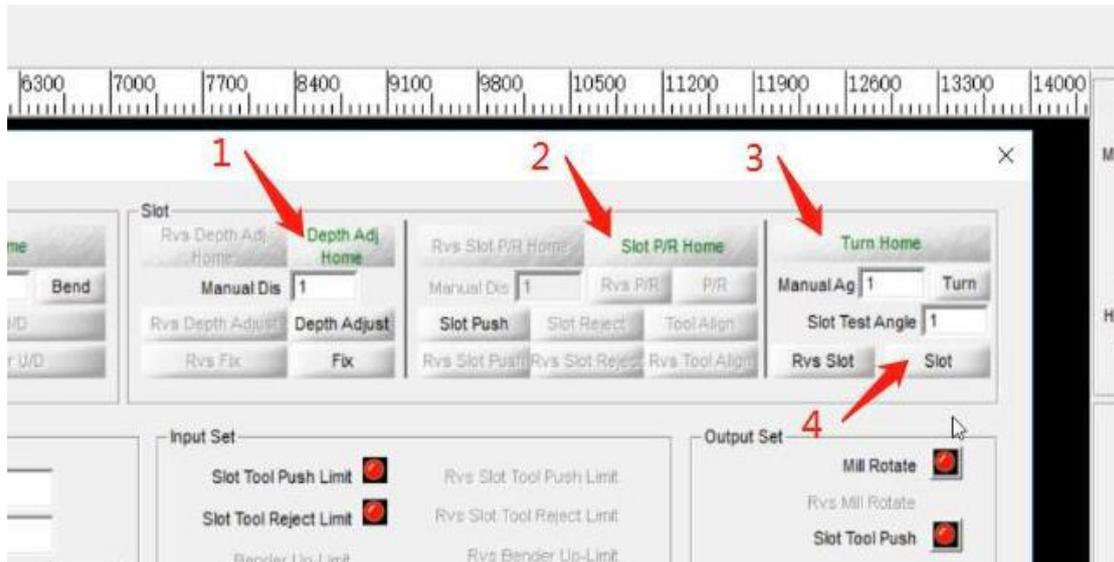
Wait for the button to turn green , then press next one.





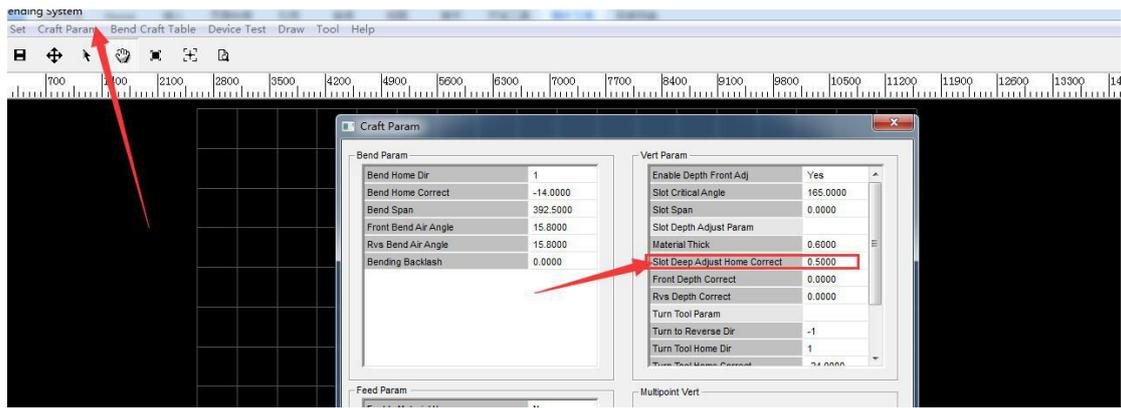
## How to adjust the depth?

According to the following operation, the machine will be slotted



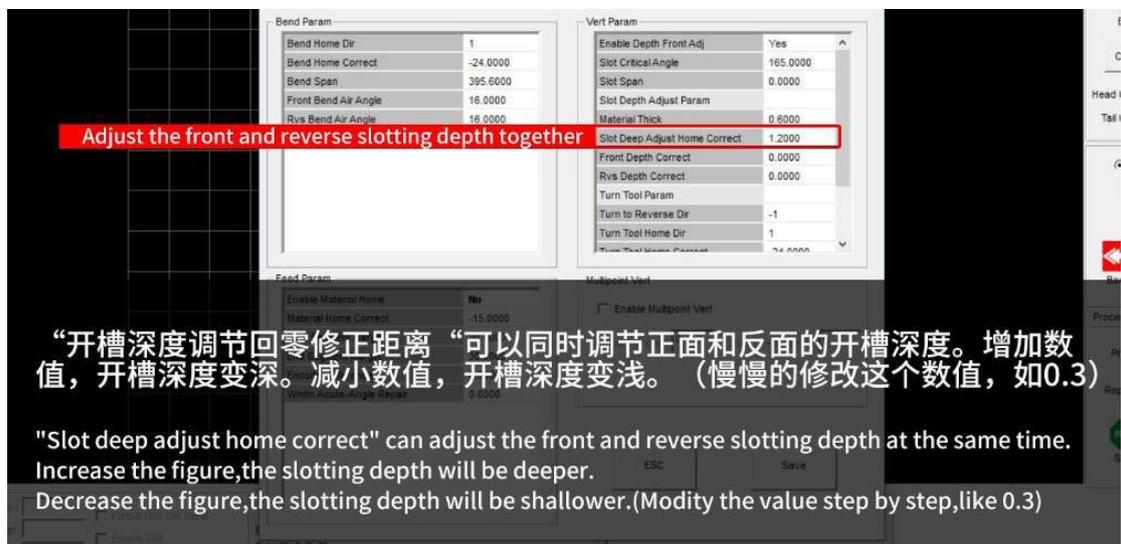
If you feel the cut depth is a little shallow or a little deep , you can adjust these parameter from this part

“craft parameter”---vert parameter (follow as picture)



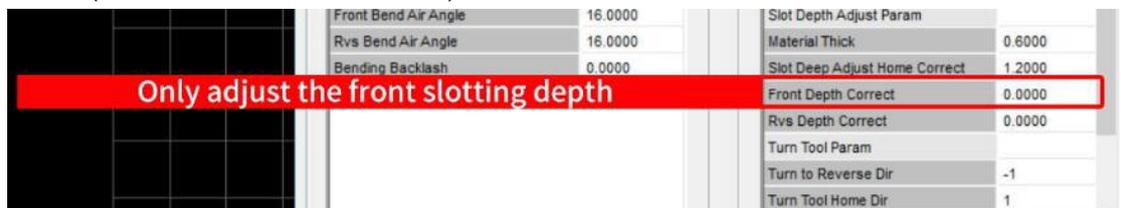
1.About “slot deep adjust home correct” this parameter, if you feel both front side and back side are all deep or shallow , you can adjust this parameter

If deep, decrease this number, if shallow increase this number (little by little , for example 0.3)



About” front depth correct “, this parameter, if you feel just front side is shallow or deep , you can adjust this number (decrease or increase)

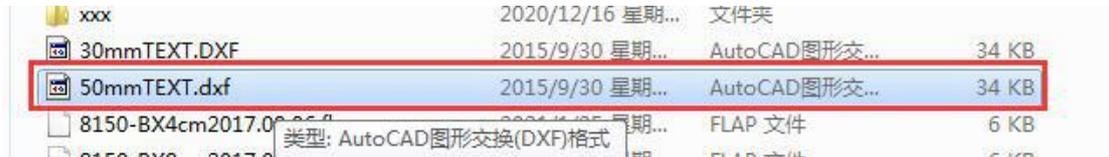
Because stainless model doesn't have back cut ,so in this software ,it doesn't show back depth correct(but in aluminum model, it has)



## How to adjust curve?

If you feel the curve degree is not good , and it can't suit the letter , for example , the curve is big or small so the letter from bending machine and CNC router can't suit , you can adjust this parameter

