Channel Letter Bending Machine Operation Manual



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

2. Turn on the machine



3.Use your hand touch this belt , if this belt is loosed and easy to rotary , that means now its aluminum model, if this belt is fixed and hard to rotary , that means now its 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 loosed .(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)

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W CBS4-V1.05	2017/7/11 星期	应用程序	5,029 KB

8. Open "device test"

File Machine Set Craft Param Bend Craft Table Device Test Draw Tool Help	
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9.Press all home button from right to left.

Wait for the button to turn green \rightarrow 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)

enaing system			10110		
Set Craft Paran Bend Craft Table Device Test Draw Tool	Help				
⊟ � ヽ [@ ≍ ⊞ ங					
700 100 2100 2800 3500 4200	4900 5600 63	300 7000 1	700 8400 9100 980	0 10500 11111 1111	0 11200 11900 12600 13300 1
	Craft Param				×
	Bend Param		- Vert Param		
	Bend Home Dir	1	Enable Depth Front Adj	Yes	A
	Bend Home Correct	-14.0000	Slot Critical Angle	165.0000	
	Bend Span	392.5000	Slot Span	0.0000	
	Front Bend Air Angle	15.8000	Slot Depth Adjust Param		
	Rvs Bend Air Angle	15.8000	Material Thick	0.6000	E
	Bending Backlash	0.0000	Slot Deep Adjust Home Correct	0.5000	3
			Front Depth Correct	0.0000	
			Rvs Depth Correct	0.0000	
			Turn Tool Param		
			Turn to Reverse Dir	-1	
			Turn Tool Home Dir	1	
	1		Tura Taal Hama Corroat	24 0000	·
	Feed Param		Multipoint Vert		

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)

	Bend Param		Vert Param		
	Bend Home Dir	1	Enable Depth Front Adj	Yes	^
	Bend Home Correct	-24.0000	Slot Critical Angle	165.0000	
	Bend Span	395.6000	Slot Span	0.0000	
	Front Bend Air Angle	16.0000	Slot Depth Adjust Param		не
	Rvs Bend Air Angle	16.0000	Material Thick	0.6000	
Adjust the front ar	nd reverse slotting	g depth togeth	CI Slot Deep Adjust Home Correct	1.2000	
			Front Depth Correct	0.0000	
			Rvs Depth Correct	0.0000	
			Turn Tool Param		
			Turn to Reverse Dir	-1	
			Turn Tool Home Dir	1	
	1. A.		Turn Teal Hama Carrant	24.0000	
	Feed Param		Multionint Mart		
	Enable Material Home Material Home Correct	No -15.0060	Enable Multipoint Vert		Pr
"开槽深度调节[值,开槽深度变》	回零修正距离 罙。减小数值	:"可以同时 [,开槽深]。	忖调节正面和反 度变浅。(慢鹘	反面的 曼的修	〕开槽深度。增加数 發改这个数值,如0.3)
"Slot deep adjust hor Increase the figure,th	me correct" can ne slotting deptl	adjust the fro n will be deep	ont and reverse slo er.	otting	depth at the same time.

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)

	Front Bend Air Angle	16.0000	Slot Depth Adjust Param	
	Rvs Bend Air Angle	16.0000	Material Thick	0.6000
	Bending Backlash	0.0000	Slot Deep Adjust Home Correct	1.2000
Only adjı	ust the front slotting	depth	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 Dir	1
	Rvs Bend Air Angle	16.0000	Turn Tool Home Dir Material Thick	0.6000
	Rvs Bend Air Angle Bending Backlash	16.0000	Turn Tool Home Dir Material Thick Slot Deep Adjust Home Correct	1 0.6000 1.2000
	Rvs Bend Air Angle Bending Backlash	16.0000	Turn Tool Home Dir Material Thick Slot Deep Adjust Home Correct Front Depth Correct	1 0.6000 1.2000 0.0000
Only adj	Rvs Bend Air Angle Bending Backlash ust the reverse slott	16.0000 0.0000	Turn Tool Home Dir Material Thick Slot Deep Adjust Home Correct Front Depth Correct Rvs Depth Correct	1 0.6000 1.2000 0.0000 0.0000
Only adj	Rvs Bend Air Angle Bending Backlash ust the reverse slott	16.0000 0.0000	Turn Tool Home Dir Material Thick Slot Deep Adjust Home Correct Front Depth Correct Rvs Depth Correct Turn Tool Param	1 0.6000 1.2000 0.0000 0.0000

