



CNC Tenon Machine Manual



Introduction

Thanks for choosing our high-speed CNC male tenon machine. This computer numerical control tenon machine features high speed, efficiency, flexibility and simpleness.

Dongguan Susheng Machinery Co., Ltd.

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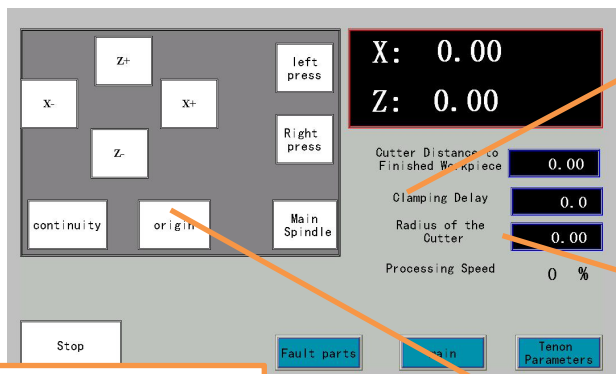
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CNC Tenon Machine Quickstart

When you connect the electricity and turn on the machine, click the **start** button on the screen, and the machine will back to original point automatically. After the return, click start again, the cutters will work automatically (please be careful), then you can input the data of each part.

If there happened alarm, click **Fault Reset**  after you eliminate them.



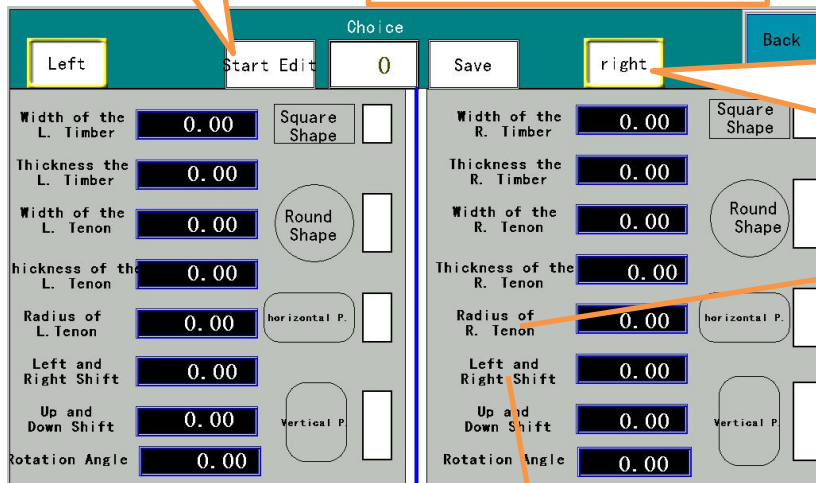
clamping delay is unilateral when used Fine-tuning the tool radius can control the tightness when insert the male tenon to the mortise.

Processing Rate is the working speed, you must adjust them on the basis of the material of the wood, should not be too fast, it is advisable to 25%.

Click the **Edit** button, then you can edit the data.

Click to back to the original point, then you can operate when turn on the machine.

This button is for choosing double-station processing or just single one, such as you choose click right, then you can only process the right one, the left station is invalid.



Tenon Radius is for the round shape tenons, invalid for other shape tenons.

Up down and left right shift is used for adjust the position of the tenon at the stock, it belongs to fine turning.

Technical Details

Max. Tenon Machining size	140MM*80MM / 5.5*3.14 inches
Knife Shaft Diameter	30MM / 1.18 inches
Knife Shaft R.P.M.	6800 - 12000 R.P.M.
Spindle Power	5.5KW / 7.37 HP
X-axis Servo	1.0KW / 1.36 HP
Y-axis Servo	1.0KW / 1.36 HP
Stock Hold-down Device	2 PCS
Working Air Pressure	6 KGS / 13.23 lbs
Dust Suction Inlet	Dia:100MM*2 PCS / 3.94inches*2PCS
Weight	800KG / 1764 lbs
Machine Size	1800MM*1100MM*1450MM / 70.87*43.31*57.09 inches