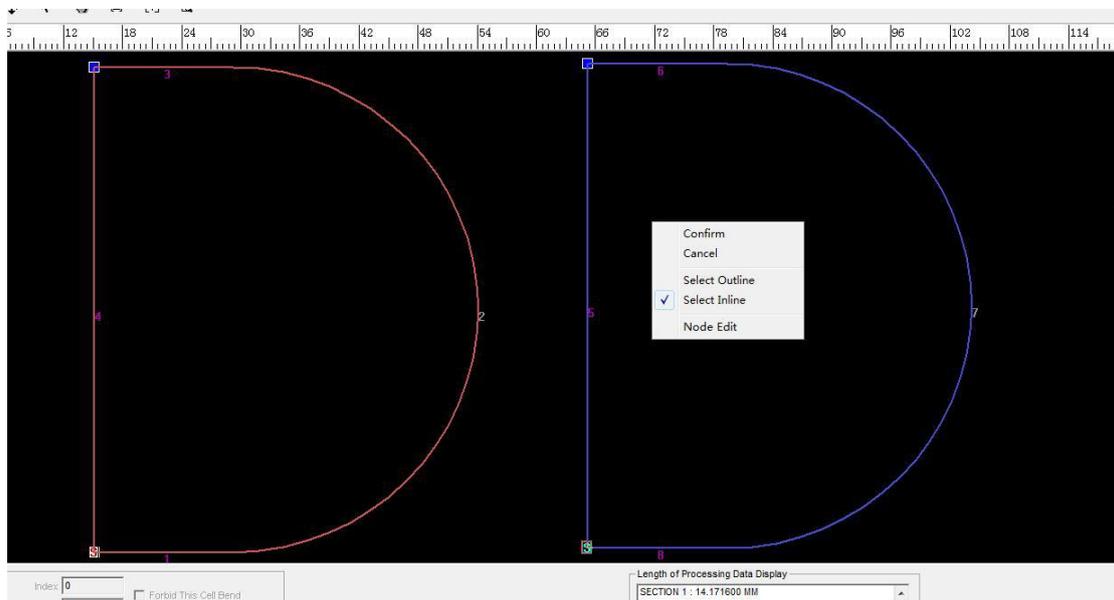
Test file is 50mm test

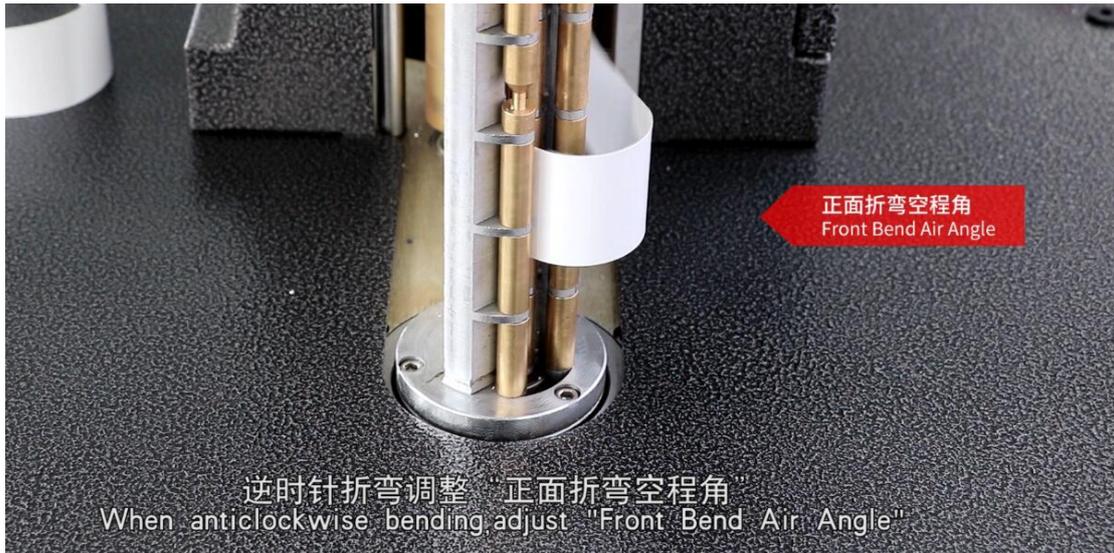


Open this file in software

Select outline and select inline

Make it



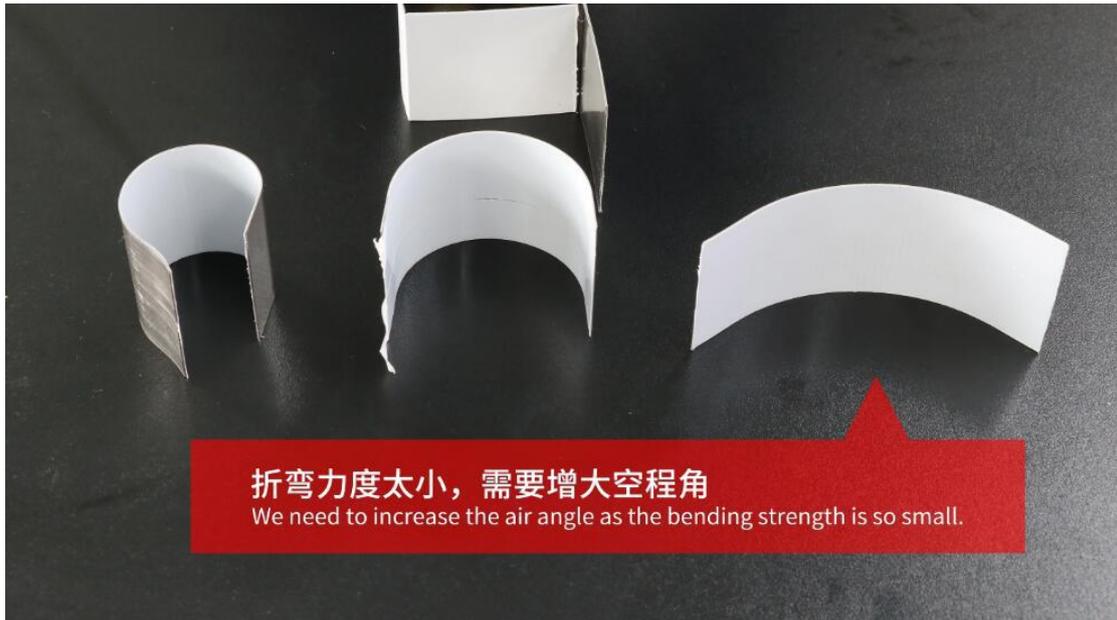


“craft parameter”--bend parameter

Bend Param	
Bend Home Dir	1
Bend Home Correct	-21.2000
Bend Span	394.0000
Front Bend Air Angle	21.3000
Rvs Bend Air Angle	14.2000
Bending Backlash	0.0000

From this picture ,you can see, it include two parameters , front bend air angle can adjust back side , and “Rvs bend air angle “can adjust front side ,about this , you can have a try , change one number (one of these two) , try to make a letter, then you will see the curve(back or front) is changed,then you will know which parameter can control backside and which one can control front side.





Bend Param	
Bend Home Dir	1
Bend Home Correct	-14.0000
Bend Span	392.5000
Front Bend Air Angle	15.8000
Rvs Bend Air Angle	15.8000
Bending Backlash	0.0000

When anticlockwise bending, adjust front bend air angle  
When clockwise bending, adjust rvs bend air angle

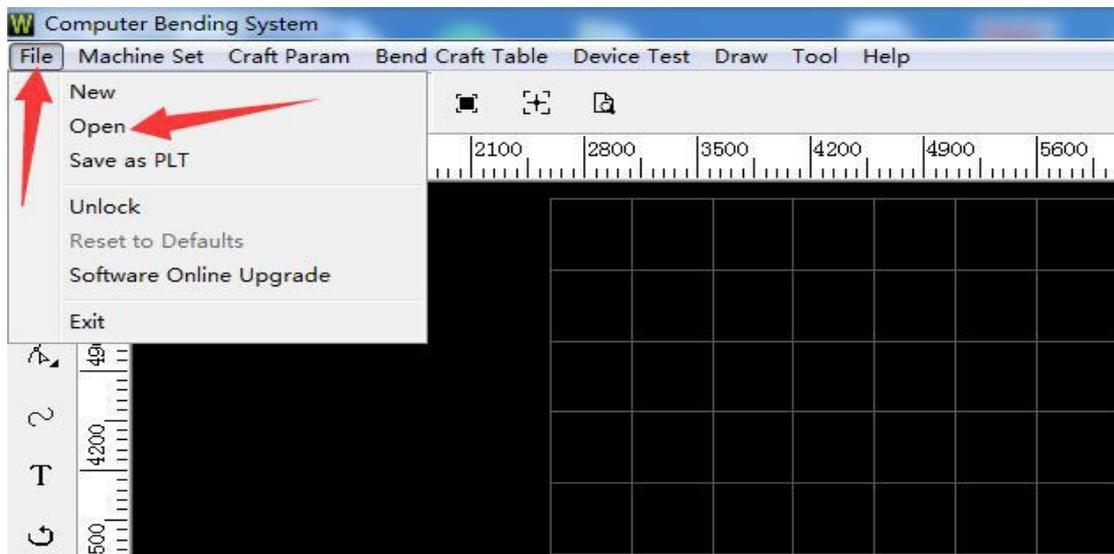
Vert Param	
Enable Depth Front Adj	Yes
Slot Critical Angle	165.0000
Slot Span	0.0000
Slot Depth Adjust Param	
Material Thick	0.6000
Slot Deep Adjust Home Correct	0.5000
Front Depth Correct	0.0000
Rvs Depth Correct	0.0000
Turn Tool Param	
Turn to Reverse Dir	-1
Turn Tool Home Dir	1
Turn Tool Home Correct	24.0000