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

📕 xxx	2020/12/16 星期	文件夹	
30mmTEXT.DXF	2015/9/30 星期	AutoCAD图形交	34 KB
🗊 50mmTEXT.dxf	2015/9/30 星期	AutoCAD图形交	34 KB
8150-BX4cm2017.0		FLAP 文件	6 KB
C DALCA BYO DOLT O			CIZD

Open this file is software

Select outline and select inline Make it



顺时针折弯调整 反面折弯空程角" When clockwise bending adjust "Rvs Bend Air Angle"



"craft parameter"--bend parameter

File	Machine Set	Craft Para	Bend Craft Table	Device Test	Draw	Tool

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.





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

-Feed Param -

Enable Material Home Material Home Correct No -15.0000

Enable Depth Front Adj	Yes	1
Slot Critical Angle	165.0000	
Slot Span	0.0000	
Slot Depth Adjust Param		
Material Thick	0.6000	III
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 Taal Hama Corract	24 0000	-

How to make a aluminum letter

Find a file and open it



Open it





Enable Process Sharp	Corner
- Zoom Type Zoom Out C Zoom In	Offset
Sure	ESC

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



Flat Aluminum is inside arcylic, 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 routor 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.

4	Process
	Process Delay 1 S
1	Repeated Times 1
	Start Hold Stop
2	
E	

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】

Enable Depth Front Adj	Yes	1
Slot Critical Angle	165.0000	
Slot Span	0.0000	
Slot Push/Reject Param		
Material Height	80.0000	=
Slot Total-Dis	157.0000	
Slot Depth Adjust Param		
Material Thick	0.6000	
Slot Deep Adjust Home Correct	1.5	L
Front Depth Correct	0.0000	
Plane Tool Up Dis	0.0000	
Diana Taal Dawn Dia	0 1000	-

- 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].

Rvs Depth Adj Home	Depth Adj Home	Rvs Slot P/R H	lome Slot	P/R Home	Turn Ho	ome
Manual Dis	1	Manual Dis 1	Rvs P	R P/R	Manual Ag 1	Turi
Rvs Depth Adjust	Depth Adjust	Slot Push	Slot Reject	Tool Align ┥	Glot T 3 kn	gle 1
Rvs Fix	Fix	Rvs Slot Push P	Rvs Slot Reject	Rvs Tool Align	Rvs Slot	Slot

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



tighten the screws

⑦ 【Align end】

Rvs Slot P/R Home	Slot P/F	R Home	Turn Ho	ome
Ianual Dis	Rvs P/R	P/R	Manual Ag 1	Turn
Slot Push Slot	Reject /	Align end	Slot Test An	gle 1
s Slot Push Rvs S	lot Reject Rv:	s Tool Align	Rvs Slot	Slot

	!				2	
ot Rvs Depth Adj Home	Depth Adj Home	Rvs Slot P/R H	ome Slo	P/R Home	Turn He	ome
Manual Dis Rvs Depth Adjust	Depth Adjust	Manual Dis 1 Slot Push	Slot Reject	Tool Align	Slot Test An	gle 1
Rvs Fix	Fix	Rvs Slot Push F	Rvs Slot Reject	Rvs Tool Align	Rvs Slot	Slot
- Input Set				Output S	Set 3	ata .
Slot Tool P	ush Limit	Rvs Slot Too	l Push Limit		Rvs Mill Rot	ate

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

(9) Forward--Check the depth of the slot



1) 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	
1810 Kitching and the		Material Thick	0.6000
larger valu	e, slotting deeper	Slot Deep Adjust Home Correct	1.6000
		Front Depth Correct	0.0000
			0.0000

1 Repeat 8 and 9, Until the depth of the slot is OK. 5.Find a file and open it

WC	omputer Bending System						
File] Machine Set Craft Param B	end Craft Table	Device	Test Draw	Tool He	lp	
Î	New Open Save as PLT		C B	3500	4200	4900	5600
1	Unlock Reset to Defaults Software Online Upgrade						
	Exit						
<i>۴</i> ۵							
∼ T	4200						
ۍ	200						

Open it





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

Enable Process Sharp	Corner
Zoom Type	Offset
C Zoom Out	
Zoom In	10.3
	_ ,

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)

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Making it