Program Instructions



东莞市速必胜机械有限公司
Dongguan SUBS CNC Woodworking Machinery

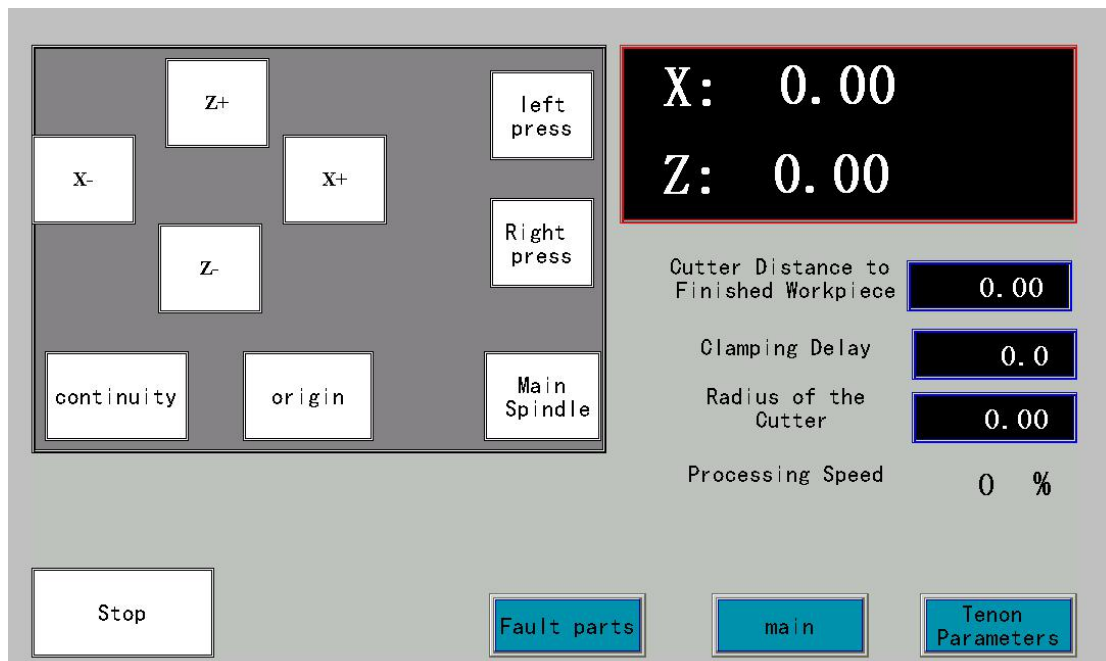


Key operational points:

1. All the size measurement of the machine is the **metric system** in millimeter, with accuracy 0.01 mm.
2. Production counter for the machine start count the continuous processing quantity from the date of purchase, the number of the products can not be reset.

3. **"Manufacturer parameters"** is used for manufacturer settings, the user does not have the right to enter.

4. **"Operation Screen"** , click **"Operation Screen"** to get into the machine operating interface, check the following images please:



1. **"X+, X-, Z+, Z-"**, are used for manual process. When it is needed to change the cutter or limit alarm, it helps to adjust to the appropriate location. And it is invalid in the automatic processing.

2. **"left press", "right press"** are for manual operation pressure cylinder. It is invalid in the automatic processing.

3. When the **"Single/Repeated processing"** button lights, the machine will automatically repeat cycle working after click the **start** button. Or there will be in the single processing mode, single action means the machine will process only one joint for each click.

4. **"Main Spindle"** is the switch of the spindle cutter, lighten it to turn on the knife shaft, or it will stop. Please notice that if start automatically button, the spindle



tool will automatically run.

5. "**Clamping Delay**" refers to the set time for replace the timber in the Single processing mode. And it is invalid in other processing mode.