Feed Param	
Enable Material Home	No
Material Home Correct	-15.0000

Multipoint Vert	
<input type="checkbox"/> Enable Multipoint Vert	

## How to make a aluminum letter

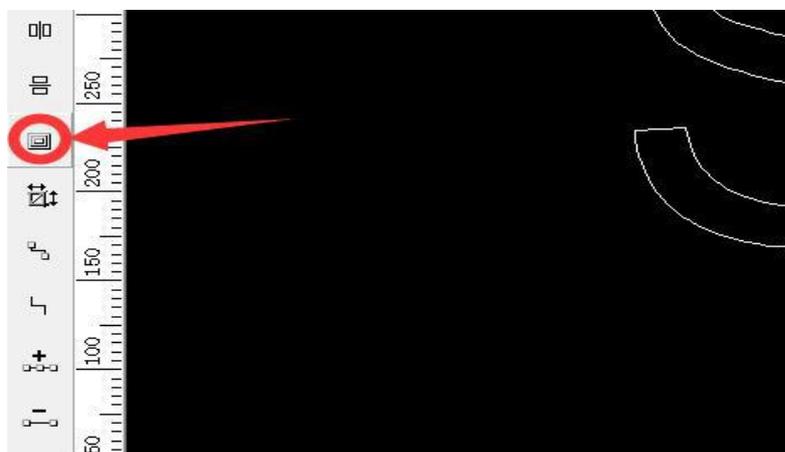
Find a file and open it

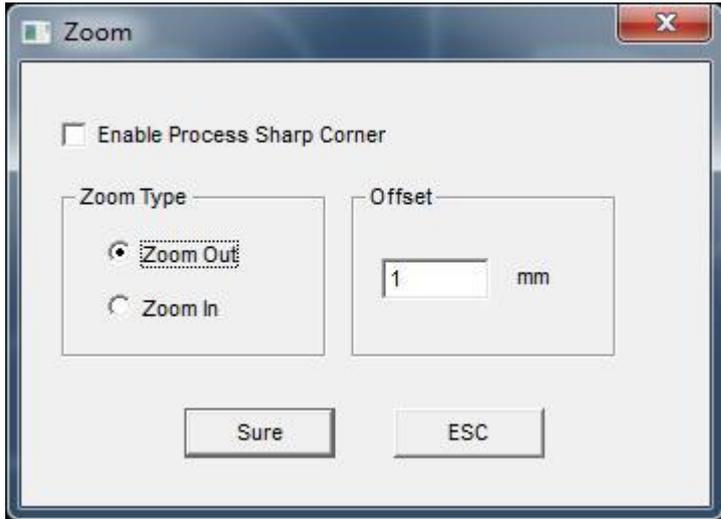


Open it

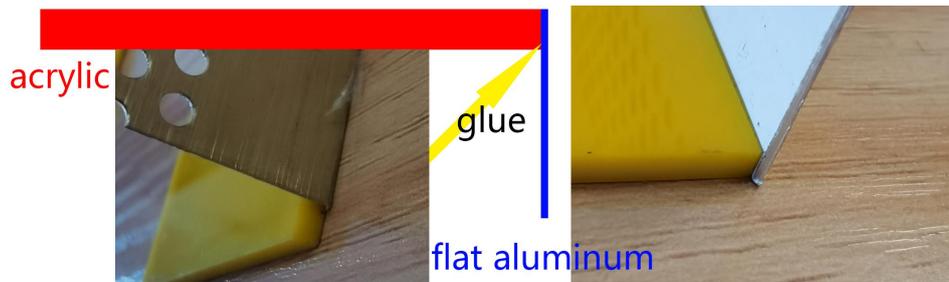


Click "ZOOM"

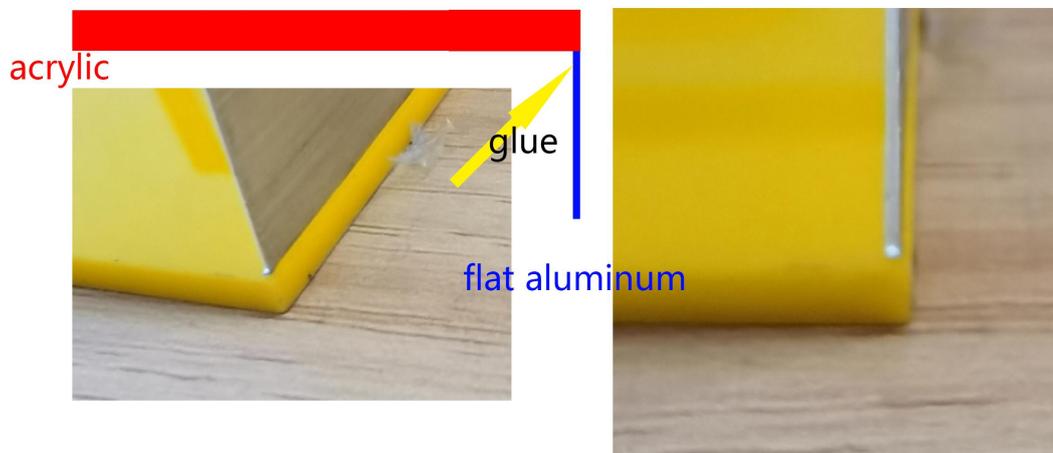




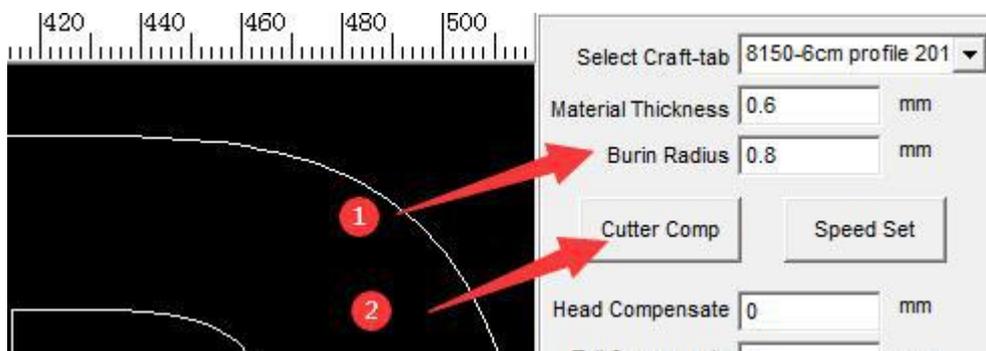
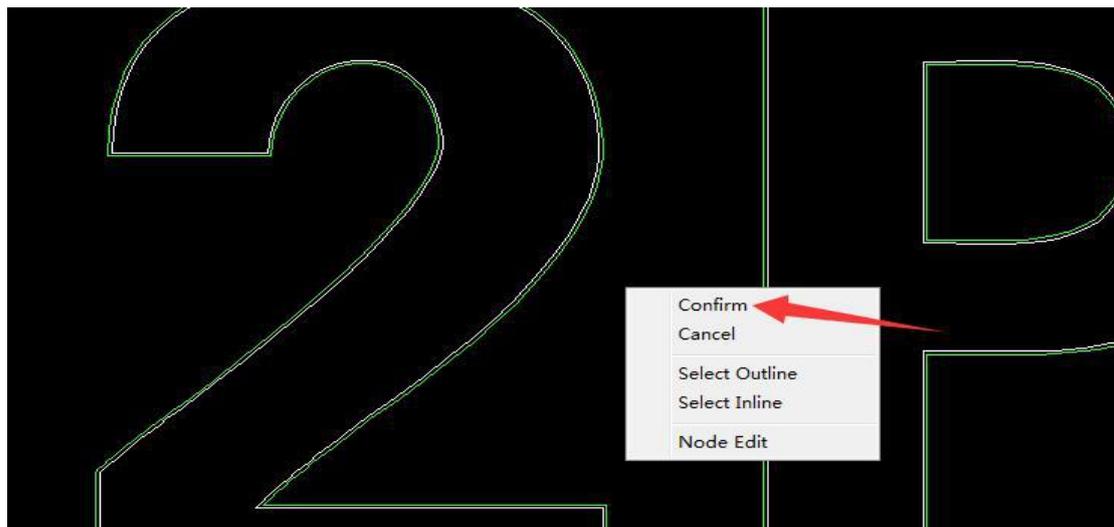
Flat Aluminum is outside acrylic, it is need to select Zoom out, Offset is 0.3  
Channle aluminum is outside acrylic. Zoom ou 0.6



Flat Aluminum is inside acrylic, it is need to select Zoom in, Offset is 0.3



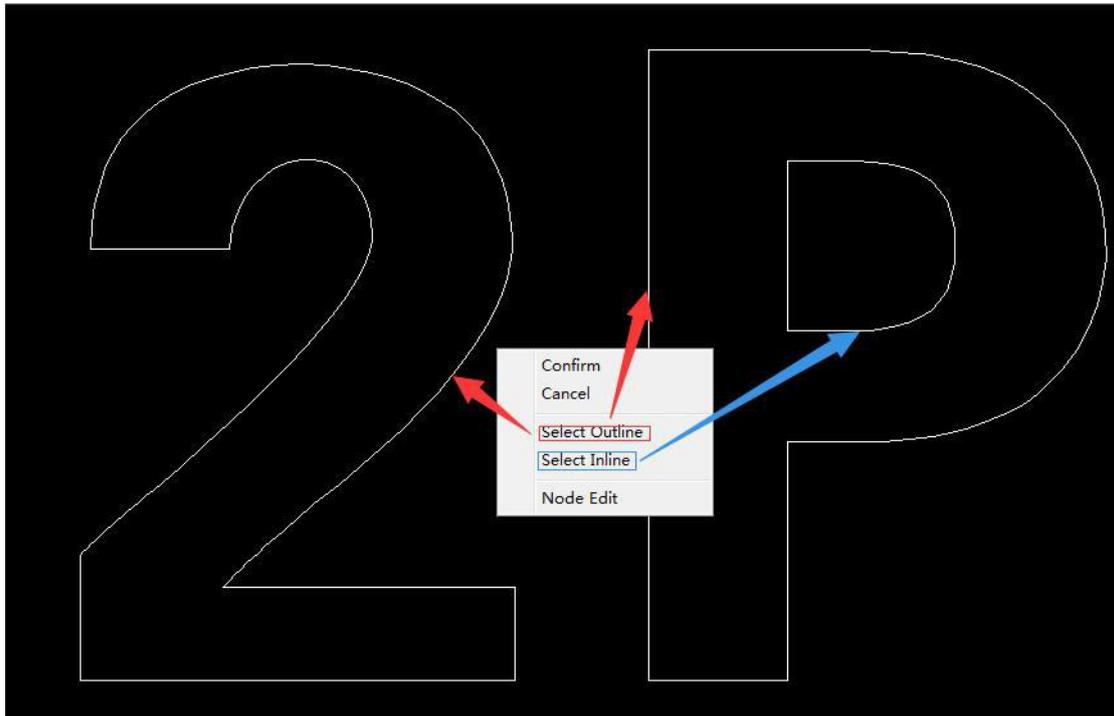
When a green line appears outside the white line, Right click, confirm



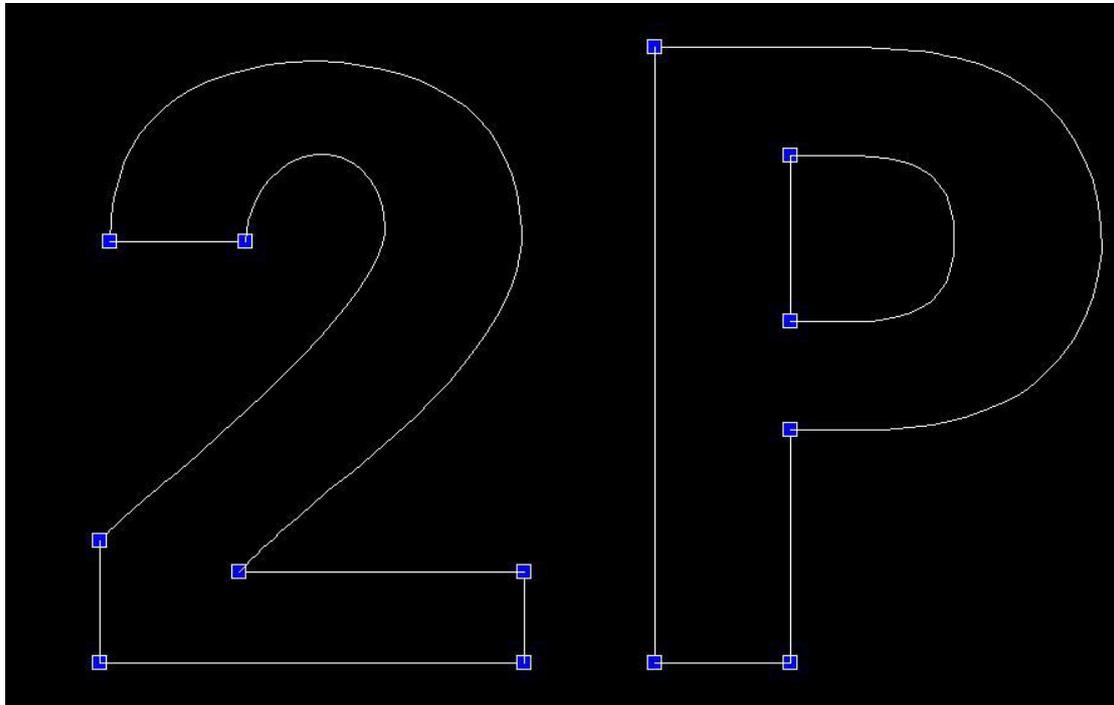
Revise "burin radius" the figure of "Burin radius" should be half of the cnc router cutter diameter. Click the cutter comp one time



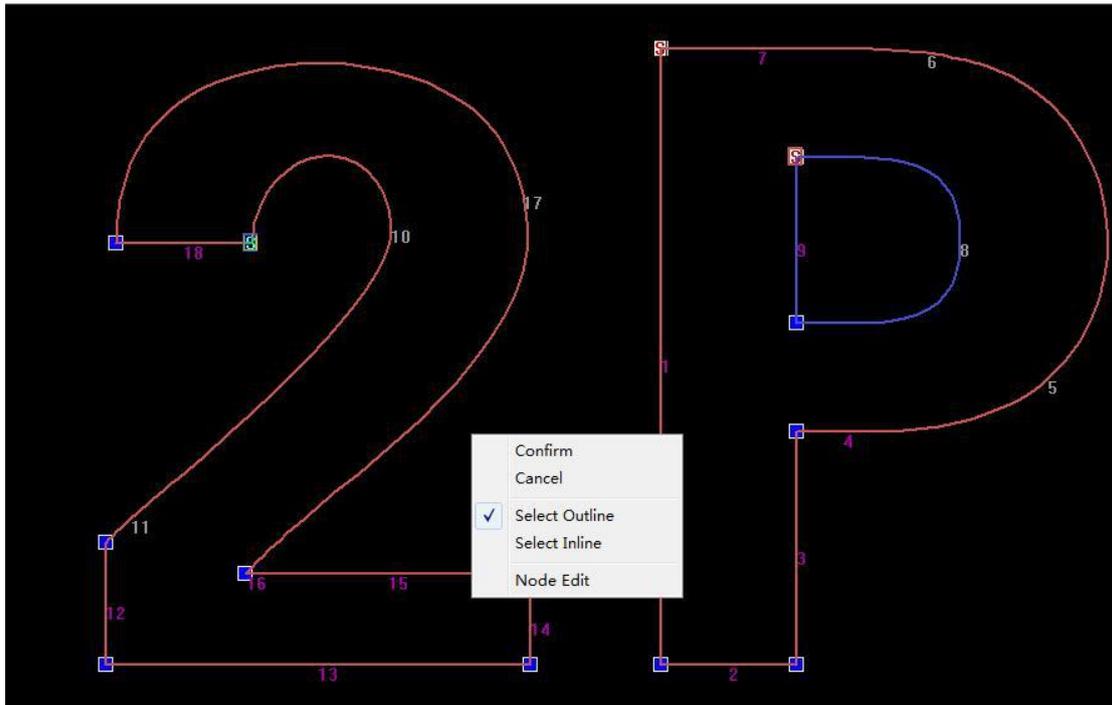
Right click in black area and choose select outline or inline



Then it shows like this:

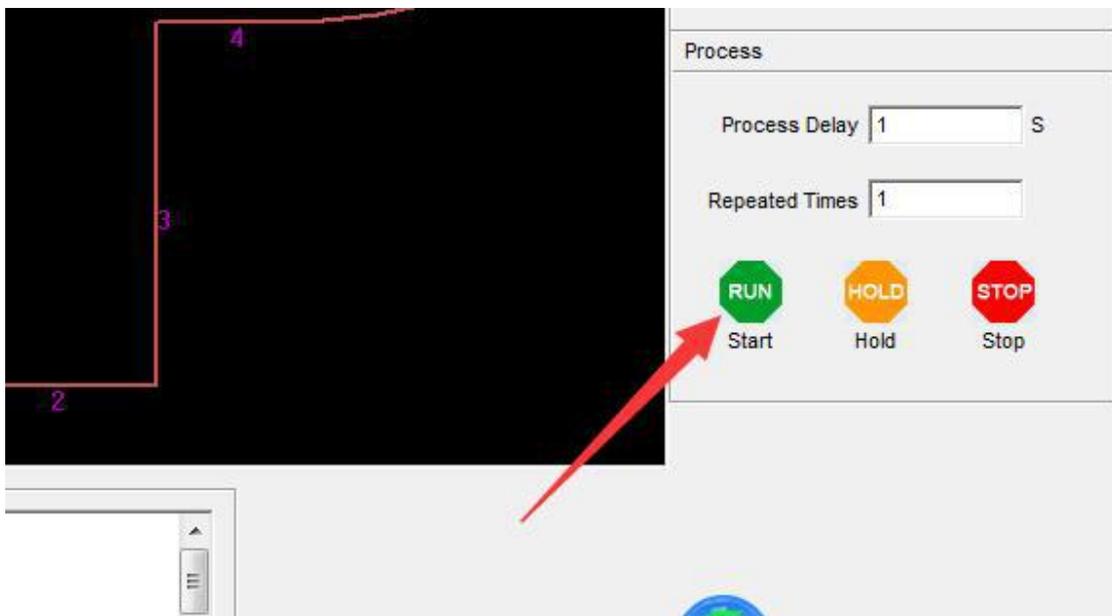


Choose a node point and click it two times ,then it will become red(outline) or blue(inline)