6. "**radius of cutters** " refers to the radius of the actual cutters' size. Please pay attention that it is the radius rather than the diameter of the cutter. The general size of the cutter will become smaller after grinding, and the radius of the cutters will directly affect the size of the tenon, at this time you only need to adjust the radius of the cutters to change the size of the tenon joint (note: the adjustment of the machining tool radius will take effect only after stop processing).

7. "**stop**" , when you click the stop button during the machine operating, it could be stopped only after the current tenon joint was done. When need to stop quickly, please press the "Emergency stop" button.

8. "**processing speed**" is the percentage of the processing speed, percentage of 100% for the largest, affect immediately after adjust. (note: this machine is high speed tenons processing machinery, it would be better to adjust the rate not very high at the very beginning, it is advisable to 30%).

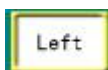
9. "**the mechanical original location**" the machine will automatically back to the mechanical original point after click this button, only back to the mechanical original location successfully, the machine can process normally. If click the start button directly after turn on the machine, it can also be automatically back to the original location.

10. Click the "**Tenon Parameters**" button to enter the following interface:

		Choice			
Left	Start Edit	0	Save	right	Back
Width of the L. Timber	0.00	Square Shape	<input type="checkbox"/>	Width of the R. Timber	0.00
Thickness the L. Timber	0.00			Thickness the R. Timber	0.00
Width of the L. Tenon	0.00	Round Shape	<input type="checkbox"/>	Width of the R. Tenon	0.00
Thickness of the L. Tenon	0.00			Thickness of the R. Tenon	0.00
Radius of L. Tenon	0.00	horizontal P.	<input type="checkbox"/>	Radius of R. Tenon	0.00
Left and Right Shift	0.00			Left and Right Shift	0.00
Up and Down Shift	0.00	Vertical P.	<input type="checkbox"/>	Up and Down Shift	0.00
Rotation Angle	0.00			Rotation Angle	0.00

Edit Methods:

Enter this page to start editing the tenons parameter which are to be processed. please choose a category firstly before start to edit, group number is from 0 to 40, only after choose a category and click the **"start editing"** button, you can edit various parameters. You can't edit without clicking the **"start editing"** button. When input all the parameters and make sure there is no mistake of the parameters, you can click "save" button to save it.



Click **"Left Parameters"** button to turn on the left tenon processing, turn it off to stop processing the left side. (Note: The left and the right tenon processing can not be turned off at the same time, or the system will turn on both side to processing automatically. It is invalid to click during processing.)

The machine will confirm the original location point on the basis of the middle of the tenon, it is according to the length and the thickness of the timber, as well as the length and the thickness of the tenon, so please make sure these above four parameters are accurate.

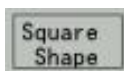
The width and the thickness of the material is the actual processing length and the width of the timber.

The length and the width of the tenon refers to the processing parameters of the tenon in the event that the square tenon, Vertical waist, and Transverse waist, and in this circumstances, the tenon radius is invalid.

The radius of the tenon refers to the radius of the round tenon in the case of processing the round tenon, in this circumstance the length and the width of the tenon is invalid.

Up Down and Left Right shift : When the parameters are zero, the machine will be decided the location of the centre of the tenon based on the length and the width of the timber, the default location is the center of the timber. These parameters can adjust the cutter shift to the left to right, or up to down. The “ + plus” means right and up side, the “ - minus” means shift to left and down side.

Tenon deflection Angle refers to the the deflection angle on the surface of the workbench .Please input the data in accordance with the actual Angle, (note: if the deflection Angle is too large, may not accept processing at the same time, should close one side to unilateral processing).



This button is the choice of the tenon shape, you can click to choose directly. (Invalid during the processing).