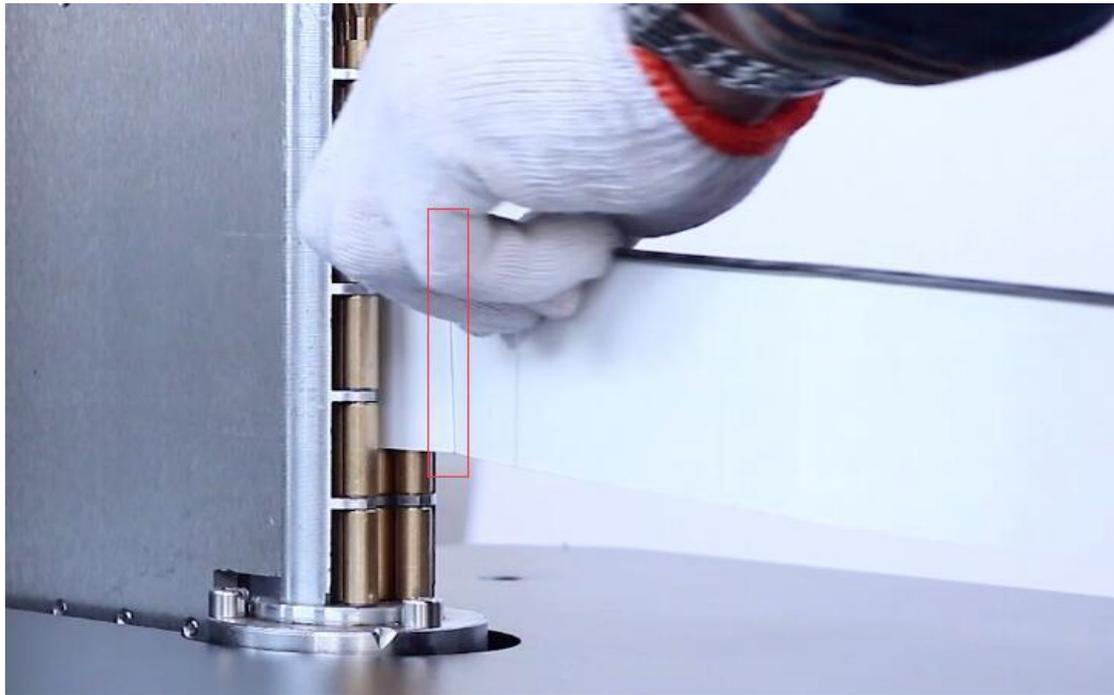
Right click again in black area and choose confirm.

Now we have to choose this letter,press start/run.

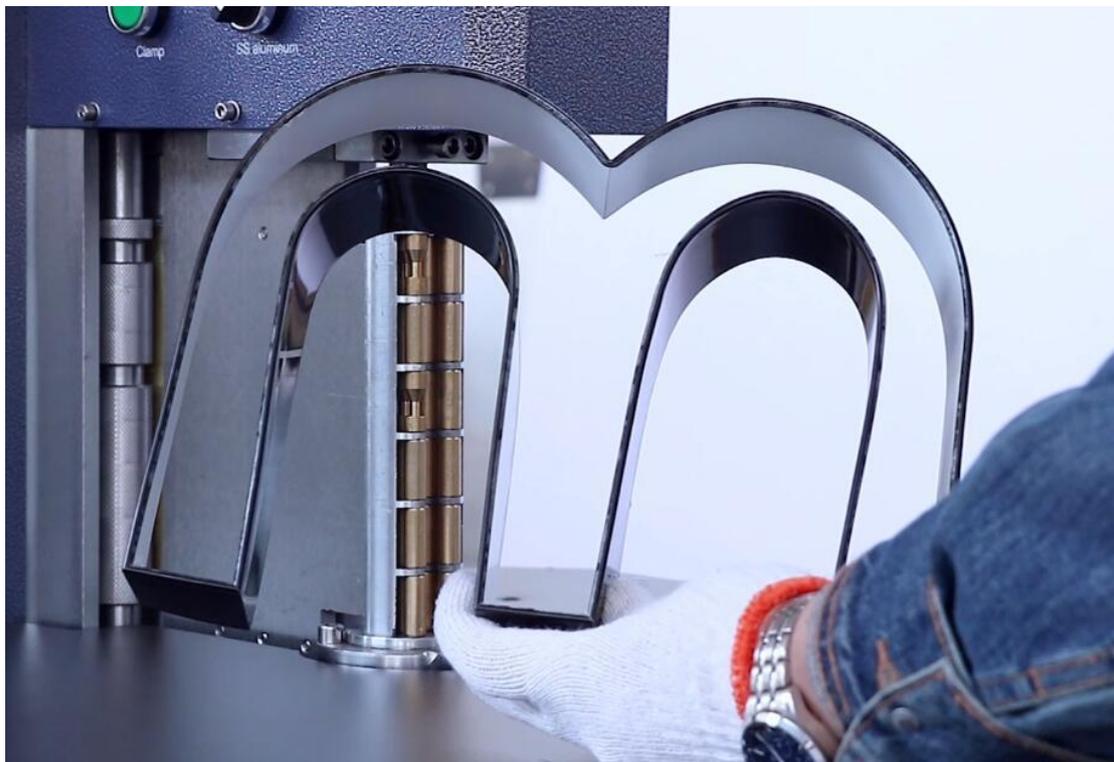


Then the machine will start .

After finishing , break it and bend it follow as the cut line (don't use the first part, break it )

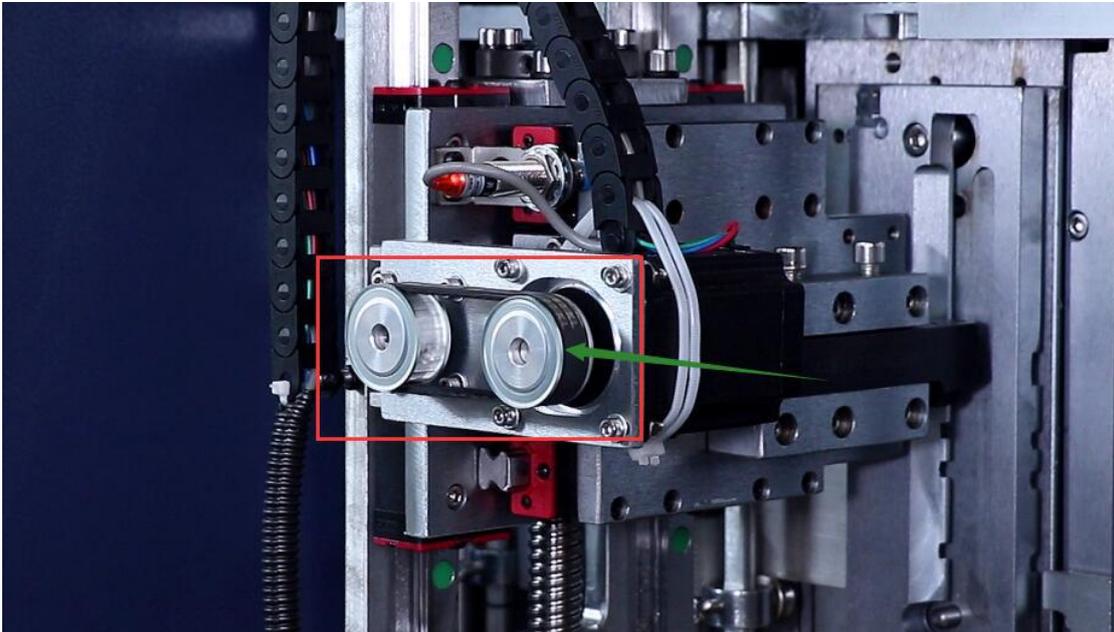


Making it

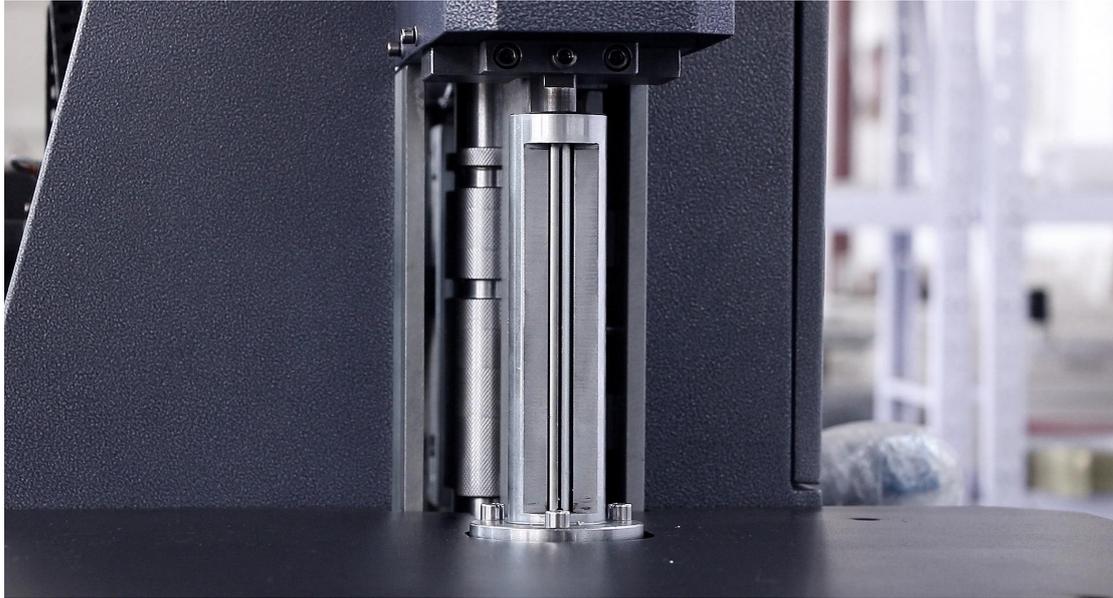


# How to make a stainless steel letter

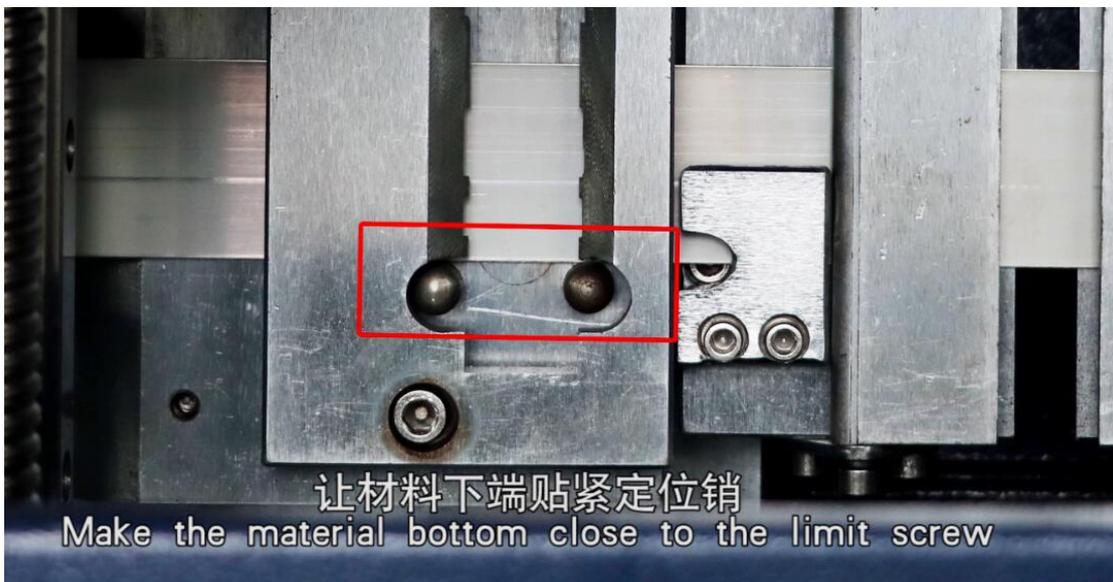
1. Press this button to transform the model (stainless model),now you can feel that belt is fixed



2. This bender is for stainless steel .exchange this one.

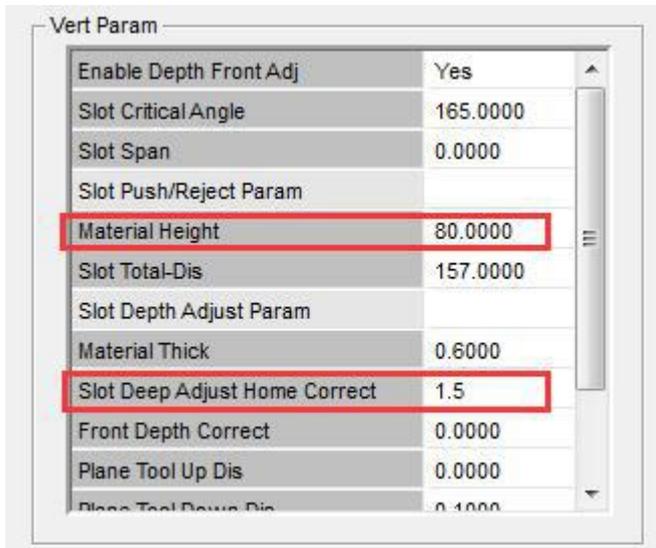


3. Put in stainless steel

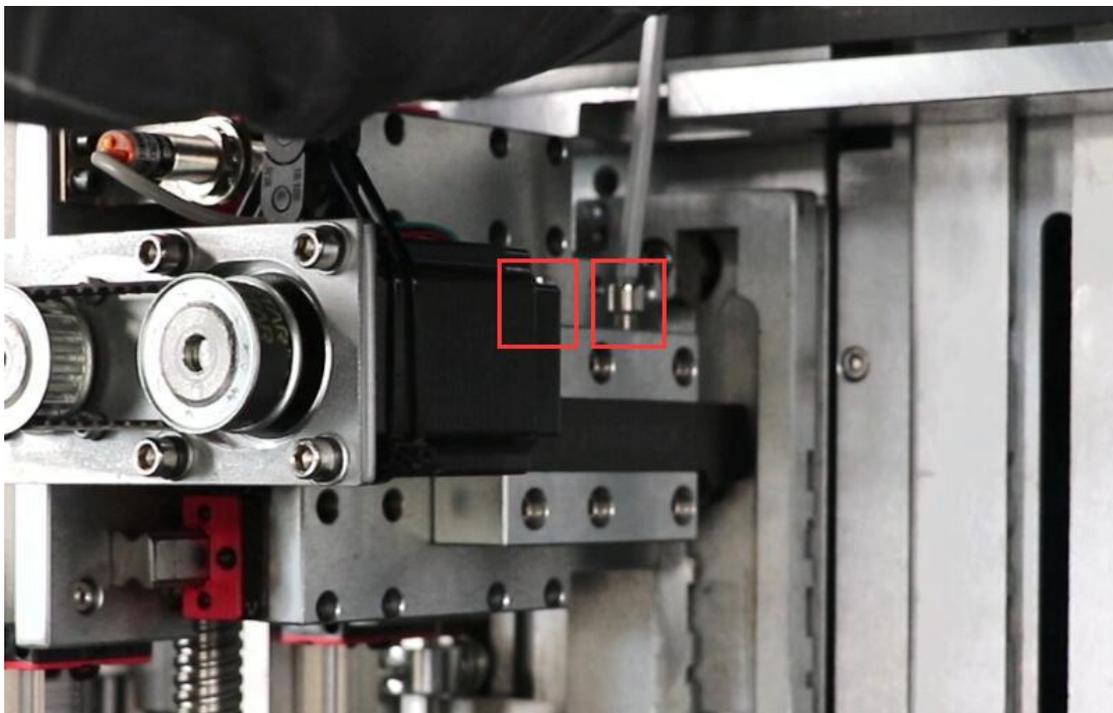


4. The first time use this machine, need to change the cutter.

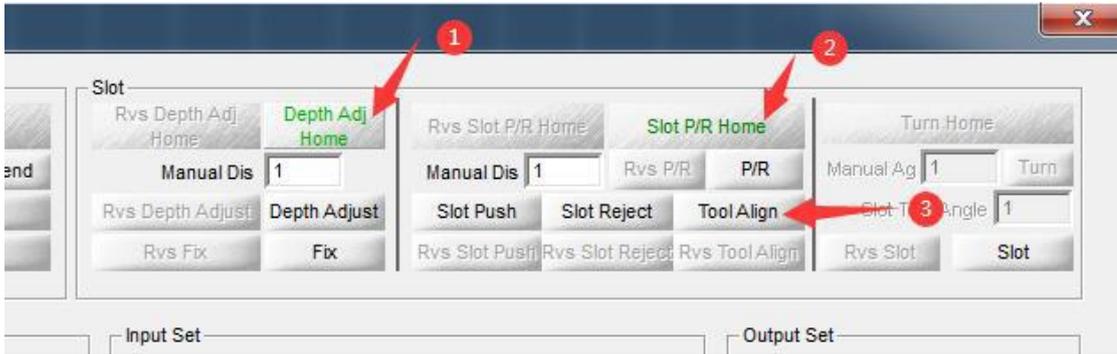
- ① Put in materials
- ② Craft Param--Change 【 Material Height 】 【 Slot Deep Adjust Home Correct--1.5】