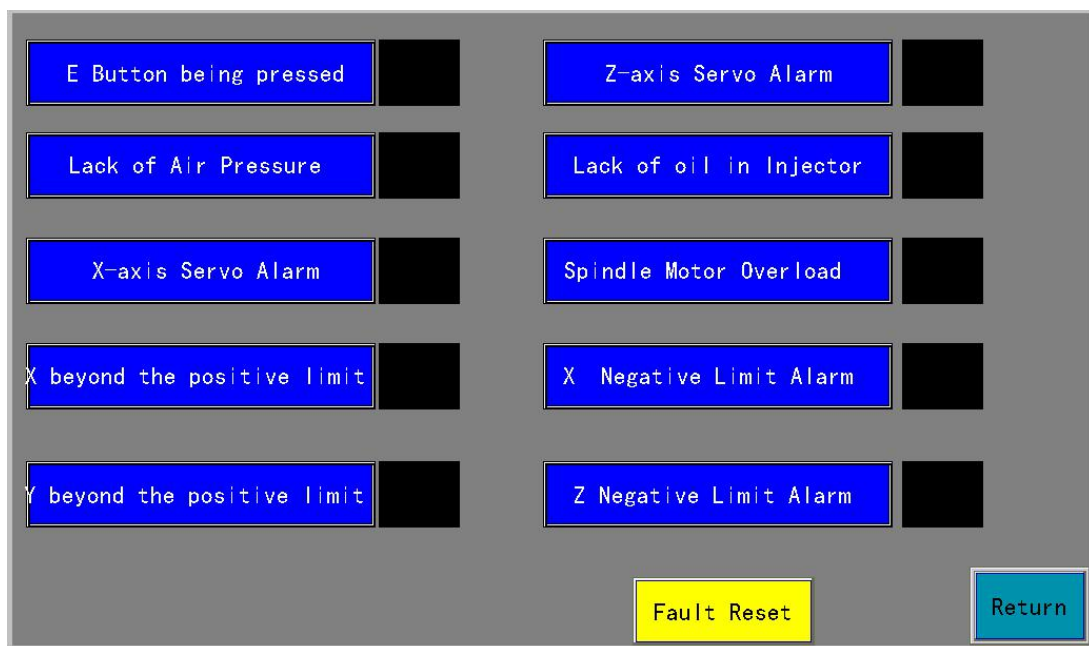


When “**Rotation Angle**” button shows zero, the processing direction of the tenon is horizontal, and you can processing the tilt tenon if input the relevant size, the angle is the whole tenon deflection angle treat the center point of the tenon as the center of the circle.

When set up the parameters above, the machine will be ready to process, at this time all you need to do is click the start button. Please notice that the cutters will turn on automatically.

The methods of solving the alarm problems:

When the machine break down during processing which the can be detected by the system, the machine will stop automatically. As the manufacturer, of course we hope to guarantee 100% quality product, but when comes something that we are hard to control, Such as damage of the CPU which the machine can not detect the problems, of course it cannot output alarm warning in that situation. When the above phenomenon occurred, please contact the factory, we will do our best to solve it for you.



When the machine occurred above malfunction,the system will enter the above fault interface, you can adopt the relevant solution according to the alarm guidance.

1. "**E button being pressed**", check whether the abrupt stop switch is pressed,the switch will automatically pop up if it is the scam of the clockwise rotation.

2. "**Lack of Air pressure**", check whether the air inlet pipe is connected, gas leakage,after pressing the "failure reset".

3. "**X axis servo alarm**" "**Z axis servo alarm**", click the "failure reset" button, generally can eliminate the malfunction, if it can not be reset, please turn off the power supply more than 5 seconds, then turn on the power supply to reset the servo, generally servo alarm situation is complicated, so please contact the manufacturer



when in this situation.

4. **"the limitation alarm"**, when occurred the above-mentioned alarm, please back into the control page, manually move away the limit alarm from the axis, and then click the "failure reset" again.

5. **"use up the lubricator "**, if yes, please refill the rail oil to the lubricator.

6. **"spindle motor overload"**. It is a protection of the operation spindle thermal relay, this fault is caused by the spindle motor, main reasons concludes: high processing speed, a great cutting quantity of the cutters, the burn out of the servo motor, power phase shortage and etc.