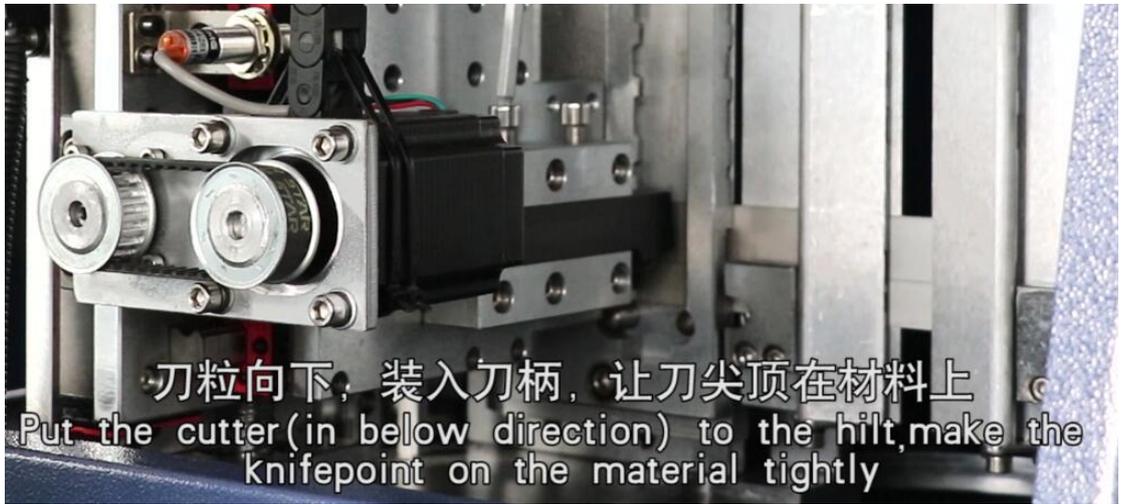
- ③ Save password--00
- ④ Loosen the screw and take out the cutter



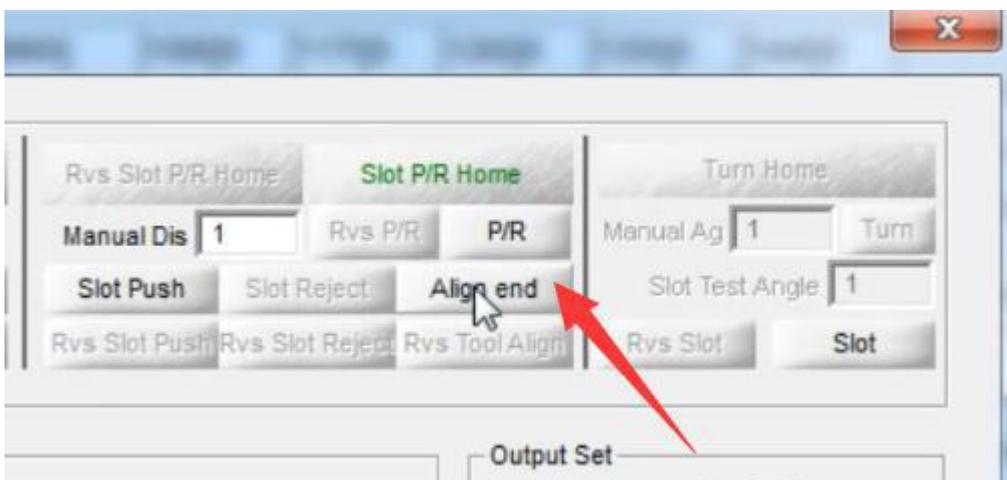
⑤ Device Test-- 【Depth Adjust Home】 【Slot P/R Home】 【Tool Align】 .



⑥ Insert cutter. Make the tip of the blade come into contact with the material  
tighten the screws



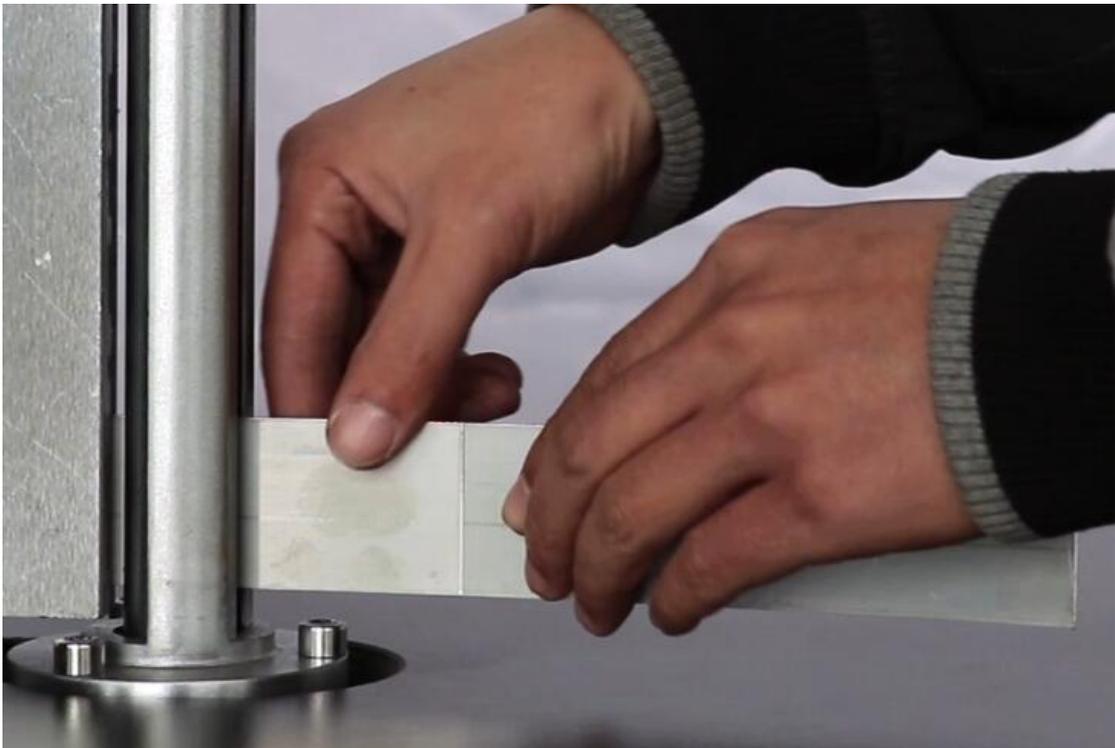
⑦ 【Align end】



⑧ 【Depth Adjust Home】【Slot P/R Home】【Slot】



⑨ Forward--Check the depth of the slot



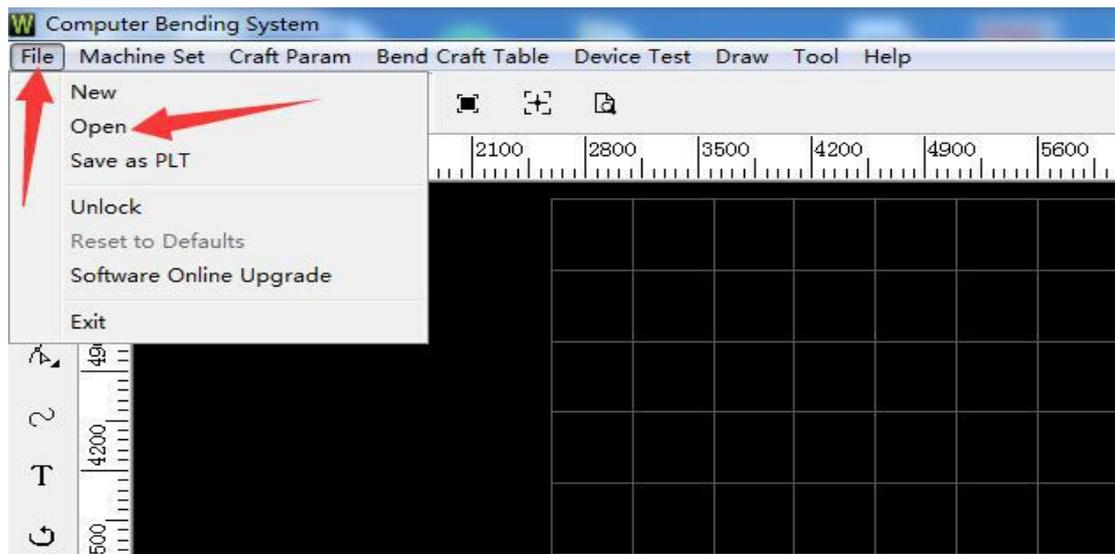
⑩ If the depth of the slot is not enough, 【Slot Deep Adjust Home Correct】 add 0.05 or 0.1 save

Bending Backlash	0.0000	Slot Depth Adjust Param	
		Material Thick	0.6000
		Slot Deep Adjust Home Correct	1.6000
		Front Depth Correct	0.0000
			0.0000

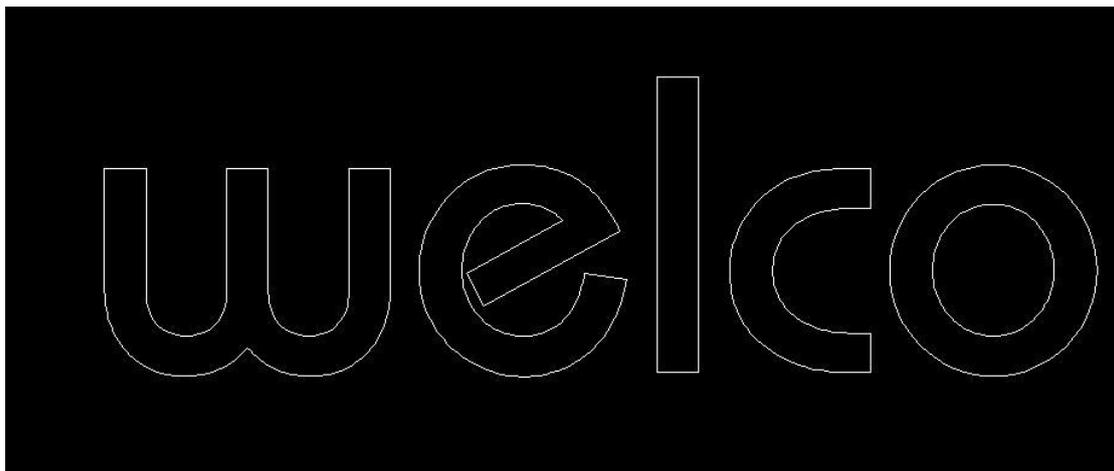
larger value, slotting deeper

⑪ Repeat 8 and 9, Until the depth of the slot is OK.

5. Find a file and open it



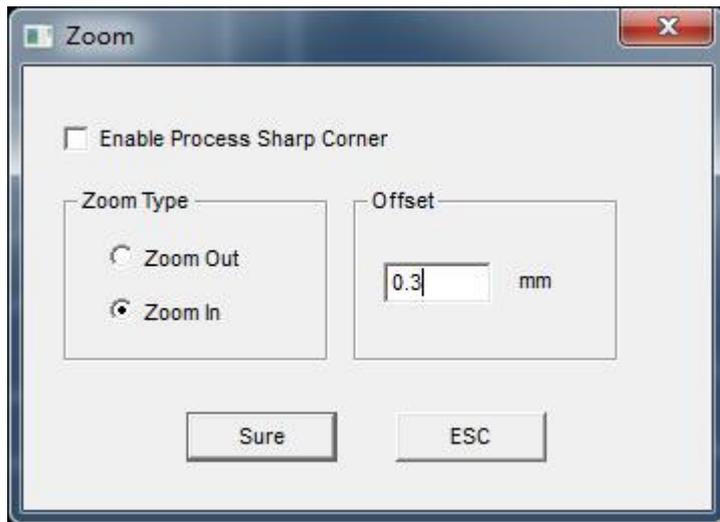
Open it



Click "ZOOM"



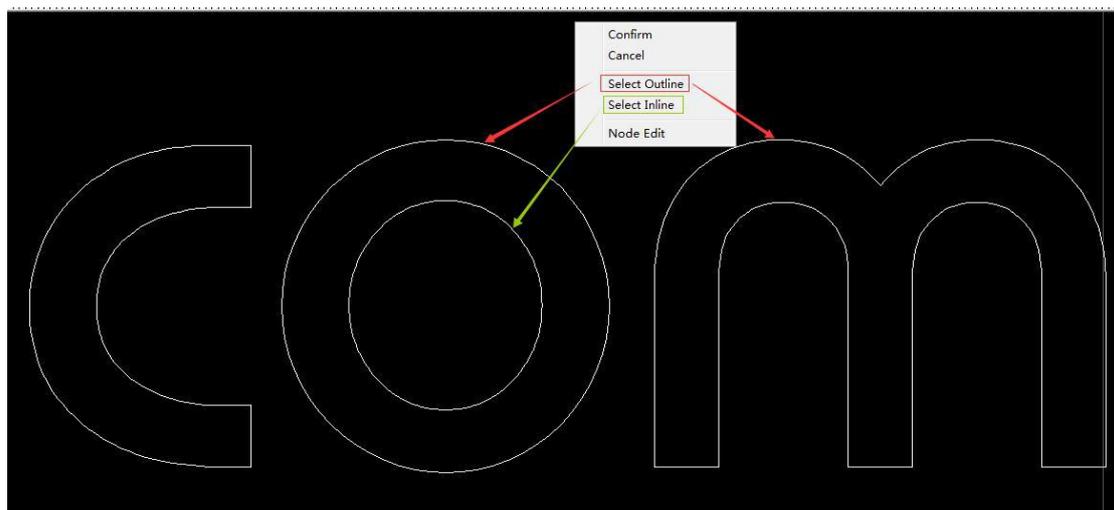
Stainless steel need inside face panel,it is need to select Zoom in,Offset is 0.3



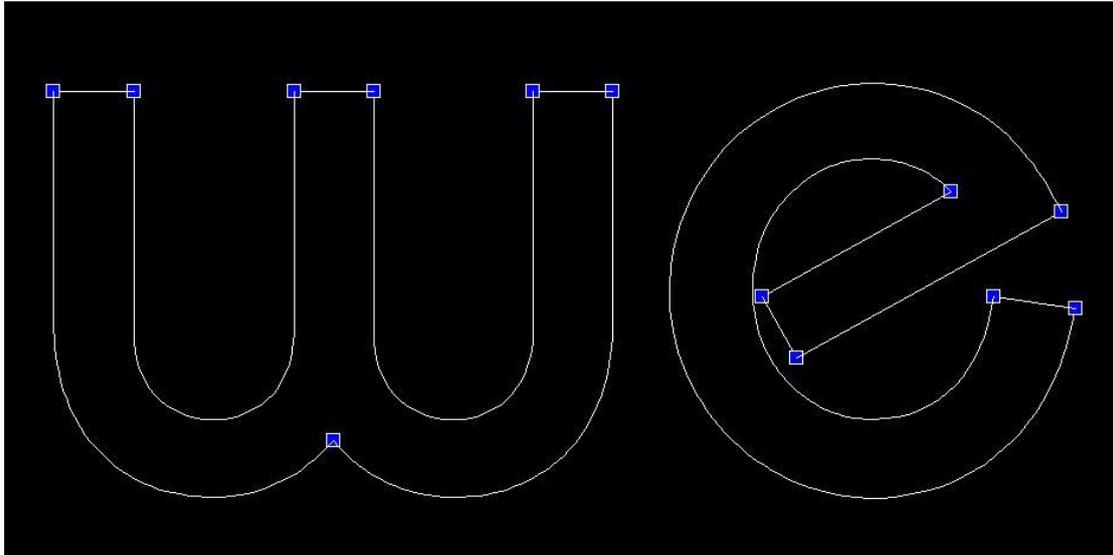
When a green line appears outside the white line, Right click, confirm



Right click in black area and choose select outline or inline



Then it shows like this:

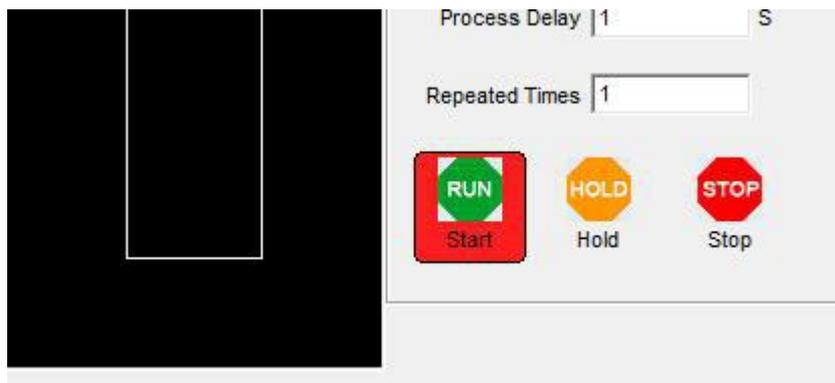


Choose a node point and click it two times ,then it will become red(outline) or blue(inline)

Right click again in black area and choose confirm.



Now we have to choose this letter,press start/run.



Then the machine will start .

After finishing , break it and bend it follow as the cut line ( don't use the first part, break it )



Making it

